UNIVERSITÀ COMMERCIALE "LUIGI BOCCONI"

PhD SCHOOL

PhD program in Social and Political Science

Cycle: 37

Disciplinary Field (code): SPS/04

Governing Reproduction: Institutional Determinants of Abortion Access and Reproductive Health

Advisor: Letizia MENCARINI

Co-advisor: Scott WILLIAMSON

PhD thesis by

Giulia FORNARO

ID number: 1735653

Year 2026

Abstract

This dissertation investigates how institutional and societal structures shape reproductive rights and reproductive health outcomes, with a focus on abortion access and maternal and infant health. Grounded in the reproductive justice framework, it integrates political science, political psychology, public health policy, and representation theory to move beyond individualistic or biomedical explanations and instead foreground the role of institutional arrangements, public opinion, and political representation.

The dissertation comprises four independent yet thematically connected studies. The first two studies examine the U.S. context in the aftermath of the Supreme Court's *Dobbs* decision, which removed abortion from the constitutionally protected rights. Drawing on original survey-experimental data, the first study tests whether the Supreme Court ruling has influenced perceptions of the orientation of public opinion and personal attitudes toward the acceptability of abortion access. The *Dobbs* decision is arguably well positioned to study meaningful public opinion change because it is one of the few instances in mature democracies where a ruling went against prevailing public opinion and restricted rights. I show that priming respondents with information about the *Dobbs* decision did not alter either their perception of public opinion or their personal attitudes toward the acceptability of abortion access. This finding goes against both the argument that restrictions on abortion access can foster "cultural change" (as has been historically advanced by anti–abortion access activists) and the claim that the *Dobbs* decision triggered some form of backlash against the Supreme Court and the "pro-life" movement. The second study highlights the presence of a systematic underestimation of public support for abortion access (i.e., an instance of "conservative bias"), underscoring dynamics of pluralistic ignorance that may explain policy misalignment with majority preferences.

The third study analyzes the diffusion of medical abortion in Italy using micro-level administrative data. The focus on medical abortion is motivated by its emphasis on the pregnant person's bodily autonomy in the process of terminating a pregnancy. This feature is particularly relevant in the Italian context, where abortion has been legal since 1978 but access remains contested in practice, especially because of the high prevalence of gynecologists opting out of abortion services. Drawing on a comprehensive database of all certificates of first-trimester induced abortions performed in the Italian national healthcare system ($N > 900{,}000$ records), this study shows that access is stratified along socioeconomic lines and shaped by systemic factors, especially at the healthcare-provider level. It also highlights that medical abortion is significantly associated with lower waiting times but not with abortion-seeking out-of-region mobility. Finally, it documents the crucial effect of the Covid-19–related confinement measures on the diffusion of medical abortion in clinical practice.

The fourth study adopts a comparative, global perspective to assess how the institutional context moderates the relationship between women's parliamentary representation and reproductive health outcomes, particularly maternal and infant mortality. Using panel data from 164 countries (1990–2020) analyzed through two-way fixed effects models, it finds that representation is more impactful in centralized and civil law systems, while its effect is attenuated in decentralized and common law systems. In sum, it highlights that central state reach is a crucial scope condition for the effective translation of descriptive representation into substantive representation.

Together, these studies contribute empirically to advancing the adoption of the reproductive justice framework in the study of reproductive choices and health outcomes.

"Ma che piccola storia ignobile mi tocca raccontare
Così solita e banale come tante
Che non merita nemmeno due colonne su un giornale
O una musica o parole un po' rimate."
— Francesco Guccini, *Piccola storia ignobile*

"The future is dark, which is the best thing the future can be, I think."
— Virginia Woolf

To my parents Raffaela and Tiziano

Acknowledgments

A special thank you goes to all those who have supported, encouraged and inspired me throughout the journey of this PhD. Your guidance, generosity and presence have made this path not only intellectually rewarding but also profoundly human.

I am deeply grateful to my advisor, Letizia Mencarini, and my co-advisor, Scott Williamson, for the continuous guidance, intellectual insight and trust. Your mentorship has been invaluable in shaping both this dissertation and my growth as a researcher.

I also wish to thank the academic community and colleagues with whom I have shared these doctoral years for the stimulating conversations, the shared challenges and the sense of belonging that made this experience richer and more meaningful.

My heartfelt thanks go to my colleagues at the Centre for Research on Health and Social Care Management, who have always remained part of my life during the doctoral journey. Your friendship and warmth made me feel as if I had never left.

To my second family in Denver - academic and beyond - thank you for accompanying me through one of the most transformative periods of my life.

And to Gabriele, thank you for your loving presence, for making me feel truly welcome in your family. Thank you for being the best *domestique* - in cycling and in life - always there to help me climb higher. To many more climbs together!

Contents

1 Public Opinion on Abortion Post-Dobbs **1**

1.1 Can Dobbs Change Minds on Abortion?Experimental Evidence on Perceived Public Opinion and Personal Opinion about Abortion in Post-Dobbs United States 2

1.2 Conservative Bias in Perceptions of Public Opinion Among Citizens: Perceived Social Norms About Abortion Rights in Post-Dobbs United States 74

2 Medication Abortion in Italy: Unraveling Access, Inequality, and Institutional Determinants **101**

3 Do They Really Have a Say? Female Representation, Central State Reach, and Maternal and Infant Mortality in a Cross-National Panel Analysis **143**

Introduction

Reproductive choices and reproductive health outcomes lie at the intersection of public policy, politics, institutional arrangements and societal dynamics. While the ability to safely conceive, give birth, terminate a pregnancy and raise children in healthy and safe environments is often portrayed as a matter of personal choices and healthcare access, the reality is deeply affected by political and institutional factors. Access to sexual and reproductive healthcare, including contraception, abortion, maternal care and fertility treatment, is not equally distributed across and within societies. Instead, it is shaped by the institutional and political context. In recent years, the political nature of reproductive rights has become particularly visible, from the rollback of abortion protections in a set of mature democracies, notably in the United States, to the uneven progress on maternal and infant health.

This dissertation is guided by a central concern: understanding how institutional and societal structures shape reproductive rights and reproductive health outcomes. Specifically, it explores how institutional decisions, public opinion dynamics, representation and state capacity influence access to abortion and, more broadly, reproductive health outcomes.

The conceptual foundation of this work lies in the reproductive justice framework, developed by Black feminists in the United States in the 1990s in response to the limitations of the mainstream reproductive rights discourse. Reproductive justice theory reframes reproductive rights not solely as matters of personal choice, but as embedded within larger social, political, institutional systems that constrain or enable concrete choice. The framework articulates three core tenets: the right to have a child, not to have a child and the right to parent children in safe and healthy environments. From a scholarly perspective, reproductive justice encourages the integration of structural conditions such as inequalities and institutional determinants into the analysis of reproductive choices and outcomes,

moving beyond narrow legalistic or biomedical accounts.

This dissertation engages with the reproductive justice framework empirically by focusing on two central dimensions: access to abortion and maternal and infant health. These domains are analyzed through the lens of institutional arrangements, public opinion dynamics and representation. The research is guided by two overarching questions:

- To what extent do institutional and societal contexts shape access to abortion and reproductive health outcomes?
- How do mechanisms of political representation influence the realization of reproductive justice across different settings?

To address these questions, the dissertation brings together four independent but thematically interconnected studies that combine different methods (survey experiment, observational analyses, event studies and other quasi-experimental designs) and geographic contexts (United States, Italy, cross-national comparative analysis). Together, they contribute to a body of research that seeks to bridge the literature on institutional arrangements and health policy with the reproductive justice scholarship.

The first chapter of the dissertation investigates whether institutional decisions affecting abortion access, particularly the U.S. Supreme Court's Dobbs decision, influence citizens' perception of public opinion on the acceptability of abortion access and personal attitudes on the matter. Drawing on original survey experiment data collected in the aftermath of the Dobbs decision, the study tests the hypothesis that institutional decisions such as Supreme Court rulings possess "expressive power", that is, they shape beliefs about the orientation of public opinion and affect personal attitudes. Contrary to this hypothesis, the study finds that priming respondents with information about the Dobbs decision did not significantly

shift attitudes and perceptions of the orientation of public opinion. Notably, the perceived legitimacy of the Supreme Court emerged as a crucial moderator of the treatment effect, highlighting the role of institutional trust.

A second, complementary study exploited the same survey data to show that respondents, on average, underestimate public support for abortion access, especially those identifying as "pro-life". This "conservative bias" in second-order beliefs indicates the presence of a form of pluralistic ignorance, where people project their own attitudes onto the broader public. These findings have important implications for understanding why political elites may misread public opinion and pursue policies that contradict majority preferences.

The second chapter turns to the Italian case, where abortion has been legal since 1978 but access remains contested in practice. In particular, the study focuses on the diffusion of medical abortion, an approach to induced abortion that emphasizes bodily autonomy in the process of terminating a pregnancy. Drawing on the comprehensive database of all certificates of first-trimester induced abortions performed in the Italian national healthcare system, it investigates how individual and systemic characteristics shape the uptake of medical abortion and how medical abortion itself influences waiting times and abortion-seeking out-of-region mobility. Findings suggest that while medical abortion has become the predominant method for first-trimester induced abortion in Italy, its availability and use are stratified. Individuals with higher levels of human capital and belonging to more privileged socio-economic statuses are more likely to access medical abortion, indicating persistent socio-economic inequalities. Moreover, institutional arrangements, such as as the type of healthcare provider and the prevalence of conscientious objection among gynecologists, contribute at shaping dynamics of access. The study also captures the effects of Covid-19 related regulatory shifts, which accelerated the uptake of medical abortion.

The third chapter zooms out to a global perspective, analyzing how institutional structures condition the relationship between female political representation and maternal and infant mortality. Building on theories of descriptive and substantive representation, the chapter investigates whether and under what conditions the increasing presence of women in parliaments translates into improvements in maternal and infant mortality. Using a panel of 164 countries tracked from the 1990s to 2020, this study tests the hypothesis that such relationship is moderated by central state reach, operationalized as horizontal reach (legal origin and administrative tradition) and vertical reach (decentralization). The impact of increased female parliamentary representation appears weaker in common law systems compared to civil law ones and attenuates in highly decentralized settings. From a theoretical standpoint, these findings contribute to a more nuanced understanding of when representation translates into substantive outcomes in the domain of reproductive health.

Chapter 1

Public Opinion on Abortion Access in Post-Dobbs United States

1.1 Can Dobbs Change Minds on Abortion? Experimental Evidence on Perceived Public Opinion and Personal Attitudes about Abortion in Post-Dobbs United States

Abstract

Anti-abortion activists have argued that restricting abortion access fosters "cultural change" by shaping public opinion, aligning with theories on the expressive power of laws and judicial decisions. While evidence shows Supreme Court decisions can influence attitudes, this mostly applies to rulings expanding rights. Less is known about decisions restricting rights and going against dominant public sentiment. Using original survey experiment data, I show that exposing respondents to information about abortion's removal from the U.S. Constitution did not change perceptions of public opinion or personal attitudes on abortion rights. These findings challenge claims of both anti-abortion expressive power and backlash reactions.

Introduction

In Oberman's ethnography about abortion policymaking, when asked about how they understood the purpose of abortion laws, an anonymous Oklahoma state senator replied: *"The purpose of the law is to stop abortion. To send a moral message. To get the message out via the law, to spark a debate in the population. The government's responsibility is to give people education. It is up to the government*

to tell them that abortion is wrong. It's not an acceptable solution." (Oberman (2018), p. 85).

This statement reflects a broader theoretical debate about the expressive power of institutional decisions. Laws and Court rulings can act as signals of societal values, shaping perceptions of public opinion and, in some cases, personal attitudes (McAdams, 2015; Sunstein, 1996; Tankard and Paluck, 2017).

There exists consensus among scholars that certain pieces of legislation, such as smoking bans in public buildings, possess expressive power (McAdams, 2015). Do institutional decisions on abortion rights possess expressive power as their proponents expect? In this case, the theoretical debate is unsettled, and scholars have pointed out the need for empirical evidence to inform theory building (e.g., Oberman (2022)).

The United States provides a compelling setting to test whether removing a constitutional protection possesses expressive power. In June 2022 the Dobbs v. Jackson Women's Health Organization decision eliminated abortion from the set of constitutionally protected rights and returned policy authority to the states. I conceptualize this national constitutional change as the signal, while recognizing that its policy consequences are implemented at the state level, prominently as the activation of previously unenforceable early gestational-age bans. This configuration allows me to assess whether the absence of a constitutional right shifts perceived public opinion and personal attitudes, even when specific policies vary across states.

The relevance and peculiarity of the Dobbs decision is widely recognized. For example, Clark et al. (2024) characterize Dobbs as one of the few instances in mature democracies where a ruling went against prevailing public opinion and restricted rights. Moreover, Republican elites and the anti-abortion movement had long sought the overturning of Roe v. Wade and publicly treated Dobbs as

signaling a national recalibration of commitments on abortion.

Dobbs provides a strong case for studying opinion change, as many individuals hold well-defined and morally grounded views on abortion, given its prominence in American political and religious discourse (e.g., Goren and Chapp (2017)). Survey data collected before and after the overturning of Roe v. Wade show no significant changes in opinions about the legality of abortion (Norrander and Wilcox, 2023) and an increase in the perception that Americans support abortion access (Clark et al., 2024). The picture emerging from these data is therefore that the Dobbs decision had little-to-no expressive power and, if any, it moved perceptions of public opinion in the direction of backlash. Studies featuring data collected in short time intervals right before and after the decision are a useful source of evidence to try to isolate its impact on individuals' attitudes and perceptions. To complement and improve the understanding of the phenomenon, experimental studies can be another effective tool, as they allow researchers to have a proper control group and therefore enhance the ability to make causal claims.

Against this backdrop, I employ an original survey experiment to assess whether providing respondents with information about the Dobbs decision shifts perceptions of public opinion or personal attitudes on abortion rights. Findings showed no substantial effects of the treatment on perceived public opinion and personal attitudes. Exploratory analyses based on post-treatment measurements suggested that perceived representativeness of the Supreme Court could moderate the treatment effect, meaning that among respondents who view the Court as more representative, exposure to the treatment vignette was associated with reduced perceived and personal support for abortion access. By contrast, issue awareness did not show a moderating effect on the treatment, possibly reflecting the high baseline salience of Dobbs. Turning to the direct effect of the treatment on perceptions of the Supreme Court and state legislatures, effects on trust of the Supreme Court

were moderated by political partisanship and exposure to the treatment vignette lowered perceived representativeness of state legislatures.

This study contributes to the debate about the expressive power of institutional decisions by providing empirical, experimental evidence to inform the ongoing theoretical discussion. From a more practical perspective, these findings highlight the lack of empirical support to the claim that abortion restrictions can serve as instruments to promote "cultural change" - as anti-abortion activists have frequently claimed over the years. Overall, this study brings together elements from psychology, political science, and legal scholarship to improve the understanding of whether and when institutional decisions shape perceived public opinion and personal attitudes.

Expressive Power of Institutional Decisions and the Abortion Case

Whether and when institutional decisions shape opinions are long-standing questions in the social sciences debate (Tankard and Paluck, 2017). To avoid conceptual ambiguity, it is important to distinguish among the key terms used throughout this study. I define personal attitudes as an individual's own evaluation of an issue. Conversely, I define perceived public opinion (also referred to in the literature as perceived [social] norms) as respondents' perceptions of what most people think about an issue. Finally, I use public opinion to refer to the aggregate distribution of attitudes in the population, as documented in representative surveys. While public opinion serves as important background, this study focuses empirically on personal attitudes and perceived public opinion.

It has been argued that legal changes can affect the perception of social norms

through their expressive function and power (Sunstein, 1996). The mechanism that makes it possible is often explained as a "law as information" theory: laws provide information about societal values, which in turn changes beliefs, and new beliefs change behavior. Prohibitions often reflect negative attitudes towards the conduct being prohibited, while laws granting privileges or mandating to engage in certain behaviors reveal attitudes approving the behavior or disapproving its omission. In light of this information, people update their beliefs about what others in their community approve or disapprove (McAdams, 2015).

The theory of indirect influence and, more broadly, psychological theories of norm perception predict that this may lead to individuals conforming their own beliefs with the perceived social norms because of an inherent desire to avoid social rejection from one's reference group (Cialdini and Goldstein, 2004; Miller and Prentice, 1996), although individuals may perceive shifts in collective opinion without changing their own (Paluck, 2009; Sherif, 1936). However, not all pieces of legislation equally possess expressive power. According to McAdams 2015, the conditions for a law to be expressive can be summarized as follows: i) its enforcement action carries some clear audience meaning, ii) many people receive the message (i.e., publicity), and iii) it is considered legitimate. Moreover, it must possess some factors that make the legal signal strong enough to stand out against the background of information delivered, e.g., by the media, the Internet, or social acquaintances.

The textbook example of laws that possess expressive power are smoking bans. Bans on smoking in public buildings are a case of well-publicized legislation that proscribes rules for the public. More importantly, they generated a sudden shock to existing beliefs, signaling disapproval of a behavior that was previously considered mostly acceptable, despite a growing body of evidence about the hazardousness of being exposed to second-hand smoke. Smoking bans led smokers to perceive the

risks of second-hand smoking and nonsmokers to be empowered in discouraging smoking in their presence (McAdams, 2015). To sum up, smoking bans reached high levels of compliance and permanently changed attitudes and behaviors because lawmakers had a clear, credible message. The credibility was based on data on the detrimental effect on health of second-hand smoke (Oberman, 2022). Another example are laws on violence against women: Htun and Jensenius found that anti-violence legislation were effective in changing attitudes condoning domestic violence in a case study on Mexico 2022.

Major judicial decisions can contribute to changes in personal attitudes about social or political issues as well. Indeed, a long-standing stream of research has theorized the concept that Courts, by legitimizing the position they support, prompt public opinion to conform to such position (Dahl, 1957; Marshall, 1987). In other words, judicial decisions are believed to exercise a direct, positive influence on public opinion. Empirical evidence seems to support this theory. For example, the 1967 Loving v. Virginia ruling on interracial marriage appeared to have fueled the increase in support for interracial marriage (Marshall, 1987; Schacter, 2008). Moreover, Tankard and Paluck provided experimental evidence that a Supreme Court ruling in favor of same-sex marriage, when presented as likely, resulted in an increased support for same-sex marriage and more positive attitudes towards gay people 2017. Similarly, Hooghe and colleagues and Flores and Barclay showed that European countries and US states that have (first) recognized same-sex marriages are the ones that have experienced the most marked decline in prejudice against same-sex couples (Flores and Barclay, 2016; Hooghe and Meeusen, 2013). Other examples of direct, positive effect of judicial decisions on public opinion were documented for discrimination against the LGBTQ+ community (Deal, 2022).

The theoretical underpinnings of the mechanism behind these phenomena lie in the expressive or symbolic character of Supreme Court (and Courts in general)

pronouncements. This concept rests on the idea that when the Court makes a decision, it is often taken to be speaking on behalf of the nation's basic principles and commitment (Sunstein, 1996). A more nuanced theory of the effect of judicial decisions on public opinion postulates indirect and possible mixed effects: when Courts issue a ruling, they bring the issue into public discourse, prompting discussion. As individuals engage in discussions on the issue, they observe media and public reactions, and either "crystallize" or modify their initial views on the matter (Franklin and Kosaki, 1989; Hoekstra and Segal, 1996; Johnson and Martin, 1998; Linos and Twist, 2016).

More broadly, institutional decisions tend to be perceived as the thermometer of current public opinion and / or expert projections of the direction in which public opinion is moving, provided that such institutions are trusted and are considered democratic in nature (Tankard and Paluck, 2017; Tyler and Jackson, 2014). Indeed, trust in and perceived representativeness of institutions are theoretically recognized as crucial characteristics when assessing the expressive power of their decisions. As hypothesized in McAdams, *"a legislature will have a weaker capacity to generate compliance expressively when more of its constituents believe that the legislature is generally captured by special interests."* (McAdams (2015), p. 152). Abortion legislation represents an interesting case in the debate about the expressive power of the law. First of all, abortion access, especially in the US, is frequently regarded to as the prototypical culture war issue (Castle, 2019; Gooch, 2015; Kurtz, 1994), mostly because it touches upon universal concerns about human sexuality and family organization (Jelen, 2009; Putnam and Campbell, 2012). Culture war issues are peculiar in terms of public opinion dynamics: for example, Goren and colleagues argued that culture war attitudes function as foundational elements in the political and religious belief system of citizens; they also provided evidence that opinions on culture war issues lead people to revise their partisan

affinities and religious orientations (Goren and Chapp, 2017). This is consistent with findings showing that party cues have little effect on attitudes toward abortion rights (Arceneaux, 2008) and that abortion attitudes can lead people to change their party identification (Killian and Wilcox, 2008). Overall, being an issue deeply rooted in moral or religious predispositions, it exhibits unusual high stability for policy preference (Converse and Markus, 1979) or gradual change through cohort replacement (Page and Shapiro, 2010). Furthermore, abortion is widely seen as a prominent and "easy" issue (i.e., an issue that can be framed in non-complex ways) (Hare et al., 2015; Kalla and Broockman, 2018; Poole and Rosenthal, 2000). It has also received significant attention as a key issue that has evolved within the American party system in the contemporary era (Lee and Brady, 2020). Abortion thus represents what can be considered a *least-likely* case for expressive effects, given the moral salience and the stability of attitudes. Yet precisely for this reason it offers a theoretical boundary test: if expressive influence is minimal in this domain, this provides a lower bound against which findings from other policy areas (e.g., domestic violence, same-sex marriage) can be compared.

Whether or not abortion legislation possesses expressive power is theoretically debated. On the one hand, legislation restricting abortion is claimed to signal stronger attitudes against abortion. As people update their beliefs, they are expected to perceive higher social costs to abortion; in other words, an individual is argued to expect that more people in their community will ostracize them if they support abortion rights (McAdams, 2015). Ethnographic research has provided evidence that lawmakers supporting abortion bans indeed understand abortion policymaking also as a mean to send the message that abortion is immoral and therefore to alter personal beliefs (Oberman, 2018). On the other hand, limits on the message-sending capacity of abortion bans are supported based on the argument that abortion bans address an issue that deals with personal judgments

about morality; consequently, lawmakers cannot justify it with data or scientific evidence, as happened for smoking bans (Oberman, 2022).

Importantly, however, the presence of a moral dimension does not, by itself, eliminate the expressive potential of public policy. Indeed, judicial rulings in other moralized domains, most notably Obergefell v. Hodges, have been associated with measurable changes in perceived norms and attitudes toward same-sex marriage (Tankard and Paluck, 2017; Flores and Barclay, 2016). These cases illustrate that moral issues sometimes do exhibit expressive responsiveness when the direction of legal change aligns with ongoing societal value shifts and enjoys broad elite and institutional support. Abortion differs from these examples not simply because it is moralized, but because it is embedded in a long-standing partisan cleavage, exhibits unusually stable attitude structures, and constitutes what many scholars describe as a culture-war identity issue. Thus, while expressive effects are possible in moral domains, abortion represents a theoretically distinct and arguably *least-likely* case.

The significance of abortion in the American political landscape is particularly evident when dealing with Roe v. Wade, i.e., the landmark 1973 Supreme Court decision that included abortion among the constitutionally protected rights. Roe v. Wade is one of the most widely known cases ruled by the Supreme Court. Indeed, survey data show that, when asked to name any case ever heard by the Supreme Court, the number one answer was Roe v. Wade (Penn and Associates, 2009). Moreover, the pursuit of its overturning was a key political objective of the Republican Party, which materialized in the Supreme Court's ruling in Dobbs v. Jackson Women's Health Organization (June 24, 2022). The Dobbs decision removed abortion during the first two trimesters of pregnancy from the constitutionally guaranteed rights and returned the issue to the states. Moreover, the subsequent period witnessed a series of relevant events impacting abortion legis-

lation, including total or early gestational-age bans achieving enforceability in a set of states and the Kansas abortion referendum. The issue of abortion access remained highly visible and salient throughout the 2022 midterm election campaign (Mutz and Mansfield, 2024) and the 2024 presidential elections.

The Dobbs decision is peculiar in many respects. First, it represents a rare rights retrenchment after decades of prominent decisions expanding rights (e.g., interracial marriage, same-sex marriage, and, earlier, the recognition of abortion rights in Roe v. Wade) and it did so against prevailing public opinion. Indeed, it is documented that Americans tend to hold liberal opinions on abortion access (PEW Research Center, 2022). Conceptually, Dobbs combines two analytically distinct elements: i) a national constitutional signal, i.e., the removal of abortion from the constitutionally protected rights, and ii) sub-national implementation, as policy authority is returned to the states. I treat the former as the potential "expressive cue", while recognizing that its consequences unfold through state policy, e.g., the activation of previously unenforceable early gestational-age bans. According to this framing, Dobbs provides leverage to test whether the removal of a constitutional right shifts perceived public opinion and personal attitudes, even if specific regulations vary across states.

Second, it can be argued that personal changes in the Court appear to have been among the decisive factors for overturning Roe v. Wade, especially in relation to the appointment of Justice Coney Barrett as substitute to Justice Bader Ginsburg in 2020 and, previously, the appointment of Justice Kavanaugh[1]. This aspect can impact trust in and perceived representativeness of the Supreme Court, as it is argued that perceived legitimacy of Supreme Court pronouncements is influenced by its ideological tenor (Ansolabehere and White, 2020; Bartels and Johnston, 2013; Hetherington and Smith, 2007) and appointment politics (Glick, 2023), depending

[1]It is recognized that the debate surrounding Brett Kavanaugh's nomination to the Supreme Court was centered on his positions about abortion, at least initially (Jozkowski et al., 2020).

on partisanship.

Finally, a crucial aspect of the argument supporting the Dobbs decision (i.e., the Supreme Court majority opinion) is that it allows to return the issue of abortion to the elected representatives in the states, therefore potentially enhancing representativeness and policy responsiveness on the matter. However, perceived legitimacy of decisions made by state legislatures is related to the extent to which electoral support for parties translates into legislative representation. The latter is argued to depend, at least partially, on the way electoral districts are designed, especially since redistricting is often implemented strategically to favor partisan groups (Engstrom, 2013; King and Gelman, 1991).

Overall, little is still known about how the expressive function of laws operates in practice (Oberman, 2018) and experimental tests assessing the impact of providing knowledge about abortion legislation on opinions about abortion rights lack (Jozkowski et al., 2020). As for the overturning of Roe v. Wade, most of the evidence relies on comparisons of survey data collected before and after the 2022 landmark Supreme Court decision. Results suggest that personal attitudes about the legality of abortion have not changed (Clark et al., 2024; Norrander and Wilcox, 2023), while perceptions of public opinion have shifted towards more favorable positions about abortion access (Clark et al., 2024), suggesting some form of backlash reaction against the Supreme Court's decision.

Methods

The objective of this study is to causally identify, by means of a survey experiment, the impact of providing information about the overturning of Roe v. Wade and its consequences on the perception of public opinion and on personal attitudes about abortion rights.

Experimental Treatment and Hypotheses

This study relies on original survey data collected in February 2023 from a sample of participants (n = 1,536) representative of the US adult population on key demographic characteristics[2]. A comparison between the distribution of key characteristics in the sample and in the US population, as per census data and other relevant sources, is available in the Supplementary Materials (Supplementary Table 1).

Half of the sample of respondents was randomly assigned to read a vignette containing information about the overturning of Roe v. Wade and its consequences (i.e., the vignette) immediately before answering a set of questions about opinions on abortion access, the Supreme Court and state legislatures (more details in the following section Measures and Analytical Strategy). The control group was invited to read the same excerpt only after having answered the same set of questions. The vignette treatment was designed to make the Dobbs decision salient, so that treated respondents evaluated the survey items with the Dobbs decision top-of-mind. Indeed, the operative pathway is salience-based rather than persuasion-based: by foregrounding the national constitutional signal at the moment of response, the design assumes that salience increases the weight respondents assign to that signal when forming judgments, thereby possibly altering perceptions of the orientation of public opinion and, in turn, potentially yielding adjustments in personal attitudes, especially when the issuing body is perceived as legitimate. The hypotheses and analysis plan were preregistered on the Open Science Framework (OSF): https://osf.io/kuwsn/.

More in detail, the vignette comprised three sections, each designed to activate a specific cognitive response based on the hypotheses of the expressive power of

[2]The survey sample was recruited by the firm Lucid. Extensive tests related to the representativeness of the sample are available in the Supplementary Materials.

institutional decisions.

The first paragraph stated the key elements of the Dobbs decision:
"On June 24, 2022, the Supreme Court of the United States overturned Roe v. Wade, which was the 1973 ruling that established the constitutional right to abortion in the US during the first two trimesters of pregnancy. As a consequence, the right to choose to have an abortion is no longer constitutionally guaranteed. Instead, states get to decide when a woman can have an abortion, if at all, and how far into a pregnancy a woman can obtain an abortion."

This paragraph was intended to heighten salience (i.e., *publicity*, in McAdams' terms) and clarity of audience meaning of the national constitutional signal. Following McAdam's theorization of the expressive power of the law, this signal is expected to lead respondents to infer stronger anti-abortion norms compared to the previous legal framework (i.e., under Roe v. Wade) (H1) and, by updating perceived social costs, to report more negative attitudes (H2) (McAdams, 2015)[3]. By contrast, Oberman's discussion of the expressive power of decisions regarding abortion access directly challenges these predictions: since abortion concerns deeply moralized judgements and because the message of the Dobbs decision (i.e., the removal of abortion from the constitutionally protected rights) is unlikely to stand out against the "background noise" created by states enacting protective legislation, exposure may yield no discernible effect on either perceived public opinion or personal attitudes (H1.1, H2.1) (Oberman, 2022). This paragraph also provides the

[3] *"For example, legislation restricting abortion signals stronger attitudes against abortion. As people update their beliefs, they perceive higher social costs to abortion. An individual expects that more people in her community will ostracize her if they discover that she had an abortion or even if she supports abortion rights. Expecting greater costs, she is slightly less likely to get an abortion, less likely to identify herself as pro-choice, perhaps even more likely to rationalize her true views to conform to the social consensus she observes. If she and others merely speak out less often, then their silence strengthens the perception of a consensus against abortion, further raising the perceived costs of the procedure or of speaking in favor of such rights. As a result, the political stakes for abortion regulation are higher than they would be if the law lacked expressive power".* (McAdams, 2015)

main informational basis for assessing whether pre-existing issue-specific awareness of the Dobbs decision (*Dobbs awareness*) moderates the expressive power of the constitutional signal. Indeed, in this study I treat Dobbs awareness as a scope condition for expressive influence. Following McAdams' argument, expressive effects require publicity and clarity. In other words, people must know about the legal (here constitutional) signal to draw inference about social approval and expected sanctions (McAdams, 2015)[4]. Dobbs awareness thus increases the likelihood that respondents receive and can interpret the national constitutional signal. In line with Zaller's *receive-accept-sample* model, more aware citizens are more likely to draw on such elite cues when forming on-the-spot judgements; accordingly, awareness should increase reliance on the Dobbs signal when reporting perceptions of public opinion orientation (Zaller, 1992). However, this prediction is challenged by the psychological theory of the Elaboration Likelihood Model of persuasion (Petty et al., 1984). This theory predicts that individuals who exhibit a high level of pre-existing knowledge about the decision are likely to have strong prior opinions. Consequently, their attitudes might not be easily altered by being exposed to new information. Conversely, people with limited prior knowledge about the Dobbs decision are more likely to take cues from the piece of information received and therefore more likely to update their beliefs (H3.1). Indeed, it was empirically observed that high levels of information about the Supreme Court decision on Lamb's Chapel v. Center Moriches (1993) increased support for the Court's decision among those for whom the decision was relatively less salient (Hoekstra and Segal, 1996).

The second paragraph reported the composition of the Supreme Court majority that issued Dobbs, highlighting its ideological balance:

[4] *"Of course, law is not informative when an individual is unaware that the law exists, which is often the case. As with any theory of law's influence on behavior, an individual must know of the law in order for it to be influential."*. (McAdams, 2015)

"The majority opinion was written by Justice Samuel Alito and the majority included four other conservative members of the Supreme Court, three of them appointed by former President Donald Trump (Neil Gorsuch, Brett Kavanaugh, and Amy Coney Barrett)."

This paragraph was designed to focus the respondent's attention on perceived legitimacy and representativeness of the Supreme Court, a key scope condition in expressive-power theories. Following the theorization in McAdams and in related literature (McAdams, 2015; Tankard and Paluck, 2017; Tyler and Jackson, 2014), perceptions of the Supreme Court are expected to moderate any expressive effect on perceived public opinion and personal attitudes (H4). Respondents who exhibit greater trust in the Supreme Court and (or) are more likely to consider it a representative institution are expected to be more inclined to align perceptions and attitudes with the decision, whereas those who do not express trust in the Supreme Court and (or) consider it unrepresentative should not. In addition, making the Court's composition salient allows a direct test of whether exposure to such information alters trust and perceived representativeness of the institution itself. The direction of potential change in trust and perceived representativeness of the institution is expected to be moderated by partisanship (Ansolabehere and White, 2020; Bartels and Johnston, 2013; Glick, 2023; Hetherington and Smith, 2007), awareness about the decision, perceived morality of abortion, and abortion attitudes (Gibson, 2024) (H5). The latter hypothesis was not pre-registered and has to be considered exploratory.

The final section highlighted state legislatures as the locus of post-Dobbs abortion policymaking and emphasized one of the key rationales of the Dobbs decision, i.e., to return the issue to state legislatures and voters to enhance representativeness and policy responsiveness. As a counterpoint to this claim, it introduces information about strategic redistricting (gerrymandering) and possible consequential

vote-seat misalignment.

"In support of their decision to overturn Roe v. Wade, Justice Alito and the conservative majority argued they were returning the issue of abortion rights to elected representatives in the states. However, some critics suggest that state legislatures (meaning the legislative body of each state) are not fully representative because of how the US electoral system is structured. Specifically, the party in power at the time of the census can redraw electoral districts to make it extremely unlikely that they lose elections for the next ten years. As a result, they can govern without support from a majority of the people. As of January 2023, 22 state legislatures are controlled by the Republican party, 16 state legislatures are controlled by the Democratic party, and the remaining 12 are split."

This information was intended to activate considerations of procedural fairness and democratic responsiveness at the state level. The expectation is that exposure to such information would reduce perceived representativeness (and possibly trust) in state legislatures (H6), insofar as the passage raises doubts about whether these bodies mirror citizens' preferences (Engstrom, 2013; King and Gelman, 1991). Similarly to H5, H6 was not pre-registered either and has to be considered exploratory.

In addition to the pre-registered moderators (H3, H4), I also included partisanship ideology, whether the respondent's state of residency was classified as red, blue, or swing in the 2020 elections, and whether the state had an abortion ban trigger law in place as further possible moderators, following Clark and colleague's approach (Clark et al., 2024). These robustness checks allow the assessment of whether the treatment effect varies systematically by political or institutional context.

Measures and Analytical Strategy

Immediately after the vignette (at the beginning of the survey module for the treated group, at the end for the control group), respondents self-assessed their prior knowledge of the information presented on a five-point scale (from *none of it* to *all of it*). I used this issue-specific awareness measure as a moderator of the treatment's effect on perceived public opinion and personal attitudes (H3). As an additional manipulation check, at the end of the survey module respondents were asked to identify who authored the Dobbs majority opinion, which provides a factual indicator of attention to and processing of the vignette.

The dependent variables perceived public opinion and personal attitudes about abortion rights were captured using a battery of survey questions that replicates the structure of the General Social Survey[5]. Respondents were asked to mark on a seven-point Likert scale[6] to what extent they think Americans oppose or support abortion access under seven distinct circumstances, distinguishing between elective reasons (i.e., any reason, the woman already has children and does not want any more, the household has a very low income, the woman is not married) and traumatic reasons (i.e., strong chance of serious defect in the fetus, carrying the pregnancy to term would jeopardize the woman's health, rape). Providing respondents with different instances of abortion access reflects the documented evidence that abortion support varies widely based on the underlying reason an abortion is sought (Alvarez and Brehm, 1995; Cook, 2019; Craig et al., 2002; Hoffmann and Johnson, 2005; Osborne et al., 2022). The choice of a seven-point Likert scale, instead of a binary yes/no format, is motivated by its greater accuracy compared to other Likert scales and the possibility for respondents to express more nuanced positions (Cicchetti et al., 1985; Joshi et al., 2015). Measuring perceived public opin-

[5]The General Social Survey is a project of the independent research organization NORC at the University of Chicago.

[6]Differently from GSS, where questioned are designed in a yes/no format.

ion on a polarized issue presents conceptual challenges that differ from measuring personal attitudes. Asking respondents to estimate the percentage of Americans who support a given position is a common approach in work on second-order beliefs (e.g., Leviston et al. (2013); Rabinowitz et al. (2016); Sparkman et al. (2022); Stern et al. (2014)) but it implicitly requires respondents to collapse opinions into a binary support/oppose categorization. By contrast, asking respondents to locate perceived public opinion on a graded support–opposition scale allows them to express uncertainty, ambivalence, or perceptions of mixed sentiment-patterns that are particularly relevant for a multidimensional issue like abortion. This measurement strategy is consistent with prior studies that use Likert-type scales to capture perceived norms (e.g., Prinstein and Wang (2005); Suls et al. (1988); Wyss et al. (2023)) and closely follows Tankard and Paluck's (2017) design, which successfully elicited perceived public support for same-sex marriage using a similar question format. In the context of abortion, where support varies substantially across reasons, a graded scale provides a more nuanced representation of how respondents believe the public differentiates between elective and traumatic circumstances - variation that a point-estimate format would likely neglect.

Respondents were subsequently asked to go through the same survey items, now marking to what extent they themselves oppose or support abortion access. These answers were also combined into a principal component index of abortion attitudes (Cronbach's alpha = 0.92), yielding a single variable employed as a moderator of the vignette's direct effect on trust and perceived representativeness of the Supreme Court (H5). Additionally, perceived morality of abortion was measured using a five-point Likert scale, following the structure used in PEW Research Center's American Abortion Quandary 2022.

Trust in the Supreme Court and state legislatures was measured using a seven-point Likert scale (from strongly mistrust to strongly trust), while a five-point

Likert scale was used for perceived representativeness of these institutions (from do not represent at all to very much represent).

The demographic and ideological data collected reflect the main factors associated with abortion attitudes identified in the literature and include gender (e.g., Huddy et al. (2008)), being a parent (Elder and Greene (2016); Katz-Wise et al. (2010); Nomaguchi and Milkie (2003)), ethnicity, education, rurality, abortion identity label[7] (e.g., Crawford et al. (2022); Jozkowski et al. (2020)), age (e.g., Barringer et al. (2020)), religious denomination (e.g., Evans (2002); Jelen (2009); Sullins (1999)), belief in Biblical literalism[8] (e.g., Adamczyk et al. (2020)), partisanship and ideology (e.g., Hout (1999); Prusaczyk and Hodson (2018); Zucker (1999)).

Data analysis was performed via linear regressions to enhance the interpretability of results, first using the treatment identifier as unique regressor, and then adding demographic and ideological variables as controls to improve the accuracy of the estimates. Given the nature of the dependent variables, (i.e., Likert scale scores) ordered logistic models were also estimated to confirm the robustness of results.

Results

Descriptive statistics and balance check tables are available in the Supplementary Materials.

As for the treatment effect on perceptions of public opinion and personal attitudes, the overall emerging picture points towards weak to non-existent effects, consistent with hypotheses H1.1 and H1.2. Nevertheless, it is worth highlighting

[7]Pro-choice, pro-life, neither pro-choice nor pro-life, equally both.

[8]Compared with other items assessing religion (e.g., religious denomination), Bible literalism better distinguishes between people who may be more devout or conservative in their religious practice, which tends to relate more strongly to abortion attitudes.

that, in the models including control variables, being exposed to the information contained in the vignette reduced personal support for abortion access in case of rape, although with marginal statistical significance (b = -0.23, $p < 0.05$; odds ratio (OR) = 0.72, $p < 0.01$). Other marginally statistically significant results emerged for reduction in personal support for abortion in case the pregnancy can endanger the woman's health (b = -0.17, $p < 0.1$; OR = 0.75, $p < 0.01$) and on the perception that Americans support abortion access in case of rape (b = -0.18, $p < 0.1$ OR = 0.77, $p < 0.05$). (Figure 1.1).

Contrary to H3, Dobbs awareness did not moderate treatment effects; this null finding is consistent with the expectation of more crystallized priors among the highly aware and with the high baseline salience of Dobbs.

As for the moderating effect of trust and perceived representativeness of the Supreme Court, the emerging picture is mixed. Evidence does not support a consistent moderating effect of trust. On the contrary, the more subjects perceive the Supreme Court as a representative institution, the more being exposed to information about the Dobbs decision reduces the perception that Americans support abortion rights for elective causes and the same happens for personal support. (Figure 1.2).

Finally, respondents who read the vignette before answering the survey questions perceived state legislatures as less representative compared to the control group. The effect remains consistent also in the multivariate model (b = -0.16, $p < 0.01$; OR = 0.73, $p < 0.01$). Instead, no treatment effects appear for trust in state legislatures. Less consistent evidence emerges for the Supreme Court. Being exposed to information about the Dobbs decision does not appear to consistently alter perceptions of the Supreme Court (except for a reduction in perceived representativeness, only once controls are added to the model).

As for moderators, abortion attitudes, partisanship, Dobbs awareness and abor-

Figure 1.1: Being exposed to information on the Dobbs decision does not consistently alter perceptions of public opinion and personal attitudes on abortion access rights. The figures report coefficients and 95% confidence intervals for the treatment status dummy variable (1 if treated, 0 otherwise) from ordinary least squares (OLS) univariate models and models including controls. The dependent variables are measured on a seven-point Likert scale score.

Figure 1.2: Perceived representativeness of the Supreme Court (SCOTUS) moderates the treatment effect in the direction of a reduction of perceived public support for abortion access - limited to elective causes. No moderating effect is found for trust in SCOTUS and pre-existing knowledge about the Dobbs decision. The figure reports coefficients and 95% confidence intervals for OLS multivariable models.

tion morality appear to play a role. Indeed, increasing support for abortion access reduced trust in the Supreme Court among the treated (b = -0.20, $p < 0.05$; OR = 0.80, $p < 0.05$). Similarly, identifying as Democrat (compared to Republican) reduced trust in state legislatures among the treated (b = -0.62, $p < 0.05$; OR = 0.466, $p < 0.01$). Finally, increasing pre-existing knowledge about the Dobbs decision and positive beliefs on the morality of abortion reduced perceived representativeness of state legislatures among the treated (b = -0.09, $p < 0.1$; OR = 0.833, $p < 0.1$ for the former; b = -0.08, $p < 0.1$; OR = 0.821, $p < 0.05$ for the latter). (Figure 1.3).

Discussion and Conclusions

Since the landmark 1973 Roe v. Wade decision, abortion access opponents have not based their fight for abortion bans uniquely on the argument that this kind of regulation will deter abortion. Instead, it was often also claimed that restricting abortion access sends a message – specifically that abortion is immoral, thereby aiming at promoting "cultural change". However, whether institutional decisions regarding abortion access have this message-sending capacity - in other words, whether they possess expressive power - is theoretically debated.

The Dobbs decision, i.e., the US Supreme Court decision that removed the right to obtain an abortion from the Constitution, represents a useful empirical setting to investigate whether changes in abortion access protections affect perceived public opinion and personal attitudes on the subject.

To address this question, I performed a survey experiment to isolate the effect of being exposed to information about the Dobbs decision on perceptions of public opinion and personal attitudes about abortion access in seven instances, covering elective and traumatic causes. It is worth highlighting that Dobbs did not ban

Figure 1.3: Effects of the treatment on perceived representativeness and trust in institutions, and moderators. Dots represent bivariate models, diamonds represent models with control variables, and squares represent models with interactions. The figure reports coefficients and 95% confidence intervals for OLS multivariable models.

abortion; instead, it returned authority to the states producing diverging outcomes, as some states imposed bans while others expanded protections. In this study, I treat the national constitutional change as the potential expressive signal, while recognizing that policy consequences are implemented sub-nationally. The design therefore evaluates whether the absence of a constitutional right shifts perceived public opinion and personal attitudes.

The results do not support the hypothesis that the Dobbs decision consistently influenced perceived public opinion or personal attitudes. This aligns with observational evidence from interrupted time series analysis, which shows no changes in personal attitudes before and after Dobbs. However, it contrasts with evidence suggesting a perceived public backlash (Clark et al., 2024).

The only marginally significant direct treatment effect was found in a reduction in personal support for abortion in case of rape. Reductions in perceived public support for abortion in case of rape and in personal support in case the pregnancy seriously endangers the woman's health also emerged, although with even smaller statistical significance. However, it must be stressed that these results appear only when adding demographic and ideological control variables to the model. Although adding control variables reduces possible noise and improves accuracy in the estimates, it opens the possibility that results are induced by 'suppression effects' (also referred to as control-variable-induced increases in estimated effect sizes) (Lenz and Sahn, 2021). I argue that the control variables used have a strong rationale for being included as they are the main correlates of abortion attitudes identified in literature; nevertheless, the possibility that these findings might be driven by statistical artifacts encourages caution in their interpretation.

More robust evidence was found for the moderating role of perceptions of the Supreme Court. Indeed, among treated respondents, increasing perceived representativeness of the Supreme Court was associated with a reduction in perceived

public support and personal support for abortion access for elective reasons. This result reinforces the importance of perceived legitimacy of the issuing bodies for institutional decisions to possess expressive power. However, a limitation of the study is that trust in and perceived representativeness of the Supreme Court were measured after the vignette, and therefore may have been influenced by the treatment itself. This sequencing thus risks introducing bias in their use as moderators. At the same time, pre-treatment measurement would have risked priming respondents to think about the Court in ways that increased its salience even for the control group, especially given that abortion and Dobbs remained highly salient throughout the 2022 midterm elections (Mutz and Mansfield, 2024). Measuring these variables post-treatment can also enhance the realism of the experiment, in that citizens often form judgments about institutional trust precisely when they encounter salient institutional decisions. In this sense, the design captures the joint evaluation process that unfolds when individuals confront a controversial ruling, though moderation results must be interpreted with caution.

Contrary to theoretical expectations, pre-existing knowledge about the Dobbs decision did not moderate the effect of being exposed to information about the Dobbs decision right before answering the survey questions on perceived public opinion or personal attitudes. This suggests that awareness alone is insufficient to shape responses to institutional decisions, possibly because abortion attitudes are deeply entrenched and resistant to heightened salience. Moreover, because Dobbs was widely covered by the media, the control group was almost certainly not "untreated" in an absolute sense. The design therefore identifies the incremental impact of immediate salience relative to ambient exposure. This is likely a conservative estimate that increases the study's realism by mirroring how citizens encounter institutional decisions amid ongoing media and elite discourse. It is also important to recognize that my data captures self-reported Dobbs awareness,

which may not fully reflect actual pre-existing knowledge. This choice is motivated by the fact that introducing factual questions about the Dobbs decision before the treatment vignette would have risked contaminating the experimental design by inducing all respondents to think about the Dobbs decision, thereby increasing its salience in the control group and reducing the ability to detect treatment effects. To partially reduce concerns about measurement validity, I report the estimates obtained from the subsample that passed the check on the respondents' attention to the treatment vignette in the Supplementary Materials. Furthermore, much of the literature on moderation in this context has focused on the type of information received rather than self-reported awareness. For instance, Linos and Twist (2016) found stronger effects when individuals were exposed to one-sided information. Similarly, Clark and colleagues (2024) showed that individuals who learned about Dobbs via social media reported lower support for the ruling and higher perceptions of public support for abortion access compared to those who received information from cable news. Although my data do not distinguish between different sources or framing of information — which I acknowledge as a limitation — I argue that in a study on the expressive power of institutional decisions, the primary focus should be on awareness of the decision itself. In this regard, I turn to Hoekstra and Segal's (1996) findings on (lack of) salience as a scope condition. My results suggest that the high salience of Dobbs may have minimized differences between aware and unaware individuals, reducing the potential for knowledge-based moderation.

The final part of the analysis focused on the effects of a (relatively) unpopular Supreme Court decision on trust in and perceived representativeness of this institution. My findings suggest little-to-no direct effect of the vignette treatment on opinions about the Supreme Court. Observational evidence, however, indicated that the decline in support for the Supreme Court after the Dobbs decision has

persisted over time, moderated by respondents' democratic values (Gibson, 2024). The impossibility for me to control for such variable represents a limitation worth acknowledging. Among the other potential moderators, attitudes towards abortion access was the only one exhibiting statistical significance. Indeed, among the treated, more progressive opinions on abortion access were associated with a reduction in trust in the Supreme Court. Moreover, I found no moderating effect for partisanship, ideology, or awareness of the Dobbs decision, consistently with observational evidence from Gibson (2024). Overall, this finding suggests that trust in the Supreme Court may be more closely tied to policy-specific attitudes rather than general political identities and reinforces the idea that policy-specific attitudes can override partisan cues in shaping institutional trust.

Finally, an innovative and exploratory element of this study was the choice of including information about the new role of state legislatures in abortion policy-making deriving from the Dobbs decision to test the impact of such decision on trust and perceived representativeness of state legislatures. My data supports a direct effect of the vignette treatment in terms of reduction of perceived representativeness. This result, possibly prompted by specific information on strategic redistricting, reinforces the concept that procedural fairness and democratic procedures contribute to shaping institutional perceptions. Nevertheless, it is worth acknowledging that the multi-faceted nature of the treatment prevents a precise identification of which specific piece of information drove this effect. The vignette presented multiple aspects of the Dobbs decision, including its rationale of returning the issue to the states, the composition of the Supreme Court majority, and the issue of gerrymandering. This design choice was intentional: the theoretical framework on the expressive power of institutional decisions is itself multi-layered, emphasizing that expressive influence depends simultaneously on publicity, clarity of audience meaning, salience, and perceived legitimacy (McAdams, 2015). Present-

ing several elements together thus mirrors both the structure of the theory and the real-world information environment surrounding Dobbs, where institutional cues are encountered in bundles rather than isolation. At the same time, this approach comes with limitations, as it remains impossible to fully disentangle whether the observed decline in perceived representativeness was primarily driven by information about gerrymandering or by other elements of the vignette. Future research could isolate these components to better assess their individual contributions to shaping institutional perceptions. As for moderators, perhaps unsurprisingly given the composition of the treatment, identifying as Democrat or Independent reduced trust in state legislatures among the treated. More interestingly, increasing awareness of the Dobbs decision and the perception that abortion is morally acceptable reduced perceived representativeness of state legislatures among the treated. One possible explanation is that awareness of Dobbs heightened sensitivity to the implications of returning abortion policy to the states. Similarly, respondents who view abortion as morally acceptable may have reacted negatively to the idea of states controlling abortion laws, particularly if they associate state legislatures with restrictive policies. Overall, this finding highlights the importance of pre-existing knowledge and moral evaluations in shaping institutional perceptions.

A key limitation of this study concerns the locus of expressive power. Dobbs did not itself ban abortion; it returned authority to the states, yielding diverging outcomes, as some states imposed bans while others expanded protections. The present design therefore identifies the expressive impact of the national constitutional signal but cannot partition the effects of specific state-level policies. Future research should implement survey designs that orthogonalize the two cues, i.e., the national constitutional change and state policies (e.g., bans versus expansions), to disentangle their relative and interactive expressive power.

As a final consideration, this study invites reflection on the extent to which its

findings can be generalized. The main goal of this study was to experimentally test the expressive power of institutional decisions in the context of an unpopular ruling running against prevailing public opinion. The single-case structure of this study and the deeply polarizing and morally rooted nature of abortion limit generalizability, and the null findings may partly reflect the fact that abortion constitutes a least-likely case for expressive effects given its moral salience and attitudes stability. Nevertheless, precisely because of these features, this case contributes to the broader debate on the conditions under which institutional decisions influence public opinion and helps identify a theoretical lower bound for expressive influence. More broadly, the results highlight the limits of informational exposure effects in deeply polarized policy areas and call for further research on different culture war issues and on less polarizing matters. Perhaps most importantly, they highlight the need for a deeper understanding of the conditions that make institutional decisions shape the way we think and behave.

References

Amy Adamczyk, Chunrye Kim, and Leevia Dillon. Examining public opinion about abortion: a mixed-methods systematic review of research over the last 15 years. *Sociological Inquiry*, 90(4):920–954, 2020.

R Michael Alvarez and John Brehm. American ambivalence towards abortion policy: Development of a heteroskedastic probit model of competing values. *American Journal of Political Science*, pages 1055–1082, 1995.

Stephen D Ansolabehere and Ariel White. Policy, politics, and public attitudes toward the Supreme Court. *American Politics Research*, 48(3):365–376, 2020.

Kevin Arceneaux. Can partisan cues diminish democratic accountability? *Political Behavior*, 30:139–160, 2008.

Mandi Nicole Barringer, J Edward Sumerau, and David A Gay. Generational variation in young adults' attitudes toward legal abortion: Contextualizing the role of religion. *Social Currents*, 7(3):279–296, 2020.

Brandon L Bartels and Christopher D Johnston. On the ideological foundations of Supreme Court legitimacy in the american public. *American Journal of Political Science*, 57(1):184–199, 2013.

Jeremiah Castle. New fronts in the culture wars? Religion, partisanship, and polarization on religious liberty and transgender rights in the United States. *American Politics Research*, 47(3):650–679, 2019.

Robert B Cialdini and Noah J Goldstein. Social influence: Compliance and conformity. *Annu. Rev. Psychol.*, 55(1):591–621, 2004.

Domenic V Cicchetti, Donald Shoinralter, and Peter J Tyrer. The effect of number of rating scale categories on levels of interrater reliability: A Monte Carlo investigation. *Applied Psychological Measurement*, 9(1):31–36, 1985.

Chelsey S Clark, Elizabeth Levy Paluck, Sean J Westwood, Maya Sen, Neil Malhotra, and Stephen Jessee. Effects of a us Supreme Court ruling to restrict abortion rights. *Nature Human Behaviour*, 8(1):63–71, 2024.

Philip E Converse and Gregory B Markus. Plus ca change. . . : The new CPS election study panel. *American Political Science Review*, 73(1):32–49, 1979.

Elizabeth Adell Cook. *Between two absolutes: Public opinion and the politics of abortion*. Routledge, 2019.

Stephen C Craig, James G Kane, and Michael D Martinez. Sometimes you feel like a nut, sometimes you don't: Citizens' ambivalence about abortion. *Political Psychology*, 23(2):285–301, 2002.

Brandon L Crawford, Kristen N Jozkowski, Ronna C Turner, and Wen-Juo Lo. Examining the relationship between Roe v. Wade knowledge and sentiment across political party and abortion identity. *Sexuality Research and Social Policy*, 19 (3):837–848, 2022.

Robert A Dahl. Decision-making in a democracy: The Supreme Court as a national policy-maker. *J. Pub. L.*, 6:279, 1957.

Cameron Deal. Bound by bostock: The effect of policies on attitudes. *Economics Letters*, 217:110656, 2022.

Laurel Elder and Steven Greene. The politics of Walmart moms: Parenthood and political attitudes in the 2012 election. *Journal of Women, Politics & Policy*, 37(4):369–393, 2016.

Erik J Engstrom. *Partisan gerrymandering and the construction of American democracy*. University of Michigan Press, 2013.

John H Evans. Polarization in abortion attitudes in US religious traditions, 1972–1998. In *Sociological Forum*, volume 17, pages 397–422. Springer, 2002.

Andrew R Flores and Scott Barclay. Backlash, consensus, legitimacy, or polarization: The effect of same-sex marriage policy on mass attitudes. *Political Research Quarterly*, 69(1):43–56, 2016.

Charles H Franklin and Liane C Kosaki. Republican schoolmaster: The US Supreme Court, public opinion, and abortion. *American Political Science Review*, 83(3):751–771, 1989.

James L Gibson. Do the effects of unpopular Supreme Court rulings linger? the Dobbs decision rescinding abortion rights. *American Political Science Review*, pages 1–8, 2024.

David Glick. Is the Supreme Court's legitimacy vulnerable to intense appointment politics? Democrats' changed views around justice Ginsburg's death. *Journal of Law and Courts*, 11(1):104–115, 2023.

Donald Michael Gooch. Ideological polarization on the supreme court: Trends in the court's institutional environment and across regimes, 1937-2008. *American Politics Research*, 43(6):999–1040, 2015.

Paul Goren and Christopher Chapp. Moral power: How public opinion on culture war issues shapes partisan predispositions and religious orientations. *American Political Science Review*, 111(1):110–128, 2017.

Christopher Hare, David A Armstrong, Ryan Bakker, Royce Carroll, and Keith T Poole. Using Bayesian Aldrich-McKelvey scaling to study citizens' ideological

preferences and perceptions. *American Journal of Political Science*, 59(3):759–774, 2015.

Marc J Hetherington and Joseph L Smith. Issue preferences and evaluations of the US Supreme Court. *Public Opinion Quarterly*, 71(1):40–66, 2007.

Valerie J Hoekstra and Jeffrey A Segal. The shepherding of local public opinion: The Supreme Court and Lamb's Chapel. *The Journal of Politics*, 58(4):1079–1102, 1996.

John P Hoffmann and Sherrie Mills Johnson. Attitudes toward abortion among religious traditions in the United States: Change or continuity? *Sociology of Religion*, 66(2):161–182, 2005.

Marc Hooghe and Cecil Meeusen. Is same-sex marriage legislation related to attitudes toward homosexuality? Trends in tolerance of homosexuality in european countries between 2002 and 2010. *Sexuality Research and Social Policy*, 10(4): 258–268, 2013.

Michael Hout. Abortion politics in the United States, 1972–1994: From single issue to ideology. *Gender Issues*, 17(2):3–34, 1999.

Mala Htun and Francesca R Jensenius. Expressive power of anti-violence legislation: Changes in social norms on violence against women in mexico. *World Politics*, 74(1):1–36, 2022.

Leonie Huddy, Erin Cassese, and Mary-Kate Lizotte. Gender, public opinion, and political reasoning. *Political women and American democracy*, pages 31–49, 2008.

Ted G Jelen. Religion and American public opinion: Social issues. 2009.

Timothy R Johnson and Andrew D Martin. The public's conditional response to Supreme Court decisions. *American Political Science Review*, 92(2):299–309, 1998.

Ankur Joshi, Saket Kale, Satish Chandel, and D Kumar Pal. Likert scale: Explored and explained. *British journal of applied science & technology*, 7(4):396–403, 2015.

Kristen N Jozkowski, Brandon L Crawford, Ronna C Turner, and Wen-Juo Lo. Knowledge and sentiments of Roe v. Wade in the wake of justice Kavanaugh's nomination to the US Supreme Court. *Sexuality Research and Social Policy*, 17: 285–300, 2020.

Joshua L Kalla and David E Broockman. The minimal persuasive effects of campaign contact in general elections: Evidence from 49 field experiments. *American Political Science Review*, 112(1):148–166, 2018.

Sabra L Katz-Wise, Heather A Priess, and Janet S Hyde. Gender-role attitudes and behavior across the transition to parenthood. *Developmental psychology*, 46 (1):18, 2010.

Mitchell Killian and Clyde Wilcox. Do abortion attitudes lead to party switching? *Political Research Quarterly*, 61(4):561–573, 2008.

Gary King and Andrew Gelman. Systemic consequences of incumbency advantage in US House elections. *American Journal of Political Science*, pages 110–138, 1991.

Lester R Kurtz. Culture wars: The struggle to define America., 1994.

Daniel J Lee and Michael Brady. Coordination and party change in the United States. *American Politics Research*, 48(6):807–821, 2020.

Gabriel S Lenz and Alexander Sahn. Achieving statistical significance with control variables and without transparency. *Political Analysis*, 29(3):356–369, 2021.

Zoe Leviston, Iain Walker, and Sarah Morwinski. Your opinion on climate change might not be as common as you think. *Nature Climate Change*, 3(4):334–337, 2013.

Katerina Linos and Kimberly Twist. The Supreme Court, the media, and public opinion: Comparing experimental and observational methods. *The Journal of Legal Studies*, 45(2):223–254, 2016.

Thomas R Marshall. The Supreme Court as an opinion leader: Court decisions and the mass public. *American Politics Quarterly*, 15(1):147–168, 1987.

Richard H McAdams. *The expressive powers of law: Theories and limits*. Harvard University Press, 2015.

Dale T Miller and Deborah A Prentice. The construction of social norms and standards. 1996.

Diana C Mutz and Edward D Mansfield. Inflation in 2022 did not affect congressional voting, but abortion did. *Proceedings of the National Academy of Sciences*, 121(21):e2319512121, 2024.

Kei M Nomaguchi and Melissa A Milkie. Costs and rewards of children: The effects of becoming a parent on adults' lives. *Journal of marriage and family*, 65(2):356–374, 2003.

Barbara Norrander and Clyde Wilcox. Trends in abortion attitudes: from Roe to Dobbs. *Public Opinion Quarterly*, 87(2):427–458, 2023.

Michelle Oberman. *Her body, our laws: On the front lines of the abortion war, from El Salvador to Oklahoma*. Beacon Press, 2018.

Michelle Oberman. What will and won't happen when abortion is banned. *Journal of Law and the Biosciences*, 9(1):lsac011, 2022.

Danny Osborne, Yanshu Huang, Nickola C Overall, Robbie M Sutton, Aino Petterson, Karen M Douglas, Paul G Davies, and Chris G Sibley. Abortion attitudes: An overview of demographic and ideological differences. *Political Psychology*, 43:29–76, 2022.

Benjamin I Page and Robert Y Shapiro. *The rational public: Fifty years of trends in Americans' policy preferences*. University of Chicago Press, 2010.

Elizabeth Levy Paluck. Reducing intergroup prejudice and conflict using the media: a field experiment in Rwanda. *Journal of personality and social psychology*, 96(3):574, 2009.

S. Penn and Berland Associates. C-SPAN Supreme Court Survey, July 9 2009. URL https://sites.c-span.org/camerasInTheCourt/pdf/C-.

Richard E Petty, John T Cacioppo, et al. Source factors and the elaboration likelihood model of persuasion. *Advances in consumer research*, 11(1):668–672, 1984.

PEW Research Center. America's abortion quandary, May 6 2022. URL https://www.pewresearch.org/religion/2022/05/06/americas-abortion-quandary/. Numbers, Facts and Trends Shaping Your World.

Keith T Poole and Howard Rosenthal. *Congress: A political-economic history of roll call voting*. Oxford University Press, USA, 2000.

Mitchell J Prinstein and Shirley S Wang. False consensus and adolescent peer contagion: Examining discrepancies between perceptions and actual reported

levels of friends' deviant and health risk behaviors. *Journal of abnormal child psychology*, 33:293–306, 2005.

Elvira Prusaczyk and Gordon Hodson. Left-right differences in abortion policy support in America: Clarifying the role of sex and sexism in a nationally representative 2016 sample. *Personality and Individual Differences*, 127:22–25, 2018.

Robert D Putnam and David E Campbell. *American grace: How religion divides and unites us*. Simon and Schuster, 2012.

Mitchell Rabinowitz, Lauren Latella, Chadly Stern, and John T Jost. Beliefs about childhood vaccination in the united states: Political ideology, false consensus, and the illusion of uniqueness. *PloS one*, 11(7):e0158382, 2016.

Jane S Schacter. Courts and the politics of backlash: Marriage equality litigation, then and now. *S. Cal. L. Rev.*, 82:1153, 2008.

Muzafer Sherif. The psychology of social norms. *Haper and Row*, 1936.

Gregg Sparkman, Nathan Geiger, and Elke U Weber. Americans experience a false social reality by underestimating popular climate policy support by nearly half. *Nature communications*, 13(1):4779, 2022.

Chadly Stern, Tessa V West, John T Jost, and Nicholas O Rule. "Ditto heads" do conservatives perceive greater consensus within their ranks than liberals? *Personality and Social Psychology Bulletin*, 40(9):1162–1177, 2014.

D Paul Sullins. Catholic/protestant trends on abortion: Convergence and polarity. *Journal for the Scientific Study of Religion*, pages 354–369, 1999.

Jerry Suls, Choi K Wan, and Glenn S Sanders. False consensus and false uniqueness in estimating the prevalence of health-protective behaviors. *Journal of Applied Social Psychology*, 18(1):66–79, 1988.

Cass R Sunstein. On the expressive function of law. *University of Pennsylvania law review*, 144(5):2021–2053, 1996.

Margaret E Tankard and Elizabeth Levy Paluck. The effect of a Supreme Court decision regarding gay marriage on social norms and personal attitudes. *Psychological science*, 28(9):1334–1344, 2017.

Tom R Tyler and Jonathan Jackson. Popular legitimacy and the exercise of legal authority: Motivating compliance, cooperation, and engagement. *Psychology, public policy, and law*, 20(1):78, 2014.

Annika M Wyss, Sebastian Berger, and Daria Knoch. Pro-environmental behavior in a common-resource dilemma: The role of beliefs. *Journal of Environmental Psychology*, 92:102160, 2023.

John Zaller. *The nature and origins of mass opinion*. Cambridge university press, 1992.

Gail Sahar Zucker. Attributional and symbolic predictors of abortion attitudes 1. *Journal of Applied Social Psychology*, 29(6):1218–1245, 1999.

Supplementary Materials

Survey Characteristics and Representativeness of the Data

The survey data analyzed are part of a module of an omnibus survey administered between February 7th and February 10th, 2023.
The firm Lucid was tasked to recruit a sample of 2,000 American adults, representative on key demographic characteristics, including gender, age, education, household income, ethnicity, and region. These participants were recruited from Lucid's preexisting panel of survey takers. The survey was conducted on Qualtrics, with the data collected and stored on this platform in line with data protection guidelines. Respondents were given the standard incentives that Lucid provides to all its panel members who complete online surveys. The project received approval from the institutional Ethics Committee Review.
The absence of ethical concerns was justified as follows. Most questions on the survey are normal in the scope of everyday social and political conversations; as a result, there is no risk posed by these questions that exceeds what American adults would expect to encounter in normal life. Participants signed informed and voluntary consent prior to beginning the survey, which was stored alongside the rest of the data.

Table S S1 compares the distribution of key characteristics in the final sample available for the analysis and the US population, as per the most recent census data and other relevant sources.

Table S1: Representativity of the sample in comparison with the US population for gender, race, age, education, political affiliation, religion, abortion identity label and state of residency.

Variable	**Sample (n = 1,536)**	**Population**	**Source**
Gender			
Female	776 (50.5%)	168,059,348 (50.4%)	American Community Survey (ACS) 2022
Male	736 (47.9%)	165,228,214 (49.6%)	
Other	23 (1.5%)	–	
Hispanic ethnicity			
Hispanic	187 (12.2%)	63,553,639 (19.1%)	ACS 2022
Race			
White	1,159 (75.5%)	202,889,017 (60.9%)	ACS 2022
Black or African American	180 (11.7%)	40,603,656 (12.2%)	
Other	197 (12.8%)	–	
Age			
18–34	443 (28.84%)	67,679,304 (26.84%)	ACS 2022
35–54	536 (34.90%)	84,524,090 (33.52%)	

Variable	Sample	Population	Source
55+	557 (36.26%)	99,949,783 (39.64%)	
Education (25+)			
Less than high school	48 (3.1%)	20,673,642 (9%)	ACS 2022
High school or equivalent	412 (26.8%)	64,317,998 (28%)	
Some college/associates	543 (35.4%)	57,426,784 (25%)	
Bachelor's degree	352 (22.9%)	52,832,642 (23%)	
Graduate degree	175 (11.4%)	32,158,999 (14%)	
Political Affiliation			
Republican	468 (30.5%)	27%	Gallup 2023
Democrat	563 (36.7%)	28%	
Independent/Other	406 (26.4%)	44%	
Religion			
Catholic	413 (26.9%)	20.8%	Pew 2014
Evangelical	227 (14.8%)	25.4%	
Mainline Protestant	288 (18.8%)	14.7%	
Agnostic/Atheist	211 (13.7%)	7.1%	
Other	397 (25.8%)	–	

Variable	Sample	Population	Source
Abortion Identity Label			
Pro-life	448 (29.2%)	44%	Gallup 2023
Pro-choice	606 (39.5%)	52%	
Equally both	363 (23.6%)	3%	
No preference/neither	118 (7.7%)	–	
State			
Alabama	24 (1.56%)	5,074,296 (1.52%)	US Census 2022
Alaska	6 (0.39%)	733,583 (0.22%)	
Arizona	51 (3.32%)	7,359,197 (2.21%)	
Arkansas	21 (1.37%)	3,045,637 (0.91%)	
California	130 (8.46%)	39,029,342 (11.71%)	
Colorado	35 (2.28%)	5,839,926 (1.75%)	
Connecticut	15 (0.98%)	3,626,205 (1.09%)	
Delaware	4 (0.26%)	1,018,396 (0.31%)	
District of Columbia	4 (0.26%)	671,803 (0.20%)	
Florida	103 (6.71%)	22,244,823 (6.67%)	
Georgia	66 (4.30%)	10,912,876 (3.27%)	
Hawaii	2 (0.13%)	1,440,196 (0.43%)	

Variable	Sample	Population	Source
Idaho	8 (0.52%)	1,939,033 (0.58%)	
Illinois	47 (3.06%)	12,582,032 (3.78%)	
Indiana	39 (2.54%)	6,833,037 (2.05%)	
Iowa	6 (0.39%)	3,200,517 (0.96%)	
Kansas	12 (0.78%)	2,937,150 (0.88%)	
Kentucky	26 (1.69%)	4,512,310 (1.35%)	
Louisiana	19 (1.24%)	4,590,241 (1.38%)	
Maine	11 (0.72%)	1,385,340 (0.42%)	
Maryland	29 (1.89%)	6,164,660 (1.85%)	
Massachusetts	21 (1.37%)	6,981,974 (2.09%)	
Michigan	46 (2.99%)	10,034,113 (3.01%)	
Minnesota	15 (0.98%)	5,717,184 (1.72%)	
Mississippi	23 (1.50%)	2,940,057 (0.88%)	
Missouri	17 (1.11%)	6,177,957 (1.85%)	
Montana	4 (0.26%)	1,122,867 (0.34%)	
Nebraska	11 (0.72%)	1,967,923 (0.59%)	
Nevada	12 (0.78%)	3,177,772 (0.95%)	
New Hampshire	5 (0.33%)	1,395,231 (0.42%)	

Variable	Sample	Population	Source
New Jersey	54 (3.52%)	9,261,699 (2.78%)	
New Mexico	14 (0.91%)	2,113,344 (0.63%)	
New York	131 (8.53%)	19,677,151 (5.90%)	
North Carolina	48 (3.12%)	10,698,973 (3.21%)	
North Dakota	2 (0.13%)	779,261 (0.23%)	
Ohio	68 (4.43%)	11,756,058 (3.53%)	
Oklahoma	22 (1.43%)	4,019,800 (1.21%)	
Oregon	15 (0.98%)	4,240,137 (1.27%)	
Pennsylvania	69 (4.49%)	12,972,008 (3.89%)	
Rhode Island	5 (0.33%)	1,093,734 (0.33%)	
South Carolina	26 (1.69%)	5,282,634 (1.59%)	
South Dakota	4 (0.26%)	909,824 (0.27%)	
Tennessee	33 (2.15%)	7,051,339 (2.12%)	
Texas	97 (6.32%)	30,029,572 (9.01%)	
Utah	14 (0.91%)	3,380,800 (1.01%)	
Vermont	6 (0.39%)	647,064 (0.19%)	
Virginia	48 (3.12%)	8,683,619 (2.61%)	
Washington	23 (1.50%)	7,785,786 (2.34%)	

Variable	Sample	Population	Source
West Virginia	16 (1.04%)	1,775,156 (0.53%)	
Wisconsin	27 (1.76%)	5,892,539 (1.77%)	
Wyoming	2 (0.13%)	581,381 (0.17%)	

Questions Wording

(Perceived status quo norms) To what extent do you think **Americans** oppose or support the right of a woman to choose to have an abortion ...

1. ... if the woman wants it for any reason?

2. ... if there is a strong chance of serious defect in the baby?

3. ... if the woman's own health is seriously endangered by the pregnancy?

4. ... if the woman is married and does not want any more children?

5. ... if the family has a very low income and cannot afford any more children?

6. ... if the woman became pregnant as a result of rape?

7. ... if the woman is not married and does not want to marry the man?

The seven instances are grouped in a grid and the respondent can choose from the following options:

1. Strongly oppose

2. Oppose

3. Somewhat oppose

4. Neither oppose nor support

5. Somewhat support

6. Support

7. Strongly support

(Personal attitudes) Now, based on **your personal opinion**, to what extent do you oppose or support the right of a woman to choose to have an abortion ...

1. ...if the woman wants it for any reason?
2. ...if there is a strong chance of serious defect in the baby?
3. ...if the woman's own health is seriously endangered by the pregnancy?
4. ...if the woman is married and does not want any more children?
5. ...if the family has a very low income and cannot afford any more children?
6. ...if the woman became pregnant as a result of rape?
7. ...if the woman is not married and does not want to marry the man?

The seven instances are grouped in a grid and the respondent can choose from the following options:

1. Strongly oppose
2. Oppose
3. Somewhat oppose
4. Neither oppose nor support
5. Somewhat support
6. Support
7. Strongly support

(Personal attitudes, morality) Choose the statement that best represents your opinion: *I personally think that having an abortion is ...*

1. Morally acceptable in all cases
2. Morally acceptable in most cases
3. Morally wrong in most cases
4. Morally wrong in all cases
5. Not a moral issue

(Trust in the Supreme Court) To what extent do you mistrust or trust the US Supreme Court as an institution?

1. Strongly mistrust
2. Mistrust
3. Somewhat mistrust
4. Neither mistrust nor trust
5. Somewhat trust
6. Trust
7. Strongly trust

(Perceived representativeness of the Supreme Court) To what extent do you think decisions made by the US Supreme Court do or do not represent public opinion in the United States?

1. Very much represent public opinion
2. Somewhat represent public opinion
3. Now and then represent public opinion

4. Hardly represent public opinion

5. Do not represent public opinion at all

(Trust in state legislatures) To what extent do you mistrust or trust state legislatures as an institution?

1. Strongly mistrust

2. Mistrust

3. Somewhat mistrust

4. Neither mistrust nor trust

5. Somewhat trust

6. Trust

7. Strongly trust

(Perceived representativeness of state legislatures) To what extent do you think decisions made by state legislatures do or do not represent public opinion in the state?

1. Very much represent public opinion

2. Somewhat represent public opinion

3. Now and then represent public opinion

4. Hardly represent public opinion

5. Do not represent public opinion at all

(Article) Please read the following article carefully and consider its implications. Then, answer the questions.

"On June 24, 2022, the Supreme Court of the United States overturned Roe v. Wade, which was the 1973 ruling that established the constitutional right to abortion in the US during the first two trimesters of pregnancy. As a consequence, the right to choose to have an abortion is no longer constitutionally guaranteed. Instead, states get to decide when a woman can have an abortion, if at all, and how far into a pregnancy a woman can obtain an abortion.

The majority opinion was written by Justice Samuel Alito and the majority included four other conservative members of the Supreme Court, three of them appointed by former President Donald Trump (Neil Gorsuch, Brett Kavanaugh, and Amy Coney Barrett).

In support of their decision to overturn Roe v. Wade, Justice Alito and the conservative majority argued they were returning the issue of abortion rights to elected representatives in the states. However, some critics suggest that state legislatures (meaning the legislative body of each state) are not fully representative because of how the US electoral system is structured. Specifically, the party in power at the time of the census can redraw electoral districts to make it extremely unlikely that they lose elections for the next ten years. As a result, they can govern without support from a majority of the people.

As of January 2023, 22 state legislatures are controlled by the Republican party, 16 state legislatures are controlled by the Democratic party, and the remaining 12 are split.".

(Knowledge) How much of the information in this article did you know beforehand?

1. All of it

2. Most of it

3. Some of it

4. Very little of it

5. None of it

(Gender) What is your gender?

1. Male

2. Female

3. Non-binary / third gender

4. Prefer not to say

(Parent) Do you have children?

1. Yes

2. No

(Hispanic) Are you of Hispanic, Latino, or Spanish origin?

1. Yes

2. No

(Race) Which racial or ethnic group best describes you? You may choose one or more races.

1. White

2. Black or African-American

3. Asian or Asian American

4. Native American
5. Middle Eastern or Middle Eastern American
6. Pacific Islander
7. Other (specify)

(Rurality) Would say that you live in an urban, suburban, or rural area?

1. Urban
2. Suburban
3. Rural

(Religion) What is your religious identity?

1. Mainline Protestant Christian
2. Evangelical Protestant Christian
3. Catholic Christian
4. Muslim
5. Jewish
6. Hindu
7. Buddhist
8. Agnostic
9. Atheist
10. Other (specify)

(Biblical literalism) Which of these statements comes closest to describing your feelings about the Bible?

1. The Bible represents the literal word of God
2. The Bible represents the word of God, although not literal
3. The Bible was written by men
4. I do not know whether the Bible represents the literal word of God or not

(Education) What is the highest level of school you have completed or the highest degree you have received? If currently enrolled, select the highest degree received to date.

1. Less than high school – No diploma
2. High school graduate – High school diploma or equivalent (For example: GED)
3. Some college, no degree
4. Associate degree in college – Occupational/vocational program
5. Associate degree in college – Academic program
6. Bachelor's degree (For example: BA, BS)
7. Master's degree (For example: MA, MS, MEd, MSW, MBA)
8. Professional school Degree (For example: MD, DDS, DVM, LLB, JD)
9. Doctorate degree (For example: PhD, EdD)
10. Other (specify)

(Abortion identity label) With respect to the issue of abortion, would you consider yourself to be ...

1. Pro-life
2. Pro-choice
3. Equally both
4. Neither

(Political affiliation) Do you consider yourself to be a Democrat, a Republican, an Independent, or none of these?

1. Democrat
2. Republican
3. Independent
4. None of the above
5. Don't know

(Ideology) Generally speaking, do you consider yourself a liberal, a moderate, or a conservative?

1. Strongly liberal
2. Moderately liberal
3. Moderate
4. Moderately conservative
5. Strongly conservative
6. Don't know

Results Tables

Table S2: Descriptive statistics and balance check table

Variable		**Control (n = 762)**	**Treated (n = 774)**	**Total (n = 1,536)**
Gender				
	Female	381 (50.0%)	395 (51.0%)	776 (50.5%)
	Male	374 (49.1%)	362 (46.8%)	736 (47.9%)
	Other	7 (0.9%)	17 (2.2%)	24 (1.6%)
				p = 0.504
Parent		447 (59%)	444 (57%)	891 (58%)
				p = 0.585
Hispanic ethnicity		98 (12.9%)	89 (11.5%)	187 (12.2%)
				p = 0.414
Race				
	White	586 (76.9%)	573 (74.0%)	1,159 (75.5%)
	Black or African American	80 (10.5%)	100 (12.9%)	180 (11.7%)
	Other	96 (12.6%)	101 (13.0%)	197 (12.8%)
				p = 0.301
Age (mean ± SD)		46.98 ± 16.90	46.48 ± 17.08	46.73 ± 16.98

(continued)

Variable		Control	Treated	Total
				p = 0.561
Rurality				
	Urban	238 (31.2%)	242 (31.3%)	480 (31.3%)
	Suburban	353 (46.3%)	349 (45.1%)	702 (45.7%)
	Rural	171 (22.4%)	182 (23.5%)	353 (23.0%)
				p = 0.852
Bible literalism				
	Literal word of God	196 (25.7%)	200 (25.8%)	396 (25.8%)
	Not literal	183 (24.0%)	197 (25.5%)	380 (24.7%)
	Not word of God	52 (6.8%)	45 (5.8%)	97 (6.3%)
	Do not know	26 (3.4%)	29 (3.7%)	55 (3.6%)
				p = 0.798
Political affiliation				
	Republican	241 (31.6%)	227 (29.3%)	468 (30.5%)
	Democrat	273 (35.8%)	290 (37.5%)	563 (36.7%)
	Independent/Other	202 (26.5%)	204 (26.4%)	406 (26.4%)

(continued)

Variable		Control	Treated	Total
				p = 0.630
Ideology				
	Strongly liberal	93 (12.2%)	103 (13.3%)	196 (12.8%)
	Moderately liberal	113 (14.8%)	115 (14.9%)	228 (14.8%)
	Moderate	278 (36.5%)	275 (35.5%)	553 (36.0%)
	Moderately conservative	126 (16.5%)	118 (15.3%)	244 (15.9%)
	Strongly conservative	119 (15.6%)	119 (15.4%)	238 (15.5%)
				p = 0.809
Abortion identity label				
	Pro-life	213 (28.0%)	235 (30.4%)	448 (29.2%)
	Pro-choice	297 (39.0%)	309 (39.9%)	606 (39.5%)
	Equally both	185 (24.3%)	178 (23.0%)	363 (23.6%)
	No preference/neither	67 (8.8%)	51 (6.6%)	118 (7.7%)
				p = 0.339
Education				
	< High school	26 (3.4%)	22 (2.8%)	48 (3.1%)

(continued)

Variable		Control	Treated	Total
	High school or equiv.	225 (29.5%)	187 (24.2%)	412 (26.8%)
	Some college/assoc.	246 (32.3%)	297 (38.4%)	543 (35.4%)
	Bachelor's degree	166 (21.8%)	186 (24.0%)	352 (22.9%)
	Graduate degree	96 (12.6%)	79 (10.2%)	175 (11.4%)
				p = 0.045
Religion				
	Catholic	200 (26.2%)	213 (27.5%)	413 (26.9%)
	Evangelical	105 (13.8%)	122 (15.8%)	227 (14.8%)
	Mainline Protestant	152 (19.9%)	136 (17.6%)	288 (18.8%)
	Agnostic/Atheist	116 (15.2%)	95 (12.3%)	95 (13.7%)
	Other	189 (24.8%)	208 (26.9%)	397 (25.8%)
				p = 0.242

Table S3: Items scores (mean ± standard deviation, p-value from the t-test on equality of means)

Item	**Control (n = 762)**	**Treated (n = 774)**	**p-value**
Perceived status quo norms			
To what extent do you think Americans oppose or support the right of a woman to choose to have an abortion...			
...if the woman wants it for any reason?	0.117 ± 2.027	0.085 ± 1.971	0.7562
...if there is a strong chance of serious defect in the baby?	0.946 ± 1.789	0.974 ± 1.751	0.7553
...if the woman's own health is seriously endangered by the pregnancy?	1.398 ± 1.724	1.415 ± 1.615	0.8411
...if the woman is married and does not want any more children?	-0.133 ± 2.125	-0.1124 ± 2.007	0.8485
...if the family has a very low income and cannot afford any more children?	0.096 ± 1.949	0.062 ± 1.920	0.7322
...if the woman became pregnant as a result of rape?	1.478 ± 1.734	1.361 ± 1.764	0.1894

Item	Control	Treated	p-value
...if the woman is not married and does not want to marry the man?	-0.074 ± 2.018	-0.071 ± 1.945	0.9808
Personal attitudes			
...if the woman wants it for any reason?	0.151 ± 2.195	0.142 ± 2.206	0.9389
...if there is a strong chance of serious defect in the baby?	1.134 ± 1.828	1.078 ± 1.911	0.5540
...if the woman's own health is seriously endangered by the pregnancy?	1.585 ± 1.715	1.528 ± 1.405	0.5235
...if the woman is married and does not want any more children?	0.095 ± 2.220	0.048 ± 2.219	0.6795
...if the family has a very low income and cannot afford any more children?	0.251 ± 2.158	0.230 ± 2.161	0.8512
...if the woman became pregnant as a result of rape?	1.576 ± 1.769	1.450 ± 1.870	0.1755
...if the woman is not married and does not want to marry the man?	0.083 ± 2.195	0.140 ± 2.205	0.6126
Personal attitudes, morality	0.159 ± 1.289	0.193 ± 1.324	0.6129

Item	**Control**	**Treated**	**p-value**
Trust in the US Supreme Court	-0.333 ± 1.673	-0.479 ± 1.734	0.0933
SCOTUS represents public opinion	0.049 ± 1.118	-0.035 ± 1.109	0.1422
Trust in state legislatures	-0.470 ± 1.538	-0.580 ± 1.584	0.1664
State legislature represents public opinion	0.091 ± 1.046	-0.035 ± 1.051	0.0192

Table S4: Outcome variables distribution by treated and control group; Wilcoxon (Mann-Whitney) test for equality of the distributions.

Item	**Control (n = 762)**	**Treated (n = 774)**	**p-value**
(Perceived status quo norms) To what extent do you think Americans oppose or support the right of a woman to choose to have an abortion...			
...if the woman wants it for any reason?			0.4121
Strongly oppose	123 (16.14%)	113 (14.60%)	
Oppose	61 (8.01%)	79 (10.21%)	
Somewhat oppose	104 (13.65%)	115 (14.86%)	
Neither oppose nor support	149 (19.55%)	124 (16.02%)	
Somewhat support	101 (13.25%)	114 (14.73%)	
Support	86 (11.29%)	123 (15.89%)	
Strongly support	137 (17.98%)	106 (13.70%)	
...if there is a strong chance of serious defect in the baby?			**0.0515**
Strongly oppose	49 (6.43%)	49 (6.33%)	
Oppose	38 (4.99%)	28 (3.62%)	
Somewhat oppose	53 (6.96%)	68 (8.79%)	
Neither oppose nor support	154 (20.21%)	148 (19.12%)	

Item	Control	Treated	p-value
Somewhat support	140 (18.37%)	122 (15.76%)	
Support	121 (15.88%)	174 (22.48%)	
Strongly support	204 (26.77%)	185 (23.90%)	
. . . if the woman's own health is seriously endangered by the pregnancy?			0.8323
Strongly oppose	35 (4.59%)	30 (3.88%)	
Oppose	33 (4.33%)	18 (2.33%)	
Somewhat oppose	38 (4.99%)	43 (5.56%)	
Neither oppose nor support	102 (13.39%)	118 (15.25%)	
Somewhat support	110 (14.44%)	125 (16.15%)	
Support	168 (22.05%)	181 (23.39%)	
Strongly support	276 (36.22%)	259 (33.46%)	
. . . if the woman is married and does not want any more children?			0.4368
Strongly oppose	164 (21.52%)	137 (17.70%)	
Oppose	87 (11.42%)	92 (11.89%)	
Somewhat oppose	64 (8.40%)	93 (12.02%)	
Neither oppose nor support	154 (20.21%)	159 (20.54%)	
Somewhat support	88 (11.55%)	91 (11.76%)	

Item	Control	Treated	p-value
Support	74 (9.71%)	96 (12.40%)	
Strongly support	131 (17.19%)	106 (13.70%)	
. . . if the family has a very low income and cannot afford any more children?			0.5803
Strongly oppose	109 (14.30%)	108 (13.95%)	
Oppose	79 (10.37%)	81 (10.47%)	
Somewhat oppose	85 (11.15%)	91 (11.76%)	
Neither oppose nor support	168 (22.05%)	182 (23.51%)	
Somewhat support	114 (14.96%)	106 (13.70%)	
Support	92 (12.07%)	99 (12.79%)	
Strongly support	115 (15.09%)	107 (13.82%)	
. . . if the woman became pregnant as a result of rape?			0.9391
Strongly oppose	33 (4.33%)	43 (5.56%)	
Oppose	33 (4.33%)	28 (3.62%)	
Somewhat oppose	33 (4.33%)	34 (4.39%)	
Neither oppose nor support	105 (13.78%)	113 (14.60%)	
Somewhat support	109 (14.30%)	117 (15.12%)	
Support	132 (17.32%)	156 (20.16%)	

Item	Control	Treated	p-value
Strongly support	317 (41.60%)	283 (36.56%)	
. . . if the woman is not married and does not want to marry the man?			0.4185
Strongly oppose	136 (17.85%)	125 (16.15%)	
Oppose	89 (11.68%)	86 (11.11%)	
Somewhat oppose	72 (9.45%)	90 (11.63%)	
Neither oppose nor support	176 (23.10%)	183 (23.64%)	
Somewhat support	88 (11.55%)	100 (12.92%)	
Support	89 (11.68%)	88 (11.37%)	
Strongly support	112 (14.70%)	102 (13.18%)	
(Personal attitudes) Now, based on your personal opinion, to what extent do you oppose or support the right of a woman to choose to have an abortion. . .			
. . . if the woman wants it for any reason?			0.3535
Strongly oppose	160 (21.00%)	159 (20.54%)	
Oppose	58 (7.61%)	71 (9.17%)	
Somewhat oppose	58 (7.61%) (%)	58 (7.49%)	
Neither oppose nor support	141 (18.50%)	141 (18.22%)	
Somewhat support	90 (11.81%)	65 (8.40%)	

Item	Control	Treated	p-value
Support	86 (11.29%)	115 (14.86%)	
Strongly support	169 (22.18%)	164 (21.19%)	
. . . if there is a strong chance of serious defect in the baby?			0.4715
Strongly oppose	51 (6.69%)	61 (7.88%)	
Oppose	29 (3.81%)	40 (5.17%)	
Somewhat oppose	50 (6.56%)	49 (6.33%)	
Neither oppose nor support	138 (18.11%)	129 (16.67%)	
Somewhat support	116 (15.22%)	102 (13.18%)	
Support	123 (16.14%)	135 (17.44%)	
Strongly support	254 (33.33%)	258 (33.33%)	
. . . if the woman's own health is seriously endangered by the pregnancy?			0.7440
Strongly oppose	36 (4.72%)	41 (5.30%)	
Oppose	24 (3.15%)	23 (2.97%)	
Somewhat oppose	27 (3.54%)	29 (3.75%)	
Neither oppose nor support	101 (13.25%)	110 (14.21%)	
Somewhat support	96 (12.60%)	95 (12.27%)	
Support	138 (18.11%)	142 (18.35%)	

Item	Control	Treated	p-value
Strongly support	339 (44.49%)	334 (43.15%)	
. . . if the woman is married and does not want any more children?			0.5522
Strongly oppose	169 (22.18%)	167 (21.58%)	
Oppose	64 (8.40%)	77 (9.95%)	
Somewhat oppose	50 (6.56%)	60 (7.75%)	
Neither oppose nor support	141 (18.50%)	141 (18.22%)	
Somewhat support	81 (10.62%)	75 (9.69%)	
Support	92 (12.08%)	85 (10.98%)	
Strongly support	164 (21.52%)	169 (21.83%)	
. . . if the family has a very low income and cannot afford any more children?			0.9792
Strongly oppose	127 (16.67%)	135 (17.44%)	
Oppose	83 (10.89%)	80 (10.34%)	
Somewhat oppose	58 (7.61%)	55 (7.11%)	
Neither oppose nor support	148 (19.42%)	159 (20.54%)	
Somewhat support	77 (10.10%)	71 (9.17%)	
Support	88 (11.55%)	95 (12.27%)	
Strongly support	181 (23.75%)	179 (23.13%)	

Additional Tables Chapter 1.1

Table 1 Perceived public opinion, elective causes. Multivariable ordinary least squares models.

	(1) Any reason			(2) No more children			(3) Cannot afford			(4) Not married		
Treated	-0.032	-0.036	-0.038	0.020	0.089	0.106	-0.034	0.016	0.027	0.002	0.049	0.073
	(0.102)	(0.096)	(0.095)	(0.105)	(0.099)	(0.099)	(0.099)	(0.097)	(0.096)	(0.101)	(0.096)	(0.096)
State F.E.	X	✓	✓	X	✓	✓	X	✓	✓	X	✓	✓
Controls	X	✓	✓	X	✓	✓	X	✓	✓	X	✓	✓
Observations	1,535	1,377	1,376	1,536	1,378	1,377	1,536	1,378	1,377	1,536	1,378	1,377
R-squared	0.000	0.310	0.322	0.000	0.302	0.312	0.000	0.244	0.256	0.000	0.287	0.298
Adjusted R-squared	-0.001	0.268	0.279	-0.001	0.260	0.269	-0.001	0.199	0.209	-0.001	0.244	0.254

Note. For each dependent variable, the second model excludes trust and perceived representativeness of institutions from the set of control variables.

Table 2 Perceived public opinion, elective causes. Multivariable ordinary least squares models. Subsample of respondents who passed the manipulation check.

	(1) Any reason			(2) No more children			(3) Cannot afford			(4) Not married		
Treated	0.073	0.059	0.063	0.032	0.073	0.081	-0.055	-0.029	-0.018	0.013	0.064	0.070
	(0.130)	(0.120)	(0.120)	(0.134)	(0.126)	(0.126)	(0.123)	(0.122)	(0.121)	(0.128)	(0.123)	(0.123)
State F.E.	X	✓	✓	X	✓	✓	X	✓	✓	X	✓	✓
Controls	X	✓	✓	X	✓	✓	X	✓	✓	X	✓	✓
Observations	971	883	882	971	883	882	971	883	882	971	883	882
R-squared	0.000	0.369	0.380	0.000	0.338	0.348	0.000	0.273	0.296	0.000	0.307	0.321
Adjusted R-squared	-0.001	0.308	0.318	-0.001	0.275	0.282	-0.001	0.204	0.224	-0.001	0.241	0.252

Note. For each dependent variable, the second model excludes trust and perceived representativeness of institutions from the set of control variables.

Table 3 Perceived public opinion, traumatic causes. Multivariable ordinary least squares models.

	(1)	(2)	(3)

	Birth defect			Women's health			Rape		
Treated	0.028	0.035	0.025	0.017	-0.014	-0.029	-0.117	-0.164*	-0.175*
	(0.090)	(0.089)	(0.090)	(0.085)	(0.086)	(0.086)	(0.089)	(0.091)	(0.091)
State F.E.	X	✓	✓	X	✓	✓	X	✓	✓
Controls	X	✓	✓	X	✓	✓	X	✓	✓
Observations	1,533	1,376	1,375	1,536	1,378	1,377	1,536	1,378	1,377
R-squared	0.000	0.220	0.228	0.000	0.180	0.186	0.001	0.172	0.178
Adjusted R-squared	-0.001	0.173	0.179	-0.001	0.131	0.134	0.001	0.122	0.126

Note. For each dependent variable, the second model excludes trust and perceived representativeness of institutions from the set of control variables.

Table 4 Perceived public opinion, traumatic causes. Multivariable ordinary least squares models. Subsample of respondents who passed the manipulation check.

	(1) Birth defect			(2) Women's health			(3) Rape		
Treated	0.115	0.102	0.094	0.038	-0.031	-0.045	-0.055	-0.154	-0.166
	(0.113)	(0.107)	(0.108)	(0.104)	(0.103)	(0.104)	(0.110)	(0.110)	(0.111)
State F.E.	X	✓	✓	X	✓	✓	X	✓	✓
Controls	X	✓	✓	X	✓	✓	X	✓	✓
Observations	969	882	881	971	883	882	971	883	882
R-squared	0.001	0.310	0.318	0.000	0.247	0.252	0.000	0.221	0.227
Adjusted R-squared	0.000	0.244	0.248	-0.001	0.175	0.176	-0.001	0.146	0.149

Note. For each dependent variable, the second model excludes trust and perceived representativeness of institutions from the set of control variables.

Table 5 Personal opinion, elective causes. Multivariable ordinary least squares models.

	(1) Any reason			(2) No more children			(3) Cannot afford			(4) Not married		
Treated	-0.009	0.015	0.017	-0.047	-0.028	-0.021	-0.021	-0.006	-0.004	0.057	0.110	0.111
	(0.112)	(0.093)	(0.093)	(0.113)	(0.095)	(0.095)	(0.110)	(0.094)	(0.094)	(0.112)	(0.094)	(0.094)
State F.E.	X	✓	✓	X	✓	✓	X	✓	✓	X	✓	✓
Controls	X	✓	✓	X	✓	✓	X	✓	✓	X	✓	✓
Observations	1,535	1,377	1,376	1,535	1,377	1,376	1,536	1,378	1,377	1,536	1,378	1,377
R-squared	0.000	0.456	0.463	0.000	0.445	0.452	0.000	0.426	0.436	0.000	0.443	0.450

Adjusted R-squared	-0.001	0.423	0.429	-0.001	0.411	0.417	-0.001	0.391	0.400	-0.001	0.410	0.416

Table 6 Personal opinion, elective causes. Multivariable ordinary least squares models. Subsample of respondents who passed the manipulation check.

	(1) Any reason			(2) No more children			(3) Cannot afford			(4) Not married		
Treated	0.004	0.049	0.053	-0.080	-0.022	-0.019	-0.041	-0.046	-0.046	-0.009	0.008	-0.001
	(0.148)	(0.117)	(0.116)	(0.147)	(0.117)	(0.116)	(0.142)	(0.117)	(0.117)	(0.145)	(0.117)	(0.117)
State F.E.	X	✓	✓	X	✓	✓	X	✓	✓	X	✓	✓
Controls	X	✓	✓	X	✓	✓	X	✓	✓	X	✓	✓
Observations	970	882	881	970	882	881	971	883	882	971	883	882
R-squared	0.000	0.534	0.545	0.000	0.528	0.536	0.000	0.499	0.508	0.000	0.519	0.526
Adjusted R-squared	-0.001	0.489	0.499	-0.001	0.482	0.489	-0.001	0.451	0.458	-0.001	0.473	0.478

Table 7 Personal opinion, traumatic causes. Multivariable ordinary least squares models.

	(1) Birth defect			(2) Women's health			(3) Rape		
Treated	-0.057	-0.046	-0.063	-0.056	-0.143*	-0.168**	-0.126	-0.203**	-0.228**
	(0.095)	(0.089)	(0.089)	(0.088)	(0.086)	(0.086)	(0.093)	(0.090)	(0.090)
State F.E.	X	✓	✓	X	✓	✓	X	✓	✓
Controls	X	✓	✓	X	✓	✓	X	✓	✓
Observations	1,535	1,377	1,376	1,535	1,377	1,376	1,535	1,377	1,376
R-squared	0.000	0.303	0.311	0.000	0.248	0.257	0.001	0.258	0.267
Adjusted R-squared	-0.000	0.261	0.267	-0.000	0.203	0.210	0.001	0.213	0.221

Note. For each dependent variable, the second model excludes trust and perceived representativeness of institutions from the set of control variables.

Table 8 Personal opinion, traumatic causes. Multivariable ordinary least squares models. Subsample of respondents who passed the manipulation check.

	(1) Birth defect	(2) Women's health	(3) Rape

Treated	-0.119	-0.121	-0.128	-0.113	-0.224**	-0.241**	-0.105	-0.231**	-0.250**
	(0.120)	(0.108)	(0.108)	(0.105)	(0.099)	(0.099)	(0.114)	(0.108)	(0.109)
State F.E.	X	✓	✓	X	✓	✓	X	✓	✓
Controls	X	✓	✓	X	✓	✓	X	✓	✓
Observations	970	882	881	970	882	881	971	883	882
R-squared	0.001	0.394	0.402	0.001	0.346	0.351	0.001	0.345	0.351
Adjusted R-squared	-0.000	0.336	0.342	0.000	0.283	0.285	-0.000	0.283	0.285

Note. For each dependent variable, the second model excludes trust and perceived representativeness of institutions from the set of control variables.

Table 9 Direct effect of the treatment on trust in and perceived representativeness of the Supreme Court and state legislatures. Multivariable ordinary least squares models.

	(1) Trust in SCOTUS		(2) SCOTUS representativeness		(3) Trust in state legislatures		(4) State legislatures representativeness	
Treated	-0.146*	-0.109	-0.083	-0.132**	-0.110	-0.087	-0.125**	-0.156***
	(0.087)	(0.088)	(0.057)	(0.057)	(0.080)	(0.084)	(0.054)	(0.055)
State F.E.	X	✓	X	✓	X	✓	X	✓
Controls	X	✓	X	✓	X	✓	X	✓
Observations	1,536	1,375	1,535	1,374	1,536	1,375	1,536	1,375
R-squared	0.002	0.202	0.001	0.218	0.001	0.126	0.004	0.172
Adjusted R-squared	0.001	0.155	0.001	0.172	0.001	0.074	0.003	0.123

Table 10 Direct effect of the treatment on trust in and perceived representativeness of the Supreme Court and state legislatures. Multivariable ordinary least squares models. Subsample of respondents who passed the manipulation check.

	(1) Trust in SCOTUS		(2) SCOTUS representativeness		(3) Trust in state legislatures		(4) State legislatures representativeness	
Treated	-0.189*	-0.134	-0.025	-0.082	-0.105	-0.042	-0.125*	-0.151**
	(0.114)	(0.116)	(0.072)	(0.073)	(0.102)	(0.112)	(0.066)	(0.069)
State F.E.	X	✓	X	✓	X	✓	X	✓

Controls	X	✓	X	✓	X	✓	X	✓
Observations	971	882	970	881	971	882	971	882
R-squared	0.003	0.240	0.000	0.247	0.001	0.121	0.004	0.191
Adjusted R-squared	0.002	0.168	-0.001	0.176	0.000	0.038	0.003	0.114

Table 11 Perceived public opinion, moderators

	(1) Any reason						(2) No more children					
Treated	-0.031	-0.031	-0.065	-0.009	0.086	-0.038	0.094	0.119	0.128	0.088	0.429	0.309
	(0.098)	(0.095)	(0.166)	(0.158)	(0.261)	(0.339)	(0.101)	(0.099)	(0.173)	(0.164)	(0.270)	(0.350)
Treated * Trust SCOTUS	0.019					0.094	-0.030					0.088
	(0.055)					(0.066)	(0.057)					(0.068)
Treated * Repr. SCOTUS		-0.144*				-0.200**		-0.279***				-0.325***
		(0.085)				(0.100)		(0.088)				(0.104)
Treated * Democrat			-0.170			-0.142			-0.226			-0.236
			(0.225)			(0.279)			(0.233)			(0.288)
Treated * Independent			0.353			0.402			0.255			0.286
			(0.247)			(0.283)			(0.256)			(0.293)
Treated * mod. conservative				-0.039		0.003				-0.162		-0.127
				(0.283)		(0.302)				(0.293)		(0.312)
Treated * mod. liberal				-0.002		0.176				0.297		0.482
				(0.287)		(0.300)				(0.297)		(0.311)
Treated * strongly cons.				0.044		0.210				0.242		0.438
				(0.280)		(0.324)				(0.290)		(0.334)
Treated * strongly liberal				-0.217		0.118				-0.331		0.099
				(0.303)		(0.330)				(0.314)		(0.341)
Treated * Dobbs awareness					-0.049	-0.034					-0.127	-0.111
					(0.095)	(0.098)					(0.099)	(0.101)
State F.E.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1,376	1,376	1,376	1,376	1,376	1,376	1,377	1,377	1,377	1,377	1,377	1,377
R-squared	0.322	0.323	0.324	0.322	0.322	0.327	0.312	0.317	0.314	0.314	0.313	0.323
Adjusted R-squared	0.278	0.280	0.280	0.277	0.278	0.279	0.268	0.274	0.270	0.269	0.269	0.275

Table 12 Perceived public opinion, moderators (cont'd)

	(3)	(4)

	Cannot afford						Not married					
Treated	0.004	0.038	0.030	-0.007	0.003	-0.130	0.061	0.085	-0.014	0.030	0.226	-0.157
	(0.099)	(0.096)	(0.168)	(0.159)	(0.263)	(0.342)	(0.098)	(0.096)	(0.167)	(0.158)	(0.262)	(0.339)
Treated * Trust SCOTUS	-0.061					0.014	-0.033					0.058
	(0.056)					(0.067)	(0.056)					(0.066)
Treated * Repr. SCOTUS		-0.226***				-0.226**		-0.234***				-0.260***
		(0.085)				(0.101)		(0.085)				(0.100)
Treated * Democrat			-0.051			-0.002			-0.037			0.144
			(0.227)			(0.282)			(0.225)			(0.279)
Treated * Independent			0.066			0.069			0.380			0.523*
			(0.250)			(0.286)			(0.248)			(0.284)
Treated * mod. conservative				-0.054		-0.004				0.090		0.251
				(0.285)		(0.305)				(0.284)		(0.302)
Treated * mod. liberal				0.399		0.379				0.222		0.312
				(0.289)		(0.303)				(0.287)		(0.301)
Treated * strongly cons.				0.190		0.302				0.208		0.543*
				(0.282)		(0.327)				(0.280)		(0.324)
Treated * strongly liberal				-0.396		-0.280				-0.312		-0.041
				(0.305)		(0.333)				(0.304)		(0.330)
Treated * Dobbs awareness					0.010	0.032					-0.060	-0.044
					(0.096)	(0.099)					(0.096)	(0.098)
State F.E.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377
R-squared	0.257	0.260	0.256	0.259	0.256	0.263	0.298	0.302	0.300	0.300	0.298	0.306
Adjusted R-squared	0.209	0.213	0.208	0.210	0.209	0.211	0.253	0.257	0.254	0.253	0.253	0.257

Table 13 Perceived public opinion, moderators (cont'd)

	(5) Birth defect						(6) Woman's health					
Treated	-0.007	0.029	0.222	0.102	-0.166	0.020	-0.055	-0.027	-0.025	-0.087	-0.416*	-0.589*
	(0.092)	(0.090)	(0.156)	(0.148)	(0.245)	(0.319)	(0.088)	(0.086)	(0.151)	(0.143)	(0.236)	(0.306)
Treated * Trust SCOTUS	-0.084					-0.107*	-0.068					-0.096
	(0.052)					(0.062)	(0.050)					(0.060)
Treated * Repr. SCOTUS		-0.085				-0.028		-0.036				0.009
		(0.080)				(0.094)		(0.077)				(0.091)
Treated * Democrat			-0.303			-0.233			0.051			0.215

			(0.211)			(0.262)			(0.203)			(0.253)
Treated * Independent			-0.277			-0.357			-0.090			-0.003
			(0.232)			(0.266)			(0.224)			(0.256)
Treated * mod. conservative				-0.047		-0.122				0.128		0.206
				(0.265)		(0.283)				(0.256)		(0.273)
Treated * mod. liberal				-0.214		-0.320				0.008		-0.163
				(0.269)		(0.282)				(0.259)		(0.272)
Treated * strongly cons.				0.123		-0.012				0.235		0.288
				(0.262)		(0.304)				(0.253)		(0.293)
Treated * strongly liberal				-0.406		-0.472				-0.032		-0.222
				(0.284)		(0.310)				(0.274)		(0.299)
Treated * Dobbs awareness					0.075	0.116					0.152*	0.162*
					(0.090)	(0.092)					(0.086)	(0.089)
State F.E.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1,375	1,375	1,375	1,375	1,375	1,375	1,377	1,377	1,377	1,377	1,377	1,377
R-squared	0.229	0.228	0.229	0.230	0.228	0.234	0.187	0.186	0.186	0.186	0.188	0.191
Adjusted R-squared	0.180	0.179	0.179	0.178	0.178	0.179	0.135	0.133	0.133	0.132	0.135	0.134

Table 14 Perceived public opinion, moderators (cont'd)

	(7) Rape											
Treated	-0.198**	-0.172*	-0.208	-0.338**	-0.266	-0.631*	-0.147	-0.130	-0.112	-0.182	-0.157	-0.483
	(0.093)	(0.091)	(0.158)	(0.150)	(0.248)	(0.322)	(0.092)	(0.089)	(0.159)	(0.147)	(0.235)	(0.327)
Treated * Trust SCOTUS	-0.060					-0.061	-0.057					-0.059
	(0.053)					(0.063)	(0.052)					(0.064)
Treated * Repr. SCOTUS		-0.064				-0.026		-0.091				-0.026
		(0.081)				(0.096)		(0.080)				(0.097)
Treated * Democrat			0.019			0.177			-0.088			0.088
			(0.214)			(0.266)			(0.215)			(0.268)
Treated * Independent			0.093			0.251			0.018			0.153
			(0.235)			(0.270)			(0.233)			(0.270)
Treated * mod. conservative				0.410		0.529*				0.297		0.411
				(0.269)		(0.288)				(0.265)		(0.290)
Treated * mod. liberal				0.239		0.202				0.179		0.232
				(0.272)		(0.286)				(0.272)		(0.291)
Treated * strongly cons.				0.243		0.430				0.140		0.393
				(0.266)		(0.308)				(0.268)		(0.311)
Treated * strongly liberal				0.110		0.115				-0.163		-0.027

				(0.288)		(0.314)				(0.287)		(0.315)
Treated * Dobbs awareness					0.036	0.034					0.016	0.029
					(0.091)	(0.093)					(0.087)	(0.095)
State F.E.	✓	✓	✓	✓	✓	✓	X	X	X	X	X	X
Controls	✓	✓	✓	✓	✓	✓	X	X	X	X	X	X
Observations	1,377	1,377	1,377	1,377	1,377	1,377	1,536	1,535	1,437	1,459	1,536	1,400
R-squared	0.178	0.178	0.178	0.179	0.178	0.181	0.004	0.009	0.027	0.023	0.003	0.046
Adjusted R-squared	0.126	0.125	0.124	0.125	0.125	0.123	0.002	0.007	0.023	0.017	0.001	0.033

Table 15 Personal opinions, moderators

	(1) Any reason						(2) No more children					
Treated	0.018	0.020	0.225	0.062	-0.096	-0.007	-0.039	-0.010	-0.036	0.113	0.221	0.167
	(0.095)	(0.093)	(0.162)	(0.154)	(0.255)	(0.330)	(0.097)	(0.095)	(0.165)	(0.156)	(0.259)	(0.336)
Treated * Trust SCOTUS	0.004					0.014	-0.049					0.026
	(0.054)					(0.064)	(0.055)					(0.065)
Treated * Repr. SCOTUS		-0.075				-0.078		-0.211**				-0.191*
		(0.083)				(0.098)		(0.084)				(0.100)
Treated * Democrat			-0.551**			-0.438			-0.192			-0.164
			(0.219)			(0.272)			(0.223)			(0.277)
Treated * Independent			0.048			0.084			0.345			0.294
			(0.241)			(0.276)			(0.246)			(0.281)
Treated * mod. conservative				0.042		-0.042				-0.335		-0.285
				(0.275)		(0.294)				(0.280)		(0.299)
Treated * mod. liberal				0.019		0.160				0.154		0.290
				(0.279)		(0.293)				(0.284)		(0.298)
Treated * strongly cons.				0.237		0.176				0.005		0.185
				(0.272)		(0.315)				(0.278)		(0.321)
Treated * strongly liberal				-0.701**		-0.454				-0.762**		-0.450
				(0.295)		(0.322)				(0.300)		(0.327)
Treated * Dobbs awareness					0.044	0.078					-0.095	-0.060
					(0.093)	(0.095)					(0.095)	(0.097)
State F.E.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1,376	1,376	1,376	1,376	1,376	1,376	1,376	1,376	1,376	1,376	1,376	1,376
R-squared	0.463	0.463	0.467	0.466	0.463	0.469	0.452	0.454	0.454	0.456	0.452	0.459
Adjust R-squared	0.428	0.429	0.432	0.431	0.428	0.431	0.417	0.418	0.418	0.419	0.417	0.421

Table 16 Personal opinions, moderators (cont'd)

	(3) Cannot afford						(4) Not married					
Treated	-0.013	0.007	0.180	-0.070	0.255	0.235	0.106	0.120	0.215	0.095	0.430*	0.221
	(0.096)	(0.094)	(0.164)	(0.155)	(0.257)	(0.332)	(0.097)	(0.094)	(0.164)	(0.156)	(0.258)	(0.333)
Treated * Trust SCOTUS	-0.025					0.050	-0.013					0.040
	(0.055)					(0.065)	(0.055)					(0.065)

Treated * Repr. SCOTUS		-0.215**				-0.232**		-0.172**				-0.183*
		(0.083)				(0.099)		(0.084)				(0.099)
Treated * Democrat			-0.471**			-0.425			-0.379*			-0.116
			(0.221)			(0.274)			(0.222)			(0.275)
Treated * Independent			0.023			0.068			0.182			0.366
			(0.244)			(0.278)			(0.244)			(0.279)
Treated * mod. conservative				0.076		0.023				0.050		0.121
				(0.278)		(0.296)				(0.279)		(0.297)
Treated * mod. liberal				0.416		0.594**				0.113		0.276
				(0.282)		(0.295)				(0.282)		(0.296)
Treated * strongly cons.				0.357		0.401				0.425		0.649**
				(0.275)		(0.318)				(0.276)		(0.319)
Treated * strongly liberal				-0.541*		-0.159				-0.603**		-0.268
				(0.298)		(0.324)				(0.298)		(0.325)
Treated * Dobbs awareness					-0.102	-0.080					-0.125	-0.108
					(0.094)	(0.096)					(0.094)	(0.096)
State F.E.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377
R-squared	0.436	0.439	0.439	0.440	0.437	0.445	0.450	0.452	0.453	0.454	0.451	0.458
Adjust R-squared	0.400	0.403	0.402	0.403	0.400	0.406	0.415	0.417	0.418	0.418	0.416	0.420

Table 17 Personal opinions, moderators (cont'd)

	(5) Birth defect						(6) Woman's health					
Treated	-0.076	-0.063	-0.010	-0.090	-0.332	-0.355	-0.197**	-0.169**	-0.068	-0.232	-0.372	-0.491
	(0.091)	(0.089)	(0.156)	(0.148)	(0.244)	(0.317)	(0.088)	(0.086)	(0.149)	(0.141)	(0.234)	(0.303)
Treated * Trust SCOTUS	-0.035					-0.052	-0.075					-0.129**
	(0.052)					(0.062)	(0.050)					(0.059)
Treated * Repr. SCOTUS		-0.013				0.021		0.014				0.106
		(0.079)				(0.094)		(0.076)				(0.090)
Treated * Democrat			-0.127			-0.105			-0.246			-0.137
			(0.210)			(0.262)			(0.202)			(0.250)
Treated * Independent			-0.007			0.002			-0.005			0.075
			(0.232)			(0.266)			(0.222)			(0.254)
Treated * mod. conservative				0.070		0.055				0.205		0.218
				(0.265)		(0.283)				(0.253)		(0.271)
Treated * mod. liberal				0.106		0.083				0.096		0.090

				(0.268)		(0.282)				(0.257)		(0.269)
Treated * strongly cons.				0.115		0.081				0.255		0.279
				(0.262)		(0.304)				(0.251)		(0.291)
Treated * strongly liberal				-0.158		-0.171				-0.207		-0.202
				(0.283)		(0.309)				(0.271)		(0.296)
Treated * Dobbs awareness					0.106	0.117					0.080	0.092
					(0.089)	(0.092)					(0.085)	(0.088)
State F.E.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1,376	1,376	1,376	1,376	1,376	1,376	1,376	1,376	1,376	1,376	1,376	1,376
R-squared	0.311	0.311	0.311	0.311	0.312	0.313	0.258	0.257	0.258	0.258	0.257	0.262
Adjust R-squared	0.267	0.267	0.266	0.265	0.267	0.264	0.210	0.209	0.210	0.209	0.210	0.210

Table 18 Personal opinions, moderators (cont'd)

	(7) Rape											
Treated	-0.248***	-0.230**	-0.237	-0.281*	-0.271	-0.529*	-0.196**	-0.148	-0.150	-0.174	-0.148	-0.438
	(0.092)	(0.090)	(0.157)	(0.149)	(0.247)	(0.320)	(0.094)	(0.092)	(0.165)	(0.151)	(0.244)	(0.333)
Treated * Trust SCOTUS	-0.053					-0.108*	-0.117**					-0.128*
	(0.052)					(0.062)	(0.054)					(0.065)
Treated * Repr. SCOTUS		0.053				0.131		-0.011				0.116
		(0.080)				(0.095)		(0.083)				(0.099)
Treated * Democrat			-0.115			0.026			-0.187			-0.112
			(0.213)			(0.264)			(0.223)			(0.273)
Treated * Independent			0.208			0.376			0.165			0.218
			(0.234)			(0.268)			(0.242)			(0.276)
Treated * mod. conservative				0.092		0.191				0.067		0.148
				(0.268)		(0.286)				(0.274)		(0.296)
Treated * mod. liberal				-0.066		-0.007				-0.012		0.058
				(0.271)		(0.285)				(0.281)		(0.298)
Treated * strongly cons.				0.276		0.457				0.124		0.369
				(0.265)		(0.306)				(0.276)		(0.318)
Treated * strongly liberal				0.017		0.086				-0.158		0.010
				(0.286)		(0.312)				(0.296)		(0.322)
Treated * Dobbs awareness					0.017	0.009					0.008	0.020
					(0.090)	(0.093)					(0.090)	(0.097)
State F.E.	✓	✓	✓	✓	✓	✓	X	X	X	X	X	X
Controls	✓	✓	✓	✓	✓	✓	X	X	X	X	X	X

Observations	1,376	1,376	1,376	1,376	1,376	1,376	1,535	1,534	1,436	1,458	1,535	1,399
R-squared	0.268	0.268	0.269	0.268	0.267	0.272	0.025	0.027	0.058	0.056	0.004	0.103
Adjust R-squared	0.221	0.221	0.221	0.219	0.220	0.220	0.023	0.025	0.054	0.050	0.002	0.091

Table 19 Perceived public opinion, additional moderators (state presidential status, trigger law state)

	(1) Any reason						(2) No more children					
Treated	0.245	0.014	0.510	0.117	-0.017	0.471	0.403*	0.119	0.640	0.124	-0.009	0.472
	(0.210)	(0.112)	(0.419)	(0.219)	(0.119)	(0.443)	(0.218)	(0.116)	(0.432)	(0.226)	(0.124)	(0.455)
Treated * Democratic state	-0.459*		-0.699**	-0.300		-0.535	-0.331		-0.301	-0.122		-0.059
	(0.267)		(0.319)	(0.281)		(0.338)	(0.277)		(0.330)	(0.290)		(0.348)
Treated * swing state	-0.283		-0.434	-0.076		-0.151	-0.404		-0.429	-0.090		-0.060
	(0.252)		(0.268)	(0.266)		(0.283)	(0.261)		(0.277)	(0.274)		(0.291)
Treated * trigger law state		-0.189	-0.460*		-0.046	-0.348		-0.048	-0.151		0.108	-0.043
		(0.212)	(0.251)		(0.227)	(0.267)		(0.220)	(0.260)		(0.235)	(0.275)
Treated * Trust SCOTUS			0.088			0.068			0.083			0.053
			(0.066)			(0.071)			(0.068)			(0.073)
Treated * Repr. SCOTUS			-0.183*			-0.179*			-0.324***			-0.317***
			(0.101)			(0.107)			(0.104)			(0.110)
Treated * Democrat			-0.103			-0.263			-0.242			-0.421
			(0.280)			(0.297)			(0.290)			(0.305)
Treated * Independent			0.386			0.098			0.274			-0.058
			(0.284)			(0.299)			(0.293)			(0.307)
Treated * mod. conservative			0.004			0.037			-0.136			-0.077
			(0.302)			(0.320)			(0.312)			(0.329)
Treated * mod. liberal			0.163			0.225			0.471			0.616*
			(0.300)			(0.321)			(0.311)			(0.331)
Treated * strongly cons.			0.197			0.074			0.420			0.261
			(0.324)			(0.343)			(0.335)			(0.353)
Treated * strongly liberal			0.145			-0.100			0.099			-0.133
			(0.331)			(0.348)			(0.342)			(0.359)
Treated * Dobbs awareness			-0.035			-0.043			-0.103			-0.109
			(0.098)			(0.105)			(0.101)			(0.107)
State F.E.	✓	✓	✓	X	X	X	✓	✓	✓	X	X	X
Observations	1,376	1,376	1,376	1,535	1,535	1,399	1,377	1,377	1,377	1,536	1,536	1,400
R-squared	0.323	0.322	0.330	0.021	0.012	0.141	0.313	0.312	0.324	0.022	0.009	0.142
Adjusted R-squared	0.279	0.279	0.281	0.017	0.010	0.126	0.269	0.268	0.275	0.019	0.007	0.127

Table 20 Perceived public opinion, additional moderators (state presidential status, trigger law state) (cont'd)

	(3) Cannot afford						(4) Not married					
Treated	0.399*	0.029	0.350	0.134	-0.084	0.275	0.221	0.159	0.240	0.022	0.041	0.278
	(0.212)	(0.113)	(0.422)	(0.211)	(0.116)	(0.435)	(0.211)	(0.112)	(0.418)	(0.216)	(0.119)	(0.441)
Treated * Democratic state	-0.492*		-0.559*	-0.281		-0.343	-0.163		-0.360	-0.047		-0.202
	(0.269)		(0.322)	(0.271)		(0.333)	(0.268)		(0.320)	(0.277)		(0.337)
Treated * swing state	-0.448*		-0.526*	-0.123		-0.164	-0.202		-0.341	0.023		-0.041
	(0.254)		(0.270)	(0.257)		(0.278)	(0.252)		(0.268)	(0.262)		(0.282)
Treated * trigger law state		-0.005	-0.244		0.183	-0.045		-0.308	-0.441*		-0.135	-0.307
		(0.214)	(0.253)		(0.219)	(0.263)		(0.213)	(0.251)		(0.225)	(0.267)
Treated * Trust SCOTUS			0.008			-0.009			0.051			0.034
			(0.067)			(0.070)			(0.066)			(0.071)
Treated * Repr. SCOTUS			-0.217**			-0.208**			-0.254**			-0.237**
			(0.102)			(0.106)			(0.101)			(0.107)
Treated * Democrat			0.016			-0.166			0.144			-0.054
			(0.283)			(0.292)			(0.281)			(0.296)
Treated * Independent			0.060			-0.176			0.493*			0.146
			(0.286)			(0.294)			(0.284)			(0.298)
Treated * mod. conservative			-0.006			0.027			0.237			0.200
			(0.305)			(0.315)			(0.302)			(0.319)
Treated * mod. liberal			0.370			0.407			0.290			0.340
			(0.304)			(0.316)			(0.301)			(0.321)
Treated * strongly cons.			0.284			0.156			0.529			0.280
			(0.327)			(0.338)			(0.324)			(0.343)
Treated * strongly liberal			-0.259			-0.385			-0.054			-0.374
			(0.334)			(0.343)			(0.332)			(0.348)
Treated * Dobbs awareness			0.037			-0.008			-0.037			
			(0.099)			(0.103)			(0.098)			
State F.E.	✓	✓	✓	X	X	X	✓	✓	✓	X	X	X
Observations	1,377	1,377	1,377	1,536	1,536	1,400	1,377	1,377	1,377	1,536	1,536	1,400
R-squared	0.258	0.256	0.265	0.023	0.010	0.108	0.298	0.299	0.308	0.026	0.009	0.123
Adjusted R-squared	0.210	0.208	0.212	0.019	0.008	0.091	0.253	0.254	0.257	0.023	0.007	0.107

Table 21 Perceived public opinion, additional moderators (state presidential status, trigger law state) (cont'd)

	(5) Birth defect						(6) Woman's health					
Treated	0.324	0.014	0.394	0.227	-0.030	0.393	-0.014	-0.001	-0.477	0.036	0.008	-0.372
	(0.197)	(0.105)	(0.393)	(0.195)	(0.106)	(0.403)	(0.190)	(0.101)	(0.379)	(0.184)	(0.100)	(0.384)
Treated * Democratic state	-0.375		-0.398	-0.299		-0.343	0.024		-0.050	0.005		0.055
	(0.250)		(0.300)	(0.250)		(0.308)	(0.242)		(0.289)	(0.237)		(0.294)
Treated * swing state	-0.377		-0.442*	-0.225		-0.232	-0.050		-0.117	-0.062		0.011
	(0.236)		(0.252)	(0.237)		(0.257)	(0.228)		(0.243)	(0.224)		(0.246)
Treated * trigger law state		0.040	-0.175		0.212	-0.004		-0.099	-0.147		0.033	-0.010
		(0.199)	(0.236)		(0.201)	(0.243)		(0.192)	(0.228)		(0.190)	(0.232)
Treated * Trust SCOTUS			-0.111*			-0.117*			-0.098			-0.109*
			(0.062)			(0.064)			(0.060)			(0.062)
Treated * Repr. SCOTUS			-0.023			-0.004			0.008			-0.005
			(0.095)			(0.098)			(0.091)			(0.093)
Treated * Democrat			-0.228			-0.334			0.205			0.008
			(0.264)			(0.270)			(0.254)			(0.258)
Treated * Independent			-0.367			-0.435			-0.017			-0.124
			(0.267)			(0.272)			(0.257)			(0.260)
Treated * mod. conservative			-0.128			-0.096			0.197			0.080
			(0.284)			(0.291)			(0.274)			(0.278)
Treated * mod. liberal			-0.329			-0.228			-0.173			-0.161
			(0.282)			(0.293)			(0.273)			(0.279)
Treated * strongly cons.			-0.029			-0.035			0.281			0.181
			(0.304)			(0.313)			(0.293)			(0.299)
Treated * strongly liberal			-0.462			-0.506			-0.237			-0.384
			(0.311)			(0.317)			(0.300)			(0.303)
Treated * Dobbs awareness			0.121			0.070			0.167*			0.139
			(0.092)			(0.095)			(0.089)			(0.091)
State F.E.	✓	✓	✓	X	X	X	✓	✓	✓	X	X	X
Observations	1,375	1,375	1,375	1,533	1,533	1,398	1,377	1,377	1,377	1,536	1,536	1,400
R-squared	0.229	0.228	0.236	0.008	0.009	0.083	0.186	0.186	0.191	0.002	0.004	0.048
Adjusted R-squared	0.179	0.178	0.180	0.005	0.007	0.067	0.133	0.133	0.132	0.002	0.002	0.031

Table 22 Perceived public opinion, additional moderators (state presidential status, trigger law state) (cont'd)

	(7) Rape					
Treated	0.036	-0.156	-0.207	0.053	-0.154	-0.178
	(0.200)	(0.107)	(0.398)	(0.192)	(0.105)	(0.400)
Treated * Democratic state	-0.402		-0.628**	-0.330		-0.564*
	(0.254)		(0.304)	(0.247)		(0.306)
Treated * swing state	-0.167		-0.294	-0.156		-0.206
	(0.239)		(0.255)	(0.234)		(0.256)
Treated * trigger law state		-0.069	-0.331		0.133	-0.192
		(0.202)	(0.239)		(0.199)	(0.242)
Treated * Trust SCOTUS			-0.064			-0.053
			(0.063)			(0.064)
Treated * Repr. SCOTUS			-0.007			-0.011
			(0.096)			(0.097)
Treated * Democrat			0.224			0.155
			(0.267)			(0.269)
Treated * Independent			0.248			0.166
			(0.270)			(0.271)
Treated * mod. conservative			0.538*			0.438
			(0.288)			(0.290)
Treated * mod. liberal			0.198			0.249
			(0.286)			(0.291)
Treated * strongly cons.			0.425			0.420
			(0.308)			(0.311)
Treated * strongly liberal			0.154			0.033
			(0.315)			(0.316)
Treated * Dobbs awareness			0.029			0.017
			(0.093)			(0.095)
State F.E.	✓	✓	✓	X	X	X
Observations	1,377	1,377	1,377	1,536	1,536	1,400
R-squared	0.179	0.178	0.184	0.010	0.004	0.055
Adjusted R-squared	0.126	0.125	0.124	0.006	0.002	0.037

Table 23 Personal opinions, additional moderators (state presidential status, trigger law state).

	(1) Any reason						(2) No more children					
Treated	0.440**	0.025	0.597	0.155	0.005	0.325	0.239	0.022	0.653	-0.037	0.004	0.470
	(0.205)	(0.110)	(0.407)	(0.239)	(0.131)	(0.464)	(0.209)	(0.112)	(0.414)	(0.243)	(0.132)	(0.471)
Treated * Democratic state	-0.682***		-0.797**	-0.350		-0.511	-0.489*		-0.653**	-0.219		-0.379
	(0.260)		(0.311)	(0.307)		(0.355)	(0.265)		(0.316)	(0.311)		(0.360)
Treated * swing state	-0.426*		-0.541**	-0.045		-0.105	-0.208		-0.340	0.189		0.130
	(0.245)		(0.261)	(0.291)		(0.297)	(0.250)		(0.266)	(0.295)		(0.301)
Treated * trigger law state		-0.030	-0.389		-0.044	-0.341		-0.153	-0.440*		-0.177	-0.406
		(0.207)	(0.244)		(0.249)	(0.280)		(0.211)	(0.249)		(0.251)	(0.285)
Treated * Trust SCOTUS			0.008			-0.037			0.021			-0.015
			(0.064)			(0.074)			(0.065)			(0.076)
Treated * Repr. SCOTUS			-0.059			-0.066			-0.173*			-0.197*
			(0.098)			(0.113)			(0.100)			(0.114)
Treated * Democrat			-0.393			-0.521*			-0.122			-0.348
			(0.273)			(0.311)			(0.278)			(0.316)
Treated * Independent			0.075			-0.238			0.281			-0.166
			(0.276)			(0.313)			(0.281)			(0.318)
Treated * mod. conservative			-0.037			0.089			-0.281			-0.218
			(0.294)			(0.336)			(0.299)			(0.341)
Treated * mod. liberal			0.151			0.216			0.279			0.391
			(0.293)			(0.337)			(0.298)			(0.342)
Treated * strongly cons.			0.161			-0.060			0.177			-0.082
			(0.315)			(0.360)			(0.321)			(0.366)
Treated * strongly liberal			-0.414			-0.541			-0.422			-0.557
			(0.323)			(0.366)			(0.328)			(0.372)
Treated * Dobbs awareness			0.077			0.094			-0.062			-0.052
			(0.096)			(0.110)			(0.097)			(0.111)
State F.E.	✓	✓	✓	X	X	X	✓	✓	✓	X	X	X
Observations	1,376	1,376	1,376	1,535	1,535	1,399	1,376	1,376	1,376	1,535	1,535	1,399
R-squared	0.466	0.463	0.472	0.031	0.019	0.217	0.453	0.452	0.461	0.022	0.015	0.206
Adjusted R-squared	0.431	0.428	0.433	0.028	0.017	0.203	0.418	0.417	0.422	0.018	0.013	0.192

Table 24 Personal opinions, additional moderators (state presidential status, trigger law state) (cont'd)

	(3) Cannot afford						(4) Not married					
Treated	0.196	0.065	0.655	0.019	0.038	0.500	0.261	0.196*	0.661	0.011	0.130	0.445
	(0.207)	(0.111)	(0.410)	(0.236)	(0.129)	(0.459)	(0.208)	(0.111)	(0.412)	(0.240)	(0.131)	(0.465)
Treated * Democratic state	-0.304		-0.440	-0.140		-0.273	-0.308		-0.528*	-0.093		-0.268
	(0.263)		(0.314)	(0.303)		(0.351)	(0.264)		(0.314)	(0.308)		(0.356)
Treated * swing state	-0.214		-0.335	0.074		0.092	-0.102		-0.251	0.231		0.213
	(0.248)		(0.263)	(0.286)		(0.293)	(0.249)		(0.264)	(0.292)		(0.298)
Treated * trigger law state		-0.248	-0.443*		-0.207	-0.398		-0.306	-0.543**		-0.258	-0.496*
		(0.209)	(0.247)		(0.244)	(0.277)		(0.209)	(0.247)		(0.249)	(0.281)
Treated * Trust SCOTUS			0.043			0.019			0.034			0.006
			(0.065)			(0.074)			(0.065)			(0.075)
Treated * Repr. SCOTUS			-0.222**			-0.240**			-0.167*			-0.188*
			(0.099)			(0.111)			(0.099)			(0.113)
Treated * Democrat			-0.413			-0.612**			-0.087			-0.286
			(0.276)			(0.308)			(0.276)			(0.312)
Treated * Independent			0.043			-0.311			0.341			-0.010
			(0.279)			(0.310)			(0.279)			(0.314)
Treated * mod. conservative			0.014			0.078			0.117			0.163
			(0.297)			(0.332)			(0.297)			(0.337)
Treated * mod. liberal			0.575*			0.695**			0.257			0.401
			(0.295)			(0.334)			(0.296)			(0.338)
Treated * strongly cons.			0.389			0.291			0.642**			0.440
			(0.318)			(0.356)			(0.319)			(0.361)
Treated * strongly liberal			-0.160			-0.202			-0.260			-0.361
			(0.325)			(0.362)			(0.326)			(0.367)
Treated * Dobbs awareness			-0.076			-0.082			-0.109			-0.115
			(0.096)			(0.108)			(0.097)			(0.110)
State F.E.	✓	✓	✓	X	X	X	✓	✓	✓	X	X	X
Observations	1,377	1,377	1,377	1,536	1,536	1,400	1,377	1,377	1,377	1,536	1,536	1,400
R-squared	0.437	0.437	0.447	0.023	0.017	0.210	0.451	0.451	0.461	0.022	0.016	0.211
Adjusted R-squared	0.400	0.400	0.403	0.020	0.015	0.195	0.415	0.416	0.421	0.019	0.014	0.196

Table 25 Personal opinions, additional moderators (state presidential status, trigger law state) (cont'd)

	(5) Birth defect						(6) Woman's health					
Treated	0.038	0.008	0.005	-0.007	-0.034	-0.129	-0.221	-0.149	-0.447	-0.154	-0.057	-0.417
	(0.197)	(0.105)	(0.392)	(0.206)	(0.112)	(0.414)	(0.188)	(0.101)	(0.375)	(0.191)	(0.103)	(0.386)
Treated * Democratic state	-0.097		-0.326	-0.086		-0.210	-0.079		-0.138	-0.034		-0.027
	(0.250)		(0.299)	(0.264)		(0.316)	(0.239)		(0.286)	(0.244)		(0.296)
Treated * swing state	-0.148		-0.302	-0.035		-0.005	0.170		0.109	0.242		0.312
	(0.236)		(0.251)	(0.250)		(0.265)	(0.226)		(0.241)	(0.232)		(0.247)
Treated * trigger law state		-0.257	-0.409*		-0.076	-0.249		-0.068	-0.165		0.008	-0.042
		(0.198)	(0.236)		(0.212)	(0.250)		(0.190)	(0.225)		(0.196)	(0.234)
Treated * Trust SCOTUS			-0.059			-0.091			-0.129**			-0.143**
			(0.062)			(0.066)			(0.059)			(0.062)
Treated * Repr. SCOTUS			0.027			0.034			0.115			0.085
			(0.095)			(0.100)			(0.090)			(0.094)
Treated * Democrat			-0.104			-0.236			-0.113			-0.252
			(0.263)			(0.278)			(0.252)			(0.259)
Treated * Independent			-0.025			-0.212			0.073			-0.039
			(0.266)			(0.279)			(0.255)			(0.261)
Treated * mod. conservative			0.043			0.012			0.225			0.107
			(0.283)			(0.299)			(0.271)			(0.280)
Treated * mod. liberal			0.062			0.104			0.089			0.039
			(0.282)			(0.301)			(0.270)			(0.281)
Treated * strongly cons.			0.068			-0.029			0.286			0.159
			(0.304)			(0.322)			(0.291)			(0.300)
Treated * strongly liberal			-0.183			-0.314			-0.190			-0.275
			(0.311)			(0.326)			(0.297)			(0.305)
Treated * Dobbs awareness			0.124			0.126			0.085			0.076
			(0.092)			(0.098)			(0.088)			(0.091)
State F.E.	✓	✓	✓	X	X	X	✓	✓	✓	X	X	X
Observations	1,376	1,376	1,376	1,535	1,535	1,399	1,376	1,376	1,376	1,535	1,535	1,399
R-squared	0.311	0.312	0.315	0.014	0.016	0.130	0.258	0.257	0.263	0.008	0.012	0.110
Adjusted R-squared	0.266	0.268	0.264	0.010	0.014	0.114	0.209	0.209	0.209	0.004	0.010	0.094

Table 26 Personal opinions, additional moderators (state presidential status, trigger law state) (cont'd)

	(7) Rape					
Treated	-0.095	-0.194*	-0.232	-0.099	-0.126	-0.356
	(0.199)	(0.106)	(0.396)	(0.201)	(0.109)	(0.409)
Treated * Democratic state	-0.164		-0.328	-0.083		-0.193
	(0.253)		(0.303)	(0.257)		(0.313)
Treated * swing state	-0.167		-0.264	0.004		-0.008
	(0.238)		(0.255)	(0.244)		(0.262)
Treated * trigger law state		-0.121	-0.259		0.004	-0.162
		(0.201)	(0.238)		(0.207)	(0.247)
Treated * Trust SCOTUS			-0.112*			-0.119*
			(0.063)			(0.066)
Treated * Repr. SCOTUS			0.138			0.119
			(0.096)			(0.099)
Treated * Democrat			0.036			-0.073
			(0.266)			(0.274)
Treated * Independent			0.364			0.232
			(0.269)			(0.276)
Treated * mod. conservative			0.187			0.180
			(0.286)			(0.296)
Treated * mod. liberal			-0.016			0.063
			(0.285)			(0.298)
Treated * strongly cons.			0.448			0.415
			(0.307)			(0.317)
Treated * strongly liberal			0.091			0.034
			(0.314)			(0.322)
Treated * Dobbs awareness			0.011			0.018
			(0.093)			(0.097)
State F.E.	✓	✓	✓	X	X	X
Observations	1,376	1,376	1,376	1,535	1,535	1,399
R-squared	0.268	0.268	0.273	0.009	0.010	0.110
Adjusted R-squared	0.220	0.221	0.219	0.005	0.008	0.094

Table 27 Opinions on SCOTUS, moderators

	(1) Trust in SCOTUS						(2) Perceived representativeness of SCOTUS					
Treated	0.171	-0.188	-0.106	-0.094	-0.109	0.000	-0.102	-0.300***	-0.000	-0.125**	-0.132**	-0.219
	(0.153)	(0.145)	(0.241)	(0.088)	(0.088)	(0.313)	(0.099)	(0.093)	(0.155)	(0.057)	(0.057)	(0.202)
Treated * Democratic	-0.508**					-0.396	-0.011					0.136
	(0.206)					(0.259)	(0.133)					(0.167)
Treated * Independent	-0.277					-0.201	-0.098					0.054
	(0.227)					(0.259)	(0.147)					(0.167)
Treated * mod. conservative		0.452*				0.298		0.403**				0.426**
		(0.260)				(0.279)		(0.167)				(0.180)
Treated * mod. liberal		-0.193				-0.075		0.238				0.245
		(0.263)				(0.276)		(0.170)				(0.179)
Treated * strongly cons.		0.193				-0.075		0.227				0.287
		(0.258)				(0.299)		(0.166)				(0.193)
Treated * strongly liberal		0.029				0.153		0.181				0.201
		(0.279)				(0.304)		(0.180)				(0.196)
Treated * Dobbs awareness			-0.001			0.023			-0.052			-0.063
			(0.088)			(0.090)			(0.057)			(0.058)
Treated * abortion morality				-0.090		0.014				-0.048		-0.046
				(0.067)		(0.077)				(0.043)		(0.050)
Treated * abortion attitudes					-0.227***	-0.202**					-0.010	0.016
					(0.087)	(0.096)					(0.057)	(0.062)
State F.E.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1,375	1,375	1,375	1,375	1,375	1,375	1,374	1,374	1,374	1,374	1,374	1,374
R-squared	0.2061	0.2055	0.2024	0.2035	0.2065	0.2103	0.2186	0.2222	0.2188	0.2190	0.2183	0.2238
Adjusted R-squared	0.1577	0.1557	0.1543	0.1555	0.1587	0.1576	0.1709	0.1734	0.1717	0.1720	0.1712	0.1719

Table 28 Opinions on state legislatures, moderators

	(1) Trust in state legislatures						(2) Perceived representativeness of state legislatures					
Treated	0.383***	-0.163	0.145	-0.071	-0.086	0.434	0.035	-0.224**	0.107	-0.140**	-0.156***	0.156
	(0.147)	(0.139)	(0.232)	(0.085)	(0.084)	(0.300)	(0.095)	(0.090)	(0.149)	(0.055)	(0.055)	(0.194)
Treated * Democratic	-0.801****					-0.621**	-0.317**					-0.206
	(0.197)					(0.249)	(0.128)					(0.161)
Treated * Independent	-0.543**					-0.429*	-0.235*					-0.176
	(0.218)					(0.249)	(0.141)					(0.161)
Treated * mod. conservative		0.446*				0.229		0.348**				0.234
		(0.249)				(0.268)		(0.161)				(0.173)

Treated * mod. liberal		-0.335				-0.204		-0.102				-0.017
		(0.253)				(0.265)		(0.164)				(0.171)
Treated * strongly cons.		0.467*				0.181		0.149				0.061
		(0.247)				(0.287)		(0.160)				(0.186)
Treated * strongly liberal		-0.157				0.016		0.018				0.158
		(0.267)				(0.292)		(0.173)				(0.189)
Treated * Dobbs awareness			-0.091			-0.076			-0.103*			-0.093*
			(0.085)			(0.086)			(0.055)			(0.056)
Treated * abortion morality				-0.098		0.015				-0.105**		-0.084*
				(0.064)		(0.074)				(0.042)		(0.048)
Treated * abortion attitudes					-0.124	-0.044					-0.013	0.057
					(0.084)	(0.092)					(0.054)	(0.059)
State F.E.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375
R-squared	0.1369	0.1337	0.1264	0.1272	0.1271	0.1390	0.1758	0.1762	0.1740	0.1757	0.1717	0.1819
Adjusted R-squared	0.0843	0.0794	0.0739	0.0747	0.0746	0.0815	0.1255	0.1246	0.1243	0.1261	0.1219	0.1273

Item	Control	Treated	p-value
. . . if the woman became pregnant as a result of rape?			0.9753
Strongly oppose	40 (5.25%)	55 (7.11%)	
Oppose	22 (2.89%)	25 (3.23%)	
Somewhat oppose	35 (4.59%)	32 (4.13%)	
Neither oppose nor support	103 (13.52%)	117 (15.12%)	
Somewhat support	81 (10.63%)	63 (8.14%)	
Support	125 (16.40%)	140 (18.09%)	
Strongly support	356 (46.72%)	342 (44.19%)	
. . . if the woman is not married and does not want to marry the man?			0.9816
Strongly oppose	158 (20.73%)	157 (20.28%)	
Oppose	71 (9.32%)	74 (9.56%)	
Somewhat oppose	62 (8.14%)	47 (6.07%)	
Neither oppose nor support	146 (19.16%)	166 (21.45%)	
Somewhat support	74 (9.71%)	63 (8.14%)	
Support	86 (11.29%)	90 (11.63%)	
Strongly support	165 (21.65%)	177 (22.87%)	
(Personal attitudes, morality) Choose the statement that best represents your opinion:			

Item	Control	Treated	p-value
I personally think that having an abortion is...			
Morally acceptable in all cases	142 (18.64%)	155 (20.03%)	0.2602
Morally acceptable in most cases	211 (27.69%)	220 (28.42%)	
Morally wrong in most cases	64 (8.40%)	80 (10.34%)	
Morally wrong in all cases	246 (32.28%)	221 (28.55%)	
Not a moral issue	98 (12.86%)	97 (12.53%)	
(Trust in the Supreme Court) To what extent do you mistrust or trust the US Supreme Court as an institution?			
Strongly mistrust	92 (12.07%)	123 (15.89%)	0.8375
Mistrust	102 (13.39%)	118 (15.25%)	
Somewhat mistrust	165 (21.65%)	137 (17.70%)	
Neither mistrust nor trust	175 (22.97%)	187 (24.16%)	
Somewhat trust	113 (14.83%)	92 (11.89%)	
Trust	67 (8.79%)	72 (9.30%)	
Strongly trust	48 (6.30%)	45 (5.81%)	
(Perceived representativeness of the Supreme Court) To what extent do you think decisions made by the US Supreme Court do or do not represent public opinion in the United States?			
Very much represents public opinion	83 (10.89%)	72 (9.30%)	0.1294

Item	Control	Treated	p-value
Somewhat represents public opinion	161 (21.13%)	154 (19.90%)	
Now and then represents	313 (41.08%)	314 (40.57%)	
Hardly represents	120 (15.75%)	141 (18.22%)	
Does not represent at all	85 (11.15%)	92 (11.89%)	
(Trust in state legislatures) To what extent do you mistrust or trust state legislatures as an institution?			
Strongly mistrust	87 (11.42%)	118 (15.25%)	0.6774
Mistrust	106 (13.91%)	114 (14.73%)	
Somewhat mistrust	177 (23.23%)	147 (18.99%)	
Neither mistrust nor trust	212 (27.82%)	216 (27.91%)	
Somewhat trust	102 (13.39%)	104 (13.44%)	
Trust	44 (5.77%)	49 (6.33%)	
Strongly trust	34 (4.46%)	26 (3.36%)	
(Perceived representativeness of state legislatures) To what extent do you think decisions made by state legislatures do or do not represent public opinion in the state?			
Very much represents public opinion	76 (9.97%)	58 (7.49%)	0.0295
Somewhat represents	171 (22.44%)	164 (21.19%)	
Now and then represents	316 (41.47%)	321 (41.47%)	

Item	Control	Treated	p-value
Hardly represents	144 (18.90%)	155 (20.03%)	
Does not represent at all	55 (7.22%)	76 (9.82%)	

1.2 Conservative Bias in Perceptions of Public Opinion Among Citizens: Perceived Social Norms About Abortion Rights in Post-Dobbs United States

This research note is published in *Political Science Research and Methods*. The typeset version is available at https://doi.org/10.1017/psrm.2025.26.

Abstract

Politicians appear to overestimate how conservative public opinion is both in the United States and in other Western democracies. Whether this "conservative bias" is peculiar to political elites or it extends also to voters is less clear, yet has major implications for beliefs formation and behaviors. I address this question in the context of abortion access in the US after the Dobbs decision. Despite the salience and availability of public opinion polls on the topic, original survey data collected after the Supreme Court decision show a consistent underestimation of public support for abortion access. Individuals identifying as "pro-life" drive most of this underestimation, suggesting the presence of egocentric biases in which "pro-life" Americans overestimate the commonality of their views. Conservative biases among voters may contribute to a skewed information environment for politicians, potentially providing leverage for further restrictions on abortion access.

Introduction

Politicians perceive public opinion as more conservative than it is both in the United States and in Western democracies (Broockman and Skovron, 2018; Pilet et al., 2024). The existence of "conservative bias" in the way political elites perceive constituency opinion has important implications for the quality of democratic representation. However, less is known about whether this case of pluralistic ignorance – i.e., incorrect beliefs about what others believe - is peculiar to political elites, or if it extends also to voters. Such second-order beliefs have been shown to exert influence on the way people process political information (Ahn et al., 2014), form and validate their own opinion (Festinger, 1950), vote (Feddersen and Pesendorfer, 1996; Huckfeldt, 1995), and behave. For instance, the perception that public opinion is more conservative than it actually is can trigger inaction on behalf of individuals holding progressive views through pressure to conform to status quo norms (or perceived inability to challenge them) – i.e., the "spiral of silence" (Noelle-Neumann, 1993; Taylor, 1982). This tendency is also likely to affect politicians' information environment, potentially impacting the policymaking process.

I examine whether public opinion exhibits conservative bias by using abortion rights in the US as a case study. Abortion is the prototypical culture war issue and is argued to play a crucial role in shaping social identity (Goren and Chapp, 2017). Moreover, it gained renewed salience with the overturning of Roe v. Wade and the subsequent modifications in state-level abortion legislation. Salience and the consequent availability of public opinion poll data support the expectation that people would demonstrate a high degree of accuracy in their assessments of public opinion on the topic. However, the deeply morally rooted nature of beliefs about abortion rights, coupled with a highly polarized political debate predict the presence of pluralistic ignorance. Previous findings indicate that public opinion

was perceived as more supportive of abortion access immediately after the Dobbs decision compared to the previous period (Clark et al., 2024), but it remains unclear if people hold accurate views about the beliefs of others on this issue.

Survey data collected approximately seven months after the overturning of Roe v. Wade from a sample representative of the US adult population on key demographic characteristics (n = 1,536) indicates that individuals underestimate public support for abortion rights. To further explore this instance of pluralistic ignorance, two analyses were conducted: first, I looked at the factors that correlate with accuracy in perception of public support for abortion access; second, I examined individuals' perceptions of how different their own views are from the public's view ("self-positioning"). The first analysis revealed that such underestimation was primarily driven by individuals identifying as "pro-life". However, when looking at self-positioning, both subjects identifying as "pro-life" and "pro-choice" appeared to be equally aware that their opinions were more extreme compared to the average. This result sheds light on how egocentric bias – also referred to as "false consensus effect", in which people overestimate the commonality of their views (Krueger and Clement, 1994; Ross et al., 1977) - operates in practice. Indeed, it suggests that the false consensus effect may exist even when subjects are self-aware that their opinions are more extreme than the average. Moreover, these findings can deepen the comprehension of the mechanisms behind forms of conservative bias held by political elites. Prior research has shown that conservative voters tend to be more vocal with their representatives compared to liberal ones (Broockman and Skovron, 2018; Pereira, 2021). My results suggest that conservative subjects are also the ones who are more likely to misperceive public opinion in a conservative direction. The combination of the two factors is likely to play a crucial role in creating a skewed information environment for politicians. Consequently, these findings point to practical implications for political developments surround-

ing abortion politics. Underestimation of public support for abortion access among voters could empower already antiabortion-oriented states to implement further restrictions and reduce legislative actions to protect abortion rights in supportive states.

Misperception of Public Opinion

Broockman and Skovron 2018 provide evidence of a systematic overestimation of how conservative constituency opinion is. Pilet and colleagues further investigated the topic outside the US, documenting a consistent right-skewed misperception 2024. A similar bias was found among US Members of Congress' senior legislative staff (Hertel-Fernandez et al., 2019).

This tendency, often labeled as "conservative bias", represents a case of pluralistic ignorance, defined in social psychology as a systematic misperception of public opinion (Allport, 1924; Shamir and Shamir, 1997). The mechanisms proposed to explain this phenomenon include conservative voters being more vocal with their elected representatives and elite politicians projecting their own preferences onto voters (i.e., egocentric bias or "false consensus effect") (Broockman and Skovron, 2018; Hertel-Fernandez et al., 2019; Pereira, 2021; Sevenans et al., 2023). These findings are crucial for the debate on the quality of democratic representation and responsiveness to constituencies' policy preferences (Miller and Stokes, 1963; Page and Shapiro, 1983).

However, such second-order beliefs among ordinary citizens remain relatively understudied in political science. Some research has shown an underestimation of public support for policies aimed at mitigating climate change (e.g., Mildenberger and Tingley (2019); Sparkman et al. (2022)). Scholars have also explored perceptions of voting behavior, finding that Americans perceive more polarization

than actually exists (Ahler, 2014; Levendusky and Malhotra, 2016) but also that citizens are able, to correctly predict voting behavior based on demographic characteristics (Carlson and Hill, 2022; Titelman and Lauderdale, 2023)[1]. In general, however, there is little research that considers whether people consistently overestimate public support for conservative policy positions in the same way that politicians often do[2].

Investigating second-order beliefs is relevant to the understanding of public opinion dynamics, which, in turn, shape politicians' information environment. Empirical evidence supports the claim that citizens consider peers' positions when forming their own (Ahler, 2014) and this is theoretically explained as an inherent desire to avoid social rejection from reference groups (Cialdini and Goldstein, 2004) and to seek social validation (Hardin and Higgins, 1996). Indeed, second-order beliefs have been argued to shape behaviors (e.g., voting decisions, engagement in activist endeavors) and beliefs (Durkheim and Lukes, 1982; Searle, 1995; Snyder and Swann Jr, 1978). As a prominent example, second-order beliefs about climate change were shown to shape support for climate policy action (e.g., Ding et al. (2011)) and personal engagement in environmentally-friendly behaviors (Jachimowicz et al., 2018). Furthermore, mutations in perceived social norms were found to motivate changes in personal attitudes, e.g., on racial discrimination (Stangor et al., 2001). Nevertheless, it has also been acknowledged that individuals may perceive shifts in collective opinion without changing their own (Paluck, 2009).

The objective of this study is to assess whether pluralistic ignorance in the form of conservative bias exists in how individuals perceive public opinion about salient political issues, focusing on abortion rights in the US after the Dobbs decision.

[1]A more detailed discussion on the literature about second-order beliefs is available in the Supplementary Materials.

[2]For example, Sparkman and colleagues 2022 stressed the importance to study pluralistic ignorance among the general public because it is argued to play a crucial role in hampering collective action.

Overall, two main elements influence accuracy in perception of public opinion[3] : information availability and presence of factors that intensify behavioral biases in its absorption (from now on "bias-predisposing factors"). For example, a highly polarized political debate is likely to increase selective exposure and motivated reasoning when processing information (Taber and Lodge, 2006; Tesler, 2018). The two elements move accuracy in opposite directions: more information available is expected to increase accuracy, whereas the presence of "bias-predisposing factors" is expected to reduce it. Abortion access, especially in the US, is regarded to as the prototypical culture war issue (e.g., Castle (2019)), mostly because it touches upon universal concerns about human sexuality and family organization (Jelen, 2009; Putnam and Campbell, 2012). Culture war attitudes serve as social identities; therefore, individuals are likely to be alert in gauging opinion orientations on this type of issue. Additionally, abortion is widely regarded as a visible and important issue for voters and it can be framed in non-complex ways (Hare et al., 2015; Kalla and Broockman, 2018). The debate about abortion rights has regained major salience with the landmark Supreme Court decision about the Dobbs v. Jackson case in June 2022, which removed abortion from the constitutionally guaranteed rights and returned the issue to the states. Moreover, the subsequent months have witnessed a series of relevant events impacting abortion legislation, including total or early gestational age bans achieving enforceability in a set of states and the Kansas abortion referendum.

These characteristics are compatible with opposed expectations on accuracy in perception of public opinion: high visibility and renewed salience[4] , sustained also throughout the 2022 midterm elections campaign (Mutz and Mansfield, 2024), suggest accuracy in perceptions; however, the highly polarized debate and the role

[3]This reflects classical theories of representations used to explain inaccurate perceptions of constituents' opinion by politicians, as in Broockman and Skovron 2018.

[4]A July 2022 survey by Pew Research Center for the People & the Press found that 60% of respondents indicated that they heard "a lot" about the decision (Norrander and Wilcox, 2023)

of abortion attitudes in shaping social identities are likely to increase biases in the way information is accessed and processed, predicting the presence of forms of pluralistic ignorance.

Data and Methods

This study is based on original survey data collected in February 2023 from a sample (n = 1,536) representative of the US adult population on key demographic characteristics[5].

Perceived public opinion and personal opinion about abortion rights were captured using survey questions borrowed from the General Social Survey[6]. Respondents were asked to mark on a seven-point Likert scale to what extent they think Americans oppose or support abortion access (perceived public opinion) under seven distinct circumstances encompassing elective reasons (i.e., any reason, the woman already has children and does not want any more, the household has a very low income, the woman is not married) and traumatic reasons (i.e., strong chance of serious defect in the fetus, carrying the pregnancy to term would jeopardize the woman's health, rape). Respondents were subsequently asked to go through the same survey items, marking to what extent they themselves oppose or support abortion access (personal opinion). Moreover, I collected information about demographic and ideological variables that reflect the main correlates of abortion attitudes identified in the literature (Jozkowski et al., 2020; Osborne et al., 2022), trust in institutions and knowledge about the Dobbs decision.

Data analysis was organized into two parts. The first one focused on "perception versus reality". Here, I analyzed the accuracy in perceptions of public opinion and

[5]The survey sample was recruited by the firm Lucid. Extensive tests related to the representativeness of the sample are available in the Supplementary Materials.

[6]The General Social Survey is a project of the independent research organization NORC at the University of Chicago.

factors associated with it. In this section, I compared the actual level of support for abortion access emerging from the survey with respondents' perceptions of it to assess the presence of underestimation or overestimation. Furthermore, I estimated multivariable models using the absolute value of the difference between actual and perceived opinion to identify the characteristics that correlate with accuracy in perception of public opinion. The second part of the analysis looked at "self-positioning" of the respondents' level of support compared to what they perceived support to be among Americans. Here, both pieces of information in this analysis are controlled by the respondent, while in the "perception versus reality" section respondents were not aware of the actual level of support emerging from the survey. Hence, this second analysis allows to collect information about how close respondents perceive their position to be with respect to the average one. To do so, I estimated multivariable models using as dependent variable the absolute value of the difference between a respondent's personal opinion and their perception of public opinion[7].

[7]Multiple linear regression models were used in the base case. Robustness checks were performed using multiple ordinal logistic models.

Results

Perception Versus Reality

Figure 1.1[8] reports the actual support for abortion access emerging from the survey and perceived support, by abortion cause. Respondents significantly underestimated public support for abortion access for most abortion reasons, except for rape and the most generic cause. The largest discrepancy was found for the woman not being married (actual support [measured in -3 to 3 scale]: 0.1113, perceived support: -0.0723, $p<0.001$), followed by when the woman already has children and does not want any more (actual support: 0.0710, perceived support: -0.1205, $p<0.001$) and the household cannot afford any more children (actual support: 0.2402, perceived support: 0.0788, $p<0.001$).

[8]See Supplementary Materials

Figure 1.1: Underestimation of public support for abortion rights. The bar charts display the sample average for actual support and perceived support, errors bars, and p-value of the t-test on equality of means.

Note: The seven-point Likert scale used to measure the level of support for abortion access (ranging from "Strongly oppose" to "Strongly support") was converted into a discrete numerical scale ranging from -3 to 3. The scale on the y axis has been reduced to ease readability. This remark applies also to Figure 1.3.

The analysis of the characteristics that correlate with accuracy in perception of public opinion revealed that, compared to subjects identifying as "pro-choice", those identifying as "pro-life" were systematically more wrong in their assessment of public support for abortion access, while subjects identifying as "neither pro-

life nor pro-choice" or "equally both" were more accurate in their perceptions, limited to elective causes. A similar pattern, although less consistent, emerged for ideology, where both strongly liberal and strongly conservative respondents misperceived public opinion – especially when dealing with elective causes, while moderately conservative subjects were more accurate in their judgment with respect to traumatic causes, as reported in Figure 1.2.

Note: The figure features regression coefficients for multiple linear models where the dependent variable is the absolute value of the difference between actual public opinion and respondent's perceived public opinion. Positive coefficients indicate larger differences, i.e., misperception. See Supplementary materials for the complete set of regression coefficients.

Self-positioning

The analysis on self-positioning revealed that both individuals identifying as "pro-life" and those identifying as "pro-choice" perceived their opinions as more extreme compared to those of the average American, as displayed in Figure 1.3[9]. On the contrary, subjects taking a neutral stance in the abortion debate perceived that the average opinion is close to their view. Multivariable analyses confirmed the finding (see Supplementary materials). All results reported in this section were produced without using survey weights. Results do not change in sign and significance when performing weighted analyses. Full details on the post-stratification technique and results are available in the Supplementary materials.

Discussion and Conclusion

Drawing on survey data collected after the 2022 landmark Supreme Court decision that removed abortion from the constitutionally protected rights in the US, this study found that individuals underestimate public support for abortion ac-

[9]See Supplementary materials

Figure 1.2: Identifying as "pro-life" is associated with a significant misperception of public opinion, while individuals with neutral positions have more accurate perceptions. A similar pattern is found for ideology.

Figure 1.3: Both individuals identifying as “pro-life” and “pro-choice” perceive their opinion as more extreme than the American public. The bar charts display personal support (darker) and perceived support (lighter) scores by respondent’s abortion identity label. The black solid line indicates the average actual support.

cess. This result has important implications for understanding public opinion, pluralistic ignorance, and the politics of abortion. First, it shows that a systematic misperception can exist even in the context of a highly salient topic, with large availability of public opinion poll data. Second, conservative biases in perception of public support for abortion access among citizens can have practical consequences from the policymaking perspective. Although they may not alter the behavior of strongly committed pro-abortion access activists, they may discourage political action on behalf of individuals holding moderately liberal views on the topic, compatibly with the "spiral of silence" theory. This, in turn, may be reflected in politicians' information environment, potentially encouraging further restrictions in antiabortion-oriented states and lessening the pressure to safeguard abortion access in protective states.

When analyzing the influence of demographic and ideological characteristics on accuracy in perceptions, identifying as "pro-life" was consistently associated with the most inaccurate estimation of public support for abortion access. This finding points in the direction of the presence of forms of egocentric biases such as the "false consensus effect", with pro-life and conservative Americans especially likely to attribute their own views to others. It is worth noting that false consensus is also found for individuals taking liberal positions - although to a lesser extent (Figure 1.3). This result partly contrasts with the empirical regularity that associates liberals with the "illusion of uniqueness" effect, defined as judging own's beliefs as more distinctive than they actually are (Stern et al., 2014b; Suls et al., 1988)[10]. Fully assessing the mechanisms that lead subjects identifying as "pro-life" to display the largest misperception is outside the scope of this research note.

[10]Figure 1.3 shows that individuals identifying as "pro-choice" overestimate public support, compatibly with an instance of false consensus. However, the extent of the misperception for the "pro-life" counterpart (now in the direction of underestimation) is larger in magnitude, therefore driving the overall result. The associated numerical values are reported in the Supplementary Materials.

Nevertheless, it is possible to link these findings with existing contributions. It is known that conservatives possess a stronger desire to "share reality" (Stern et al., 2014a) compared to liberals. Similarly to what has been documented in the climate change debate, selective exposure to information and motivated reasoning could be plausible mechanisms at play (Bayes and Druckman, 2021); however, more research is needed to confirm this hypothesis.

As for self-positioning, both individuals identifying as "pro-life" and "pro-choice" appear comparably aware that their opinions are more extreme compared to the average. This result therefore suggests that, for individuals holding "extreme" positions, self-awareness that their stance is farther from the perceived average public opinion does not necessarily lead to accuracy in assessment.

Finally, given the specificity of the case study, caution is required when making claims about the results generalizability . Considering accuracy in perception of public opinion as the net result of two countervailing forces – information availability and "bias-predisposing factors", these results suggest that the latter may prevail in the case of abortion access. With abortion as the prototypical culture war issue, it is conceivable that the same effect is present for other issues that are strongly correlated with partisanship and social identity. On the contrary, "bias-predisposing factors" may be less present for topics that do not evoke comparably strong emotional responses. Therefore, in these cases accuracy may primarily be function of information availability.

Overall, these findings call for further research on second-order beliefs for different issues and contexts, with a specific attention to the mechanisms driving results. Biases in perceptions of public opinion among citizens are interconnected with biases in political elites' perceptions of preferences among their constituents and can impact agenda setting and policymaking. Therefore, improving knowledge on this topic can substantially contribute to understanding patterns of democratic

representation.

References

Douglas J Ahler. Self-fulfilling misperceptions of public polarization. *The Journal of Politics*, 76(3):607–620, 2014.

TK Ahn, Robert Huckfeldt, and John Barry Ryan. *Experts, activists, and democratic politics: Are electorates self-educating?* Cambridge University Press, 2014.

Floyd Henry Allport. *Social psychology.* Boston, Houghton, 1924.

Robin Bayes and James N Druckman. Motivated reasoning and climate change. *Current Opinion in Behavioral Sciences*, 42:27–35, 2021.

David E Broockman and Christopher Skovron. Bias in perceptions of public opinion among political elites. *American Political Science Review*, 112(3):542–563, 2018.

Taylor N Carlson and Seth J Hill. Experimental measurement of misperception in political beliefs. *Journal of Experimental Political Science*, 9(2):241–254, 2022.

Jeremiah Castle. New fronts in the culture wars? Religion, partisanship, and polarization on religious liberty and transgender rights in the United States. *American Politics Research*, 47(3):650–679, 2019.

Robert B Cialdini and Noah J Goldstein. Social influence: Compliance and conformity. *Annu. Rev. Psychol.*, 55(1):591–621, 2004.

Chelsey S Clark, Elizabeth Levy Paluck, Sean J Westwood, Maya Sen, Neil Malhotra, and Stephen Jessee. Effects of a us Supreme Court ruling to restrict abortion rights. *Nature Human Behaviour*, 8(1):63–71, 2024.

Ding Ding, Edward W Maibach, Xiaoquan Zhao, Connie Roser-Renouf, and Anthony Leiserowitz. Support for climate policy and societal action are linked to perceptions about scientific agreement. *Nature Climate Change*, 1(9):462–466, 2011.

Emile Durkheim and Steven Lukes. *The rules of sociological method and selected texts on sociology and its method. Edited with an Introduction by Steven Lukes.* Macmillan, 1982.

Andrew Dustan, Kristine Koutout, and Greg Leo. Second-order beliefs and gender. *Journal of Economic Behavior & Organization*, 200:752–781, 2022.

Daniel Egan, Christoph Merkle, and Martin Weber. Second-order beliefs and the individual investor. *Journal of Economic Behavior & Organization*, 107:652–666, 2014.

Timothy J Feddersen and Wolfgang Pesendorfer. The swing voter's curse. *The American economic review*, pages 408–424, 1996.

Leon Festinger. Informal social communication. *Psychological review*, 57(5):271, 1950.

Paul Goren and Christopher Chapp. Moral power: How public opinion on culture war issues shapes partisan predispositions and religious orientations. *American Political Science Review*, 111(1):110–128, 2017.

Curtis D Hardin and E Tory Higgins. Shared reality: How social verification makes the subjective objective. 1996.

Christopher Hare, David A Armstrong, Ryan Bakker, Royce Carroll, and Keith T Poole. Using Bayesian Aldrich-McKelvey scaling to study citizens' ideological preferences and perceptions. *American Journal of Political Science*, 59(3):759–774, 2015.

Alexander Hertel-Fernandez, Matto Mildenberger, and Leah C Stokes. Legislative staff and representation in congress. *American Political Science Review*, 113(1): 1–18, 2019.

Robert Huckfeldt. Citizens, politics, and social communication: Information and influence in an election campaign. *Cambridge University*, 1995.

Jon M Jachimowicz, Oliver P Hauser, Julia D O'Brien, Erin Sherman, and Adam D Galinsky. The critical role of second-order normative beliefs in predicting energy conservation. *Nature Human Behaviour*, 2(10):757–764, 2018.

Ted G Jelen. Religion and American public opinion: Social issues. 2009.

John T Jost. Underestimating belief in climate change. *Nature Climate Change*, 8(3):189–190, 2018.

Kristen N Jozkowski, Brandon L Crawford, Ronna C Turner, and Wen-Juo Lo. Knowledge and sentiments of Roe v. Wade in the wake of justice Kavanaugh's nomination to the US Supreme Court. *Sexuality Research and Social Policy*, 17: 285–300, 2020.

Joshua L Kalla and David E Broockman. The minimal persuasive effects of campaign contact in general elections: Evidence from 49 field experiments. *American Political Science Review*, 112(1):148–166, 2018.

Joachim Krueger and Russell W Clement. The truly false consensus effect: an

ineradicable and egocentric bias in social perception. *Journal of personality and social psychology*, 67(4):596, 1994.

Matthew S Levendusky and Neil Malhotra. (Mis) perceptions of partisan polarization in the american public. *Public Opinion Quarterly*, 80(S1):378–391, 2016.

Zoe Leviston, Iain Walker, and Sarah Morwinski. Your opinion on climate change might not be as common as you think. *Nature Climate Change*, 3(4):334–337, 2013.

Aaron M McCright, Riley E Dunlap, and Chenyang Xiao. Perceived scientific agreement and support for government action on climate change in the USA. *Climatic Change*, 119:511–518, 2013.

Matto Mildenberger and Dustin Tingley. Beliefs about climate beliefs: the importance of second-order opinions for climate politics. *British Journal of Political Science*, 49(4):1279–1307, 2019.

Warren E Miller and Donald E Stokes. Constituency influence in congress. *American political science review*, 57(1):45–56, 1963.

Diana C Mutz and Edward D Mansfield. Inflation in 2022 did not affect congressional voting, but abortion did. *Proceedings of the National Academy of Sciences*, 121(21):e2319512121, 2024.

Elisabeth Noelle-Neumann. *The spiral of silence: Public opinion-our social skin*. University of Chicago Press, 1993.

Barbara Norrander and Clyde Wilcox. Trends in abortion attitudes: from Roe to Dobbs. *Public Opinion Quarterly*, 87(2):427–458, 2023.

Danny Osborne, Yanshu Huang, Nickola C Overall, Robbie M Sutton, Aino Petterson, Karen M Douglas, Paul G Davies, and Chris G Sibley. Abortion attitudes:

An overview of demographic and ideological differences. *Political Psychology*, 43:29–76, 2022.

Benjamin I Page and Robert Y Shapiro. Effects of public opinion on policy. *American political science review*, 77(1):175–190, 1983.

Elizabeth Levy Paluck. Reducing intergroup prejudice and conflict using the media: a field experiment in Rwanda. *Journal of personality and social psychology*, 96(3):574, 2009.

Miguel M Pereira. Understanding and reducing biases in elite beliefs about the electorate. *American Political Science Review*, 115(4):1308–1324, 2021.

Jean-Benoit Pilet, Lior Sheffer, Luzia Helfer, Frederic Varone, Rens Vliegenthart, and Stefaan Walgrave. Do politicians outside the United States also think voters are more conservative than they really are? *American Political Science Review*, 118(2):1037–1045, 2024.

Deborah A Prentice and Dale T Miller. Pluralistic ignorance and alcohol use on campus: some consequences of misperceiving the social norm. *Journal of personality and social psychology*, 64(2):243, 1993.

Mitchell J Prinstein and Shirley S Wang. False consensus and adolescent peer contagion: Examining discrepancies between perceptions and actual reported levels of friends' deviant and health risk behaviors. *Journal of abnormal child psychology*, 33:293–306, 2005.

Robert D Putnam and David E Campbell. *American grace: How religion divides and unites us.* Simon and Schuster, 2012.

Mitchell Rabinowitz, Lauren Latella, Chadly Stern, and John T Jost. Beliefs about

childhood vaccination in the united states: Political ideology, false consensus, and the illusion of uniqueness. *PloS one*, 11(7):e0158382, 2016.

Lee Ross, David Greene, and Pamela House. The "false consensus effect": An egocentric bias in social perception and attribution processes. *Journal of experimental social psychology*, 13(3):279–301, 1977.

Jonathon P Schuldt, Y Connie Yuan, Yunya Song, and Kai Liu. Beliefs about whose beliefs? Second-order beliefs and support for China's coal-to-gas policy. *Journal of Environmental Psychology*, 66:101367, 2019.

John R Searle. The construction of social reality. *Allen Lane*, 1995.

Julie Sevenans, Stefaan Walgrave, Arno Jansen, Karolin Soontjens, Stefanie Bailer, Nathalie Brack, Christian Breunig, Luzia Helfer, Peter Loewen, Jean-Benoit Pilet, et al. Projection in politicians' perceptions of public opinion. *Political Psychology*, 44(6):1259–1279, 2023.

Jacob Shamir and Michal Shamir. Pluralistic ignorance across issues and over time: Information cues and biases. *Public Opinion Quarterly*, pages 227–260, 1997.

Steven J Sherman, Clark C Presson, Laurie Chassin, Eric Corty, and Richard Olshavsky. The false consensus effect in estimates of smoking prevalence: Underlying mechanisms. *Personality and Social Psychology Bulletin*, 9(2):197–207, 1983.

Mark Snyder and William B Swann Jr. Behavioral confirmation in social interaction: From social perception to social reality. *Journal of experimental social psychology*, 14(2):148–162, 1978.

Gregg Sparkman, Nathan Geiger, and Elke U Weber. Americans experience a false social reality by underestimating popular climate policy support by nearly half. *Nature communications*, 13(1):4779, 2022.

Charles Stangor, Gretchen B Sechrist, and John T Jost. Changing racial beliefs by providing consensus information. *Personality and Social Psychology Bulletin*, 27(4):486–496, 2001.

Chadly Stern, Tessa V West, John T Jost, and Nicholas O Rule. "Ditto heads" do conservatives perceive greater consensus within their ranks than liberals? *Personality and Social Psychology Bulletin*, 40(9):1162–1177, 2014a.

Chadly Stern, Tessa V West, and Peter G Schmitt. The liberal illusion of uniqueness. *Psychological Science*, 25(1):137–144, 2014b.

Jerry Suls, Choi K Wan, and Glenn S Sanders. False consensus and false uniqueness in estimating the prevalence of health-protective behaviors. *Journal of Applied Social Psychology*, 18(1):66–79, 1988.

Charles S Taber and Milton Lodge. Motivated skepticism in the evaluation of political beliefs. *American journal of political science*, 50(3):755–769, 2006.

D Garth Taylor. Pluralistic ignorance and the spiral of silence: A formal analysis. *Public opinion quarterly*, 46(3):311–335, 1982.

Michael Tesler. Elite domination of public doubts about climate change (not evolution). *Political Communication*, 35(2):306–326, 2018.

Noam Titelman and Benjamin E Lauderdale. Can citizens guess how other citizens voted based on demographic characteristics? *Political Science Research and Methods*, 11(2):254–274, 2023.

Alexander Todorov and Anesu N Mandisodza. Public opinion on foreign policy: The multilateral public that perceives itself as unilateral. *Public Opinion Quarterly*, 68(3):323–348, 2004.

Annika M Wyss, Sebastian Berger, and Daria Knoch. Pro-environmental behavior in a common-resource dilemma: The role of beliefs. *Journal of Environmental Psychology*, 92:102160, 2023.

Additional Tables and Figures Chapter 1.2

Table S1 Differences in real versus perceived support for abortion access.

Abortion reason	Actual support	Perceived support	95% CI of difference	p-value
Elective reasons				
Any reason	0.1467	0.1030	-0.038 – 0.125	0.2941
The woman is married and does not want any more children	0.0710	-0.1205	0.112 – 0.271	< 0.0001
The family has a very low income and cannot afford any more children	0.2402	0.0788	0.079 – 0.244	0.0001
The woman is not married and does not want to marry the man	0.1113	-0.0723	0.106 – 0.261	< 0.0001
Traumatic reasons				
There is a strong chance of serious defect in the baby	1.1038	0.9630	0.068 – 0.214	0.0002
The woman's own health is seriously endangered by the pregnancy	1.5564	1.4091	0.079 – 0.215	< 0.0001
The woman became pregnant because of rape	1.5121	1.4182	0.021 – 0.166	0.0112

Note: One-sample t-test (two-tailed) on equality of means. Support is measured using a 7-point Likert scale where scores were assigned as follows: strongly oppose = -3, oppose = -2, somewhat oppose = -1, neither oppose nor support = 0, somewhat support = 1, support = 2, strongly support = 3.

Table S2 Differences in real versus perceived support for abortion access. Wilcoxon sign-rank test results.

Abortion reason	p-value on Wilcoxon sign-rank test
Elective reasons	
Any reason	0.6076
The woman is married and does not want any more children	0.0004
The family has a very low income and cannot afford any more children	0.0005
The woman is not married and does not want to marry the man	< 0.0000
Traumatic reasons	
There is a strong chance of serious defect in the baby	< 0.0000
The woman's own health is seriously endangered by the pregnancy	< 0.0000
The woman became pregnant because of rape	0.0201

Note: Wilcoxon sign-rank test on equality of distributions. Support is measured using a 7-point Likert scale where scores were assigned as follows: strongly oppose = -3, oppose = -2, somewhat oppose = -1, neither oppose nor support = 0, somewhat support = 1, support = 2, strongly support = 3.

Figure S1 Multivariate linear models for perceived status quo norms by abortion cause.

Cannot afford
Not married
Female
Parent
Hispanic
Age
Bible is the word of God
Trust in SCOTUS
SCOTUS representativeness
Trust in state legislatures
State legislatures representativeness
Knowledge about Dobbs decision
Race (Ref: Caucasian)
Black or African American
Other
Rurality (Ref: Urban)
Rural
Suburban
Partisanship (Ref: Republican)
Democrat
Independent
Ideology (Ref: Moderate)
Moderately conservative
Moderately liberal
Strongly conservative
Strongly liberal
Abortion identity label (Ref: Pro-choice)
Equally both
Neither
Pro-life
Education (Ref: Less than high school)
High school
Some college
Bachelor's degree
Master's degree, PhD
Religion (Ref: Catholic)
Evangelical
Mainline protestant
Agnostic, atheist
Other
-2
-1
0
1
-2
-1
0
1

Birth defect
Woman's health
Female
Parent
Hispanic
Age
Bible is the word of God
Trust in SCOTUS
SCOTUS representativeness
Trust in state legislatures
State legislatures representativeness
Knowledge about Dobbs decision
Race (Ref: Caucasian)
Black or African American
Other
Rurality (Ref: Urban)
Rural
Suburban
Partisanship (Ref: Republican)
Democrat
Independent
Ideology (Ref: Moderate)
Moderately conservative
Moderately liberal
Strongly conservative
Strongly liberal
Abortion identity label (Ref: Pro-choice)
Equally both
Neither
Pro-life
Education (Ref: Less than high school)
High school
Some college
Bachelor's degree
Master's degree, PhD
Religion (Ref: Catholic)
Evangelical
Mainline protestant
Agnostic, atheist
Other
-2
-1
0
1

Rape
PCA
Female
Parent
Hispanic
Age
Bible is the word of God
Trust in SCOTUS
SCOTUS representativeness
Trust in state legislatures
State legislatures representativeness
Knowledge about Dobbs decision
Race (Ref: Caucasian)
Black or African American
Other
Rurality (Ref: Urban)
Rural
Suburban
Partisanship (Ref: Republican)
Democrat
Independent
Ideology (Ref: Moderate)
Moderately conservative
Moderately liberal
Strongly conservative
Strongly liberal
Abortion identity label (Ref: Pro-choice)
Equally both
Neither
Pro-life
Education (Ref: Less than high school)
High school
Some college
Bachelor's degree
Master's degree, PhD
Religion (Ref: Catholic)
Evangelical
Mainline protestant
Agnostic, atheist
Other
-1
-.5
0
.5
1

Table S3 Multiple linear regression models for perceived public opinion by abortion cause.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married	(8) PCA score
Female	-0.257***	-0.037	-0.112	-0.283***	-0.225**	-0.101	-0.208**	-0.135***
	(0.099)	(0.093)	(0.089)	(0.103)	(0.100)	(0.094)	(0.099)	(0.050)
Parent	0.124	0.103	0.058	0.048	0.049	0.087	0.010	0.021
	(0.103)	(0.097)	(0.093)	(0.107)	(0.104)	(0.098)	(0.103)	(0.052)
Hispanic	-0.057	-0.169	-0.379**	-0.051	-0.072	-0.167	-0.194	-0.023
	(0.164)	(0.154)	(0.149)	(0.170)	(0.166)	(0.156)	(0.165)	(0.083)
Race (ref = White)								
Black or African American	-0.376**	-0.394**	-0.502***	-0.208	-0.546***	-0.475***	-0.372**	-0.098
	(0.164)	(0.154)	(0.148)	(0.170)	(0.166)	(0.156)	(0.165)	(0.083)
Other	-0.155	-0.265*	-0.119	0.156	-0.181	-0.128	-0.074	0.076
	(0.161)	(0.151)	(0.146)	(0.167)	(0.163)	(0.153)	(0.162)	(0.081)
Age	0.002	0.013***	0.012***	0.001	0.005*	0.016***	0.005	0.000
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)
Rurality (ref = urban)								
Rural	-0.337**	-0.279**	-0.212	-0.132	-0.181	-0.269*	-0.343**	-0.063
	(0.145)	(0.136)	(0.131)	(0.150)	(0.146)	(0.138)	(0.145)	(0.073)
Suburban	-0.219*	-0.084	0.048	-0.048	-0.224*	-0.134	-0.310***	-0.026
	(0.117)	(0.110)	(0.106)	(0.122)	(0.119)	(0.112)	(0.118)	(0.059)
Bible is the literal word of God	0.016	-0.293**	-0.219*	0.106	-0.051	-0.300**	0.031	0.047
	(0.131)	(0.123)	(0.119)	(0.136)	(0.133)	(0.125)	(0.132)	(0.066)
Political affiliation (ref = Republican)								
Democrat	0.556***	0.375***	0.274**	0.571***	0.463***	0.455***	0.400***	0.275***
	(0.143)	(0.135)	(0.130)	(0.149)	(0.145)	(0.137)	(0.144)	(0.072)
Independent	0.210	0.223*	0.106	0.292**	0.408***	0.354***	0.401***	0.145**
	(0.142)	(0.133)	(0.128)	(0.147)	(0.143)	(0.135)	(0.142)	(0.071)
Ideology (ref = moderate)								
Moderately liberal	0.165	0.001	-0.095	0.358**	0.237	-0.034	0.247	0.179**
	(0.152)	(0.143)	(0.137)	(0.158)	(0.153)	(0.145)	(0.152)	(0.076)
Strongly liberal	0.324*	-0.099	-0.006	0.378**	0.413**	-0.047	0.521***	0.188**
	(0.167)	(0.157)	(0.151)	(0.174)	(0.169)	(0.159)	(0.168)	(0.084)

Moderately conservative	-0.033	0.090	0.158	-0.115	0.026	0.149	0.006	-0.051
	(0.153)	(0.144)	(0.139)	(0.159)	(0.155)	(0.146)	(0.154)	(0.077)
Strongly conservative	0.039	-0.255	-0.065	0.196	0.067	-0.134	0.258	0.099
	(0.167)	(0.156)	(0.151)	(0.173)	(0.168)	(0.159)	(0.167)	(0.084)
Abortion identity label (ref = pro-choice)								
Pro-life	-1.911***	-1.068***	-0.807***	-2.035***	-1.584***	-0.763***	-1.901***	-0.984***
	(0.134)	(0.126)	(0.122)	(0.139)	(0.136)	(0.128)	(0.135)	(0.068)
Neither	-0.660***	-0.677***	-0.606***	-0.928***	-0.630***	-0.428**	-0.942***	-0.446***
	(0.220)	(0.206)	(0.199)	(0.228)	(0.222)	(0.209)	(0.221)	(0.111)
Equally both	-0.572***	-0.284**	-0.203*	-0.846***	-0.370***	-0.085	-0.783***	-0.410***
	(0.130)	(0.122)	(0.118)	(0.135)	(0.131)	(0.124)	(0.130)	(0.065)
Education (ref = less than high school diploma)								
High school or equivalent	-0.234	-0.021	-0.347	-0.112	-0.487	-0.442	-0.183	-0.038
	(0.313)	(0.294)	(0.280)	(0.321)	(0.312)	(0.295)	(0.310)	(0.158)
Some college/associates	-0.074	0.215	-0.068	-0.129	-0.326	-0.090	-0.149	-0.044
	(0.310)	(0.291)	(0.277)	(0.318)	(0.309)	(0.291)	(0.307)	(0.156)
Bachelor's degree	0.021	0.367	0.020	-0.025	-0.289	-0.254	-0.110	0.008
	(0.319)	(0.299)	(0.285)	(0.327)	(0.318)	(0.300)	(0.316)	(0.160)
Graduate degree	0.205	0.349	0.026	0.128	-0.064	-0.231	0.169	0.080
	(0.336)	(0.316)	(0.301)	(0.346)	(0.337)	(0.317)	(0.334)	(0.169)
Religion (ref = Catholic)								
Evangelical protestant	-0.265*	0.063	0.029	-0.205	-0.135	-0.196	-0.344**	-0.095
	(0.159)	(0.150)	(0.144)	(0.166)	(0.161)	(0.152)	(0.160)	(0.080)
Mainline protestant	-0.170	0.092	0.151	-0.071	-0.241	0.028	-0.265*	-0.030
	(0.147)	(0.138)	(0.133)	(0.153)	(0.149)	(0.140)	(0.148)	(0.074)
Agnostic/atheist	0.056	0.304*	0.218	0.244	0.122	0.078	-0.165	0.120
	(0.168)	(0.158)	(0.152)	(0.175)	(0.170)	(0.160)	(0.169)	(0.085)
Other	-0.082	-0.137	-0.114	0.103	-0.083	-0.272**	-0.091	0.049
	(0.144)	(0.135)	(0.130)	(0.149)	(0.145)	(0.137)	(0.144)	(0.072)
Trust SCOTUS score	-0.042	-0.067*	-0.027	-0.010	0.014	0.007	-0.071*	-0.005
	(0.040)	(0.037)	(0.036)	(0.041)	(0.040)	(0.038)	(0.040)	(0.020)
Repr SCOTUS score	-0.150**	-0.107*	-0.117**	-0.108*	-0.177***	-0.065	-0.010	-0.051*
	(0.059)	(0.055)	(0.053)	(0.061)	(0.059)	(0.056)	(0.059)	(0.029)
Trust state leg score	0.149***	0.092**	0.054	0.111**	0.075*	0.092**	0.111***	0.055***

	(0.041)	(0.039)	(0.037)	(0.043)	(0.042)	(0.039)	(0.042)	(0.021)
Repr state leg score	0.027	0.031	0.010	0.121*	0.173***	-0.054	0.138**	0.057*
	(0.061)	(0.057)	(0.055)	(0.063)	(0.062)	(0.058)	(0.061)	(0.031)
Knowledge score	0.126**	0.042	0.069	0.076	0.063	0.064	0.120**	0.037
	(0.051)	(0.048)	(0.046)	(0.053)	(0.052)	(0.049)	(0.051)	(0.026)
State F.E.	YES	YES	YES	YES	YES	YES	YES	YES
Observations	1,376	1,375	1,377	1,377	1,377	1,377	1,377	1,375
R-squared	0.322	0.228	0.186	0.311	0.256	0.175	0.298	0.311

Table S4 Multiple ordinal logistic regression models for perceived public opinion by abortion cause.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Female	-0.273***	-0.009	-0.112	-0.289***	-0.237**	-0.104	-0.240**
	(0.103)	(0.104)	(0.106)	(0.103)	(0.102)	(0.107)	(0.103)
Parent	0.123	0.099	0.079	0.018	0.041	0.120	-0.014
	(0.108)	(0.108)	(0.111)	(0.107)	(0.107)	(0.112)	(0.107)
Hispanic	-0.076	-0.206	-0.441**	-0.010	-0.026	-0.167	-0.175
	(0.171)	(0.170)	(0.173)	(0.173)	(0.170)	(0.175)	(0.171)
Race (ref = White)							
Black or African American	-0.462***	-0.478***	-0.584***	-0.272	-0.577***	-0.564***	-0.415**
	(0.172)	(0.174)	(0.178)	(0.173)	(0.171)	(0.174)	(0.171)
Other	-0.158	-0.265	-0.082	0.122	-0.221	-0.158	-0.122
	(0.172)	(0.172)	(0.175)	(0.170)	(0.167)	(0.176)	(0.167)
Age	0.001	0.014***	0.013***	0.001	0.005	0.017***	0.005
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Rurality (ref = urban)							
Rural	-0.303**	-0.283*	-0.257*	-0.095	-0.179	-0.305*	-0.314**
	(0.150)	(0.152)	(0.156)	(0.151)	(0.150)	(0.157)	(0.151)
Suburban	-0.181	-0.055	0.066	-0.010	-0.218*	-0.142	-0.273**
	(0.123)	(0.125)	(0.128)	(0.122)	(0.121)	(0.128)	(0.122)
Bible is the literal word of God	0.081	-0.335**	-0.247*	0.122	-0.050	-0.346**	0.071
	(0.137)	(0.137)	(0.137)	(0.138)	(0.137)	(0.139)	(0.138)
Political affiliation (ref = Republican)							
Democrat	0.625***	0.409***	0.352**	0.564***	0.463***	0.497***	0.429***
	(0.148)	(0.151)	(0.152)	(0.152)	(0.152)	(0.153)	(0.150)
Independent	0.243*	0.212	0.128	0.279*	0.404***	0.336**	0.433***
	(0.146)	(0.146)	(0.149)	(0.148)	(0.147)	(0.150)	(0.148)
Ideology (ref = moderate)							
Moderately liberal	0.168	0.031	0.017	0.400**	0.281*	-0.067	0.280*
	(0.156)	(0.161)	(0.167)	(0.158)	(0.155)	(0.166)	(0.155)

Strongly liberal	0.383**	-0.012	0.094	0.452**	0.437**	-0.082	0.581***
	(0.180)	(0.183)	(0.182)	(0.179)	(0.176)	(0.182)	(0.177)
Moderately conservative	-0.003	0.023	0.128	-0.047	0.029	0.089	0.047
	(0.156)	(0.157)	(0.161)	(0.159)	(0.157)	(0.163)	(0.159)
Strongly conservative	-0.056	-0.270	-0.027	0.145	0.028	-0.140	0.223
	(0.177)	(0.174)	(0.176)	(0.178)	(0.178)	(0.177)	(0.177)
Abortion identity label (ref = pro-choice)							
Pro-life	-2.010***	-1.171***	-0.935***	-2.109***	-1.654***	-0.873***	-2.029***
	(0.150)	(0.145)	(0.145)	(0.151)	(0.147)	(0.146)	(0.151)
Neither	-0.612***	-0.809***	-0.786***	-0.907***	-0.624***	-0.692***	-0.952***
	(0.220)	(0.224)	(0.229)	(0.220)	(0.218)	(0.229)	(0.220)
Equally both	-0.579***	-0.388***	-0.383***	-0.834***	-0.388***	-0.191	-0.835***
	(0.134)	(0.136)	(0.138)	(0.135)	(0.133)	(0.141)	(0.135)
Education (ref = less than high school diploma)							
High school or equivalent	-0.311	-0.007	-0.413	-0.169	-0.564*	-0.632*	-0.256
	(0.325)	(0.328)	(0.329)	(0.324)	(0.335)	(0.337)	(0.339)
Some college/associates	-0.171	0.245	-0.085	-0.186	-0.385	-0.228	-0.238
	(0.321)	(0.325)	(0.327)	(0.320)	(0.330)	(0.334)	(0.335)
Bachelor's degree	-0.064	0.385	0.006	-0.071	-0.402	-0.459	-0.239
	(0.332)	(0.335)	(0.338)	(0.330)	(0.339)	(0.345)	(0.344)
Graduate degree	0.243	0.383	-0.030	0.162	-0.097	-0.474	0.126
	(0.349)	(0.354)	(0.357)	(0.348)	(0.357)	(0.363)	(0.361)
Religion (ref = Catholic)							
Evangelical protestant	-0.281*	0.133	0.103	-0.216	-0.104	-0.161	-0.373**
	(0.169)	(0.168)	(0.170)	(0.168)	(0.165)	(0.169)	(0.167)
Mainline protestant	-0.193	0.083	0.138	-0.089	-0.237	0.043	-0.311**
	(0.151)	(0.154)	(0.156)	(0.153)	(0.152)	(0.160)	(0.153)
Agnostic/atheist	0.068	0.399**	0.372**	0.234	0.076	0.079	-0.204
	(0.174)	(0.179)	(0.187)	(0.176)	(0.172)	(0.187)	(0.177)
Other	-0.059	-0.137	-0.083	0.132	-0.079	-0.292*	-0.086
	(0.149)	(0.150)	(0.153)	(0.151)	(0.150)	(0.155)	(0.149)
Trust SCOTUS score	-0.060	-0.091**	-0.048	-0.017	0.016	-0.012	-0.081*
	(0.042)	(0.042)	(0.043)	(0.043)	(0.042)	(0.043)	(0.042)
Repr SCOTUS score	-0.177***	-0.140**	-0.210***	-0.129**	-0.203***	-0.143**	-0.010

	(0.063)	(0.063)	(0.063)	(0.063)	(0.061)	(0.063)	(0.062)
Trust state leg score	0.192***	0.094**	0.054	0.125***	0.093**	0.079*	0.129***
	(0.046)	(0.045)	(0.046)	(0.045)	(0.045)	(0.045)	(0.044)
Repr state leg score	0.011	0.044	0.040	0.121*	0.188***	-0.023	0.142**
	(0.066)	(0.065)	(0.066)	(0.065)	(0.065)	(0.066)	(0.064)
Knowledge score	0.136**	0.098*	0.156***	0.055	0.067	0.120**	0.131**
	(0.055)	(0.055)	(0.055)	(0.055)	(0.054)	(0.056)	(0.055)
State F.E.	YES	YES	YES	YES	YES	YES	YES
Observations	1,376	1,375	1,377	1,377	1,377	1,377	1,377
Pseudo R-squared	0.1009	0.0708	0.0633	0.0977	0.0767	0.0573	0.0920

Table S5 Multiple weighted linear regression models for perceived public opinion by abortion cause.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Female	-0.251**	-0.027	-0.183**	-0.234**	-0.231**	-0.168*	-0.248**
	(0.099)	(0.093)	(0.089)	(0.102)	(0.099)	(0.093)	(0.098)
Parent	0.171*	0.160*	0.057	0.030	0.114	0.020	0.060
	(0.104)	(0.097)	(0.094)	(0.107)	(0.104)	(0.098)	(0.103)
Hispanic	-0.222	-0.374***	-0.586***	-0.218	-0.223	-0.192	-0.209
	(0.153)	(0.143)	(0.138)	(0.159)	(0.153)	(0.145)	(0.152)
Race (ref = White)							
Black or African American	-0.441***	-0.356**	-0.557***	-0.193	-0.638***	-0.571***	-0.368**
	(0.163)	(0.152)	(0.147)	(0.168)	(0.163)	(0.154)	(0.162)
Other	-0.184	-0.222*	-0.242**	0.220*	-0.267**	-0.229*	-0.107
	(0.126)	(0.118)	(0.114)	(0.130)	(0.126)	(0.119)	(0.125)
Age	-0.003	0.011***	0.006**	-0.001	0.002	0.012***	0.001
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Rurality (ref = urban)							
Rural	-0.374**	-0.224	-0.225*	-0.155	-0.249*	-0.230*	-0.335**
	(0.147)	(0.138)	(0.133)	(0.152)	(0.147)	(0.139)	(0.146)
Suburban	-0.291**	0.003	0.037	0.026	-0.240**	-0.128	-0.260**
	(0.116)	(0.109)	(0.105)	(0.120)	(0.116)	(0.110)	(0.116)
Bible is the literal word of God	0.051	-0.347***	-0.341***	0.043	-0.138	-0.312**	-0.049
	(0.133)	(0.125)	(0.120)	(0.138)	(0.134)	(0.126)	(0.133)
Political affiliation (ref = Republican)							
Democrat	0.675***	0.357***	0.290**	0.691***	0.638***	0.572***	0.453***
	(0.144)	(0.135)	(0.130)	(0.150)	(0.145)	(0.137)	(0.144)
Independent	0.254*	0.273**	0.234*	0.326**	0.559***	0.457***	0.432***
	(0.143)	(0.134)	(0.129)	(0.148)	(0.143)	(0.135)	(0.142)
Ideology (ref = moderate)							
Moderately liberal	-0.033	0.011	-0.061	0.093	0.189	0.040	0.132
	(0.147)	(0.138)	(0.133)	(0.152)	(0.147)	(0.139)	(0.146)
Strongly liberal	0.062	0.014	0.134	0.232	0.259	-0.007	0.495***
	(0.167)	(0.157)	(0.151)	(0.174)	(0.168)	(0.159)	(0.167)

Moderately conservative	0.037	0.163	0.275*	0.008	0.108	0.387***	0.065
	(0.157)	(0.148)	(0.142)	(0.163)	(0.158)	(0.149)	(0.157)
Strongly conservative	-0.010	-0.068	0.083	0.059	-0.029	-0.064	0.149
	(0.171)	(0.161)	(0.154)	(0.177)	(0.171)	(0.162)	(0.170)
Abortion identity label (ref = pro-choice)							
Pro-life	-1.894***	-1.018***	-0.824***	-2.010***	-1.475***	-0.704***	-1.811***
	(0.136)	(0.127)	(0.123)	(0.141)	(0.136)	(0.129)	(0.136)
Neither	-0.568***	-0.796***	-0.566***	-0.594***	-0.403**	-0.332*	-0.920***
	(0.203)	(0.190)	(0.183)	(0.210)	(0.203)	(0.192)	(0.202)
Equally both	-0.536***	-0.299**	-0.184	-0.728***	-0.253*	-0.039	-0.721***
	(0.131)	(0.123)	(0.118)	(0.136)	(0.131)	(0.124)	(0.130)
Education (ref = less than high school diploma)							
High school or equivalent	-0.011	-0.201	-0.307	0.098	-0.273	-0.241	-0.020
	(0.210)	(0.197)	(0.188)	(0.216)	(0.209)	(0.197)	(0.208)
Some college/associates	0.199	0.130	0.037	0.014	-0.109	0.120	-0.044
	(0.212)	(0.198)	(0.190)	(0.218)	(0.211)	(0.199)	(0.209)
Bachelor's degree	0.296	0.161	-0.000	0.049	-0.069	-0.105	-0.080
	(0.218)	(0.204)	(0.195)	(0.224)	(0.217)	(0.205)	(0.216)
Graduate degree	0.500**	0.213	0.057	0.383	0.130	-0.116	0.259
	(0.235)	(0.220)	(0.211)	(0.242)	(0.234)	(0.221)	(0.233)
Religion (ref = Catholic)							
Evangelical protestant	-0.298*	-0.056	-0.052	-0.159	-0.061	-0.268*	-0.313*
	(0.161)	(0.151)	(0.146)	(0.167)	(0.162)	(0.153)	(0.161)
Mainline protestant	-0.158	0.046	0.152	-0.047	-0.283*	-0.046	-0.258*
	(0.150)	(0.140)	(0.135)	(0.155)	(0.150)	(0.142)	(0.149)
Agnostic/atheist	-0.023	0.323**	0.208	0.317*	-0.007	0.048	-0.213
	(0.172)	(0.161)	(0.155)	(0.178)	(0.172)	(0.162)	(0.171)
Other	-0.035	-0.072	-0.145	0.090	-0.109	-0.334**	-0.064
	(0.144)	(0.135)	(0.129)	(0.149)	(0.144)	(0.136)	(0.143)
Trust SCOTUS score	-0.013	-0.032	0.029	0.019	0.038	0.054	-0.059
	(0.040)	(0.037)	(0.036)	(0.041)	(0.040)	(0.038)	(0.040)
Repr SCOTUS score	-0.174***	-0.172***	-0.204***	-0.059	-0.216***	-0.137**	-0.006
	(0.058)	(0.054)	(0.052)	(0.060)	(0.058)	(0.055)	(0.058)
Trust state leg score	0.126***	0.060	-0.001	0.107**	0.076*	0.076*	0.129***

	(0.041)	(0.039)	(0.037)	(0.043)	(0.042)	(0.039)	(0.041)
Repr state leg score	0.015	0.081	0.067	0.079	0.163***	-0.031	0.137**
	(0.061)	(0.058)	(0.055)	(0.064)	(0.062)	(0.058)	(0.061)
Knowledge score	0.191***	-0.002	0.098**	0.090*	0.107**	0.124***	0.130***
	(0.050)	(0.047)	(0.045)	(0.052)	(0.050)	(0.047)	(0.050)
State F.E.	YES	YES	YES	YES	YES	YES	YES
Observations	1,376	1,375	1,377	1,377	1,377	1,377	1,377
R-squared	0.344	0.243	0.226	0.324	0.279	0.217	0.310

Table S6 Multiple linear regression models for perceived public opinion by abortion cause, controlling for experiment treatment status.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Treated	-0.038	0.025	-0.029	0.106	0.027	-0.175*	0.073
	(0.095)	(0.090)	(0.086)	(0.099)	(0.096)	(0.091)	(0.096)
Female	-0.257***	-0.037	-0.112	-0.283***	-0.225**	-0.101	-0.209**
	(0.099)	(0.093)	(0.089)	(0.103)	(0.100)	(0.094)	(0.099)
Parent	0.124	0.103	0.058	0.049	0.049	0.084	0.011
	(0.103)	(0.097)	(0.093)	(0.107)	(0.104)	(0.098)	(0.103)
Hispanic	-0.059	-0.167	-0.381**	-0.045	-0.070	-0.177	-0.189
	(0.164)	(0.154)	(0.149)	(0.171)	(0.166)	(0.156)	(0.165)
Race (ref = White)							
Black or African American	-0.374**	-0.395**	-0.501***	-0.213	-0.547***	-0.467***	-0.375**
	(0.164)	(0.154)	(0.149)	(0.170)	(0.166)	(0.156)	(0.165)
Other	-0.156	-0.264*	-0.120	0.158	-0.181	-0.130	-0.073
	(0.161)	(0.151)	(0.146)	(0.167)	(0.163)	(0.153)	(0.162)
Age	0.002	0.013***	0.012***	0.001	0.005*	0.016***	0.005
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Rurality (ref = urban)							
Rural	-0.337**	-0.279**	-0.212	-0.131	-0.181	-0.270**	-0.343**
	(0.145)	(0.136)	(0.131)	(0.150)	(0.146)	(0.138)	(0.145)
Suburban	-0.220*	-0.083	0.047	-0.043	-0.223*	-0.141	-0.307***
	(0.118)	(0.110)	(0.106)	(0.122)	(0.119)	(0.112)	(0.118)
Bible is the literal word of God	0.015	-0.293**	-0.219*	0.108	-0.051	-0.303**	0.032
	(0.131)	(0.124)	(0.119)	(0.136)	(0.133)	(0.125)	(0.132)
Political affiliation (ref = Republican)							
Democrat	0.557***	0.375***	0.275**	0.568***	0.463***	0.458***	0.399***
	(0.143)	(0.135)	(0.130)	(0.149)	(0.145)	(0.136)	(0.144)
Independent	0.211	0.222*	0.107	0.290**	0.408***	0.356***	0.400***
	(0.142)	(0.133)	(0.128)	(0.147)	(0.143)	(0.135)	(0.142)

Ideology (ref = moderate)							
Moderately liberal	0.165	0.000	-0.095	0.357**	0.237	-0.032	0.246
	(0.152)	(0.143)	(0.137)	(0.158)	(0.153)	(0.144)	(0.152)
Strongly liberal	0.327*	-0.100	-0.004	0.372**	0.412**	-0.037	0.517***
	(0.167)	(0.157)	(0.151)	(0.174)	(0.169)	(0.159)	(0.168)
Moderately conservative	-0.033	0.090	0.158	-0.115	0.026	0.150	0.006
	(0.154)	(0.144)	(0.139)	(0.159)	(0.155)	(0.146)	(0.154)
Strongly conservative	0.039	-0.255	-0.066	0.197	0.068	-0.135	0.259
	(0.167)	(0.156)	(0.151)	(0.173)	(0.168)	(0.158)	(0.167)
Abortion identity label (ref = pro-choice)							
Pro-life	-1.910***	-1.069***	-0.806***	-2.039***	-1.585***	-0.756***	-1.904***
	(0.134)	(0.126)	(0.122)	(0.140)	(0.136)	(0.128)	(0.135)
Neither	-0.663***	-0.675***	-0.608***	-0.921***	-0.628***	-0.440**	-0.937***
	(0.220)	(0.206)	(0.199)	(0.228)	(0.222)	(0.209)	(0.221)
Equally both	-0.571***	-0.285**	-0.202*	-0.848***	-0.371***	-0.083	-0.784***
	(0.130)	(0.122)	(0.118)	(0.135)	(0.131)	(0.124)	(0.131)
Education (ref = less than high school diploma)							
High school or equivalent	-0.233	-0.022	-0.346	-0.115	-0.487	-0.436	-0.185
	(0.313)	(0.294)	(0.280)	(0.321)	(0.313)	(0.294)	(0.310)
Some college/associates	-0.069	0.212	-0.064	-0.144	-0.330	-0.066	-0.159
	(0.310)	(0.291)	(0.277)	(0.318)	(0.309)	(0.291)	(0.307)
Bachelor’s degree	0.026	0.364	0.024	-0.038	-0.292	-0.231	-0.119
	(0.319)	(0.299)	(0.285)	(0.327)	(0.319)	(0.300)	(0.317)
Graduate degree	0.207	0.348	0.028	0.123	-0.066	-0.222	0.165
	(0.337)	(0.316)	(0.302)	(0.346)	(0.337)	(0.317)	(0.334)
Religion (ref = Catholic)							
Evangelical protestant	-0.264*	0.062	0.029	-0.208	-0.136	-0.191	-0.346**
	(0.159)	(0.150)	(0.144)	(0.166)	(0.161)	(0.152)	(0.160)
Mainline protestant	-0.173	0.094	0.149	-0.063	-0.239	0.014	-0.259*
	(0.148)	(0.139)	(0.134)	(0.153)	(0.149)	(0.140)	(0.148)
Agnostic/atheist	0.052	0.307*	0.215	0.256	0.125	0.059	-0.157
	(0.169)	(0.158)	(0.153)	(0.175)	(0.170)	(0.160)	(0.169)
Other	-0.083	-0.136	-0.115	0.105	-0.082	-0.276**	-0.090
	(0.144)	(0.135)	(0.130)	(0.149)	(0.145)	(0.137)	(0.144)

Trust SCOTUS score	-0.043	-0.067*	-0.027	-0.010	0.014	0.007	-0.070*
	(0.040)	(0.037)	(0.036)	(0.041)	(0.040)	(0.038)	(0.040)
Repr SCOTUS score	-0.151**	-0.107*	-0.118**	-0.107*	-0.177***	-0.068	-0.009
	(0.059)	(0.055)	(0.053)	(0.061)	(0.059)	(0.056)	(0.059)
Trust state leg score	0.150***	0.092**	0.054	0.110**	0.074*	0.093**	0.110***
	(0.041)	(0.039)	(0.038)	(0.043)	(0.042)	(0.039)	(0.042)
Repr state leg score	0.026	0.032	0.009	0.125**	0.174***	-0.060	0.141**
	(0.061)	(0.057)	(0.055)	(0.063)	(0.062)	(0.058)	(0.061)
Knowledge score	0.126**	0.042	0.069	0.075	0.063	0.065	0.120**
	(0.051)	(0.048)	(0.046)	(0.053)	(0.052)	(0.049)	(0.051)
Observations	1,376	1,375	1,377	1,377	1,377	1,377	1,377
R-squared	0.322	0.228	0.186	0.312	0.256	0.178	0.298

Table S7 Multiple linear regression models for perceived public opinion by abortion cause, discarding abortion identity label.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Female	-0.094	0.058	-0.039	-0.097	-0.092	-0.039	-0.034
	(0.105)	(0.094)	(0.090)	(0.109)	(0.104)	(0.095)	(0.105)
Parent	0.054	0.063	0.028	-0.030	-0.008	0.060	-0.064
	(0.111)	(0.099)	(0.095)	(0.115)	(0.109)	(0.099)	(0.111)
Hispanic	0.057	-0.102	-0.328**	0.073	0.023	-0.121	-0.078
	(0.176)	(0.158)	(0.151)	(0.183)	(0.174)	(0.158)	(0.177)
Race (ref = White)							
Black or African American	-0.480***	-0.464***	-0.560***	-0.344*	-0.630***	-0.517***	-0.502***
	(0.176)	(0.158)	(0.150)	(0.183)	(0.174)	(0.158)	(0.176)
Other	-0.244	-0.324**	-0.167	0.041	-0.253	-0.162	-0.184
	(0.173)	(0.155)	(0.148)	(0.180)	(0.171)	(0.155)	(0.173)
Age	0.000	0.012***	0.011***	-0.000	0.004	0.015***	0.003
	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)
Rurality (ref = urban)							
Rural	-0.382**	-0.298**	-0.224*	-0.180	-0.214	-0.281**	-0.387**
	(0.156)	(0.139)	(0.133)	(0.162)	(0.154)	(0.140)	(0.156)
Suburban	-0.203	-0.074	0.058	-0.029	-0.211*	-0.126	-0.292**
	(0.126)	(0.113)	(0.108)	(0.131)	(0.125)	(0.113)	(0.126)
Bible is the literal word of God	-0.193	-0.409***	-0.304**	-0.105	-0.226	-0.386***	-0.166
	(0.140)	(0.126)	(0.120)	(0.146)	(0.139)	(0.126)	(0.141)
Political affiliation (ref = Republican)							
Democrat	0.764***	0.492***	0.363***	0.796***	0.635***	0.537***	0.611***
	(0.154)	(0.138)	(0.131)	(0.160)	(0.152)	(0.138)	(0.154)
Independent	0.200	0.210	0.095	0.278*	0.397***	0.345**	0.386**
	(0.152)	(0.137)	(0.130)	(0.158)	(0.150)	(0.137)	(0.152)
Ideology (ref = moderate)							
Moderately liberal	0.274*	0.069	-0.043	0.512***	0.318**	-0.002	0.392**
	(0.162)	(0.145)	(0.139)	(0.168)	(0.160)	(0.145)	(0.162)
Strongly liberal	0.229	-0.146	-0.042	0.300	0.328*	-0.093	0.449**
	(0.179)	(0.161)	(0.154)	(0.187)	(0.177)	(0.161)	(0.180)

Moderately conservative	-0.353**	-0.088	0.022	-0.442***	-0.243	0.015	-0.299*
	(0.163)	(0.146)	(0.140)	(0.170)	(0.161)	(0.147)	(0.163)
Strongly conservative	-0.447**	-0.523***	-0.268*	-0.288	-0.346**	-0.341**	-0.194
	(0.175)	(0.157)	(0.150)	(0.182)	(0.173)	(0.157)	(0.175)
Education (ref = less than high school diploma)							
High school or equivalent	-0.254	0.008	-0.313	-0.134	-0.479	-0.412	-0.194
	(0.336)	(0.301)	(0.284)	(0.345)	(0.328)	(0.298)	(0.332)
Some college/associates	-0.079	0.264	-0.016	-0.127	-0.304	-0.050	-0.134
	(0.331)	(0.297)	(0.280)	(0.340)	(0.324)	(0.294)	(0.328)
Bachelor's degree	0.109	0.464	0.107	0.089	-0.196	-0.186	0.008
	(0.341)	(0.306)	(0.289)	(0.351)	(0.334)	(0.303)	(0.338)
Graduate degree	0.207	0.398	0.077	0.151	-0.043	-0.198	0.202
	(0.360)	(0.323)	(0.305)	(0.371)	(0.353)	(0.321)	(0.357)
Religion (ref = Catholic)							
Evangelical protestant	-0.423**	-0.025	-0.040	-0.364**	-0.270	-0.265*	-0.492***
	(0.171)	(0.154)	(0.146)	(0.178)	(0.169)	(0.154)	(0.171)
Mainline protestant	-0.086	0.145	0.192	0.022	-0.170	0.064	-0.176
	(0.158)	(0.142)	(0.136)	(0.165)	(0.157)	(0.142)	(0.159)
Agnostic/atheist	0.239	0.411**	0.299*	0.454**	0.270	0.147	0.032
	(0.180)	(0.162)	(0.154)	(0.187)	(0.178)	(0.162)	(0.180)
Other	-0.090	-0.144	-0.121	0.085	-0.088	-0.274**	-0.109
	(0.155)	(0.139)	(0.132)	(0.161)	(0.153)	(0.139)	(0.155)
Trust SCOTUS score	-0.115***	-0.108***	-0.058	-0.090**	-0.045	-0.020	-0.146***
	(0.042)	(0.038)	(0.036)	(0.044)	(0.042)	(0.038)	(0.043)
Repr SCOTUS score	-0.209***	-0.140**	-0.143***	-0.173***	-0.226***	-0.089	-0.070
	(0.063)	(0.056)	(0.054)	(0.065)	(0.062)	(0.056)	(0.063)
Trust state leg score	0.189***	0.115***	0.071*	0.148***	0.109**	0.111***	0.145***
	(0.044)	(0.040)	(0.038)	(0.046)	(0.044)	(0.040)	(0.044)
Repr state leg score	0.015	0.029	0.011	0.115*	0.164**	-0.056	0.133**
	(0.065)	(0.059)	(0.056)	(0.068)	(0.065)	(0.059)	(0.065)
Knowledge score	0.097*	0.030	0.061	0.049	0.040	0.054	0.096*
	(0.055)	(0.049)	(0.047)	(0.057)	(0.054)	(0.049)	(0.055)
State F.E.	YES	YES	YES	YES	YES	YES	YES
Observations	1,376	1,375	1,377	1,377	1,377	1,377	1,377

R-squared	0.213	0.182	0.155	0.198	0.174	0.149	0.189

Table S8 Multiple linear regression models. Dependent variable: absolute value of the difference between actual support for abortion access and respondent's perceived support, by abortion cause.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Female	0.134**	0.041	0.037	0.174***	0.129**	0.048	0.075
	(0.057)	(0.057)	(0.055)	(0.061)	(0.058)	(0.056)	(0.061)
Parent	-0.007	-0.008	0.004	0.052	0.124**	-0.044	0.087
	(0.059)	(0.059)	(0.058)	(0.064)	(0.061)	(0.058)	(0.064)
Hispanic	-0.150	-0.030	0.122	-0.104	-0.047	0.051	-0.150
	(0.094)	(0.095)	(0.092)	(0.101)	(0.097)	(0.093)	(0.102)
Race (ref = White)							
Black or African American	0.020	0.164*	0.242***	-0.032	-0.015	0.159*	0.035
	(0.094)	(0.095)	(0.092)	(0.101)	(0.097)	(0.093)	(0.102)
Other	0.124	0.170*	0.151*	-0.014	-0.097	0.087	-0.004
	(0.092)	(0.093)	(0.090)	(0.099)	(0.095)	(0.091)	(0.100)
Age	0.001	-0.004**	-0.005***	-0.001	-0.005**	-0.006***	-0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Rurality (ref = urban)							
Rural	-0.019	-0.040	0.019	0.023	-0.002	0.074	0.071
	(0.083)	(0.083)	(0.081)	(0.089)	(0.085)	(0.082)	(0.090)
Suburban	0.012	-0.030	-0.030	0.049	-0.025	0.049	0.033
	(0.067)	(0.068)	(0.066)	(0.072)	(0.069)	(0.066)	(0.073)
Bible is the literal word of God	0.168**	0.072	0.077	0.285***	0.184**	0.078	0.196**
	(0.075)	(0.076)	(0.073)	(0.081)	(0.077)	(0.074)	(0.081)
Political affiliation (ref = Republican)							
Democrat	0.131	-0.058	-0.011	0.007	-0.024	-0.127	-0.055
	(0.082)	(0.083)	(0.080)	(0.088)	(0.084)	(0.081)	(0.089)
Independent	0.033	-0.055	-0.013	-0.040	-0.029	-0.197**	-0.120
	(0.081)	(0.082)	(0.079)	(0.087)	(0.083)	(0.080)	(0.088)
Ideology (ref = moderate)							
Moderately liberal	-0.062	-0.054	0.098	0.071	-0.004	-0.095	-0.006
	(0.087)	(0.088)	(0.085)	(0.094)	(0.089)	(0.086)	(0.094)

Strongly liberal	0.245**	0.225**	0.032	0.176*	0.192*	-0.045	0.223**
	(0.096)	(0.096)	(0.093)	(0.103)	(0.099)	(0.095)	(0.104)
Moderately conservative	-0.065	-0.193**	-0.169**	0.070	0.037	-0.195**	-0.010
	(0.088)	(0.089)	(0.086)	(0.095)	(0.090)	(0.087)	(0.095)
Strongly conservative	0.365***	0.186*	0.109	0.292***	0.344***	0.055	0.222**
	(0.095)	(0.096)	(0.093)	(0.103)	(0.098)	(0.094)	(0.103)
Abortion identity label (ref = pro-choice)							
Pro-life	0.350***	0.274***	0.291***	0.440***	0.384***	0.228***	0.483***
	(0.077)	(0.078)	(0.075)	(0.083)	(0.079)	(0.076)	(0.083)
Neither	-0.617***	-0.087	0.106	-0.571***	-0.330**	-0.062	-0.514***
	(0.126)	(0.127)	(0.123)	(0.136)	(0.129)	(0.124)	(0.136)
Equally both	-0.313***	-0.145*	-0.082	-0.215***	-0.157**	-0.083	-0.154*
	(0.074)	(0.075)	(0.073)	(0.080)	(0.077)	(0.074)	(0.081)
Education (ref = less than high school diploma)							
High school or equivalent	-0.055	-0.174	0.007	0.027	-0.174	-0.011	-0.106
	(0.179)	(0.181)	(0.173)	(0.191)	(0.182)	(0.175)	(0.192)
Some college/associates	-0.102	-0.180	-0.055	-0.054	-0.241	-0.104	-0.200
	(0.177)	(0.179)	(0.171)	(0.189)	(0.180)	(0.173)	(0.190)
Bachelor's degree	-0.085	-0.331*	-0.120	-0.146	-0.316*	-0.107	-0.398**
	(0.182)	(0.184)	(0.176)	(0.195)	(0.186)	(0.178)	(0.195)
Graduate degree	-0.103	-0.336*	-0.140	-0.032	-0.310	-0.175	-0.288
	(0.192)	(0.194)	(0.186)	(0.206)	(0.196)	(0.188)	(0.207)
Religion (ref = Catholic)							
Evangelical protestant	0.152*	0.101	0.045	-0.060	0.071	0.185**	-0.020
	(0.091)	(0.092)	(0.089)	(0.098)	(0.094)	(0.090)	(0.099)
Mainline protestant	0.109	-0.018	-0.074	0.004	0.069	0.065	0.043
	(0.084)	(0.085)	(0.082)	(0.091)	(0.087)	(0.083)	(0.091)
Agnostic/atheist	0.129	-0.023	0.056	0.148	0.040	0.015	0.154
	(0.096)	(0.097)	(0.094)	(0.104)	(0.099)	(0.095)	(0.104)
Other	0.203**	0.073	0.120	0.236***	0.258***	0.176**	0.225**
	(0.082)	(0.083)	(0.080)	(0.089)	(0.085)	(0.081)	(0.089)
Trust SCOTUS score	-0.024	0.004	-0.001	-0.042*	-0.024	-0.017	-0.043*
	(0.023)	(0.023)	(0.022)	(0.025)	(0.023)	(0.023)	(0.025)
Repr SCOTUS score	0.009	-0.035	-0.048	-0.040	-0.018	-0.056*	-0.009

	(0.033)	(0.034)	(0.033)	(0.036)	(0.034)	(0.033)	(0.036)
Trust state leg score	-0.008	-0.051**	-0.051**	0.001	-0.019	-0.077***	-0.011
	(0.024)	(0.024)	(0.023)	(0.026)	(0.024)	(0.023)	(0.026)
Repr state leg score	0.009	0.002	0.043	0.057	0.020	0.063*	0.000
	(0.035)	(0.035)	(0.034)	(0.038)	(0.036)	(0.034)	(0.038)
Knowledge score	0.148***	0.128***	0.056**	0.143***	0.184***	0.037	0.148***
	(0.029)	(0.030)	(0.029)	(0.032)	(0.030)	(0.029)	(0.032)
State F.E.	YES	YES	YES	YES	YES	YES	YES
Observations	1,376	1,375	1,377	1,377	1,377	1,377	1,377
R-squared	0.187	0.123	0.124	0.162	0.164	0.120	0.154

Table S9 Multiple ordinal logistic regression models. Dependent variable: absolute value of the difference between actual support for abortion access and respondent's perceived support, by abortion cause.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Female	0.305***	0.080	0.073	0.363***	0.242**	0.080	0.157
	(0.103)	(0.102)	(0.105)	(0.104)	(0.103)	(0.105)	(0.104)
Parent	-0.063	0.007	-0.033	0.074	0.227**	-0.216**	0.146
	(0.108)	(0.106)	(0.109)	(0.107)	(0.108)	(0.109)	(0.107)
Hispanic	-0.195	-0.095	0.255	-0.145	-0.076	0.205	-0.220
	(0.169)	(0.172)	(0.176)	(0.172)	(0.171)	(0.175)	(0.170)
Race (ref = White)							
Black or African American	0.163	0.259	0.423**	0.046	0.004	0.418**	0.097
	(0.175)	(0.171)	(0.176)	(0.175)	(0.175)	(0.175)	(0.174)
Other	0.208	0.317*	0.176	-0.059	-0.200	0.144	-0.002
	(0.170)	(0.170)	(0.168)	(0.167)	(0.168)	(0.172)	(0.166)
Age	0.003	-0.006*	-0.010***	-0.001	-0.008**	-0.011***	-0.003
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Rurality (ref = urban)							
Rural	-0.011	-0.160	-0.141	0.022	0.031	0.114	0.137
	(0.152)	(0.149)	(0.154)	(0.153)	(0.151)	(0.153)	(0.153)
Suburban	0.047	-0.065	-0.120	0.077	-0.027	0.145	0.082
	(0.121)	(0.121)	(0.124)	(0.121)	(0.121)	(0.123)	(0.122)
Bible is the literal word of God	0.297**	0.175	0.133	0.413***	0.278**	0.163	0.284**
	(0.137)	(0.136)	(0.139)	(0.139)	(0.137)	(0.140)	(0.140)
Political affiliation (ref = Republican)							
Democrat	0.131	-0.098	0.005	-0.156	-0.114	-0.167	-0.178
	(0.149)	(0.151)	(0.151)	(0.151)	(0.148)	(0.152)	(0.151)
Independent	-0.005	-0.035	0.046	-0.144	-0.113	-0.258*	-0.257*
	(0.150)	(0.148)	(0.149)	(0.150)	(0.148)	(0.150)	(0.150)
Ideology (ref = moderate)							
Moderately liberal	-0.100	-0.058	0.121	0.045	0.023	-0.228	-0.025
	(0.154)	(0.159)	(0.159)	(0.154)	(0.154)	(0.160)	(0.153)

Strongly liberal	0.403**	0.452***	-0.031	0.239	0.334**	-0.267	0.301*
	(0.169)	(0.172)	(0.176)	(0.173)	(0.170)	(0.177)	(0.171)
Moderately conservative	-0.098	-0.291*	-0.344**	0.112	0.093	-0.308*	0.015
	(0.161)	(0.159)	(0.163)	(0.160)	(0.159)	(0.162)	(0.161)
Strongly conservative	0.738***	0.364**	0.124	0.478***	0.652***	-0.020	0.375**
	(0.180)	(0.175)	(0.176)	(0.179)	(0.176)	(0.177)	(0.177)
Abortion identity label (ref = pro-choice)							
Pro-life	0.902***	0.428***	0.473***	1.141***	0.738***	0.352**	1.075***
	(0.144)	(0.141)	(0.143)	(0.144)	(0.141)	(0.143)	(0.142)
Neither	-1.408***	-0.152	0.385	-1.028***	-0.705***	0.117	-0.979***
	(0.256)	(0.219)	(0.234)	(0.252)	(0.242)	(0.227)	(0.254)
Equally both	-0.547***	-0.317**	-0.120	-0.250*	-0.336**	-0.123	-0.216
	(0.133)	(0.134)	(0.136)	(0.135)	(0.135)	(0.136)	(0.134)
Education (ref = less than high school diploma)							
High school or equivalent	0.046	-0.358	0.007	0.126	-0.318	0.175	-0.111
	(0.355)	(0.330)	(0.326)	(0.339)	(0.349)	(0.320)	(0.337)
Some college/associates	-0.092	-0.337	-0.154	-0.040	-0.439	-0.035	-0.278
	(0.351)	(0.327)	(0.324)	(0.335)	(0.345)	(0.317)	(0.333)
Bachelor's degree	-0.074	-0.681**	-0.267	-0.212	-0.545	-0.041	-0.621*
	(0.360)	(0.337)	(0.332)	(0.344)	(0.353)	(0.326)	(0.342)
Graduate degree	-0.115	-0.754**	-0.403	-0.064	-0.614*	-0.225	-0.475
	(0.375)	(0.355)	(0.352)	(0.360)	(0.370)	(0.345)	(0.358)
Religion (ref = Catholic)							
Evangelical protestant	0.334**	0.090	-0.028	0.003	0.170	0.305*	0.044
	(0.167)	(0.167)	(0.171)	(0.170)	(0.165)	(0.173)	(0.172)
Mainline protestant	0.219	-0.050	-0.138	0.030	0.156	0.015	0.122
	(0.153)	(0.153)	(0.156)	(0.154)	(0.152)	(0.156)	(0.154)
Agnostic/atheist	0.233	-0.111	0.038	0.195	0.103	-0.003	0.266
	(0.176)	(0.173)	(0.175)	(0.174)	(0.172)	(0.176)	(0.174)
Other	0.387***	0.051	0.132	0.373**	0.477***	0.185	0.355**
	(0.150)	(0.149)	(0.152)	(0.150)	(0.150)	(0.152)	(0.149)
Trust SCOTUS score	-0.046	-0.009	-0.003	-0.072*	-0.053	-0.042	-0.069*
	(0.041)	(0.042)	(0.042)	(0.042)	(0.041)	(0.043)	(0.041)
Repr SCOTUS score	0.041	-0.071	-0.057	-0.041	-0.016	-0.081	-0.009

	(0.060)	(0.061)	(0.062)	(0.061)	(0.060)	(0.063)	(0.060)
Trust state leg score	-0.037	-0.066	-0.086*	-0.016	-0.030	-0.100**	-0.031
	(0.043)	(0.044)	(0.044)	(0.043)	(0.042)	(0.045)	(0.042)
Repr state leg score	0.015	-0.030	0.040	0.056	0.017	0.065	-0.024
	(0.063)	(0.064)	(0.065)	(0.064)	(0.062)	(0.067)	(0.062)
Knowledge score	0.277***	0.233***	0.070	0.266***	0.359***	0.025	0.245***
	(0.055)	(0.054)	(0.054)	(0.055)	(0.056)	(0.054)	(0.055)
State F.E.	YES	YES	YES	YES	YES	YES	YES
Observations	1,376	1,375	1,377	1,377	1,377	1,377	1,377
Pseudo R-squared	0.0617	0.0330	0.0330	0.0557	0.0492	0.0330	0.0497

Table S10 Multiple weighted linear regression models. Dependent variable: absolute value of the difference between actual support for abortion access and respondent's perceived support, by abortion cause.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Female	0.161***	0.042	0.049	0.197***	0.145**	0.100*	0.107*
	(0.057)	(0.057)	(0.055)	(0.061)	(0.058)	(0.055)	(0.061)
Parent	-0.005	0.005	-0.016	0.030	0.135**	-0.039	0.068
	(0.060)	(0.060)	(0.058)	(0.064)	(0.060)	(0.058)	(0.064)
Hispanic	-0.095	0.111	0.330***	0.046	0.068	0.135	-0.003
	(0.088)	(0.089)	(0.085)	(0.095)	(0.089)	(0.085)	(0.095)
Race (ref = White)							
Black or African American	-0.078	0.158*	0.336***	-0.009	-0.064	0.244***	-0.014
	(0.094)	(0.094)	(0.090)	(0.100)	(0.095)	(0.091)	(0.101)
Other	0.115	0.128*	0.194***	-0.025	-0.081	0.078	-0.058
	(0.073)	(0.073)	(0.070)	(0.078)	(0.073)	(0.070)	(0.078)
Age	0.001	-0.003	-0.002	-0.001	-0.004**	-0.005**	-0.003*
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Rurality (ref = urban)							
Rural	0.009	-0.024	0.095	0.103	0.031	0.103	0.173*
	(0.085)	(0.085)	(0.082)	(0.091)	(0.086)	(0.082)	(0.091)
Suburban	0.021	0.010	0.065	0.105	0.021	0.108*	0.108
	(0.067)	(0.067)	(0.064)	(0.072)	(0.068)	(0.065)	(0.072)
Bible is the literal word of God	0.229***	0.098	0.146**	0.311***	0.205***	0.064	0.214***
	(0.077)	(0.077)	(0.074)	(0.082)	(0.078)	(0.075)	(0.083)
Political affiliation (ref = Republican)							
Democrat	0.183**	-0.002	0.021	0.015	0.032	-0.216***	-0.031
	(0.083)	(0.084)	(0.080)	(0.089)	(0.084)	(0.081)	(0.089)
Independent	0.077	-0.027	-0.068	-0.014	-0.011	-0.285***	-0.086
	(0.082)	(0.083)	(0.079)	(0.088)	(0.083)	(0.080)	(0.088)

Ideology (ref = moderate)							
Moderately liberal	-0.067	-0.060	0.114	0.028	-0.000	-0.102	-0.006
	(0.085)	(0.085)	(0.082)	(0.091)	(0.086)	(0.082)	(0.091)
Strongly liberal	0.223**	0.192**	-0.063	0.117	0.216**	-0.012	0.261**
	(0.097)	(0.097)	(0.093)	(0.104)	(0.098)	(0.094)	(0.104)
Moderately conservative	-0.065	-0.151*	-0.192**	0.124	0.067	-0.282***	0.049
	(0.091)	(0.091)	(0.087)	(0.097)	(0.092)	(0.088)	(0.098)
Strongly conservative	0.380***	0.135	0.028	0.347***	0.425***	0.053	0.256**
	(0.099)	(0.099)	(0.095)	(0.106)	(0.100)	(0.095)	(0.106)
Abortion identity label (ref = pro-choice)							
Pro-life	0.340***	0.240***	0.284***	0.410***	0.373***	0.206***	0.423***
	(0.078)	(0.079)	(0.076)	(0.084)	(0.079)	(0.076)	(0.084)
Neither	-0.622***	0.119	0.152	-0.514***	-0.356***	-0.135	-0.419***
	(0.117)	(0.117)	(0.113)	(0.125)	(0.118)	(0.113)	(0.126)
Equally both	-0.341***	-0.156**	-0.137*	-0.271***	-0.215***	-0.123*	-0.189**
	(0.076)	(0.076)	(0.073)	(0.081)	(0.076)	(0.073)	(0.081)
Education (ref = less than high school diploma)							
High school or equivalent	-0.225*	-0.004	0.104	-0.068	-0.337***	-0.035	-0.217*
	(0.121)	(0.122)	(0.116)	(0.129)	(0.122)	(0.116)	(0.129)
Some college/associates	-0.149	-0.047	0.039	-0.086	-0.379***	-0.093	-0.183
	(0.122)	(0.123)	(0.117)	(0.130)	(0.123)	(0.117)	(0.130)
Bachelor’s degree	-0.207*	-0.221*	-0.055	-0.281**	-0.503***	-0.140	-0.453***
	(0.126)	(0.126)	(0.120)	(0.134)	(0.126)	(0.121)	(0.134)
Graduate degree	-0.207	-0.210	-0.055	-0.069	-0.431***	-0.172	-0.287**
	(0.136)	(0.136)	(0.130)	(0.144)	(0.136)	(0.131)	(0.145)
Religion (ref = Catholic)							
Evangelical protestant	0.016	0.126	0.130	-0.085	0.103	0.220**	-0.067
	(0.093)	(0.094)	(0.090)	(0.100)	(0.094)	(0.090)	(0.100)
Mainline protestant	0.083	-0.053	-0.113	0.011	0.086	0.043	-0.006
	(0.086)	(0.087)	(0.083)	(0.093)	(0.087)	(0.084)	(0.093)
Agnostic/atheist	0.110	-0.088	0.012	0.155	0.102	0.037	0.127
	(0.099)	(0.099)	(0.095)	(0.106)	(0.100)	(0.096)	(0.106)
Other	0.202**	-0.021	0.131	0.262***	0.297***	0.219***	0.219**
	(0.083)	(0.083)	(0.080)	(0.089)	(0.084)	(0.080)	(0.089)

Trust SCOTUS score	-0.024	-0.023	-0.039*	-0.040	-0.023	-0.043*	-0.028
	(0.023)	(0.023)	(0.022)	(0.025)	(0.023)	(0.022)	(0.025)
Repr SCOTUS score	0.002	-0.023	0.003	-0.068*	-0.037	-0.036	-0.021
	(0.033)	(0.034)	(0.032)	(0.036)	(0.034)	(0.032)	(0.036)
Trust state leg score	0.007	-0.032	-0.008	0.003	-0.030	-0.062***	-0.008
	(0.024)	(0.024)	(0.023)	(0.026)	(0.024)	(0.023)	(0.026)
Repr state leg score	-0.009	0.000	-0.008	0.084**	0.036	0.032	0.019
	(0.035)	(0.036)	(0.034)	(0.038)	(0.036)	(0.034)	(0.038)
Knowledge score	0.128***	0.149***	0.035	0.135***	0.165***	-0.001	0.143***
	(0.029)	(0.029)	(0.028)	(0.031)	(0.029)	(0.028)	(0.031)
State F.E.	YES	YES	YES	YES	YES	YES	YES
Observations	1,376	1,375	1,377	1,377	1,377	1,377	1,377
R-squared	0.204	0.135	0.171	0.194	0.208	0.176	0.174

Table S11 Multiple linear regression models. Dependent variable: absolute value of the difference between actual support for abortion access and respondent's perceived support, by abortion cause. Experiment treatment status controlled for.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Treated	-0.040	-0.076	-0.119**	-0.166***	-0.092*	-0.010	-0.140**
	(0.055)	(0.055)	(0.053)	(0.059)	(0.056)	(0.054)	(0.059)
Female	0.134**	0.041	0.037	0.175***	0.129**	0.048	0.076
	(0.057)	(0.057)	(0.055)	(0.061)	(0.058)	(0.056)	(0.061)
Parent	-0.008	-0.009	0.002	0.050	0.123**	-0.044	0.085
	(0.059)	(0.059)	(0.058)	(0.063)	(0.061)	(0.058)	(0.064)
Hispanic	-0.152	-0.034	0.115	-0.114	-0.053	0.051	-0.158
	(0.094)	(0.095)	(0.092)	(0.101)	(0.097)	(0.093)	(0.102)
Race (ref = White)							
Black or African American	0.022	0.167*	0.247***	-0.024	-0.010	0.159*	0.042
	(0.094)	(0.095)	(0.092)	(0.101)	(0.097)	(0.093)	(0.102)
Other	0.123	0.169*	0.150*	-0.016	-0.098	0.087	-0.006
	(0.092)	(0.093)	(0.090)	(0.099)	(0.095)	(0.091)	(0.100)
Age	0.001	-0.004**	-0.005***	-0.001	-0.005**	-0.006***	-0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Rurality (ref = urban)							
Rural	-0.019	-0.041	0.019	0.023	-0.002	0.074	0.070
	(0.083)	(0.083)	(0.081)	(0.089)	(0.085)	(0.082)	(0.090)
Suburban	0.010	-0.032	-0.035	0.042	-0.029	0.049	0.028
	(0.067)	(0.068)	(0.066)	(0.072)	(0.069)	(0.066)	(0.073)
Bible is the literal word of God	0.167**	0.071	0.076	0.283***	0.183**	0.078	0.194**
	(0.075)	(0.076)	(0.073)	(0.081)	(0.077)	(0.074)	(0.081)
Political affiliation (ref = Republican)							
Democrat	0.131	-0.056	-0.008	0.011	-0.022	-0.127	-0.052
	(0.082)	(0.083)	(0.080)	(0.088)	(0.084)	(0.081)	(0.089)
Independent	0.033	-0.054	-0.012	-0.038	-0.027	-0.197**	-0.118
	(0.081)	(0.082)	(0.079)	(0.087)	(0.083)	(0.080)	(0.088)
Ideology (ref = moderate)							

Moderately liberal	-0.061	-0.053	0.099	0.073	-0.003	-0.095	-0.005
	(0.087)	(0.088)	(0.085)	(0.093)	(0.089)	(0.086)	(0.094)
Strongly liberal	0.248***	0.229**	0.039	0.185*	0.197**	-0.044	0.231**
	(0.096)	(0.096)	(0.093)	(0.103)	(0.098)	(0.095)	(0.104)
Moderately conservative	-0.065	-0.193**	-0.169**	0.071	0.037	-0.195**	-0.009
	(0.088)	(0.088)	(0.086)	(0.094)	(0.090)	(0.087)	(0.095)
Strongly conservative	0.364***	0.185*	0.109	0.291***	0.343***	0.055	0.222**
	(0.095)	(0.096)	(0.093)	(0.102)	(0.098)	(0.094)	(0.103)
Abortion identity label (ref = pro-choice)							
Pro-life	0.351***	0.277***	0.296***	0.447***	0.388***	0.229***	0.489***
	(0.077)	(0.078)	(0.075)	(0.083)	(0.079)	(0.076)	(0.083)
Neither	-0.620***	-0.092	0.098	-0.582***	-0.336***	-0.063	-0.523***
	(0.126)	(0.127)	(0.123)	(0.135)	(0.129)	(0.124)	(0.136)
Equally both	-0.312***	-0.144*	-0.080	-0.212***	-0.156**	-0.083	-0.152*
	(0.074)	(0.075)	(0.073)	(0.080)	(0.077)	(0.074)	(0.081)
Education (ref = less than high school diploma)							
High school or equivalent	-0.055	-0.172	0.010	0.032	-0.172	-0.011	-0.102
	(0.179)	(0.181)	(0.173)	(0.190)	(0.182)	(0.175)	(0.191)
Some college/associates	-0.097	-0.170	-0.039	-0.031	-0.228	-0.103	-0.180
	(0.177)	(0.179)	(0.171)	(0.188)	(0.180)	(0.173)	(0.190)
Bachelor's degree	-0.080	-0.322*	-0.105	-0.124	-0.304	-0.106	-0.380*
	(0.182)	(0.184)	(0.176)	(0.194)	(0.186)	(0.178)	(0.195)
Graduate degree	-0.101	-0.333*	-0.134	-0.024	-0.306	-0.174	-0.281
	(0.193)	(0.194)	(0.186)	(0.205)	(0.196)	(0.188)	(0.206)
Religion (ref = Catholic)							
Evangelical protestant	0.153*	0.102	0.048	-0.056	0.074	0.185**	-0.017
	(0.091)	(0.092)	(0.089)	(0.098)	(0.094)	(0.090)	(0.099)
Mainline protestant	0.105	-0.024	-0.083	-0.009	0.062	0.064	0.033
	(0.084)	(0.085)	(0.082)	(0.091)	(0.087)	(0.083)	(0.091)
Agnostic/atheist	0.124	-0.032	0.042	0.129	0.030	0.014	0.138
	(0.096)	(0.097)	(0.094)	(0.104)	(0.099)	(0.095)	(0.104)
Other	0.202**	0.071	0.117	0.232***	0.256***	0.176**	0.222**
	(0.082)	(0.083)	(0.080)	(0.088)	(0.085)	(0.081)	(0.089)
Trust SCOTUS score	-0.024	0.003	-0.001	-0.042*	-0.024	-0.017	-0.044*

	(0.023)	(0.023)	(0.022)	(0.025)	(0.023)	(0.023)	(0.025)
Repr SCOTUS score	0.009	-0.036	-0.050	-0.042	-0.020	-0.056*	-0.011
	(0.034)	(0.034)	(0.033)	(0.036)	(0.034)	(0.033)	(0.036)
Trust state leg score	-0.008	-0.051**	-0.050**	0.002	-0.019	-0.077***	-0.010
	(0.024)	(0.024)	(0.023)	(0.026)	(0.024)	(0.023)	(0.026)
Repr state leg score	0.007	-0.001	0.038	0.051	0.017	0.063*	-0.005
	(0.035)	(0.035)	(0.034)	(0.038)	(0.036)	(0.035)	(0.038)
Knowledge score	0.149***	0.128***	0.057**	0.144***	0.184***	0.037	0.149***
	(0.029)	(0.030)	(0.029)	(0.032)	(0.030)	(0.029)	(0.032)
Observations	1,376	1,375	1,377	1,377	1,377	1,377	1,377
R-squared	0.188	0.125	0.127	0.167	0.165	0.120	0.158

Table S12 Average personal opinion perceived public opinion by respondent's abortion identity label, and actual opinion in the sample.

Abortion reason	Abortion identity label								Actual opinion in the sample
	Pro-choice		Pro-life		Neither		Equally both		
	Personal opinion	Perceived public opinion	Personal opinion	Perceived public opinion	Personal opinion	Perceived public opinion	Personal opinion	Perceived public opinion	
Elective reasons									
Any reason	1.5429	0.9852	-1.6644	-1.1964	-0.593	-0.0593	0.1185	0.2818	0.1467
The woman is married and does not want any more children	1.4538	0.8267	-1.6711	-1.4174	-0.2034	-0.2119	0.2920	-0.0854	0.0710
The family has a very low income and cannot afford any more children	1.5099	0.7492	-1.4397	-0.9554	-0.0678	-0.0678	0.2920	0.2838	0.2402
The woman is not married and does not want to marry the man	1.4769	0.7424	-1.5737	-1.1741	-0.1949	-0.3051	0.0082	-0.0331	0.1113
Traumatic reasons									
There is a strong chance of serious defect in the baby	1.9852	1.5679	-0.0604	0.1719	0.6610	0.6271	1.2231	1.0304	1.1038
The woman's own health is seriously endangered by the pregnancy	2.1980	1.8135	0.7047	0.8973	1.2288	1.1780	1.6364	1.4325	1.5564

The woman became pregnant because of rape	2.2013	1.7805	0.5347	0.8594	1.0339	1.2034	1.7273	1.5785	1.5121

Table S13 Multiple linear regression models. Dependent variable: absolute value of the difference between respondent's personal opinion about abortion access and respondent's perceived public opinion, by abortion cause.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Female	0.223***	0.114*	0.166***	0.119*	0.197***	0.192***	0.236***
	(0.072)	(0.067)	(0.064)	(0.071)	(0.072)	(0.068)	(0.070)
Parent	-0.113	-0.047	-0.073	-0.247***	-0.032	-0.042	-0.063
	(0.074)	(0.069)	(0.065)	(0.073)	(0.075)	(0.070)	(0.072)
Hispanic	-0.065	-0.204*	-0.252**	-0.040	-0.102	-0.067	-0.088
	(0.118)	(0.110)	(0.104)	(0.117)	(0.119)	(0.112)	(0.115)
Race (ref = White)							
Black or African American	0.046	0.055	0.052	-0.106	-0.134	-0.039	-0.242**
	(0.116)	(0.107)	(0.103)	(0.115)	(0.117)	(0.110)	(0.113)
Other	0.179	0.311***	0.211**	0.082	0.206*	0.093	0.309***
	(0.114)	(0.106)	(0.101)	(0.113)	(0.115)	(0.109)	(0.111)
Age	-0.007***	-0.009***	-0.010***	-0.010***	-0.006***	-0.010***	-0.008***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Rurality (ref = urban)							
Rural	0.014	0.062	0.147	-0.090	0.053	0.074	-0.105
	(0.104)	(0.096)	(0.092)	(0.103)	(0.105)	(0.098)	(0.101)
Suburban	0.008	0.055	0.071	-0.048	0.100	0.100	-0.018
	(0.084)	(0.078)	(0.074)	(0.083)	(0.085)	(0.080)	(0.082)
Abortion identity label (ref = pro-choice)							
Pro-life	0.017	0.093	0.082	-0.263***	-0.047	0.108	-0.086
	(0.093)	(0.086)	(0.082)	(0.092)	(0.093)	(0.088)	(0.090)
Neither	-0.198	-0.286**	-0.253**	-0.452***	-0.414***	-0.286**	-0.404***
	(0.144)	(0.133)	(0.127)	(0.142)	(0.145)	(0.136)	(0.140)
Equally both	-0.064	-0.001	-0.139*	-0.273***	-0.199**	-0.143	-0.387***
	(0.093)	(0.087)	(0.082)	(0.092)	(0.094)	(0.089)	(0.091)
Education (ref = less than high school diploma)							

High school or equivalent	0.158	0.116	-0.054	0.348*	0.224	-0.062	0.083
	(0.213)	(0.198)	(0.187)	(0.209)	(0.213)	(0.201)	(0.205)
Some college/associates	0.276	0.134	-0.080	0.447**	0.353*	-0.015	0.144
	(0.212)	(0.197)	(0.186)	(0.208)	(0.212)	(0.199)	(0.204)
Bachelor's degree	0.271	0.047	-0.137	0.459**	0.387*	0.004	0.257
	(0.219)	(0.203)	(0.192)	(0.215)	(0.219)	(0.206)	(0.211)
Graduate degree	0.292	0.168	-0.055	0.410*	0.355	-0.104	0.163
	(0.232)	(0.216)	(0.204)	(0.228)	(0.233)	(0.219)	(0.224)
Religion (ref = Catholic)							
Evangelical protestant	0.089	0.176*	0.077	0.002	0.184	0.252**	0.042
	(0.114)	(0.106)	(0.101)	(0.113)	(0.115)	(0.108)	(0.111)
Mainline protestant	-0.157	0.013	-0.015	-0.062	0.053	0.063	-0.016
	(0.108)	(0.101)	(0.096)	(0.107)	(0.109)	(0.103)	(0.105)
Agnostic/atheist	-0.007	-0.141	-0.016	-0.129	0.119	0.119	0.204*
	(0.118)	(0.110)	(0.105)	(0.117)	(0.120)	(0.113)	(0.115)
Other	-0.054	0.109	0.033	-0.006	0.056	0.257***	0.046
	(0.098)	(0.091)	(0.087)	(0.097)	(0.099)	(0.093)	(0.096)
Trust SCOTUS score	-0.051*	-0.033	-0.034	-0.025	-0.105***	-0.063**	-0.053*
	(0.029)	(0.027)	(0.025)	(0.028)	(0.029)	(0.027)	(0.028)
Repr SCOTUS score	-0.011	0.033	0.026	0.014	-0.020	0.042	0.001
	(0.043)	(0.040)	(0.038)	(0.043)	(0.043)	(0.041)	(0.042)
Trust state leg score	0.021	-0.016	0.033	0.000	0.032	-0.010	0.011
	(0.030)	(0.028)	(0.027)	(0.030)	(0.030)	(0.029)	(0.029)
Repr state leg score	-0.017	0.015	-0.026	0.008	-0.023	0.020	-0.011
	(0.045)	(0.041)	(0.039)	(0.044)	(0.045)	(0.042)	(0.043)
Knowledge score	0.004	0.020	0.017	0.001	0.023	0.041	0.046
	(0.036)	(0.033)	(0.032)	(0.035)	(0.036)	(0.034)	(0.035)
State F.E.	YES	YES	YES	YES	YES	YES	YES
Observations	1,500	1,498	1,501	1,501	1,502	1,501	1,502
R-squared	0.063	0.065	0.070	0.078	0.081	0.071	0.092

Table S14 Multiple ordered logistic models. Dependent variable: absolute value of the difference between respondent's personal opinion about abortion access and respondent's perceived public opinion, by abortion cause.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Female	0.230**	0.061	0.231**	0.085	0.228**	0.254**	0.256**
	(0.106)	(0.107)	(0.112)	(0.107)	(0.107)	(0.114)	(0.109)
Parent	-0.178	-0.027	-0.086	-0.321***	0.023	-0.073	-0.035
	(0.109)	(0.111)	(0.115)	(0.110)	(0.109)	(0.116)	(0.111)
Hispanic	-0.010	-0.226	-0.419**	0.027	-0.092	-0.126	0.051
	(0.172)	(0.172)	(0.184)	(0.173)	(0.174)	(0.181)	(0.173)
Race (ref = White)							
Black or African American	0.092	0.117	-0.012	-0.142	-0.249	-0.135	-0.430**
	(0.167)	(0.170)	(0.181)	(0.173)	(0.176)	(0.183)	(0.180)
Other	0.018	0.325*	0.202	0.036	0.286*	0.074	0.328*
	(0.172)	(0.169)	(0.176)	(0.172)	(0.166)	(0.178)	(0.169)
Age	-0.008**	-0.012***	-0.014***	-0.012***	-0.006*	-0.016***	-0.011***
	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)	(0.004)
Rurality (ref = urban)							
Rural	0.049	0.030	0.294*	-0.101	0.093	0.153	-0.115
	(0.151)	(0.157)	(0.163)	(0.155)	(0.154)	(0.166)	(0.158)
Suburban	0.014	0.061	0.149	-0.053	0.172	0.207	-0.007
	(0.122)	(0.125)	(0.133)	(0.125)	(0.125)	(0.132)	(0.127)
Abortion identity label (ref = pro-choice)							
Pro-life	-0.107	0.133	0.092	-0.535***	-0.164	0.167	-0.336**
	(0.137)	(0.137)	(0.143)	(0.140)	(0.137)	(0.143)	(0.139)
Neither	-0.284	-0.503**	-0.344	-0.726***	-0.666***	-0.392*	-0.710***
	(0.213)	(0.228)	(0.230)	(0.225)	(0.226)	(0.237)	(0.229)

Equally both	-0.113	0.024	-0.102	-0.260*	-0.266*	-0.246*	-0.622***
	(0.136)	(0.138)	(0.144)	(0.136)	(0.137)	(0.149)	(0.141)
Education (ref = less than high school diploma)							
High school or equivalent	0.210	0.129	-0.147	0.593*	0.298	-0.056	0.179
	(0.328)	(0.335)	(0.332)	(0.343)	(0.327)	(0.345)	(0.332)
Some college/associates	0.403	0.210	-0.205	0.777**	0.521	0.024	0.246
	(0.326)	(0.333)	(0.329)	(0.341)	(0.325)	(0.343)	(0.330)
Bachelor's degree	0.412	0.114	-0.178	0.816**	0.460	0.095	0.321
	(0.335)	(0.343)	(0.341)	(0.351)	(0.335)	(0.353)	(0.341)
Graduate degree	0.409	0.134	-0.094	0.784**	0.480	-0.055	0.346
	(0.355)	(0.365)	(0.361)	(0.369)	(0.354)	(0.376)	(0.359)
Religion (ref = Catholic)							
Evangelical protestant	0.038	0.278*	0.169	0.015	0.206	0.317*	0.098
	(0.166)	(0.166)	(0.174)	(0.170)	(0.169)	(0.181)	(0.173)
Mainline protestant	-0.309*	0.056	-0.047	-0.133	0.061	0.112	-0.033
	(0.158)	(0.160)	(0.169)	(0.163)	(0.158)	(0.173)	(0.164)
Agnostic/atheist	-0.079	-0.299	-0.090	-0.203	0.146	0.348*	0.346**
	(0.170)	(0.182)	(0.188)	(0.177)	(0.172)	(0.185)	(0.175)
Other	-0.236*	0.057	0.015	-0.112	-0.028	0.409***	0.028
	(0.143)	(0.147)	(0.152)	(0.146)	(0.147)	(0.156)	(0.149)
Trust SCOTUS score	-0.031	-0.038	-0.041	-0.022	-0.144***	-0.106**	-0.062
	(0.042)	(0.043)	(0.045)	(0.043)	(0.043)	(0.045)	(0.043)
Repr SCOTUS score	-0.013	0.111*	0.111*	0.013	-0.065	0.195***	0.066
	(0.063)	(0.064)	(0.067)	(0.064)	(0.063)	(0.068)	(0.064)
Trust state leg score	0.004	-0.001	0.040	-0.022	0.058	-0.005	-0.003
	(0.044)	(0.045)	(0.047)	(0.045)	(0.045)	(0.047)	(0.045)
Repr state leg score	-0.020	-0.044	-0.030	0.047	-0.016	-0.009	-0.022
	(0.065)	(0.066)	(0.068)	(0.066)	(0.066)	(0.069)	(0.066)
Knowledge score	0.026	0.002	-0.008	-0.006	0.031	0.045	0.040
	(0.053)	(0.055)	(0.056)	(0.054)	(0.054)	(0.057)	(0.055)
State F.E.	YES	YES	YES	YES	YES	YES	YES
Observations	1,500	1,498	1,501	1,501	1,502	1,501	1,502
Pseudo R-squared	0.0193	0.0227	0.0243	0.0281	0.0281	0.0298	0.0341

Table S15 Multiple weighted linear regression models. Dependent variable: absolute value of the difference between respondent's personal opinion about abortion access and respondent's perceived public opinion, by abortion cause.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Female	0.191***	0.152**	0.186***	0.099	0.140*	0.252***	0.217***
	(0.074)	(0.069)	(0.065)	(0.072)	(0.072)	(0.068)	(0.071)
Parent	-0.115	-0.040	-0.150**	-0.238***	-0.024	-0.083	-0.132*
	(0.076)	(0.071)	(0.068)	(0.074)	(0.075)	(0.071)	(0.073)
Hispanic	-0.084	-0.170	-0.186*	-0.070	-0.073	-0.133	-0.117
	(0.112)	(0.104)	(0.099)	(0.109)	(0.110)	(0.104)	(0.108)
Race (ref = White)							
Black or African American	0.083	0.024	0.093	-0.068	-0.164	-0.062	-0.300***
	(0.120)	(0.111)	(0.106)	(0.116)	(0.117)	(0.111)	(0.115)
Other	0.229**	0.351***	0.145*	0.102	0.219**	0.048	0.296***
	(0.093)	(0.086)	(0.082)	(0.090)	(0.091)	(0.086)	(0.089)
Age	-0.007***	-0.006***	-0.009***	-0.009***	-0.007***	-0.009***	-0.008***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Rurality (ref = urban)							
Rural	0.165	0.064	0.147	-0.012	0.134	0.106	-0.085
	(0.108)	(0.101)	(0.096)	(0.105)	(0.106)	(0.100)	(0.104)
Suburban	0.094	0.077	0.014	-0.049	0.153*	0.066	-0.010
	(0.085)	(0.079)	(0.075)	(0.083)	(0.083)	(0.079)	(0.082)
Abortion identity label (ref = pro-choice)							
Pro-life	0.010	0.246***	0.058	-0.223**	-0.120	0.028	-0.020
	(0.096)	(0.089)	(0.085)	(0.093)	(0.094)	(0.089)	(0.092)
Neither	-0.156	-0.349***	-0.249**	-0.474***	-0.320**	-0.240*	-0.315**
	(0.138)	(0.128)	(0.122)	(0.134)	(0.135)	(0.128)	(0.133)
Equally both	0.012	0.139	-0.087	-0.186**	-0.239**	-0.093	-0.263***
	(0.097)	(0.091)	(0.086)	(0.095)	(0.096)	(0.090)	(0.094)
Education (ref = less than high school diploma)							
High school or equivalent	0.266*	-0.158	0.036	0.364**	0.362**	-0.039	0.069

	(0.148)	(0.138)	(0.130)	(0.143)	(0.144)	(0.136)	(0.141)
Some college/associates	0.300**	-0.238*	-0.074	0.348**	0.398***	-0.077	0.061
	(0.151)	(0.140)	(0.134)	(0.146)	(0.148)	(0.139)	(0.145)
Bachelor's degree	0.328**	-0.307**	-0.127	0.465***	0.495***	-0.026	0.314**
	(0.156)	(0.145)	(0.138)	(0.151)	(0.152)	(0.144)	(0.149)
Graduate degree	0.223	-0.217	-0.122	0.235	0.292*	-0.171	-0.001
	(0.168)	(0.156)	(0.149)	(0.163)	(0.164)	(0.155)	(0.161)
Religion (ref = Catholic)							
Evangelical protestant	0.118	0.150	-0.002	-0.042	0.204*	0.298***	0.018
	(0.118)	(0.109)	(0.105)	(0.115)	(0.116)	(0.109)	(0.114)
Mainline protestant	-0.177	-0.008	-0.045	-0.168	0.056	0.101	-0.066
	(0.114)	(0.105)	(0.101)	(0.110)	(0.111)	(0.105)	(0.109)
Agnostic/atheist	0.081	-0.134	0.015	-0.145	0.129	0.169	0.184
	(0.126)	(0.117)	(0.112)	(0.122)	(0.123)	(0.116)	(0.121)
Other	-0.008	0.154*	0.012	-0.012	0.096	0.338***	0.089
	(0.100)	(0.093)	(0.089)	(0.097)	(0.098)	(0.093)	(0.096)
Trust SCOTUS score	-0.076***	-0.046*	-0.031	-0.053*	-0.141***	-0.076***	-0.083***
	(0.029)	(0.027)	(0.026)	(0.029)	(0.029)	(0.027)	(0.028)
Repr SCOTUS score	0.022	0.050	0.011	0.029	0.056	0.089**	0.040
	(0.044)	(0.041)	(0.039)	(0.042)	(0.043)	(0.040)	(0.042)
Trust state leg score	0.038	-0.015	0.072***	0.018	0.064**	0.000	0.019
	(0.031)	(0.029)	(0.028)	(0.030)	(0.031)	(0.029)	(0.030)
Repr state leg score	-0.008	0.017	-0.020	-0.005	-0.055	0.008	-0.016
	(0.046)	(0.043)	(0.041)	(0.045)	(0.045)	(0.043)	(0.044)
Knowledge score	0.070**	0.018	0.060*	0.031	0.083**	0.097***	0.081**
	(0.036)	(0.033)	(0.032)	(0.035)	(0.035)	(0.033)	(0.034)
State F.E.	YES	YES	YES	YES	YES	YES	YES
Observations	1,500	1,498	1,501	1,501	1,502	1,501	1,502
R-squared	0.086	0.106	0.085	0.089	0.114	0.092	0.119

Table S16 Multiple linear regression models. Dependent variable: absolute value of the difference between respondent's personal opinion about abortion access and respondent's perceived public opinion, by abortion cause. Experiment treatment status is controlled for.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Treated	0.054	0.086	-0.010	0.129*	0.039	-0.009	-0.051
	(0.069)	(0.064)	(0.061)	(0.068)	(0.070)	(0.066)	(0.067)
Female	0.222***	0.113*	0.166***	0.117*	0.197***	0.192***	0.236***
	(0.072)	(0.067)	(0.064)	(0.071)	(0.072)	(0.068)	(0.070)
Parent	-0.112	-0.046	-0.073	-0.245***	-0.031	-0.042	-0.063
	(0.074)	(0.069)	(0.066)	(0.073)	(0.075)	(0.070)	(0.072)
Hispanic	-0.062	-0.199*	-0.252**	-0.032	-0.099	-0.068	-0.091
	(0.118)	(0.110)	(0.105)	(0.117)	(0.119)	(0.112)	(0.115)
Race (ref = White)							
Black or African American	0.042	0.050	0.052	-0.114	-0.137	-0.038	-0.239**
	(0.116)	(0.108)	(0.103)	(0.115)	(0.117)	(0.110)	(0.113)
Other	0.178	0.310***	0.211**	0.081	0.206*	0.093	0.310***
	(0.114)	(0.106)	(0.101)	(0.113)	(0.115)	(0.109)	(0.111)
Age	-0.007***	-0.009***	-0.010***	-0.010***	-0.006***	-0.010***	-0.008***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Rurality (ref = urban)							
Rural	0.014	0.063	0.147	-0.090	0.053	0.074	-0.105
	(0.104)	(0.096)	(0.092)	(0.102)	(0.105)	(0.098)	(0.101)
Suburban	0.010	0.057	0.070	-0.044	0.101	0.100	-0.020
	(0.084)	(0.078)	(0.074)	(0.083)	(0.085)	(0.080)	(0.082)
Abortion identity label (ref = pro-choice)							
Pro-life	0.015	0.090	0.082	-0.267***	-0.049	0.109	-0.085
	(0.093)	(0.086)	(0.082)	(0.092)	(0.093)	(0.088)	(0.090)
Neither	-0.194	-0.279**	-0.254**	-0.442***	-0.410***	-0.287**	-0.408***
	(0.144)	(0.133)	(0.127)	(0.142)	(0.145)	(0.137)	(0.140)

Equally both	-0.063	-0.000	-0.139*	-0.271***	-0.199**	-0.143	-0.388***
	(0.093)	(0.087)	(0.083)	(0.092)	(0.094)	(0.089)	(0.091)
Education (ref = less than high school diploma)							
High school or equivalent	0.157	0.114	-0.053	0.345*	0.224	-0.062	0.084
	(0.213)	(0.198)	(0.187)	(0.209)	(0.213)	(0.201)	(0.205)
Some college/associates	0.270	0.124	-0.079	0.432**	0.348	-0.014	0.150
	(0.212)	(0.197)	(0.186)	(0.208)	(0.212)	(0.200)	(0.204)
Bachelor's degree	0.265	0.038	-0.136	0.445**	0.382*	0.005	0.263
	(0.219)	(0.203)	(0.193)	(0.215)	(0.219)	(0.207)	(0.211)
Graduate degree	0.291	0.166	-0.054	0.405*	0.353	-0.104	0.165
	(0.232)	(0.216)	(0.204)	(0.228)	(0.233)	(0.219)	(0.224)
Religion (ref = Catholic)							
Evangelical protestant	0.088	0.176*	0.078	0.002	0.183	0.252**	0.042
	(0.114)	(0.105)	(0.101)	(0.112)	(0.115)	(0.108)	(0.111)
Mainline protestant	-0.153	0.020	-0.016	-0.052	0.056	0.062	-0.020
	(0.108)	(0.101)	(0.096)	(0.107)	(0.109)	(0.103)	(0.105)
Agnostic/atheist	-0.001	-0.132	-0.017	-0.116	0.123	0.118	0.198*
	(0.119)	(0.110)	(0.105)	(0.117)	(0.120)	(0.113)	(0.116)
Other	-0.054	0.109	0.033	-0.006	0.056	0.257***	0.046
	(0.098)	(0.091)	(0.087)	(0.097)	(0.099)	(0.093)	(0.096)
Trust SCOTUS score	-0.050*	-0.032	-0.034	-0.025	-0.104***	-0.063**	-0.053*
	(0.029)	(0.027)	(0.025)	(0.028)	(0.029)	(0.027)	(0.028)
Repr SCOTUS score	-0.011	0.034	0.026	0.015	-0.020	0.042	0.001
	(0.043)	(0.040)	(0.038)	(0.042)	(0.043)	(0.041)	(0.042)
Trust state leg score	0.021	-0.016	0.034	-0.000	0.032	-0.010	0.012
	(0.030)	(0.028)	(0.027)	(0.030)	(0.030)	(0.029)	(0.029)
Repr state leg score	-0.016	0.017	-0.026	0.011	-0.022	0.020	-0.012
	(0.045)	(0.041)	(0.039)	(0.044)	(0.045)	(0.042)	(0.043)
Knowledge score	0.004	0.020	0.017	0.001	0.023	0.041	0.046
	(0.036)	(0.033)	(0.032)	(0.035)	(0.036)	(0.034)	(0.035)
State F.E.	YES	YES	YES	YES	YES	YES	YES
Observations	1,500	1,498	1,501	1,501	1,502	1,501	1,502
R-squared	0.063	0.066	0.070	0.080	0.081	0.071	0.093

Table S17 Multiple logistic regressions for the probability of thinking that public opinion is less supportive of abortion access compared to respondent's personal opinion. Estimates are expressed in odds ratios.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Female	1.245	1.045	1.360**	0.978	1.121	1.278	1.235
	(0.183)	(0.143)	(0.196)	(0.141)	(0.164)	(0.197)	(0.181)
Parent	0.796	1.135	0.923	0.753*	1.055	0.845	1.000
	(0.119)	(0.161)	(0.137)	(0.111)	(0.158)	(0.133)	(0.150)
Hispanic	0.841	0.972	0.784	0.725	0.810	0.917	1.343
	(0.197)	(0.212)	(0.181)	(0.174)	(0.190)	(0.221)	(0.308)
Race (ref = White)							
Black or African American	1.205	0.952	0.930	0.899	0.841	0.793	0.736
	(0.277)	(0.214)	(0.224)	(0.208)	(0.204)	(0.204)	(0.180)
Other	0.706	1.195	0.904	0.641*	1.383	0.939	0.836
	(0.170)	(0.253)	(0.207)	(0.154)	(0.311)	(0.227)	(0.195)
Age	0.985***	0.992*	0.994	0.992*	0.987***	0.979***	0.985***
	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Rurality (ref = urban)							
Rural	1.177	1.043	1.299	0.929	1.170	1.385	1.004
	(0.253)	(0.209)	(0.275)	(0.196)	(0.252)	(0.315)	(0.216)
Suburban	1.044	0.898	1.021	0.823	1.099	1.238	1.001
	(0.177)	(0.142)	(0.174)	(0.137)	(0.187)	(0.223)	(0.170)
Bible is the literal word of God	0.815	0.772	0.777	0.883	0.683*	0.880	0.644**
	(0.164)	(0.143)	(0.154)	(0.175)	(0.140)	(0.186)	(0.134)
Political affiliation (ref = Republican)							
Democrat	0.881	0.906	1.157	0.678*	1.621**	1.118	1.335
	(0.185)	(0.176)	(0.237)	(0.142)	(0.354)	(0.247)	(0.284)
Independent	0.891	0.843	0.995	0.741	1.782***	0.968	1.156
	(0.193)	(0.166)	(0.208)	(0.156)	(0.391)	(0.219)	(0.254)
Ideology (ref = moderate)							
Moderately liberal	1.313	1.005	1.264	1.156	1.601**	1.090	1.334

	(0.267)	(0.204)	(0.260)	(0.235)	(0.328)	(0.246)	(0.271)
Strongly liberal	1.256	1.323	1.074	1.239	1.804**	1.372	1.465
	(0.288)	(0.290)	(0.251)	(0.284)	(0.417)	(0.334)	(0.341)
Moderately conservative	0.952	0.996	1.235	1.178	1.443	1.226	1.162
	(0.228)	(0.216)	(0.275)	(0.266)	(0.343)	(0.303)	(0.276)
Strongly conservative	0.690	0.954	0.738	0.486***	1.600*	1.344	1.182
	(0.185)	(0.224)	(0.191)	(0.134)	(0.427)	(0.353)	(0.311)
Abortion identity label (ref = pro-choice)							
Pro-life	0.282***	0.531***	0.553***	0.231***	0.223***	0.419***	0.240***
	(0.059)	(0.100)	(0.111)	(0.049)	(0.048)	(0.090)	(0.051)
Neither	0.481**	0.569*	0.605	0.404***	0.373***	0.337***	0.418***
	(0.159)	(0.181)	(0.197)	(0.134)	(0.125)	(0.141)	(0.138)
Equally both	0.484***	0.932	0.948	0.604***	0.434***	0.648**	0.424***
	(0.090)	(0.160)	(0.170)	(0.108)	(0.080)	(0.126)	(0.079)
Education (ref = less than high school diploma)							
High school or equivalent	2.443*	1.182	1.681	1.031	2.180	5.617**	1.378
	(1.318)	(0.533)	(0.835)	(0.473)	(1.166)	(4.452)	(0.645)
Some college/associates	2.120	1.058	1.257	1.062	2.421*	4.538*	1.176
	(1.137)	(0.475)	(0.623)	(0.482)	(1.285)	(3.588)	(0.547)
Bachelor's degree	2.741*	1.068	1.327	1.243	2.188	6.141**	1.313
	(1.494)	(0.490)	(0.672)	(0.577)	(1.180)	(4.895)	(0.625)
Graduate degree	2.909*	1.151	1.818	1.356	2.170	6.245**	1.705
	(1.649)	(0.555)	(0.957)	(0.664)	(1.219)	(5.099)	(0.849)
Religion (ref = Catholic)							
Evangelical protestant	0.815	1.108	0.913	0.987	0.993	1.243	1.463
	(0.202)	(0.249)	(0.220)	(0.238)	(0.250)	(0.326)	(0.365)
Mainline protestant	0.899	1.126	1.003	0.889	1.154	1.527*	1.378
	(0.197)	(0.232)	(0.216)	(0.191)	(0.252)	(0.354)	(0.307)
Agnostic/atheist	0.774	0.962	0.789	0.894	1.166	1.337	1.698**
	(0.184)	(0.218)	(0.188)	(0.210)	(0.271)	(0.337)	(0.398)
Other	0.835	1.050	0.961	0.950	0.780	1.283	1.049
	(0.173)	(0.203)	(0.194)	(0.196)	(0.164)	(0.287)	(0.221)
Trust SCOTUS score	0.870**	1.024	0.955	0.890**	0.813***	0.870**	0.971
	(0.052)	(0.057)	(0.055)	(0.053)	(0.050)	(0.055)	(0.058)

Repr SCOTUS score	1.134	1.041	1.169*	1.063	1.054	1.207**	1.046
	(0.099)	(0.084)	(0.101)	(0.091)	(0.092)	(0.111)	(0.091)
Trust state leg score	0.985	0.989	1.058	0.997	1.177***	1.008	1.028
	(0.060)	(0.057)	(0.064)	(0.060)	(0.074)	(0.064)	(0.063)
Repr state leg score	0.990	0.946	0.888	1.045	0.886	0.982	0.867
	(0.087)	(0.079)	(0.079)	(0.092)	(0.080)	(0.091)	(0.078)
Knowledge score	1.116	1.050	1.025	1.173**	1.078	1.069	1.080
	(0.086)	(0.074)	(0.077)	(0.091)	(0.082)	(0.086)	(0.084)
State F.E.	YES	YES	YES	YES	YES	YES	YES
Observations	1,351	1,340	1,350	1,352	1,363	1,366	1,354
Pseudo R-squared	0.1205	0.0495	0.0648	0.1153	0.1565	0.1009	0.1372

Table S18 Multiple logistic regressions for the probability of thinking that status quo norms are less supportive of abortion rights compared to respondent's personal opinion. Estimates are expressed in odds ratios. Experiment treatment status is controlled for.

	(1) Any reason	(2) Birth defect	(3) Women's health	(4) No more children	(5) Can't afford	(6) Rape	(7) Not married
Treated	1.142	1.081	0.941	0.940	1.020	0.977	0.895
	(0.161)	(0.142)	(0.130)	(0.130)	(0.143)	(0.144)	(0.126)
Female	1.243	1.046	1.361**	0.979	1.121	1.279	1.237
	(0.183)	(0.143)	(0.197)	(0.141)	(0.164)	(0.197)	(0.182)
Parent	0.798	1.136	0.922	0.752*	1.055	0.845	0.999
	(0.119)	(0.161)	(0.137)	(0.111)	(0.158)	(0.133)	(0.150)
Hispanic	0.845	0.976	0.781	0.724	0.811	0.916	1.335
	(0.198)	(0.213)	(0.181)	(0.173)	(0.190)	(0.221)	(0.306)
Race (ref = White)							
Black or African American	1.200	0.951	0.933	0.902	0.840	0.793	0.737
	(0.276)	(0.214)	(0.225)	(0.209)	(0.204)	(0.204)	(0.180)
Other	0.705	1.197	0.903	0.640*	1.383	0.938	0.836
	(0.170)	(0.254)	(0.207)	(0.154)	(0.311)	(0.227)	(0.195)
Age	0.985***	0.992*	0.994	0.992*	0.987***	0.979***	0.985***
	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Rurality (ref = urban)							
Rural	1.181	1.045	1.299	0.928	1.171	1.384	1.000
	(0.254)	(0.209)	(0.275)	(0.196)	(0.252)	(0.315)	(0.216)
Suburban	1.052	0.902	1.019	0.820	1.100	1.236	0.996
	(0.179)	(0.143)	(0.174)	(0.137)	(0.188)	(0.223)	(0.169)
Bible is the literal word of God	0.815	0.772	0.777	0.882	0.684*	0.880	0.643**
	(0.164)	(0.143)	(0.154)	(0.175)	(0.140)	(0.187)	(0.134)
Political affiliation (ref = Republican)							
Democrat	0.878	0.905	1.160	0.679*	1.620**	1.119	1.339
	(0.184)	(0.176)	(0.238)	(0.142)	(0.353)	(0.248)	(0.285)
Independent	0.892	0.844	0.996	0.741	1.782***	0.969	1.156
	(0.193)	(0.166)	(0.209)	(0.156)	(0.391)	(0.219)	(0.254)

Ideology (ref = moderate)							
Moderately liberal	1.314	1.005	1.264	1.157	1.600**	1.091	1.337
	(0.267)	(0.204)	(0.261)	(0.235)	(0.328)	(0.246)	(0.272)
Strongly liberal	1.251	1.320	1.078	1.242	1.803**	1.372	1.472*
	(0.287)	(0.289)	(0.252)	(0.285)	(0.417)	(0.335)	(0.343)
Moderately conservative	0.950	0.996	1.236	1.179	1.443	1.227	1.165
	(0.228)	(0.216)	(0.276)	(0.266)	(0.343)	(0.303)	(0.277)
Strongly conservative	0.691	0.956	0.739	0.486***	1.599*	1.344	1.181
	(0.186)	(0.224)	(0.192)	(0.134)	(0.426)	(0.353)	(0.311)
Abortion identity label (ref = pro-choice)							
Pro-life	0.281***	0.530***	0.555***	0.231***	0.223***	0.419***	0.240***
	(0.059)	(0.100)	(0.111)	(0.049)	(0.048)	(0.090)	(0.051)
Neither	0.485**	0.572*	0.601	0.402***	0.373***	0.337***	0.415***
	(0.160)	(0.182)	(0.196)	(0.134)	(0.125)	(0.141)	(0.137)
Equally both	0.481***	0.931	0.948	0.606***	0.433***	0.648**	0.425***
	(0.089)	(0.160)	(0.170)	(0.108)	(0.080)	(0.127)	(0.079)
Education (ref = less than high school diploma)							
High school or equivalent	2.455*	1.186	1.678	1.030	2.178	5.623**	1.378
	(1.327)	(0.535)	(0.833)	(0.473)	(1.165)	(4.458)	(0.645)
Some college/associates	2.096	1.052	1.263	1.070	2.414*	4.555*	1.193
	(1.127)	(0.472)	(0.626)	(0.486)	(1.282)	(3.604)	(0.555)
Bachelor's degree	2.713*	1.063	1.332	1.251	2.181	6.160**	1.328
	(1.481)	(0.488)	(0.674)	(0.581)	(1.178)	(4.912)	(0.632)
Graduate degree	2.900*	1.152	1.820	1.360	2.166	6.258**	1.713
	(1.646)	(0.555)	(0.958)	(0.666)	(1.217)	(5.111)	(0.853)
Religion (ref = Catholic)							
Evangelical protestant	0.811	1.104	0.914	0.989	0.993	1.245	1.470
	(0.201)	(0.248)	(0.220)	(0.238)	(0.250)	(0.326)	(0.367)
Mainline protestant	0.911	1.132	0.999	0.884	1.155	1.524*	1.366
	(0.200)	(0.233)	(0.215)	(0.191)	(0.252)	(0.354)	(0.305)
Agnostic/atheist	0.785	0.970	0.785	0.888	1.168	1.334	1.675**
	(0.187)	(0.220)	(0.187)	(0.209)	(0.272)	(0.336)	(0.393)
Other	0.835	1.050	0.960	0.950	0.780	1.283	1.047
	(0.173)	(0.203)	(0.194)	(0.196)	(0.164)	(0.287)	(0.221)

Trust SCOTUS score	0.871**	1.025	0.954	0.890**	0.813***	0.869**	0.970
	(0.052)	(0.057)	(0.055)	(0.052)	(0.050)	(0.055)	(0.058)
Repr SCOTUS score	1.137	1.042	1.168*	1.062	1.054	1.207**	1.045
	(0.099)	(0.084)	(0.101)	(0.091)	(0.092)	(0.111)	(0.091)
Trust state leg score	0.984	0.988	1.058	0.997	1.177***	1.008	1.029
	(0.060)	(0.057)	(0.064)	(0.060)	(0.074)	(0.064)	(0.063)
Repr state leg score	0.994	0.949	0.886	1.043	0.886	0.981	0.864
	(0.088)	(0.079)	(0.079)	(0.092)	(0.080)	(0.091)	(0.078)
Knowledge score	1.114	1.049	1.025	1.175**	1.078	1.070	1.082
	(0.086)	(0.074)	(0.077)	(0.091)	(0.082)	(0.086)	(0.084)
State F.E.	YES	YES	YES	YES	YES	YES	YES
Observations	1,351	1,340	1,350	1,352	1,363	1,366	1,354
Pseudo R-squared	0.1211	0.0498	0.0649	0.1154	0.1565	0.1009	0.1376

Table S19 Cross tabulation of the relative distribution of respondents by abortion identity label and partisanship; p-value of the Chi-square test on the independence of the distributions reported below.

	Partisanship		
	Democrat	**Independent**	**Republican**
Pro-choice	52.76 %	27.59 %	19.66 %
Pro-life	23.65 %	24.59 %	51.76 %
Equally both	38.51 %	29.55 %	31.94 %
Neither	28.72 %	43.62 %	27.66 %

p-value of the Chi-square test < 0.0000

Table S20 Cross tabulation of the relative distribution of respondents by abortion identity label and ideology; p-value of the Chi-square test on the independence of the distributions reported below.

	Ideology				
	Moderate	**Moderately conservative**	**Moderately liberal**	**Strongly conservative**	**Strongly liberal**
Pro-choice	38.38 %	10.33 %	27.02 %	6.37 %	17.9 %
Pro-life	25.34 %	24.43 %	6.39 %	34.02 %	9.82 %
Equally both	47.95 %	17.25 %	9.94 %	12.28 %	12.57 %
Neither	56.12 %	18.37 %	9.18 %	10.20 %	6.12 %

p-value of the Chi-square test < 0.0000

Table S21 Cross tabulation of the sample averages of personal opinion (full sample), perceived public opinion among subjects identifying as "pro-life" and "pro-choice", and the measure of distance between perception and actual average opinion for subjects identifying as "pro-life" and "pro-choice". This table shows that both subjects identifying as "pro-life" and "pro-choice" are on average wrong in their assessment of public opinion in opposite directions, the former thinking it is more conservative than it is, the latter thinking it is more liberal. However, individuals identifying as "pro-life" are systematically more wrong in their assessment compared to the pro-choice counterpart.

	Actual opinion	Pro-life perception	Pro-choice perception	|Actual opinion - pro-life perception|	|Actual opinion - pro-choice perception|
Any	0.1465798	-1.196429	0.9851485	1.3430088	0.8385687
Defect	1.105537	0.171875	1.567881	0.933662	0.462344
Woman's health	1.556352	0.8973214	1.813531	0.6590306	0.257179
No more children	0.0710098	-1.417411	0.8267327	1.4884208	0.7557229
Cannot afford	0.2402344	-0.9553571	0.7491749	1.1955915	0.5089405
Rape	1.512052	0.859375	1.780528	0.652677	0.268476
Not married	0.1113281	-1.174107	0.7623762	1.2854351	0.6510481

Table S22 Uncorrected and Bonferroni-corrected p-values for the indicator of identifying as "pro-life"

	Any cause	Birth defect	Woman's health	No more children	Cannot afford	Rape	Not married
	Dependent variable: perception of public opinion						
p-value	0.00000000000000	0.00000000000000	0.00000000004577	0.00000000000000	0.00000000000000	0.00000000319800	0.00000000000000

Bonferroni-corrected p-value	0.00000000000000	0.00000000000000	0.00000000032039	0.00000000000000	0.00000000000000	0.00000002238600	0.00000000000000
	Dependent variable: absolute value of the difference between actual support for abortion access and respondent's perceived support						
p-value	0.00000582900000	0.00042158000000	0.00010847000000	0.00000013080000	0.00000136700000	0.00271876000000	0.00000000857300
Bonferroni-corrected p-value	0.00004080300000	0.00295106000000	0.00075929000000	0.00000091560000	0.00000956900000	0.01903132000000	0.00000006001100

Supplementary Materials

Literature on Perceptions of Public Opinion

In this section, I review the existing literature on second-order beliefs or perceptions of public opinion. There exists a well-established body of literature investigating second-order beliefs (about both the general population and specific groups) in the environmental and climate change policy domain:

- Ding et al. (2011) provided evidence that people who believe that scientists disagree on global warming tend to feel less certain that global warming is occurring and show less support for policies aimed at mitigating climate change.

- McCright et al. (2013) showed that perceived scientific agreement about climate change is correlated to personal views about global warming.

- Leviston et al. (2013) found that opinions about climate change are subject to strong false consensus effects, that people grossly overestimate the numbers of people who reject the existence of climate change in the broader community, and that people with high false consensus bias are less likely to change their opinions.

- Jachimowicz et al. (2018) showed that second-order normative beliefs predicted energy savings, their effect being stronger compared to first-order beliefs. They underscored the importance of the implications deriving from this finding for policymakers.

- Jost (2018) found that citizens in the US and China systematically underestimate popular support for taking action to curb climate change.

- Mildenberger and Tingley (2019) demonstrated that the mass public, political elites and intellectual elites have second-order beliefs characterized by egocentric bias and underestimate pro-climate positions.

- Schuldt et al. (2019) found that second-order environmental beliefs significantly predict policy support for energy conversion policies, especially for fellow countrymen (Chinese) reference group.

- Sparkman et al. (2022) estimated that 80–90% of Americans understate the prevalence of support for major climate change mitigation policies and climate concern.

- Wyss et al. (2023) showed that beliefs about others' behavior in a common-resource dilemma in which a negative environmental externality is triggered depending on the group's collective decision-making strongly predict people's choices.

Moreover, second-order beliefs have been studied in the political science literature, both looking at the dyadic relationship between elite politicians (or their senior staff members) and constituencies, and among ordinary citizens:

- Todorov and Mandisodza (2004) showed that Americans overestimate public support for unilateral foreign policies

- Ahler (2014) and Levendusky and Malhotra (2016) provided evidence that Americans perceive more political polarization among voters than it actually exists.

- Ahler (2014) documented the existence of systematic biases in the way Americans perceive the composition of major political parties. For instance, interviewees thought that 32% of Democrats belong to the LGBT community

(vs. 6% in reality) and 38% of Republicans earn over 250,000 dollars per year (vs. 2% in reality).

- Hertel-Fernandez et al. (2019) showed that senior legislative staff members exhibit conservative bias in the way they perceive preferences in their Members' constituents. Egocentric bias and interest group contact appear to be the mechanisms

- Broockman and Skovron (2018) found that politicians perceive public opinion as more conservative than it actually is in the US.

- Pilet et al. (2024) confirmed the findings by Broockman and Skovron in Belgium, Canada, Germany and Switzerland.

- Pereira (2021) and Sevenans et al. (2023) showed that politicians tend to project their own preferences on voters, hence demonstrating the existence of a form of egocentric bias in the way they perceive public opinion

- Carlson and Hill (2022) provided experimental evidence that American citizens have only small biases in perceptions about the 2016 vote choice of others (on average, less than 5 percentage points)

Finally, second-order beliefs have been considered for the study of:

- gender bias: Dustan et al. (2022) found that, while men and women do not exhibit differences in their perception on whether men outscore women in mathematics tests, differences exist in second order beliefs);

- financial investment behavior: Egan et al. (2014) showed that investors' beliefs about the return expectations of other investors influence

- health-related issues:

- Rabinowitz et al. (2016) examined beliefs about vaccination and showed that conservatives overestimated the proportion of like-minded others who agreed; with them, liberals underestimated the proportion of others who agreed with them
- Prentice and Miller (1993) found that college students collectively misperceive that drinking is more common and desirable among their fellow students than is actually the case;
- Prinstein and Wang (2005) provided evidence that second-order beliefs about peers' engagement in deviant and health-risk behaviors influence adolescents' behaviors;
- Sherman et al. (1983) found evidence of false consensus effect in estimates of smoking prevalence by adolescents. The hypothesized mechanisms that found support in the data were selective exposure and motivational explanations;
- Suls et al. (1988) showed that people who behave in undesirable ways will tend to overestimate the actual number of others who behave similarly. In contrast, people who behave in desirable ways will underestimate the actual number of people who behave like themselves (false uniqueness).

Chapter 2

Medication Abortion in Italy: Unraveling Access, Inequality, and Institutional Determinants

This article is co-authored with Marzia Loghi (Italian National Institute of Statistics), Letizia Mencarini (Bocconi University), and Paola Profeta (Bocconi University).

Abstract

The introduction of medication abortion has reshaped access to induced abortion in Italy, becoming the most widely used method by 2022. Yet, regional disparities in access persist. This study investigates four key questions: i) how individual and contextual factors influence medication abortion uptake, ii) the association between medication abortion, waiting times, and abortion-seeking out-of-region mobility, iii) the impact of Covid-19-related measures on uptake, and

iv) whether the diffusion of medication abortion has affected the prevalence of conscientious objection among healthcare providers. We use the official database of abortion certificates collected through the Italian healthcare system between 2010 and 2022 (more than 900,000 observations). Results show that individual characteristics and healthcare facility-level factors are more predictive of medication abortion uptake than regional-level, systemic characteristics. Particularly, women with higher education and employed have significantly higher odds of receiving medication abortion, with these disparities widening over time. Medication abortion is also consistently associated with shorter waiting times, though no correlation with abortion-seeking out-of-region mobility. Covid-19-related regulatory changes prompted a clear increase in medication abortion uptake and, to a lesser extent, a decrease in waiting times, but had negligible effects on abortion-related mobility. Finally, even if the correlation is clearly negative, we do not find strong evidence that the growing diffusion of medication abortion is the driver of the decline in conscientious objection.

Introduction

Induced abortion is a medical practice that lies at the intersection of public health, human rights, reproductive justice, and the principle of bodily autonomy. Due to its unique nature, it remains a highly contentious issue for policymakers. While most mature democracies guarantee at least some level of access to this procedure, signs of backsliding exist.

Access to induced abortion arguably depends on the method used to implement the procedure. A medication abortion (also known as "medication abortion" or "pill abortion") is a non-surgical method of ending an early pregnancy using prescription medications. The process involves taking the first medication, usu-

ally mifepristone, to block a pregnancy-supporting hormone, followed by a second medication, usually misoprostol, which induces uterine contractions to expel the pregnancy tissue[1].

Medication abortion enables the possibility of at-home self-administration through tele-medicine, potentially expanding access while maintaining safety standards comparable to in-clinic procedures (Wainwright et al., 2016; Gambir et al., 2020; Grossman and Grindlay, 2017; Endler et al., 2019; Ngo et al., 2011). This approach has shown promise in reducing abortion-related morbidity and mortality associated with unsafe invasive methods, particularly in settings where induced abortion is illegal under most circumstances (Dzuba et al., 2013; Berer, 2005; Jelinska and Yanow, 2018). Previous studies on acceptability and pregnant women's reported outcomes found that pregnant women often prefer medication abortion over surgical methods as it avoids the use of anesthesia, is perceived as safer and more natural, and provides greater bodily autonomy (Honkanen and von Hertzen, 2002; Berer, 2005; Ho, 2006; Berer and Hoggart, 2018; Lafaurie et al., 2005) As of 2023, 96 countries have approved mifepristone for abortion, reflecting broad global availability in principle. In high-income countries, medication abortions account for at least half of all abortions, with steady increases over time. Medication abortion is the most frequently used technique also in many European countries: for instance, Finland, Sweden, and Norway report roughly 90–96% of abortions as medication abortions (Guttmacher Institute, 2023); in England and Wales, 87%. As for North America, medication abortion accounted for 63% of all U.S. abortions in 2023. In Asia, India stands out for its high reliance on medication abortion.

[1]The World Health Organization recommends the use of letrozole as a possible alternative to mifepristone during the first 90 days of gestation. The use of sulprostone is no longer recommended and should be restricted to selected cases under strict monitoring in a hospital setting (e.g., Italian Society of Gynecology and Obstetrics (SIGO) (2024), p. 10). Other alternatives to mifepristone are misoprostol alone (Raymond et al., 2019) and methotrexate combined with misoprostol (Hausknecht, 1995).

Shocks such as the outbreak of the Covid-19 pandemic, which compelled hospitals and healthcare facilities to rapidly adapt their organizational models, have influenced abortion practices, leading to an increased availability of medication abortion. For instance, as a reaction of the challenges imposed by the Covid-19 pandemic, France increased gestational age limits and introduced tele-medicine services for medication abortion (Gibelin et al., 2021).

Despite the abundance of evidence on safety, effectiveness and acceptability of medication abortion, the literature documents country-level experiences of lags in its introduction in clinical practice or vetoes due to political and cultural reasons.

From a social perspective, medication abortion advocates have stressed its potential to reduce violence associated with abortion provision, and reshape the *cultural meaning of abortion*, particularly in contexts where society is divided on the issue and abortion services are highly politicized (Joffe, 2000). Nevertheless, the literature has documented country-level experiences where the introduction of medication abortion was deliberately obstructed and delayed for political and ideological reasons (e.g., for Australia Baird (2015)).

Most of the literature on medication abortion tends to focus on clinical effectiveness, safety and acceptability of the procedure. Less is known about societal and organizational dynamics related to its provision. Country-level analyses are usually based on critical content analysis of documental sources and qualitative or mixed-methods studies featuring limited sample sizes.

Italy offers an arguably interesting setting to deepen the analysis on medication abortion uptake for a number of reasons. From a cultural and social standpoint, provision of abortion services has historically been a contentious and politicized topic (e.g., Caruso (2020)). Furthermore, while the law ensures access to first-trimester abortion under various conditions, healthcare providers are permitted to refuse to perform the procedure due to conscientious objection. Although con-

scientious objection in abortion services is not exclusive to Italy, its prevalence is among the highest in Europe. According to the most recent data, in 2022 60.7% of Italian gynecologists exercised conscientious objection, though decreasing from the peak of 71% in 2016. These features make the Italian system liberal *de jure* but resulting in limited access *de facto* (Pullan and Gannon, 2024). Indeed, it has been documented that the large prevalence of objecting gynecologists in Italy has historically impacted access to induced abortion, with evidence showing that the prevalence of conscientious objection has led to longer waiting times and increasing out-of-region mobility for pregnant women seeking induced abortion (Autorino et al., 2020; Bo et al., 2015).

Medication abortion was introduced in the Italian clinical practice in 2005, following practices already in place in other developed countries, but received official marketing authorization only in 2009. Its uptake was initially slow and characterized by regional heterogeneity. However, the 2020 Covid-19 pandemic prompted changes in the regulation of medication abortion to enhance its use, mostly due to the necessity to contain the spread of the infection, pressure from scientific organizations, and the increase in requests from users, becoming the most used technique in 2022 (50.7% of total induced abortions).

Official data availability allows for an in-depth analysis of social and organizational aspects. The Italian National Institute of Statistics records every induced abortion procedure performed in the country, together with detailed information on pregnant woman's characteristics and technical details of the intervention. Moreover, the Italian Ministry of Health releases every year regional-level aggregated figures on characteristics of the induced abortion procedures implemented, prevalence of conscientious objection and supply characteristics (e.g., availability of public family planning services).

Drawing on microlevel data sourced from the official database containing all

induced abortion certificates that were mandatorily collected through the Italian healthcare system between 2010[2] and 2022 (N = 907,129) and regional-level aggregate data on induced abortion and conscientious objection, this study explores the evolution of medication abortion uptake within the Italian healthcare system, focusing on societal and organizational dynamics associated with its adoption and diffusion.

In this article, we aim at investigating a set of research questions related to societal, technological and organizational dynamics linked to the diffusion of medication abortion in Italy. At the individual level, we explore the role of demand-side and supply-side characteristics on medication abortion uptake, and its association with waiting times and abortion-seeking out-of-region mobility, controlling for economic, demographic and cultural characteristics of regions, demographic characteristics of pregnant women, and aspects related to the procedure (e.g., whether it was performed in a public or in an accredited and authorized private facility [from here on, *private clinic* or *private provider*], which type of healthcare professional issued the abortion certificate). We therefore first examine the demographic and organizational factors that influence medication abortion uptake. Particularly, we ask whether individual, demand-side characteristics or contextual, supply-side factors better explain variability in medication abortion adoption. Second, we assess the influence of medication abortion uptake on waiting times and out-of-region mobility. Third, we analyze the impact of Covid-19 pandemic-related confinement measures on the diffusion of medication abortion and how it compares to standard measures of access such as waiting times and out-of-region mobility. Finally, using regional-level aggregated data, we ask whether there exists a significant and consistent correlation between the uptake of medication abortion and prevalence

[2]Although medication abortion was introduced into clinical practice in 2005, data on medication abortions have only been systematically collected since 2010. This delay was due to the fact that the formal marketing authorization of mifepristone in 2009, which marked the official regulatory recognition necessary for reliable data reporting.

of conscientious objection, controlling for regional characteristics and time trends.

Medication Abortion in the Italian Context

Medication abortion has become the predominant method in many countries, though national trajectories vary significantly. While uptake has been rapid in contexts like the U.K. and the Scandinavian countries, other settings, including Canada and Japan, have seen slower diffusion due to delayed approval or structural barriers. In Latin America misoprostol has become widely used outside formal healthcare systems, often in response to restrictive abortion laws[3] .

Induced abortion in Italy is free of charge and allowed in the first trimester if childbearing is expected to harm physical or mental health, economic, social or familial state, based on Law 194 of 1978. Beyond the first trimester, induced abortion is permitted only in cases of fetal abnormalities or when the pregnant woman's physical health is at risk. Those seeking an abortion must first consult either with their primary physician, a healthcare provider at a family planning clinic, or another medical facility. The provider is responsible for conducting the necessary medical assessments and evaluating the grounds for the request. After discussing possible alternatives with the pregnant woman, the provider issues a certificate confirming the pregnancy and authorizing its termination. A mandatory seven-day waiting period follows—except in urgent cases—before the procedure can take place at any accredited healthcare facility. These regulations apply uniformly across all Italian regions, allowing pregnant women to undergo the procedure anywhere in the country, regardless of where the certification was issued. Law 194 of 1978 grants healthcare professionals the right to refuse participation in procedures specifically intended to terminate a pregnancy, citing conscientious objection. To

[3] A comprehensive review of medication, institutional, and socio-political dynamics on medication abortion worldwide is available in the Supplementary Materials.

be exempt from performing abortions, practitioners must formally submit their objection to the local healthcare authority and the director of their facility. The law also requires regional authorities to ensure sufficient access to abortion services, which may involve deploying staff from other locations if needed. Unlike in other countries, such as England, Norway, and Portugal, Italian objectors are not obligated to refer pregnant women to non-objecting providers. However, they are prohibited from engaging in discriminatory practices or obstructing access to information that would enable pregnant women to seek alternative services.

The prevalence of conscientious objection is often linked to conservative religious beliefs. Indeed, there is some correlation at the regional level between the percentage of objectors and religious regular attendance, but the prevalence of objection appears disproportionately high, considering that in 2022 (ISTAT data) less than 19% of Italians reported attending religious services weekly or more, while about 31% said they never attend except perhaps for weddings and funerals. While religion appears to play a role, evidence—including qualitative studies based on in-depth interviews with practitioners—suggests that career incentives may also influence the decision to become a conscientious objector. Due to the high proportion of objecting gynecologists, non-objectors frequently bear the bulk of abortion procedures, whereas more complex medical cases tend to be handled by objectors. As a result, objecting practitioners may have greater opportunities for career advancement (Minerva, 2015).

The significant prevalence of objecting gynecologists in Italy has historically notably impacted access to induced abortion. Particularly, the high concentration of objecting practitioners in Southern, lower-income regions (compared to the North) has created abortion deserts, resulting in territorial discrimination. Empirical studies have confirmed that the prevalence of conscientious objection has led to longer waiting times and increasing out-of-region mobility for women seeking

induced abortion (Autorino et al., 2020; Bo et al., 2015).

Medication abortion was introduced in the Italian clinical practice in 2005, following practices already in place in other developed countries and as recommended by the World Health Organization guidelines. However, until 2009, mifepristone was not available on the market in Italy, and it was therefore necessary to purchase it from abroad through healthcare facilities, creating major difficulties in its distribution. The process for authorizing the commercialization of mifepristone in Italy was completed at the end of July 2009, when the Italian Medicines Agency Board of Directors expressed a favorable opinion on its use up to forty-nine days, requiring hospitalization until expulsion.

The uptake of medication abortion in clinical practice was initially slow and displayed major heterogeneity across regions, starting predominantly in the North (Liguria, Piedmont, and Emilia Romagna) and gradually extending to Central and Southern regions. However, the Covid-19 pandemic prompted regulatory changes to facilitate the use of medication abortion. These changes were driven by the need to contain the spread of the virus, pressure from scientific organizations, and a surge in user demand, also through web platforms (e.g., Women on Web (Aiken et al., 2021)). Indeed, in August 2020 the use of medication abortion was officially extended up to 9 weeks of gestation, the requirement to hospitalize the pregnant woman until expulsion was removed, and medication abortion could be administered in a Day Hospital or at adequately equipped outpatient facilities that are functionally connected to a hospital and authorized by the regions, as well as at family planning clinics (AIFA, 2020; Montanari Vergallo et al., 2021). Consequently, in 2021 medication abortion became the most frequently used technique for induced abortion in Italy, followed by vacuum aspiration (42.7% of cases), and 8% of procedures were still performed by curettage, nevertheless reaching 24.9% in Sardinia and 14.2% in Abruzzo (Italian Ministry of Health, 2023). Updated data

confirm that medication abortion was the most frequently used technique also in 2022, reaching a prevalence of 50.7% of cases (Italian Ministry of Health, 2024) (Figure 2.1).

Figure 2.1: Evolution of the share of medication abortions performed in Italian regions from 2010 (top left) to 2022 (bottom).

Note: The color scheme identifies four levels: <15% (lightest), 15%–30%, 30%–45%, 45%–60%, >60% (darkest). Source: Italian Ministry of Health reports for 2010–2022.

Together with the diffusion of medication abortion (Figure 2.2), two other major trends have characterized the dynamics of induced abortion in Italy in the last decade. One is the constant decline in induced abortion rate (measured as the number of induced abortions per 1,000 women in childbearing age) - with the exception of a rebound in 2022 - as shown in Figure 2.3 (Italian Ministry of Health, 2024). The drop in 2020, probably related to the reduction in interpersonal contacts due to the epidemic confinement measures, represents the largest one since

Figure 2.2: Increasing diffusion of medication abortion in Italian clinical practice

2014.

The other trend is related to prevalence of conscientious objection. Indeed, despite remaining particularly high, the share of gynecologists exercising conscientious objection has steadily decreased since 2018, settling at 60.7% in 2022 (Figure 2.4). Similarly decreasing trends, although less marked, can be found for anesthesiologists and non-medical personnel (Italian Ministry of Health, 2024). The conjoint dynamics of reduction in prevalence of conscientious objection and increased diffusion of medication abortion give rise to the hypothesis that greater uptake of medication abortion may, under certain conditions, reduce conscientious objection among healthcare providers. This hypothesis is based on theories of professional identity creation pointing to the idea that disruptions in regular practice, possibly deriving by the introduction of new technologies, can provide occasions for the evaluation of existing intra- and inter-professional relationships, and professional identity as a whole (e.g., Korica and Molloy (2010)). Medication abortion

Figure 2.3: Overtime decrease in Italian abortion rate, interrupted by a rebound in 2022.

can involve outpatient settings, shorter procedural involvement and can reduce the salience of 'surgical identity' for providers (Aquino et al., 2024; Shukla et al., 2022). When new practices become widespread, providers who previously objected may re-evaluate the moral or practical burden of providing abortion services, and institutional pressures may change accordingly. However, it is important to emphasize that other factors, such as institutional policies, training of new cohorts, shifting generational attitudes, and broader socio-political changes, are expected to play a role.

Data

To address our research questions above, we employed three main data sources. First, we exploit individual-level data from the complete database of first-trimester,

Figure 2.4: Overtime decrease in gynecologists exercising conscientious objection in Italy since 2018.

legal induced abortions performed in Italy between 2010 and 2022 (n = 907,129). These data are collected by the Italian National Institute of Statistics (ISTAT). As mandated by the law, healthcare facilities offering abortion services have to collect detailed information about each intervention with the aim of gaining a better understanding of the phenomenon. Consequently, data on socio-demographic attributes of the pregnant woman, characteristics of the pregnancy, the services involved in authorizing and conducting the abortion, and on the technical details of the intervention are gathered. Detailed characteristics are collected through an individual and anonymous compulsory form filled out by the physician who performs the operation. Single forms are transmitted to healthcare facilities, then to the regional offices that monitor the collection process and finally to ISTAT, which is responsible for the data management.

Second, we relied on regional-level aggregated figures on share of medication

abortions performed, prevalence of conscientious objection, abortion rates, net outflow of abortion procedures, and other relevant supply-side characteristics (e.g., public family planning clinics per 20,000 residents ratio) published in the annual ministerial reports on the enforcement status of the Law 194/78.

Finally, additional regional characteristics, including gross domestic product (GDP) per capita, a measure of secularization (defined as the share of the regional population which has not attended a place of worship in the previous year), share of non-Italian women in reproductive age, and total fertility rate were retrieved from ISTAT data warehouse (ISTATData Italian National Institute of Statistics (2024)).

Empirical Analysis

Characteristics of Medication Abortion Uptake

We first examine the predictors of medication abortion uptake using logistic regression models that include fixed effects for year, region of birth, region of residence, region where the induced abortion was performed, and healthcare facility. These fixed effects allow us to account for time patterns and time-invariant regional characteristics (e.g., cultural factors, local attitudes towards abortion). In this analysis, the dependent variable is binary, taking value 1 if the procedure was a medication abortion (mifepristone alone or combined with prostaglandins) and 0 otherwise. The individual-level explanatory variables included in these models are: age, citizenship, marital status, educational attainment, employment status, parity, previous induced abortions, and urgency of the procedure. Supply-specific variables included are certificate issuer and healthcare center type; regional-level variables are the (lagged) share of medication abortions performed in the region, share of objecting gynecologists, non-objecting gynecologists weekly workload (available

from 2016), the indicator of secularization, GDP per capita, total fertility rate, induced abortion rate, share of accredited private health providers performing abortions, public family planning clinics rate, and net outflow of induced abortions in the region[4]. The inclusion of these regional-level variables is motivated by a set of structural factors that shape both the demand for and the provision of abortion services. First, we account for the economic context of each region, captured by GDP per capita and female unemployment, because previous research shows that economic conditions influence reproductive health behaviors, mobility patterns, and the organization of local healthcare services (Autorino et al., 2020). Second, we include indicators of the cultural and normative environment, such as secularization, which correlate with local attitudes toward abortion and may shape both women's preferences for medication versus surgical methods and the institutional prioritization of abortion services. Third, the demographic structure of regions, operationalized through the total fertility rate and the share of non-Italian women of reproductive age, captures heterogeneity in reproductive behaviors and underlying abortion demand, which is known to vary across population groups. Finally, we incorporate supply-side characteristics, including the availability of accredited private providers, the density of public family planning clinics, the regional abortion rate, and the net outflow of abortion procedures. These variables proxy for institutional capacity, provider availability, and healthcare-system organization, all of which may affect the likelihood that medical abortion is offered and the time needed to obtain the procedure. Together, this set of variables allows us to control for well-documented regional heterogeneity in economic, demographic, cultural, and infrastructural dimensions that could otherwise confound the relationship between individual characteristics, service delivery models,

[4]As a robustness check, we also include the share of non-Italian citizens among women of childbearing age as an additional regional-level variable. This variable was excluded from the main specification due to its high correlation with regional GDP per capita

and medical abortion uptake or waiting times. Particularly, the total fertility rate proxies underlying reproductive patterns that correlate with abortion demand, contraceptive behavior, and demographic composition. Following Autorino et al. (2020), including the total fertility rate helps distinguish supply-driven variation in access from differences in the volume of pregnancies that might independently affect regional abortion service utilization. The density of public family planning clinics captures the institutional infrastructure through which information, counseling, and pre-abortion services are delivered. Regions with more robust family planning systems may adopt medication abortion earlier, diversify abortion pathways, or manage waiting times more efficiently. The regional abortion rate serves as a proxy for latent demand and the baseline workload of abortion services, allowing us to account for differences in service pressure that may influence both the method offered and the timeliness of care. Finally, the net outflow of abortion procedures accounts for structural differences in regional healthcare attractiveness: some regions systematically draw patients from elsewhere, while others experience persistent out-migration due to limited supply. Including this variable mitigates confounding arising from general patterns of health-system mobility. Standard errors are corrected to account for cluster correlation at the healthcare facility level.

Furthermore, to investigate whether individual, demand-side characteristics or systemic, supply-side characteristics matter *most* in explaining variability in access to medication abortion, we estimate two and three-level mixed effect models (regional level, healthcare facility-level, and "facilities nested in regions" models). The focus of this analysis is the intraclass correlation coefficient (ICC), which measures the proportion of total variance in the outcome that is attributable to differences between groups (regions, hospitals, hospitals nested in regions) and the variance of the random intercept, which quantifies the extent to which group-specific averages

differ from the overall average.

Two and three-level mixed effect models indicate that individual-level and facility-level characteristics explain most of the variability in the probability of accessing medication abortion, while regional differences appear to play a minimal role. Indeed, extremely small values of the intra-class correlation coefficient (ICC) and of the variance of the random intercept suggest virtually no variation in the probability of having access to medication abortion is attributed to differences across regions. On the contrary, facility-level ICC indicates that 22.7% - 70.3% (depending on the model) of this variance can be attributed to differences between healthcare facilities (variance of the random intercept = 7.803, 95 % CI 5.958 – 10.220 in the two-level model, 0.030, 95% CI 0.020 – 0.044 in the three-level one). Among the individual characteristics, older (odds ratio [OR] = 1.765, $p < 0.001$), Italian (OR non-Italian = 0.838, $p < 0.001$), educated (at least upper secondary educational attainment, OR = 1.338, $p < 0.001$), formally employed (OR for unemployed = 0.853, $p < 0.001$) or student (OR = 1.169, $p < 0.001$), childless (OR on having one child = 0.880, $p < 0.01$) pregnant women are the most likely to receive a medication abortion. Moreover, the fact that the procedure was considered *urgent* is associated with a greater likelihood of the procedure being a medication abortion (OR 4.832, $p < 0.001$). This can be explained by the fact that Italian law (Art. 5 of Law 194/1978) states that when a physician identifies conditions requiring urgent intervention, they must immediately issue a certificate attesting to the urgency. Before the introduction of medication abortion, most urgent abortion procedures were those approaching or exceeding 90 days of gestation, as delays beyond this threshold could increase the risk of complications. However, with the availability of medication abortion, this urgency threshold has shifted to an earlier gestational stage—specifically, the 7-week limit (later extended to 9-week) for medication abortion. As a result, many of the procedures classified as

urgent now fall within this lower gestational range, where medication abortion is a viable and preferred option. Given that the number of pregnancies between 7 and 9 weeks is significantly higher than those after 90 days, this shift has led to a strong association between urgency and medication abortion. In other words, the urgency classification is increasingly applied to cases eligible for medication abortion, reinforcing the observed pattern in which urgent procedures are more likely to be performed through medication rather than surgical means. Finally, obtaining the abortion from a private provider significantly reduces the odds that the procedure is a medication one (OR = 0.018, $p < 0.001$), possibly because of distorted incentives arising from reimbursement schemes. The complete model results are reported in Figure 2.5 and in the Supplementary Materials (Table S1). Additional robustness checks are available in Table S2.

Figure 2.5: Predictors of medication abortion. The figure displays odds ratios from the logistic regression model.

Note: The x-axis is displayed on a logarithmic scale to reflect the multiplicative nature of the estimates.

By looking at the marginal effect by year, we find that these correlations have become stronger over the years (Figure 2.6). In other words, coeteris paribus, older, Italian, educated, and employed women have become more likely to receive a medication abortion compared to their counterparts over the years.

Figure 2.6: Marginal effects per year. Dependent variable: 1 = the pregnant woman received medication abortion (mifepristone or mifepristone plus prostaglandins), 0 = otherwise.

Medication Abortion and Waiting Times

To study the relation between medication abortion and waiting times (expressed in days) we use individual-level data to estimate zero-inflated negative binomial models. The choice of zero-inflated negative binomial is justified by the presence of overdispersion (overdispersion alpha = 0.166) and the better fit to the data compared to nonzero-inflated models, measured through Akaike and Bayesian information criteria. In this analysis, the dependent variable is the number of days between certificate issuance and the day of the intervention. The main independent variable of interest is whether the procedure is a medication abortion and

we control for both the individual- and regional-level variables enumerated in the previous section. The models include the same set of fixed effects previously mentioned and, again, standard errors are corrected to account for cluster correlation at the healthcare facility level.

Medication abortion is consistently associated with a significant decrease in waiting time expressed in days (incidence rate ratio (IRR): 0.689, $p < 0.001$). Contrary to previous analyses conducted on different time spans (e.g., Autorino et al. (2020)), our estimates indicate that between 2010 and 2022 the share of objecting gynecologists in one region, ceteris paribus, is not significantly associated with increasing waiting times (possibly because of the coinciding decline in abortion rate). The complete model results are displayed in Figure 2.7 and in the Supplementary Materials (Table S1, Table S3).

Figure 2.7: Predictors of waiting time (in days). The figure displays incidence rate ratios (IRRs) from the zero-inflated negative binomial regression model.

Note: The x-axis is displayed on a logarithmic scale to reflect the multiplicative nature of the estimates.

Medication Abortion and Out-of-Region Mobility

To analyze the relationship between medication abortion and out-of-region mobility, we estimate a set of logistic models where the dependent variable is binary, taking value of 1 if the procedure took place outside of the region of residence and not in a neighboring province[5] and 0 otherwise. In addition to the set of control variables common to the previously presented models, here we further control for the difference between the number of births among a region's residents (regardless of the location of delivery) and the total births occurring within the region, expressed as a percentage of the latter. This variable serves as a measure of birth-related mobility and helps control for the possibility that individuals seeking abortions outside their region of residence may be influenced not only by provider availability but also by the perceived higher quality or reputation of gynecological services.

We do not find consistent evidence to support the claim that women might be migrating out of their region of residence specifically to obtain a medication abortion. However, contrary to the previous analysis on waiting times, we find that prevalence of conscientious objection among gynecologists in one region may still contribute to affect the probability of out-of-region mobility (odds ratio: 1.187, $p < 0.1$). Among the other predictors, the ones associated with an increase in the probability of traveling out of the region of residence to obtain an abortion are age - although following a concave pattern (OR: 3.746, $p < 0.001$), not being married (OR: 1.275, $p < 0.01$), having received at least upper secondary education (OR 1.236, $p < 0.001$), not being formally employed, and undergoing an urgent procedure (OR 1.114, $p < 0.001$). On the contrary, non-Italian citizens are less

[5]In Italy, regions are the primary administrative units with legislative autonomy in certain areas, such as healthcare. Each region is further subdivided into provinces, which serve as intermediate administrative divisions mainly responsible for local coordination and infrastructures but with limited political power. While regions have their own governments and policy-making authority, provinces primarily oversee administrative tasks at a smaller scale.

likely to travel to a different region (OR 0.831, $p < 0.01$). Similarly, obtaining an abortion in a private clinic and residing in wealthier regions reduce the odds of out-of-region mobility for abortion seekers (OR 0.470, $p < 0.001$ for the former; OR 0.489, $p < 0.01$ for the latter). The complete model results are displayed in Figure 2.8 and in the Supplementary Materials (Table S1, Table S4). A summary of the three baseline models' results is available in Figure S1.

Figure 2.8: Predictors of out-of-region mobility to obtain an abortion. The figure displays odds ratios from the logistic regression model.

Note: The x-axis is displayed on a logarithmic scale to reflect the multiplicative nature of the estimates.

Medication Abortion and the Covid-19 Pandemic

To study the influence of the Covid-19 emergence on medication abortion uptake and, more broadly, on abortion access in Italy, we rely on an event study design using high-dimensional fixed effects regression models. This approach esti-

mates the dynamic effects of the implementation of the Covid-19-related measures by including a series of leads and lags relative to the implementation month (in our case, March 2020). Specifically, we regress the outcomes of interest (i.e., the proportion of medication abortions, waiting time [in days], and the proportion of procedures implemented outside of the pregnant woman's region of residence) on a set of indicator variables representing different time periods before and after the policy change. Our specification includes the same individual-level controls, procedural and healthcare system factors (i.e., certificate issuer, healthcare facility type), and regional characteristics presented in the previous sections. To account for time-invariant regional characteristics and facility-level heterogeneity, we include year, month, healthcare facility, and regional fixed effects. Standard errors are clustered at the facility level to account for potential within-facility correlation in errors. The coefficients on the lead indicators test for potential pre-trends, while the coefficients on the lag indicators capture the post-policy effects on each outcome. As a robustness check, we also estimate a simpler model that excludes controls and relies on a slimmer fixed-effects structure, absorbing only year, month, and facility-level heterogeneity. This alternative specification provides a transparent comparison, ensuring that the estimated policy effects are not solely driven by the inclusion of controls.

As for the proportion of medication abortions, pre-trends exhibit non-significant coefficients, indicating that there were no systematic differences in the probability of medication abortion uptake prior to the enactment of the Covid-19 confinement measures. This suggests that the parallel trends assumption holds, supporting the validity of the event study design. Following March 2020, the estimated coefficients remain close to zero in the initial months, suggesting a lagged response to the policy changes and reorganization of healthcare services implemented in response to the pandemic. However, from June 2020 onward, there is a statistically significant

and progressively increasing effect, indicating a higher likelihood of medication abortion uptake over time. By August 2020 and beyond, the effect reaches its peak, reflecting a substantial increase in the probability of obtaining a medication abortion.

Looking at waiting times, in the pre-Covid period our estimates indicate relatively longer waiting times. However, there is no strong evidence of a consistent pre-trend, supporting the validity of the event study approach. Following the Covid-19-related measures passed in March 2020, waiting times decrease sharply, with coefficients turning negative and remaining significantly below zero in most of the months immediately after the policy change. However, starting from August 2020 and beyond, the coefficients approach zero, indicating a partial reversion of the initial reductions.

Finally, as for out-of-region migration, we find no significant effect, suggesting that access did not worsen as a consequences of the Covid-19 shock. The results remain consistent across specifications, reinforcing the robustness of our findings. The findings of the event study are displayed in Figure 2.9 and in the Supplementary Materials (Figure S1, Table S5).

Figure 2.9: Event study estimates for medication abortion, waiting time, and out-of-region procedures.

(a) Share of medical abortions

(b) Waiting time (days)

(c) Share of out-of-region procedures

(d) Share of out-of-region procedures, excluding non-neighboring provinces

Note: Estimates were generated from high-dimensional fixed effects regressions controlling for individual, procedural, and systemic factors. The model includes facility, month, year, and regional fixed effects, with standard errors clustered at the facility level. Markers indicate point estimates, and vertical bars represent 95% confidence intervals.

Medication Abortion and Conscientious Objection: A Regional-Level Analysis

To investigate the correlation between medication abortion diffusion and prevalence of conscientious objection among gynecologists at the aggregate level, we use panel, regional-level data and estimate ordinary least squares (OLS) regressions including regional and year-fixed effects to account for unobserved time-invariant regional characteristics and for temporal trends that are common to all regions. The dependent variable is the share of gynecologists exercising conscientious objec-

tion in a given region at a given year. The main independent variable of interest is the share of medication abortions on the overall number of procedures performed in that region during the given year. To allow for the possibility of asynchronous effects, we run separate regressions using its one-year lag and different versions of lagged rolling averages. In models including additional covariates, we control for a set of variables that capture cultural and economic aspects that are argued to influence the way healthcare services - and especially abortion services - are provided. First, we control for GDP per capita at current market prices and the female unemployment rate to characterize the economic context. Second, we account for the share of the regional population which has not attended a place of worship in the past year as a measure for local religiously-motivated attitudes towards abortion. Third, we include the share of non-Italian citizens among women of childbearing age to control for the fact that women from abroad, who reside in Italy but distributed unequally across regions, rely on abortion services more frequently than Italian women do (following Autorino et al. (2020)). Finally, we control for the total fertility rate to account for fertility patterns that might be related to abortion trends. The estimated standard errors are robust to heteroscedasticity and in robustness checks they allow for arbitrary intra-region correlation.

Overall, the estimates point to a negative association between the diffusion of medical abortion and the prevalence of conscientious objection. Although the magnitude of the coefficient remains relatively stable across specifications, statistical significance attenuates once additional regional controls are included. Taken together, these results provide some indication of a negative correlation, but the lack of robustness across models suggests that this relationship should be interpreted cautiously and not as strong empirical evidence of a systematic effect (Table 2.1).

Table 2.1: Correlation between conscientious objection and diffusion of medication abortion.

	% objecting gynecologists					
	(1)	(2)	(3)	(4)	(5)	(6)
% medication abortions at time t	-0.169***				-0.135**	-0.142
	(0.062)				(0.064)	(0.106)
% medication abortions at time t-1		-0.163***				
		(0.061)				
Rolling avg. % medication abortions			-0.159***			
			(0.056)			
Rolling avg. % medication abortions t-2				-0.164***		
				(0.056)		
Year and region F.E.	✓	✓	✓	✓	✓	✓
Regional controls	X	X	X	X	✓	✓
S.E. corrected for cluster corr.	X	X	X	X	X	✓
Observations	271	250	250	250	271	271
Adjusted R-squared	0.913	0.913	0.912	0.914	0.921	0.921

Note: Regional controls include secularization indicator, GDP per capita (thousands €), share of foreign women aged 15-49, female unemployment rate, total fertility rate, induced abortions per 1,000 women aged 15-49. **** $p < 0.001$ *** $p < 0.01$ ** $p < 0.05$, * $p < 0.1$.

Discussion and Conclusion

Medication abortion is recognized as a safe and effective approach to induced abortion (Wainwright et al., 2016; Gambir et al., 2020; Grossman and Grindlay, 2017; Endler et al., 2019; Ngo et al., 2011) and is frequently preferred to surgical techniques by pregnant women as it grants greater bodily autonomy and is less invasive compared to other approaches (Honkanen and von Hertzen, 2002; Berer, 2005; Ho, 2006; Berer and Hoggart, 2018; Lafaurie et al., 2005). Although its uptake has majorly increased in several countries consequently to the Covid-19 pandemic and the expansion of tele-medicine (Gibelin et al., 2021; Aiken et al., 2021), little is still known on societal and organizational dynamics surrounding the diffusion of medication abortion. Exploiting the wealth of individual-level data on first-trimester induced abortions performed between 2010 and 2022 by Italian healthcare facilities, we investigated drivers of medication abortion uptake, its impact on waiting times and out-of-region mobility, the impact of Covid-19 lockdown measures on its diffusion, and the correlation between medication abortion diffusion and prevalence of conscientious objection.

Our findings indicate that women having relatively higher levels of education and employed are significantly more likely to have access to medication abortion and this trend has increased over time. This raises concerns about whether the implementation of medication abortion in Italy has effectively reduced inequalities in access. Previous findings indicated that (lack of) awareness of the possibility of choosing medication abortion plays a key role in shaping access to this method (Newton et al., 2016).

We argue that our findings contribute to this literature by suggesting that a certain level of human capital is necessary to obtain a medication abortion. They also raise questions about whether the organizational arrangements on the supply side have been adequate to ensure widespread access. Moreover, we show that medi-

cation abortion is associated with significant and consistent reduction in waiting times, while it is not a driver of the choice to migrate to a different region to obtain abortion services. This might suggest that there is no strong individual preference for medication abortion compared to other techniques. Alternatively, the structured timeline required by this method, such as the waiting periods between drug administrations and the necessity to wait until the expulsion is complete, may encourage pregnant women to seek care within their area of residence. We also find that prevalence of conscientious objection might still be a factor influencing of out-of-region mobility, in spite of the concurrent declines in abortion rates and share of objecting gynecologists.

Furthermore, our data indicate that the shock generated by the onset of the Covid-19 pandemic and the consequent disruption of standard models of healthcare services provision have prompted a shift in abortion practices in Italy. Particularly, we find a significant increase in the proportion of medication abortions, although this effect was not immediate. Our estimates show that the increase becomes stable and significant starting from June 2020 and this effect appears reinforced and consolidated from August 2020 onward, most likely as a consequence of the Italian Ministry of Health increasing the gestational age limit to access medication abortion and removing the mandatory 3-day hospital stay (AIFA, 2020). Overall, our data support the claim that the Covid-19 pandemic played a key role in shaping medication abortion utilization patterns.

As for the most frequently used measures of access, we found evidence of a reduction in waiting time in the immediate post-Covid-19-related measures implementation, possibly fueled by the reduction in abortion incidence resulting from the confinement measures together with the indication of abortion as a non-deferrable service by the Ministry of Health. However, this effect appears short-lived, indicating a partial reversal after August 2020. Moreover, we do not detect any

significant change in abortion-seeking out-of-region mobility.

Finally, our results indicate that the shift from a predominantly surgical-based approach to induced abortion to a medication-based one is not likely to be a primary driver of the reduction in prevalence of conscientious objection (although the correlation is clearly negative) . Ideological and reputational motives, together with better career prospects (Pullan and Gannon, 2024) might still prevail in the choice of exercising conscientious objection. Moreover, the decline in conscientious objection begins a few years before the uptake of medication abortion reached large scale in many regions, suggesting that antecedent institutional or generational processes likely set the stage for change. For example, newer gynecologists may enter with different attitudes than earlier cohorts. Given that our regional-level aggregate data do not permit decomposition of these divergent mechanisms, we emphasize the need for qualitative research, such as in-depth interviews, provider surveys, to unpack how individual providers conceive conscientious objection in the context of changing practice.

This study provides a detailed account of the factors shaping medication abortion uptake and its consequences for access to abortion care in Italy. By highlighting the interplay between individual and contextual characteristics, our findings offer valuable insights into persistent disparities and evolving patterns of abortion provision. Beyond the Italian case, this research contributes to a broader understanding of how the diffusion of medication abortion can reshape access to reproductive healthcare in contexts where structural and institutional barriers remain.

References

AIFA. Determina n. 865/2020: Modifica alle condizioni e modalità di impiego del medicinale per uso umano mifepristone e prostaglandina. Gazzetta Ufficiale della Repubblica Italian, Serie generale n. 203 del 14-08-2020, 2020. URL https://www.aifa.gov.it/-/modifica-delle-modalita-di-impiego-del-medicinale-mifegyne-a-base-di-mifepristone-ru486-. Accessed: April 10, 2025.

Ara Aiken, Je Starling, R Gomperts, JG Scott, and CE Aiken. Demand for self-managed online telemedicine abortion in eight European countries during the COVID-19 pandemic: A regression discontinuity analysis. *BMJ Sex Reprod Health*, 47(4):238–245, 2021.

American College of Obstetricians and Gynecologists. Medication abortion up to 70 days of gestation, 2020. URL https://www.acog.org/clinical/clinical-guidance/practice-bulletin/articles/2020/10/medication-abortion-up-to-70-days-of-gestation. Accessed: March 19, 2025.

Carmen Imma Aquino, Libera Troìa, Maurizio Guida, and Daniela Surico. "to be or not to be" a conscientious objector to voluntary abortion: An italian web-survey of healthcare workers. *Medicina*, 60(12):1984, 2024.

Tommaso Autorino, Francesco Mattioli, and Letizia Mencarini. The impact of gynecologists' conscientious objection on abortion access. *Social science research*, 87:102403, 2020.

Barbara Baird. Medical abortion in Australia: a short history. *Reproductive Health Matters*, 23(46):169–176, 2015.

Deborah J Bateson, Patricia A Lohr, Wendy V Norman, Caroline Moreau, Kristina Gemzell-Danielsson, Paul D Blumenthal, Lesley Hoggart, Hang-Wun Raymond

Li, Abigail RA Aiken, and Kirsten I Black. The impact of COVID-19 on contraception and abortion care policy and practice: experiences from selected countries, 2020.

Marge Berer. Why medical abortion is important for women, 2005.

Marge Berer and Lesley Hoggart. Medical abortion pills have the potential to change everything about abortion. *Contraception*, 97(2):79–81, 2018.

Marco Bo, Carla Maria Zotti, and Lorena Charrier. Conscientious objection and waiting time for voluntary abortion in Italy. *The European Journal of Contraception & Reproductive Health Care*, 20(4):272–282, 2015.

Vicki Breitbart. Counseling for medical abortion. *American journal of obstetrics and gynecology*, 183(2):S26–S33, 2000.

Erin A Brennand, Beili Huang, Natalie V Scime, Jadine Paw, and Erin L Nelson. Abortion care in Alberta, Canada, from 2012 to 2023: a population-based, cross-sectional analysis of use and geographical access. *The Lancet Public Health*, 10 (3):e246–e256, 2025.

Elena Caruso. Abortion in Italy: forty years on. *Feminist Legal Studies*, 28(1): 87–96, 2020.

Sheila Dunn and Rebecca Cook. Medical abortion in Canada: behind the times. *CMAJ*, 186(1):13–14, 2014.

Ilana G Dzuba, Beverly Winikoff, and Melanie Peña. Medical abortion: a path to safe, high-quality abortion care in Latin America and the Caribbean. *The European Journal of Contraception & Reproductive Health Care*, 18(6):441–450, 2013.

Margit Endler, Antonella Lavelanet, Amanda Cleeve, Bela Ganatra, Rebecca Gomperts, and Kristina Gemzell-Danielsson. Telemedicine for medical abortion: a systematic review. *BJOG: An International Journal of Obstetrics & Gynaecology*, 126(9):1094–1102, 2019.

Katherine Gambir, Camille Garnsey, Kelly Ann Necastro, and Thoai D Ngo. Effectiveness, safety and acceptability of medical abortion at home versus in the clinic: a systematic review and meta-analysis in response to COVID-19. *BMJ global health*, 5(12):e003934, 2020.

Karen Gibelin, Aubert Agostini, Michèle Marcot, Hélène Piclet, Florence Bretelle, and Laura Miquel. Covid-19 impact in abortions' practice, a regional French evaluation. *Journal of gynecology obstetrics and human reproduction*, 50(5): 102038, 2021.

Daniel Grossman and Kate Grindlay. Safety of medical abortion provided through telemedicine compared with in person. *Obstetrics & Gynecology*, 130(4):778–782, 2017.

Guttmacher Institute. National estimate of abortion in India released, 2017. URL https://www.guttmacher.org/news-release/2017/national-estimate-abortion-india-released. Accessed: March 19, 2025.

Guttmacher Institute. Mifepristone for abortion in a global context: Safe, effective and approved in nearly 100 countries, 2023. URL https://www.guttmacher.org/2023/07/mifepristone-abortion-global-context-safe-effective-and-approved-nearly-100-countries. Accessed: March 19, 2025.

Richard U Hausknecht. Methotrexate and misoprostol to terminate early pregnancy. *New England Journal of Medicine*, 333(9):537–540, 1995.

RC Henshaw, SA Naji, IT Russell, and AA Templeton. Comparison of medical abortion with surgical vacuum aspiration: women's preferences and acceptability of treatment. *British Medical Journal*, 307(6906):714–717, 1993.

Pak Chung Ho. Women's perceptions on medical abortion. *Contraception*, 74(1): 11–15, 2006.

Helena Honkanen and Helena von Hertzen. Users' perspectives on medical abortion in Finland. *Contraception*, 65(6):419–423, 2002.

Italian Ministry of Health. Report on the state of access to induced abortion in 2021 by the Ministry of Health to the Italian Parliament. Technical report, Italian Ministry of Health, 2023. Available at: https://www.salute.gov.it/portale/donna/dettaglioPubblicazioniDonna.jsp?lingua=italiano&id=3367.

Italian Ministry of Health. Report on the state of access to induced abortion in 2022 by the Ministry of Health to the Italian Parliament. Technical report, Italian Ministry of Health, 2024. Available at: https://www.salute.gov.it/portale/documentazione/p6_2_2_1.jsp?lingua=italiano&id=3493.

Italian National Institute of Statistics. Istatdata - the Italian National Institute of Statistics data warehouse. Technical report, Italian National Institute of Statistics, 2024. Available at: https://esploradati.istat.it/databrowser/#/en.

Italian Society of Gynecology and Obstetrics (SIGO). Recommendations for the pharmacological treatment of abortion, 2024. URL https://www.sigo.it/wp-content/uploads/2024/09/21.-RaccomandazioniTFA.pdf. Accessed: March 19, 2025.

Kinga Jelinska and Susan Yanow. Putting abortion pills into women's hands: realizing the full potential of medical abortion. *Contraception*, 97(2):86–89, 2018.

Carole Joffe. Medical abortion in social context. *American journal of obstetrics and gynecology*, 183(2):S10–S15, 2000.

Yudai Kaneda. Japan's approval of oral abortion pills: A new era of opportunities and challenges in aligning with global standards. *Women's Health*, 19: 17455057231216533, 2023.

Nathalie Kapp, Elisabeth Eckersberger, Antonella Lavelanet, and Maria Isabel Rodriguez. Medical abortion in the late first trimester: a systematic review. *Contraception*, 99(2):77–86, 2019.

Maja Korica and Eamonn Molloy. Making sense of professional identities: Stories of medical professionals and new technologies. *Human relations*, 63(12):1879–1901, 2010.

María Mercedes Lafaurie, Daniel Grossman, Erika Troncoso, Deborah L Billings, and Susana Chávez. Women's perspectives on medical abortion in Mexico, Colombia, Ecuador and Peru: a qualitative study. *Reproductive health matters*, 13(26):75–83, 2005.

Francesca Minerva. Conscientious objection in Italy. *Journal of Medical Ethics*, 41(2):170–173, 2015.

Gianluca Montanari Vergallo, Raffaella Rinaldi, Valeria Piersanti, Anastasio Tini, and Alessandro Del Rio. Is the right to abortion at risk in times of covid-19? the Italian state of affairs within the European context. *Medicina*, 57(6):615, 2021.

Danielle Newton, Chris Bayly, Kathleen McNamee, Annarella Hardiman, Marie Bismark, Amy Webster, and Louise Keogh. How do women seeking abortion

choose between surgical and medical abortion? Perspectives from abortion service providers. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 56(5):523–529, 2016.

Thoai D Ngo, Min Hae Park, Haleema Shakur, and Caroline Free. Comparative effectiveness, safety and acceptability of medical abortion at home and in a clinic: a systematic review. *Bulletin of the World Health Organization*, 89:360–370, 2011.

Danielle Pullan and Payton Gannon. Between the church and the state: Catholic and European influences on abortion governance in Italy and beyond. *Journal of Religion in Europe*, 17(3):262–292, 2024.

Elizabeth G Raymond, Margo S Harrison, and Mark A Weaver. Efficacy of misoprostol alone for first-trimester medical abortion: a systematic review. *Obstetrics & Gynecology*, 133(1):137–147, 2019.

Ankita Shukla, Lucia Vazquez-Quesada, Isabel Vieitez, Rajib Acharya, and Saumya RamaRao. Quality of care in abortion in the era of technological and medical advancements and self-care. *Reproductive Health*, 19(1):191, 2022.

Pengcheng Tu, Denghui Hu, Shangchun Wu, Jianan Li, Xiaomei Jiang, Kaiyan Pei, and Wei-Hong Zhang. Characteristics and contraceptive practices among chinese women seeking abortion: a multicentre, descriptive study from 2019 to 2021. *BMJ Sexual & Reproductive Health*, 50(4):252–261, 2024.

UK Government. Abortion statistics for england and wales: 2021, 2021. URL https://www.gov.uk/government/statistics/abortion-statistics-for-england-and-wales-2021/abortion-statistics-england-and-wales-2021. Accessed: March 19, 2025.

Megan Wainwright, Christopher J Colvin, Alison Swartz, and Natalie Leon. Self-management of medical abortion: a qualitative evidence synthesis. *Reproductive Health Matters*, 24(47):155–167, 2016.

Nina Zamberlin, Mariana Romero, and Silvina Ramos. Latin American women's experiences with medical abortion in settings where abortion is legally restricted. *Reproductive health*, 9:1–11, 2012.

Supplementary Materials

Medication Abortion Worldwide

Medication abortion consists typically in the use of a combination of mifepristone and misoprostol to terminate a pregnancy. According to the latest guidelines from gynecology and obstetrics societies, mifepristone is employed to increase uterine contractility and enhance the uterus' response to prostaglandins. Misoprostol is then administered to induce uterine contractions and complete the abortion process (e.g., American College of Obstetricians and Gynecologists (2020), Italian Society of Gynecology and Obstetrics (SIGO) (2024), p. 9)[6].

As of 2023, 96 countries have approved mifepristone for abortion, reflecting broad global availability in principle. In high-income countries, medication abortions account for at least half of all abortions, with steady increases over time. As for North America, medication abortion accounted for 53% of all U.S. abortions in 2020, and this increased to about 63% of abortions by 2023. Canada instead was slower to adopt medication abortion. Mifepristone was only approved in 2015, and prior to that the medication method accounted for under 5% of abortions (estimated) nationwide (Dunn and Cook, 2014). Over the last few years Canada has moved toward greater use of abortion medication, but uptake remains lower than in the U.S. or Europe, due in part to initial rollout challenges and regional access disparities (Brennand et al., 2025). The U.K. has seen one of the most rapid adoptions of medication abortion. In England and Wales, 87% of all abortions in 2021 were medically induced, up from 85% in 2020 (UK Government, 2021). medication abortion is the most frequently used technique also in many

[6]The World Health Organization recommends the use of letrozole as a possible alternative to mifepristone during the first 90 days of gestation. The use of sulprostone is no longer recommended and should be restricted to selected cases under strict monitoring in a hospital setting (e.g., Italian Society of Gynecology and Obstetrics (SIGO) (2024), p. 10). Other alternatives to mifepristone are misoprostol alone (Raymond et al., 2019) and methotrexate combined with misoprostol (Hausknecht, 1995).

other European countries. In the Nordic countries, virtually all abortions are done with pills: for instance, Finland, Sweden, and Norway report roughly 90–96% of abortions as medication abortions (Guttmacher Institute, 2023). In Asia, India stands out for its high reliance on medication abortion. A national study estimated that about 15.6 million abortions occurred in India in 2015, of which 81% were medication abortions (Guttmacher Institute, 2017). On the contrary, China's abortion services provision has remained predominantly surgical despite early approval of mifepristone (Tu et al., 2024). Japan represents an even more extreme case, as mifepristone was approved only in 2023 (Kaneda, 2023). As for Latin America, medication abortion uptake is substantial but largely informal due to restrictive laws in most countries. Over the past two decades women have increasingly turned to misoprostol, often times purchased online, to induce abortion at home, improving safety relative to traditional unsafe methods for self-managed abortion (Zamberlin et al., 2012).

Literature on medication abortion has explored its implications for efficacy, safety, acceptability, and accessibility, with particular attention to its evolving role in diverse healthcare systems. Widespread consensus exists on medication abortion's safety and efficacy (e.g., Kapp et al. (2019); Grossman and Grindlay (2017); Berer and Hoggart (2018)). As for acceptability and user preferences, reviews of the literature found that autonomy and active involvement (Wainwright et al., 2016), safety perception and the appeal of less invasive methods may be crucial drivers in the preference of medication abortion compared to the surgical procedure in developed countries (Ho, 2006). For example, Honkanen and von Hertzen (2002) found that the three most important reasons for choosing medication abortion among Finnish pregnant persons were avoidance of surgery, avoidance of general anesthesia, and the method being more natural. Particularly, medication abortion is considered more natural because it happens in women's

own bodies without external interference (Berer, 2005), i.e., it is *not "carried out" or "conducted" by someone else* (Berer and Hoggart, 2018). Comparable findings apply to experiences from the Global South, based on in-depth interviews carried out in Mexico, Colombia, Ecuador, and Peru (Lafaurie et al., 2005). However, preferences for medication abortion may decline as gestational age increases (e.g., Henshaw et al. (1993) found that between 50 and 63 days of gestational age vacuum aspiration is preferred), in case of prolonged bleeding and high levels of discomfort and anxiety during the procedure. No significant differences in emotional responses or incidence of psychiatric morbidity were found between medication and surgical induced abortion (Ho, 2006). Nevertheless, it was recognized that specific populations systematically prefer or may require surgical abortions, including people experiencing homelessness (Bateson et al., 2020).

One crucial aspect of medication abortion emphasized in the literature is its versatility in terms of settings where it can be implemented. Particularly, advances in telemedicine have emerged as a pivotal development in the provision of medication abortion services. Reviews of the literature on telemedicine for medication abortion found no differences in effectiveness or acceptability between home-based and clinic-based medication abortions across countries (Ngo et al., 2011; Grossman and Grindlay, 2017) and highlighted that qualitative studies on acceptability showed no negative impacts for women or providers (Endler et al., 2019). Some studies suggest that at-home abortions may achieve better compliance compared to in-clinic procedures, with many individuals finding them more popular and reporting a generally more positive experience. However, there are notable reasons for preferring in-clinic abortions, primarily due to the stigma associated with family dynamics (Gambir et al., 2020).

It has been argued that medication abortion has the potential to reduce deaths and morbidity from complications such as sepsis and uterine perforation leading

to hysterectomy, arising from unsafe invasive procedures, in places where most abortions are still illegal (Berer, 2005). Substantial declines in abortion-related morbidity and mortality and lower costs of treating complications have been observed in Latin American countries with medication abortion than with other self-induction methods (Dzuba et al., 2013). Nevertheless, it has been emphasized that the promise of medication abortion to both reduce maternal mortality and morbidity from unsafe abortion and to expand reproductive rights can only be realized if information is available (Jelinska and Yanow, 2018; Joffe, 2000). Indeed, it was found that successful access to medication abortion crucially depends on awareness. Qualitative evidence from Australia documented that the key information sources tend to be own research (often online), experiences of peers, and advice from health professionals (Newton et al., 2016). The role of safe abortion hotlines in the Global South has been identified as a key element in generating awareness on medication abortion (Berer and Hoggart, 2018) and its proper use (Dzuba et al., 2013). More broadly, counseling and education were found to be strongly correlated with women's satisfaction with medication abortion because of the larger extent of pregnant person's involvement in the procedure (Breitbart, 2000). From a social and cultural standpoint, pro-abortion access activists have historically sustained that medication abortion has the potential to reshape the abortion landscape by improving access, reduce violence associated with abortion provision and ultimately change the *cultural meaning* of abortion in contexts where society is deeply divided over the issue and where abortion services have been strongly politicized (Joffe, 2000).

Despite the abundance of evidence on safety, effectiveness and acceptability of medication abortion, the literature documents country-level experiences of lags in its introduction in clinical practice or vetoes due to political and cultural reasons. For example, the introduction of medication abortion in Australia was argued

to be deliberately obstructed and consequently significantly delayed. Baird 2015 claimed that the integration of medication abortion into primary health care has been constrained by the stigma attached to abortion, overly cautious institutionalized frameworks, and the lack of public health responsibility for abortion services. Another prominent example is the ban of over-the-counter sales of misoprostol in Brazil in the '90s, firmly advocated by the anti-abortion access movement, which forced misoprostol onto the black market, causing major detrimental consequences in terms of costs and access (Berer, 2005). Conversely, shocks such as the outbreak of the Covid-19 pandemic, which compelled hospitals and healthcare facilities to rapidly adapt their organizational models, have influenced abortion practices, leading to an increased availability of medication abortion. For instance, as a reaction of the challenges imposed by the Covid-19 pandemic, France increased gestational age limits and introduced telemedicine services for medication abortion (Gibelin et al., 2021). Finally, medication abortion has gained even more relevance for abortion access in the U.S. in the aftermath of the overturning of Roe v. Wade and the consequent enactment of major limitations to standard abortion provision in a set of states.

Supplementary Materials

Table S1: Summary of baseline models' results. For models (1), (2), (3), the dependent variable is 1 if the pregnant woman received medication abortion (mifepristone or mifepristone plus prostaglandin), 0 otherwise; for model (5), the dependent variable is 1 if the abortion was performed outside of the pregnant woman's region of residence and not in a neighboring province, 0 otherwise. Estimates expressed in odds ratios for the logistic models (1), (2), and (5), incidence rate ratios for the zero-inflated negative binomial model (4), and in ordinary beta coefficients for the linear model (3).

	Depvar: Medication abortion			Waiting time (days)	OOR mobility
	Multilevel logistic		Multilevel linear	Zero-inflated	Logistic
	Regional-level	Facility-level	Three-level (Nested)	negative binomial	
	(1)	(2)	(3)	(4)	(5)
Medication abortion	-	-	-	0.689****	0.984
	-	-	-	(0.012)	(0.035)
Age	1.752****	1.765****	0.059****	1.059****	3.744****
	(0.107)	(0.132)	(0.011)	(0.008)	(0.290)
Age squared	0.599****	0.600****	-0.053****	0.932****	0.269****
	(0.033)	(0.041)	(0.010)	(0.007)	(0.021)
Non-Italian	0.870***	0.838****	-0.019****	0.993	0.831***
	(0.041)	(0.030)	(0.005)	(0.005)	(0.052)
Not married	1.017	1.036	0.003	1.009****	1.275****
	(0.034)	(0.024)	(0.002)	(0.002)	(0.029)
Urgent	5.202****	4.825****	0.232****	0.568****	1.236****
	(1.173)	(1.270)	(0.053)	(0.013)	(0.032)
No educational attainment / Primary / Lower secondary (Ref.)					
Upper secondary	1.308****	1.338****	0.028****	1.002	2.070****
	(0.014)	(0.018)	(0.004)	(0.002)	(0.079)
Tertiary	1.561****	1.589****	0.053****	0.992**	1.180****
	(0.046)	(0.036)	(0.006)	(0.003)	(0.030)
Employed (Ref.)					
Unemployed	0.853****	0.852****	-0.019****	0.989****	1.207****
	(0.013)	(0.016)	(0.003)	(0.002)	(0.061)
Housewife	0.882****	0.853****	-0.015****	0.985****	1.398****
	(0.029)	(0.022)	(0.003)	(0.003)	(0.054)
Student / other	1.205****	1.169****	0.013****	0.988***	0.561****

	(0.031)	(0.020)	(0.003)	(0.004)	(0.015)
Childless (Ref.)					
One child	0.884***	0.879***	-0.014****	1.009****	0.472****
	(0.036)	(0.039)	(0.004)	(0.003)	(0.016)
≥ two children	1.004	1.010	-0.001	1.025****	0.997
	(0.047)	(0.044)	(0.005)	(0.003)	(0.018)
No previous induced abortions (Ref.)					
≥ one	0.940***	0.906****	-0.010****	1.011****	1.113****
induced abortion	(0.019)	(0.025)	(0.002)	(0.002)	(0.030)
Certificate issuer (Ref = family planning clinic)					
'Trusted physician'	1.474****	1.469****	0.038****	1.001	0.981
	(0.084)	(0.049)	(0.005)	(0.005)	(0.043)
Gynecologist	1.047	1.056	0.008	0.826****	1.080**
	(0.124)	(0.075)	(0.007)	(0.011)	(0.035)
Other	1.209	1.147	0.006	0.978	1.221****
	(0.331)	(0.249)	(0.014)	(0.031)	(0.067)
Healthcare provider (Ref = public hospital)					
Private clinic	0.045***	0.010****	-0.129**	0.732****	0.470****
	(0.049)	(0.012)	(0.059)	(0.024)	(0.036)
% medication	1.022	1.017	0.084****	0.970**	0.961
abortions t-1	(0.161)	(0.171)	(0.012)	(0.014)	(0.099)
% objecting	1.010	1.073	-0.021**	1.014	1.135*
gynecologists	(0.091)	(0.105)	(0.009)	(0.014)	(0.080)
Secularization	1.185	1.208	0.022	0.975	0.902
	(0.168)	(0.193)	(0.015)	(0.016)	(0.078)
GDP per capita	1.533	1.481	0.017	1.074*	0.489***
	(0.876)	(0.881)	(0.019)	(0.044)	(0.122)
% non-Italian	1.841	1.747	-0.012	0.841**	1.286
women 15-49	(1.089)	(1.041)	(0.045)	(0.062)	(0.467)
Total fertility rate	0.768*	0.808	-0.026**	1.027	0.858
	(0.118)	(0.127)	(0.013)	(0.020)	(0.113)
Abortion rate (per	2.179****	2.282****	0.038	0.989	0.806*
1,000 women 15-49)	(0.513)	(0.570)	(0.024)	(0.026)	(0.093)
% private	0.885	0.838*	-0.001	1.008	0.939
	(0.088)	(0.084)	(0.012)	(0.018)	(0.062)
Family planning	1.403***	1.369***	0.018**	0.981*	1.049
clinics rate	(0.155)	(0.142)	(0.009)	(0.010)	(0.075)
Net outflow	0.966	0.947	-0.011**	1.000	-

of abortions	(0.062)	(0.081)	(0.004)	(0.007)	-
Year FE	✓	✓	✓	✓	✓
Region of birth FE	✓	✓	✓	✓	✓
Region of res. FE	✓	✓	✓	✓	✓
Region of interv. FE	✓	✓	✓	✓	✓
Facility FE	✓	✓	✓	✓	✓
Observations	797,334	797,334	797,334	782,292	761,134
Intraclass corr.	0.000	0.703	0.227	-	-
coefficient	(0.000–0.000)	(0.644–0.757)	(0.163–0.308)	-	-
Variance of the	0.000	7.803	0.030	-	-
random intercept	(0.000–0.000)	(5.958–10.220)	(0.020–0.044)	-	-
AIC	593940.8	480478.9	440245.5	4933173	-
BIC	584172.6	480722.3	441427.6	4934249	-
Pseudo R2	-	-	-	-	0.2875

Note: Robust standard errors in parentheses, clustered by healthcare facility. **** $p < 0.001$ *** $p < 0.01$ ** $p < 0.05$, * $p < 0.1$. for the intraclass correlation coefficients and the variance of the random intercept, values in parentheses represent 95% confidence intervals. The three-level model is linear despite the binary nature of the dependent variable due to convergence issues.

Complete regression tables for predictors of access to medication abortion, waiting times, and out-of-region mobility.

Table S2: Demographic and systemic factors associated with the use of medication abortion (2010-2022). Logistic regressions, dependent variable: 1 if the pregnant woman received medication abortion (mifepristone or mifepristone plus prostaglandin), 0 otherwise. Estimates expressed in odds ratios.

	(1)	(2)	(3)	(4)	(5)	(6)
Age	1.840****		1.765****	1.763****	1.763****	1.697****
	(0.108)		(0.104)	(0.104)	(0.104)	(0.085)
Age squared	0.584****		0.600****	0.600****	0.600****	0.607****
	(0.032)		(0.033)	(0.033)	(0.033)	(0.029)
Italian (Ref.)						
Non-Italian	0.824****		0.838****	0.837****	0.838****	0.847****
	(0.023)		(0.024)	(0.024)	(0.024)	(0.029)
Married (Ref.)						
Not married	1.030		1.036*	1.035*	1.036*	1.039*
	(0.019)		(0.020)	(0.020)	(0.020)	(0.021)
No educational attainment / Primary / Lower secondary (Ref.)						
Upper secondary education	1.356****		1.338****	1.337****	1.338****	1.324****
	(0.021)		(0.022)	(0.021)	(0.021)	(0.022)
Tertiary education	1.610****		1.589****	1.591****	1.590****	1.555****
	(0.039)		(0.038)	(0.038)	(0.038)	(0.038)
Employed (Ref.)						
Unemployed / Seeking job	0.833****		0.852****	0.853****	0.852****	0.841****
	(0.016)		(0.018)	(0.017)	(0.018)	(0.019)
Housewife	0.848****		0.853****	0.852****	0.853****	0.817****
	(0.022)		(0.022)	(0.022)	(0.022)	(0.019)
Student / other	1.168****		1.169****	1.173****	1.170****	1.163****
	(0.022)		(0.025)	(0.024)	(0.025)	(0.028)
Childless (Ref.)						
One child	0.876****		0.879****	0.881****	0.880****	0.906****
	(0.029)		(0.028)	(0.028)	(0.028)	(0.019)
Two children or more	1.002		1.010	1.013	1.011	1.072**
	(0.034)		(0.034)	(0.034)	(0.034)	(0.033)
No previous induced abortions (Ref.)						
$\geq$ 1 induced abortions	0.901****		0.906****	0.905****	0.906****	0.921****
	(0.021)		(0.021)	(0.020)	(0.021)	(0.014)
Not urgent (Ref.)						
Urgent procedure	4.740****		4.820****	4.845****	4.829****	4.106****
	(0.668)		(0.694)	(0.694)	(0.695)	(0.616)
Certificate issuer (Ref. = family planning clinic)						
Trusted physician		1.573****	1.469****	1.469****	1.469****	1.443****
		(0.060)	(0.051)	(0.051)	(0.051)	(0.050)

Continued on next page

	(1)	(2)	(3)	(4)	(5)	(6)
Gynecologist		1.497****	1.057	1.054	1.056	1.021
		(0.142)	(0.072)	(0.072)	(0.072)	(0.079)
Other		1.454*	1.147	1.162	1.151	0.885
		(0.300)	(0.272)	(0.295)	(0.279)	(0.148)
Healthcare center type (Ref. = public hospital)						
Private clinic		0.014****	0.019****	0.019****	0.019****	0.011****
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
% medication abortions in regions $t-1$		1.091	1.017			1.349**
		(0.125)	(0.123)			(0.183)
% medication abortions in regions (rolling average since 2010)				0.694**		
				(0.118)		
% medication abortions in regions (rolling average $t-2$)					0.907	
					(0.113)	
% objecting gynecologists		1.105	1.073	1.008	1.051	0.916
		(0.107)	(0.106)	(0.104)	(0.106)	(0.102)
Non-objecting gynecologists' weekly workload						1.092
						(0.095)
Secularization		1.195	1.208	1.289*	1.232	0.870
		(0.164)	(0.168)	(0.174)	(0.170)	(0.094)
GDP per capita (€ thousand)		1.191	1.481	1.342	1.449	2.025
		(0.544)	(0.743)	(0.667)	(0.715)	(1.054)
Share of non-Italian women in reproductive age		2.229	1.746	1.342	1.629	1.093
		(1.404)	(1.120)	(0.817)	(1.022)	(0.888)
Total fertility rate		0.799	0.808	0.786	0.791	1.002
		(0.168)	(0.177)	(0.174)	(0.171)	(0.202)
Abortion rate (per 1,000 fertile women)		2.217***	2.283****	2.057***	2.216***	2.651***
		(0.558)	(0.567)	(0.517)	(0.552)	(0.827)
% private healthcare providers performing abortions		0.830	0.838	0.831	0.824	0.909
		(0.122)	(0.120)	(0.118)	(0.118)	(0.225)
Public family planning clinics per 20,000 residents		1.371****	1.368****	1.302****	1.363****	1.332****
		(0.116)	(0.110)	(0.101)	(0.105)	(0.115)
Net outflow of abortion the region		0.956	0.947	0.913	0.929	0.975
		(0.064)	(0.066)	(0.062)	(0.066)	(0.059)
Region of birth FE	✓	✓	✓	✓	✓	✓
Region of residence FE	✓	✓	✓	✓	✓	✓
Region of intervention FE	✓	✓	✓	✓	✓	✓
Healthcare facility FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Pseudo R2	0.3778	0.3288	0.3704	0.3711	0.3704	0.3189
Observations	821,062	725,169	725,169	725,169	725,169	342,388

Note: Robust standard errors in parentheses, clustered by healthcare facility. *p<0.1, **p<0.05, ***p<0.01, ****p<0.001.

Table S3: Medication abortion and waiting time (days) in Italy (2010-2022). Zero-inflated negative binomial regressions, dependent variable: number of days between issuance of the certificate and the procedure. Estimates expressed in incidence rate ratios.

	(1)	(2)	(3)	(4)
Medication abortion	0.689****	0.688****	0.689****	0.712****
	(0.012)	(0.012)	(0.012)	(0.010)
Age	1.059****	1.059****	1.059****	1.042****
	(0.008)	(0.008)	(0.008)	(0.009)
Age squared	0.932****	0.932****	0.932****	0.947****
	(0.007)	(0.007)	(0.007)	(0.008)
Italian (Ref.)				
Non-Italian	0.993	0.993	0.993	0.999
	(0.005)	(0.005)	(0.005)	(0.006)
Married (Ref.)				
Not married	1.009****	1.009****	1.009****	1.012****
	(0.002)	(0.002)	(0.002)	(0.003)
No educational attainment / Primary / Lower secondary (Ref.)				
Upper secondary education	1.002	1.002	1.002	1.003
	(0.002)	(0.002)	(0.002)	(0.002)
Tertiary education	0.992**	0.992**	0.992**	0.989***
	(0.003)	(0.003)	(0.003)	(0.004)
Employed (Ref.)				
Unemployed / Seeking first-time job	0.989****	0.989****	0.989****	0.991**
	(0.002)	(0.002)	(0.002)	(0.003)
Housewife	0.985****	0.985****	0.985****	0.988****
	(0.003)	(0.003)	(0.003)	(0.003)
Student / other	0.988***	0.988***	0.988***	0.994
	(0.004)	(0.004)	(0.004)	(0.004)
Childless (Ref.)				
One child	1.009****	1.009****	1.009****	1.009***
	(0.003)	(0.003)	(0.003)	(0.003)
Two children or more	1.025****	1.025****	1.025****	1.027****
	(0.003)	(0.003)	(0.003)	(0.004)
No previous induced abortions (Ref.)				
≥ 1 previous induced abortions	1.011****	1.011****	1.011****	1.013****
	(0.002)	(0.002)	(0.002)	(0.002)
Not urgent (Ref.)				
Urgent procedure	0.568****	0.568****	0.569****	0.595****
	(0.013)	(0.013)	(0.013)	(0.013)
Certificate issuer (Ref. = family planning clinic)				
Trusted physician	1.001	1.001	1.001	1.015***
	(0.005)	(0.005)	(0.005)	(0.005)
Gynecologist	0.826****	0.826****	0.826****	0.826****
	(0.011)	(0.011)	(0.011)	(0.012)

Continued on next page

	(1)	(2)	(3)	(4)
Other healthcare provider	0.978	0.978	0.978	1.008
	(0.031)	(0.032)	(0.031)	(0.038)
Healthcare center type (Ref. = public hospital)				
Private clinic	0.732****	0.722****	0.730****	0.770****
	(0.024)	(0.025)	(0.024)	(0.008)
% medication abortions in the region ($t-1$)	0.970**			0.947***
	(0.014)			(0.019)
% medication abortions in the region (rolling average since 2010)		0.987		
		(0.017)		
% medication abortions in the region (rolling average $t-2$)			0.972*	
			(0.015)	
% objecting gynecologists	1.014	1.016	1.013	1.005
	(0.014)	(0.014)	(0.014)	(0.013)
Non-objecting gynecologists' weekly workload				0.997
				(0.009)
Secularization	0.975	0.971*	0.975	0.967*
	(0.016)	(0.015)	(0.016)	(0.019)
GDP per capita (€ thousand)	1.074*	1.076*	1.072*	1.122
	(0.044)	(0.045)	(0.044)	(0.092)
% non-Italian women in reproductive age	0.841**	0.841**	0.837**	1.054
	(0.062)	(0.063)	(0.063)	(0.098)
Total fertility rate	1.027	1.031	1.028	0.985
	(0.020)	(0.021)	(0.020)	(0.025)
Abortion rate (per 1,000 fertile women)	0.989	0.998	0.987	0.998
	(0.026)	(0.026)	(0.027)	(0.048)
% private healthcare providers performing abortions	1.008	1.012	1.008	1.027
	(0.018)	(0.018)	(0.018)	(0.029)
Public family planning clinics per 20,000 residents	0.981*	0.981*	0.980*	0.981
	(0.010)	(0.010)	(0.010)	(0.014)
Net outflow of abortions in the region	1.000	1.004	1.000	0.999
	(0.007)	(0.007)	(0.007)	(0.007)
Region of birth FE	✓	✓	✓	✓
Region of residence FE	✓	✓	✓	✓
Region of intervention FE	✓	✓	✓	✓
Healthcare facility FE	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
AIC	4,933,173	4,933,371	4,933,191	2,363,738
BIC	4,934,249	4,934,459	4,934,290	2,364,681
Observations	782,292	782,292	782,292	375,633

Note: Robust standard errors in parentheses, clustered by healthcare facility. *p<0.1, **p<0.05, ***p<0.01, ****p<0.001.

Table S4: Out-of-region mobility (excluding neighboring provinces and pregnant women not residing in Italy) and medication abortion. Logistic regressions of individual abortions occurred outside or within the region of residence (2010-2022), dependent variable: 1 = the abortion was performed outside of the region and not in a neighboring province, 0 = otherwise. Estimates expressed in odds ratios.

	(1)	(2)	(3)	(4)	(5)	(6)
Medication abortion	1.002	1.092**	0.984	0.989	0.985	0.988
	(0.040)	(0.039)	(0.035)	(0.034)	(0.035)	(0.032)
Age	3.823****		3.746****	3.751****	3.746****	3.574****
	(0.273)		(0.291)	(0.292)	(0.291)	(0.406)
Age squared	0.263****		0.269****	0.268****	0.269****	0.283****
	(0.020)		(0.022)	(0.022)	(0.022)	(0.032)
Italian (Ref.)						
Non-Italian	0.823****		0.831***	0.829***	0.831***	0.856*
	(0.046)		(0.052)	(0.052)	(0.052)	(0.074)
Married (Ref.)						
Not married	1.273****		1.275****	1.274****	1.275****	1.260****
	(0.027)		(0.029)	(0.029)	(0.029)	(0.042)
No educational attainment / Primary / Lower secondary (Ref.)						
Upper secondary education	1.236****		1.236****	1.236****	1.236****	1.272****
	(0.030)		(0.032)	(0.032)	(0.032)	(0.039)
Tertiary education	2.097****		2.069****	2.069****	2.070****	2.145****
	(0.076)		(0.079)	(0.079)	(0.079)	(0.086)
Employed (Ref.)						
Unemployed / Seeking job	1.188****		1.180****	1.180****	1.180****	1.171****
	(0.028)		(0.030)	(0.030)	(0.030)	(0.044)
Housewife	1.208****		1.207****	1.207****	1.207****	1.136**
	(0.062)		(0.061)	(0.061)	(0.061)	(0.070)
Student / other	1.392****		1.398****	1.400****	1.398****	1.334****
	(0.053)		(0.054)	(0.054)	(0.054)	(0.071)
Childless (Ref.)						
One child	0.569****		0.561****	0.561****	0.561****	0.514****
	(0.015)		(0.015)	(0.015)	(0.015)	(0.018)
Two children or more	0.477****		0.473****	0.473****	0.473****	0.426****
	(0.016)		(0.016)	(0.016)	(0.016)	(0.018)
No previous induced abortions (Ref.)						
$\geq$ 1 induced abortions	0.996		0.997	0.997	0.997	0.999
	(0.020)		(0.018)	(0.018)	(0.018)	(0.027)
Not urgent (Ref.)						
Urgent procedure	1.130****		1.113****	1.119****	1.114****	1.116***
	(0.030)		(0.029)	(0.031)	(0.030)	(0.040)
Certificate issuer (Ref. = family planning clinic)						
Trusted physician		0.953	0.981	0.981	0.981	0.997
		(0.040)	(0.043)	(0.042)	(0.043)	(0.047)

Continued on next page

	(1)	(2)	(3)	(4)	(5)	(6)
Gynecologist		1.063**	1.083**	1.082**	1.083**	1.094**
		(0.033)	(0.034)	(0.034)	(0.035)	(0.039)
Other		1.252****	1.220****	1.217****	1.220****	1.134
		(0.072)	(0.067)	(0.068)	(0.068)	(0.105)
Healthcare center type (Ref. = public hospital)						
Private clinic	0.483****		0.475****	0.485****	0.477****	0.985
	(0.037)		(0.038)	(0.041)	(0.039)	(0.087)
% medication abortions in region $t-1$		0.989	0.990			1.168*
		(0.117)	(0.119)			(0.098)
% medication abortions in regions (rolling average since 2010)				0.842		
				(0.124)		
% medication abortions in regions (rolling average $t-2$)					0.974	
					(0.116)	
% objecting gynecologists		1.206*	1.195*	1.151	1.190*	0.926
		(0.119)	(0.119)	(0.115)	(0.120)	(0.093)
Non-objector gynecologists' weekly workload						0.983
						(0.024)
Net outflow mobility for births		1.196*	1.185*	1.135	1.179*	1.115
		(0.115)	(0.115)	(0.107)	(0.116)	(0.086)
Secularization		0.936	0.925	0.961	0.928	0.963
		(0.083)	(0.083)	(0.082)	(0.082)	(0.085)
GDP per capita (€ thousand)		0.481***	0.478***	0.469***	0.477***	0.444
		(0.120)	(0.123)	(0.122)	(0.123)	(0.224)
% non-Italian women in reproductive age		1.104	1.141	1.154	1.143	1.441
		(0.358)	(0.371)	(0.385)	(0.379)	(1.260)
Total fertility rate		0.800	0.801	0.808	0.800	1.073
		(0.145)	(0.148)	(0.139)	(0.147)	(0.153)
Abortion rate (per 1,000 fertile women)		0.811*	0.821*	0.759**	0.815*	0.614**
		(0.094)	(0.097)	(0.097)	(0.099)	(0.120)
% private healthcare providers performing abortions		0.956	0.939	0.930	0.938	0.814*
		(0.063)	(0.061)	(0.060)	(0.061)	(0.096)
Public family planning clinics per 20,000 residents		1.031	1.050	1.007	1.047	0.936
		(0.077)	(0.080)	(0.072)	(0.079)	(0.106)
Region of birth FE	✓	✓	✓	✓	✓	✓
Region of residence FE	✓	✓	✓	✓	✓	✓
Region of intervention FE	✓	✓	✓	✓	✓	✓
Healthcare facility FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Pseudo R2	0.2880	0.2667	0.2877	0.2879	0.2877	0.3147
Observations	865,053	761,134	761,134	761,134	761,134	365,738

Note: Robust standard errors in parentheses, clustered by healthcare facility. *p<0.1, **p<0.05, ***p<0.01, ****p<0.001.

Figure S1: Multivariable estimates for medication abortion, waiting time, and out-of-region procedures. Baseline models.

Note: Point estimates are displayed as odds ratios or incidence rate ratios, with 95% confidence intervals. The x-axis is on a logarithmic scale to reflect the multiplicative nature of the estimates.

Medication abortion and Covid-19

Figure S2: Event study unadjusted estimates for medication abortion, waiting time, and out-of-region procedures.

(a) Share of medical abortions

(b) Waiting time (days)

(c) Share of out-of-region procedures

(d) Share of out-of-region procedures, excluding non-neighboring provinces

Note: Estimates were generated from high-dimensional fixed effects regressions with facility, month, and year fixed effects, clustering standard errors at the regional level. Markers indicate point estimates, and vertical bars represent 95% confidence intervals.

Table S5: Summary of event study estimates.

	Medication		Waiting Time		Out-of-Region Abortion		OOR Abortion (Excl. Neighb. Prov.)	
Time Period	**Unadjusted**	**With Controls**	**Unadjusted**	**With Controls**	**Unadjusted**	**With Controls**	**Unadjusted**	**With Controls**
≤ Oct 2019	-0.022	-0.020	0.668	0.332	0.000	0.007	-0.006	0.003
	(0.036)	(0.051)	(0.394)	(0.420)	(0.009)	(0.007)	(0.005)	(0.006)
Nov 2019	-0.004	-0.007	1.234***	1.044***	0.006	0.010	-0.004	0.003
	(0.041)	(0.049)	(0.402)	(0.411)	(0.008)	(0.007)	(0.005)	(0.006)
Dec 2019	0.001	-0.002	1.043****	0.838***	0.002	0.006	-0.005	0.001
	(0.029)	(0.041)	(0.261)	(0.315)	(0.008)	(0.006)	(0.004)	(0.005)
Jan 2020	0.004	0.001	-0.317	-0.418**	0.005	0.003	0.006	0.005
	(0.006)	(0.008)	(0.267)	(0.196)	(0.004)	(0.004)	(0.004)	(0.003)
Feb 2020	-	-	-	-	-	-	-	-
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Mar 2020	0.010	0.012	-0.689***	-0.602***	-0.007	-0.004	-0.002	0.001
	(0.015)	(0.011)	(0.190)	(0.182)	(0.006)	(0.004)	(0.004)	(0.003)
Apr 2020	-0.001	-0.004	-0.364	-0.192	-0.010**	-0.005	-0.004	-0.0001
	(0.014)	(0.011)	(0.320)	(0.225)	(0.005)	(0.004)	(0.003)	(0.003)
May 2020	0.004	0.006	-0.707****	-0.618***	-0.012**	-0.007*	-0.003	0.001
	(0.010)	(0.010)	(0.160)	(0.223)	(0.005)	(0.004)	(0.004)	(0.004)
Jun 2020	0.042**	0.042****	-1.114****	-1.074****	-0.009	-0.005	-0.005	-0.001
	(0.016)	(0.012)	(0.269)	(0.290)	(0.005)	(0.004)	(0.004)	(0.004)
Jul 2020	0.044***	0.044****	-0.898***	-0.872***	-0.004	-0.004	0.0001	0.001
	(-0.015)	(0.012)	(0.285)	(0.266)	(0.005)	(0.004)	(0.003)	(0.003)
≥ Aug 2020	0.082****	0.083****	0.119	0.105	-0.007*	-0.006*	-0.002	-0.001
	(0.011)	(0.011)	(0.226)	(0.192)	(0.004)	(0.003)	(0.003)	(0.002)
Observations	907,126	797,331	886,746	782,289	882,430	776,402	866,021	762,019

Note: Robust standard errors in parentheses. *p<0.1, **p<0.05, ***p<0.01, ****p<0.001.

Chapter 3

Do They Really Have a Say? Female Representation, Central State Reach, and Maternal and Infant Mortality in a Cross-National Panel Analysis

This article is co-authored with Kerim Can Kavakli, Marlene Jugl, and Aleksandra Torbica (Bocconi University).

Abstract

An extensive literature has explored the extent to which increased female representation in legislatures results in policy outcomes that benefit women's condition in society. This work builds upon theories about the scope conditions that link descriptive to substantive representation. So far, the main focus has been on the

moderating role of the extent of democracy and economic development of a given country. We theorize that central state reach is a crucial, yet overlooked moderator of the association between female parliamentary representation and policy outcomes. We hypothesize that lower central state reach reduces the beneficial impact of female representation on maternal and infant (plus neonatal and child) mortality. Using a sample of 164 countries from 1991 to 2020, we find that the negative association between the share of women in parliaments and mortality rates is weaker in common law countries compared to civil law ones. When we look at vertical concentration of power, instead, we find that such negative association weakens as decentralization increases only for longer-term mortality indicators (infant, child mortality) and that the moderating role of decentralization might operate non-linearly.

Introduction

Reducing maternal and infant mortality has long been a central objective for global health and development agendas, featured in the Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs). Indeed, maternal and infant mortality are core indicators of reproductive health outcomes because they reflect the health risks and care quality associated to pregnancy, childbirth, and the postpartum period. Moreover, they are widely recognized as crucial indicators of the quality of healthcare systems and, more broadly, national socio-economic progress and well-being (e.g., Zureick-Brown et al. (2013); Jamison et al. (2006); Owusu et al. (2021)).

Previous comparative research has identified a set of factors linked to the reduction of maternal and infant mortality. Overall, these determinants appear to relate to broader processes of female empowerment. Indeed, the literature has rec-

ognized the positive influence of the increase in women's educational attainment (Austin and Noble, 2014; Boehmer and Williamson, 1996; Shandra et al., 2005; Shen and Williamson, 1999; Ware, 1984), female literacy (Grosse et al., 1989; Lena and London, 1993), women's participation to formal labor markets (Kawachi et al., 1999; Navarro et al., 2006), women's access to property and ability to borrow from financial institutions (Burroway, 2012, 2016), greater control over fertility choices, including increased age at marriage and access to contraception (Finlay et al., 2011; Fraser et al., 1995; Austin and Noble, 2014; Shen and Williamson, 1999).

Female political representation is a crucial dimension of female empowerment, with the potential to impact on health outcomes such as maternal and infant mortality by shaping legislative priorities, favoring gender-sensitive policies, and influencing budgetary allocations. Healthcare policy, particularly, is a policy area that tends to be more prioritized by female politicians compared to their male counterpart (e.g., Poggione (2004); Beckwith (2014)). In addition, there exists evidence suggesting that female political representation could be a determinant factor in the reduction of maternal and infant mortality (e.g., Quamruzzaman and Lange (2016); Swiss et al. (2012)). However, recent scholarship on the topic has shifted attention toward the societal and institutional conditions that allow female descriptive representation to effectively translate into substantial representation capable of practically influencing policy outcomes such as reproductive health. For instance, Macmillan et al. (2018) find that the negative correlation between female representation and infant and maternal mortality is stronger in lesser developed and weaker democratic contexts. By contrast, Mechkova and Edgell (2024) show that maternal mortality is reduced with increased female political representation only in democracies and electoral autocracies, but not in closed autocracies, suggesting that a minimal degree of vertical accountability - through semi-competitive elections - is necessary to achieve concrete improvements in policy outcomes.

We contribute to this literature arguing that the effectiveness of female political representation on reproductive health outcomes is not uniform across institutional contexts but depends instead on *central state reach*. We argue that the concept of central state reach can be operationalized along two dimensions: the *horizontal reach*, defined as the parliament's power over other actors such as the government and the bureaucracy, and the *vertical reach*, defined as the parliament's power over local governments. The former is characterized in terms of types of public administration systems (i.e., legal origin à la La Porta et al. (1999), administrative tradition à la Painter and Peters (2010)), while the latter is measured as decentralization. Public administration systems consist of norms about the role of state vis-à-vis society and about the degree to which civil servants should focus on implementing rules or rather achieving results. First, we hypothesize that in countries with English common law tradition - characterized by a contractarian view of the state and more limited state intervention - female political representation has weaker influence on health outcomes, as state actors play a more constrained role in service provision. In contrast, in countries with interventionist legal origins (civil law countries, socialist law countries), where the state is more organically embedded in society, we expect stronger effects. Second, we expect greater decentralization to weaken the influence of national-level female representation, as policy authority and service delivery are shifted away from central government. Conversely, in more centralized contexts, national-level female representation should translate into greater substantive representation and therefore have stronger impact on health outcomes due to stronger central state outreach.

An illustrative example of this argument emerges when comparing Kenya and Angola. They are both sub-Saharan African countries with colonial legacies and shared global commitments; moreover, both countries experienced notable increases in women's parliamentary representation between 2000 and 2020. How-

ever, while Angola achieved substantial reductions in maternal mortality over the same period, Kenya's progress stagnated. Kenya introduced gender quotas through its 2010 Constitution, which included a *two-thirds gender rule*. After the 2013 elections, female representation in Parliament increased to about 19% of the National Assembly; by 2018 women held almost 22% of the National Assembly seats (Aringo and Odongo, 2025; Bouka et al., 2017). During the same decade, Kenya implemented flagship maternal health policies such as free maternity services and the *Linda Mama* project (Oyugi et al., 2024). Despite these reforms, maternal mortality figures stagnated. Concurrently, Kenya implemented a major decentralization reform: starting in 2013, healthcare responsibilities were devolved to county governments. Devolution was intended to improve service access (Awe et al., 2023) but instead revealed systemic weaknesses such as corruption, poor management, labor strikes, lack of implementation capacity at the local level, and absence of clear accountability mechanisms (Shilibua, 2012; Kilonzo et al., 2017; Pyone et al., 2017; McCollum et al., 2018). Moreover, Kenya's English, common law legal origin may have compounded these challenges by limiting centralized enforcement and accountability. In such a fragmented context, national policy initiatives, including those championed by female representatives, struggled to materialize into improved care and therefore maternal mortality figures stagnated (Masaba et al., 2022; World Bank, 2024a). Angola adopted a binding 30% gender quota in 2010 (Inter-Parliamentary Union (IPU), 2024) and prioritized maternal and child health in successive national health strategies (United Nations Population Fund (UNFPA), 2024). Maternal mortality witnessed a steady decline (World Health Organization et al., 2025), supported by centralized budgeting, a coordinated national policy framework (UNICEF Angola, 2023), and the civil law legal origin's predisposition toward uniform, top-down implementation. In spite of other dissimilar characteristics worth acknowledging, such as Angola's post-civil

war context and oil wealth, the most consequential difference among the two countries lies in their institutional configuration: Kenya's decentralized governance and common law system diluted national policy execution, whereas Angola's centralized, civil law-based apparatus enabled female political inclusion to translate more effectively into maternal health improvements.

We test our hypotheses using a panel dataset of 164 countries from 1991 to 2020. We estimate two-way fixed effects models with country-level clustered standard errors and including a set of demographic, developmental, and societal time-varying control variables. The focus of our analysis is on the interaction between the share of women in national legislature and our two measures of central state reach. Our findings indicate consistent support for the first hypothesis, while the second hypothesis is confirmed only for infant and child mortality. Moreover, our data suggest a possibly non-monotonic moderation effect for decentralization, whereby an intermediate degree of fiscal-administrative autonomy offers the ideal context for national-level female representatives to champion policy priorities while relying on adequate sub-national implementation systems. Overall, our work supports the notion that while women in legislatures can advance policies that address the condition of women in society, whether this potential is realized depends on the surrounding institutional context and the central state reach is a key element in this picture.

Theoretical Framework

Female Representation and Population Health

Female representation is itself part of the SDGs. Indeed, subgoal 5.5 aims to *"Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life."*.

An important indicator of women's political representation is the share of women among parliamentarians. In 2025, only about 27% of parliamentarians in single or lower houses around the world are women (Inter-Parliamentary Union, 2025). Although this share has significantly grown from 12% in 1997, in part due to the increasing use of gender quotas (Rustagi and Akter, 2022), it continues to vary considerably across countries and regions, with regional averages ranging from 18% in the Middle East and North Africa to 35% in the Americas in 2025.

Previous studies have found evidence supporting the relationship between female representation in parliaments and health outcomes, especially infant, child, and maternal health outcomes, at the country level. Swiss et al. (2012) find that female representation has a positive effect on child health outcomes, including infant survival, in a panel analysis of developing countries, particularly in less developed countries and in those less integrated in the world polity. Quamruzzaman and Lange (2016) find a negative relationship between female political representation and infant death in a multilevel analysis with individual-level survey data from low- and middle-income countries. They also show that increased health spending accounts for part of this relationship. Using event study and instrumental variable analysis, Rustagi and Akter (2022) find that women's political representation has a positive impact on various child health indicators, including infant and neonatal mortality, around the world with the exception of North America and Europe. Bhalotra et al. (2023) employed a staggered difference-in-differences approach to identify the impact of gender quotas in developing countries and found sharp, sustained reductions in maternal mortality. As for the mechanisms, they show that increased female political representation is associated to an increase in births attended by skilled medical personnel and in prenatal care utilization, together with a decline in early-life fertility. In contrast, an earlier study by Boehmer and Williamson (1996) found no support for the effect of female representation

on infant mortality in least developed countries after controlling for women's educational status, suggesting that other aspects of women's participation in society have more immediate effects than their political representation.

Other studies have examined the relationship at the subnational level. Homan (2017) finds that that higher female representation in state legislatures in the US is associated with reduced infant mortality, both between states and within states over time. Other studies find reductions in infant mortality associated with women's representation in subnational legislatures in Argentina (Cunial, 2021) and India (Bhalotra and Clots-Figueras, 2014) and with the share of women among mayors and state legislators in Brazil (Hessel et al., 2020).

In terms of mechanisms, the literature builds on the theory of the politics of presence (Phillips, 1995; Celis et al., 2008; Wängnerud, 2009; Mechkova and Edgell, 2024), which argues that the share of female political representatives (descriptive representation, i.e., the demographic similarity between representatives and the represented (Pitkin, 1967)) has effects on actual outcomes for women (substantive representation, i.e., the representation of constituents' interests in policymaking and action (Wängnerud, 2009)). Based on lived experiences in a gendered society, which female politicians share with other women, they develop gender-specific policy preferences (e.g., Mansbridge (1999)), for example, a focus on childbearing, maternal and infant health. Empirical studies support the assumption that political preferences and attitudes are gendered, with female politicians prioritizing issues that are also important for female voters, including health (for an overview see Wängnerud, 2009). The other part of the mechanism that is frequently studied are the instruments through which such gendered policy preferences turn into favorable policy outcomes relevant for women, including maternal and infant health. Female politicians can positively affect these through decisions on policies, e.g., information campaigns, budget allocation, e.g., for healthcare infrastructure and

skilled birth attendants, or indirectly by favoring gender equity and female empowerment. Indeed, there exists a body of evidence suggesting that female politicians are effective in producing policy outputs that influence the composition of budgets and the formulation of laws, particularly concerning women's rights and welfare (Clayton and Zetterberg, 2018; Ennser-Jedenastik, 2017; Franceschet et al., 2012; Funk and Philips, 2019; Schwindt-Bayer, 2006). However, policies and budgets, respectively, explain only part of the total effect of female representation (Bhalotra and Clots-Figueras, 2014; Bhalotra et al., 2023; Cunial, 2021; Quamruzzaman and Lange, 2016).

Related to the underlying mechanism is the widely discussed aspect of the critical mass (Wängnerud, 2009): Some of the most comprehensive studies on the relation between female representation and infant, child or maternal mortality build on the idea that a critical mass of female parliamentarians might be necessary for effects to materialize (Dahlerup, 2006; Sarah and Mona, 2008; Childs and Krook, 2009; Quamruzzaman and Lange, 2016; Macmillan et al., 2018; Swiss et al., 2012). To study such threshold effects, scholars have used categorical measures of women's representation, categorizing countries into low, medium, or high share of female parliamentarians, rather than (or besides) the continuous percentage of female representation. Swiss et al. (2012) find that female representation is particularly effective when the threshold of 20% female legislators is reached. Similarly, the study by Quamruzzaman and Lange (2016) shows that the 20% threshold is significantly related with reduced infant death rates, while moderate levels of female representation (between 10 and 19.9 percent) are not significantly related with infant death. Macmillan et al. (2018) find strong evidence for a threshold effect at 20% and especially at 30% female legislators for decreased mortality for women and children.

Recent advancements of the literature on the mechanisms that link female po-

litical representation with reproductive health outcomes have highlighted the importance to study the societal and institutional conditions that enable descriptive representation to translate effectively into substantive representation, capable of meaningfully shaping policy outcomes. To date, few studies, with mixed results, explore how far a democratic institutional context moderates the relation between female representation and infant and maternal mortality: Macmillan et al. (2018) find that the negative relationship between female representation and infant and maternal mortality is particularly strong in lesser developed and weak democratic contexts. According to Mechkova and Edgell (2024), instead, reductions in maternal mortality are observed in democracies and electoral autocracies but not in closed autocracies, suggesting that vertical accountability is a necessary condition and at least semi-competitive elections are needed for it to be expressed. Finally, Swiss and colleagues argue that *"women legislators' effects on child health are not dependent on the democratic status"* (Swiss et al., 2012, p. 550); however, their conclusion is drawn from the non-significance of the democracy index included as a covariate in multivariable regressions, meaning that they did not assess the potential moderating effect of regime type on this relationship. The mixed findings are accompanied by opposite theoretical arguments: On the one hand, it is argued that electoral competition in democracies (and in electoral autocracies) *"creates incentives to improve public goods delivery and also permits women lawmakers to influence policy adoption and implementation, particularly around elections"* (Mechkova and Edgell, 2024, p. 2,472). On the other hand, female representatives may be *"a 'substitute for' rather than a 'complement of' democracy"* (Macmillan et al., 2018, p. 1,912), who raise problems in the delivery of child and maternal health that are not reported otherwise because of restrictions, for example, on press freedom. In conclusion, the scholarly debate on the scope conditions enabling female political representation to shape reproductive health outcomes remains un-

derdeveloped, with existing work largely focused on the extent of democracy or regime type.

The Moderating Role of "Central State Reach"

As previously stated, the discussion of mechanisms that link female political representation and maternal and infant mortality in the existing literature focuses on the preferences and identities of female parliamentarians and the policy tools used to advance maternal and infant health. The missing link between the two is whether and when female legislators can really influence these policy and budgetary decisions. We argue that the institutional context plays a central moderating role in determining whether descriptive representation translates into substantive outcomes. This point is often implicit in the the discussion about the role of democratic institutions (Macmillan et al., 2018; Mechkova and Edgell, 2024), but extends more broadly to the the structural distribution of power within the state. We conceptualize this dimension as the *central state reach*: How much influence does the central state, in particular legislators, have over health policies and budget allocation? Are these decisions in the hand of legislators or rather decided by others, including local politicians and leaders or private actors? If other actors prevail, especially in the implementation phase, then the descriptive representation of women in parliaments would hardly translate into substantive policies and budgets that favor healthcare in line with their needs and priorities.

We distinguish between horizontal and vertical central state reach.
Horizontal reach refers to the parliament's power over other national actors such as the government, bureaucracy, or private actors. This concept taps into the relation between state, society, and private sector, as captured in the literature on state, legal origin (La Porta et al., 1999), and administrative traditions (Peters, 2021). Legal Origin Theory posits that national legal systems reflect deeper insti-

tutional logics about the role and power of the state. Historically, at its core, this approach sees legal traditions as proxies for the balance of authority between the state and private actors, especially property owners. Common law, developed in England, emerged as a mechanism to constrain sovereignty, protect private rights, and empower the Parliament and property holders. It is thus associated with limiting state power and prioritizing judicial protection of individual liberties, with relatively low formalism of judicial procedures. By contrast, civil law systems, originating in France, Germany, and other countries in continental Europe, were historically used as instruments of state-building. These codified legal systems were largely designed by centralized authorities to extend state control over economic and social life. Finally, socialist legal systems are argued to represent the most pervasive form of state dominance, where legal institutions serve primarily to maintain political control and extract resources. According to legal origin scholars, these legal system traditions continue to shape how states exercise authority over markets, society, and public policy (La Porta et al., 1999). Indeed, a substantial body of literature, especially in economics, has documented the influence of legal origin on development and policy outcomes by shaping regulatory frameworks. Studies have found correlations between legal origin and investor protection, labor market regulation, and contract enforcement, with common law systems generally providing stronger safeguards for private actors and market efficiency (La Porta et al., 1997; Botero et al., 2004; Djankov et al., 2003b). Beyond the legal domain, legal origin has also been linked to broader state functions and public policy outcomes, including military conscription, government ownership of banks and the media, and patterns of comparative advantage in trade (Mulligan and Shleifer, 2005a,b; La Porta et al., 2002; Djankov et al., 2003a; Nunn, 2007). Civil law countries were shown to exhibit weaker "government performance" and lower levels of "institutional quality" compared to common law countries (La Porta et al.,

1999; Mahoney, 2001). However, it was found that civil law countries perform better at managing public health outcomes compared to common law countries; particularly, they show greater contraception prevalence, more births attended by trained health personnel, and less low-weight births than common law countries (Scanlon, 2016), suggesting that health system performance may require a different approach than administrative performance for other goals, such as, e.g., the registration of businesses. In addition to legal origin, scholarship in public administration highlights the role of administrative traditions, defined as long-standing, culturally embedded patterns of bureaucratic organization and behavior (Peters, 2021). For example, within Western contexts, four principal traditions (Anglo-American, Napoleonic, Germanic, and Scandinavian) are identified, each reflecting distinct historical legacies that continue to shape central state institutions and society. These administrative lineages intersect with legal origin by reinforcing or constraining legislative power, shaping not only formal legal frameworks, but also the capacity of public actors, including female legislators, to influence policy and budgetary decisions. Since civil law systems (and continental European administrative traditions) are associated with stronger central government control (La Porta et al., 2008) and constitutional commitments to social rights (including health) are more prevalent in civil law countries compared to common law ones (Ben-Bassat and Dahan, 2008), we hypothesize that legal origin and administrative tradition moderate the influence of female political representation on reproductive health outcomes. Specifically, we expect that in common law countries, where central state authority is more constrained, the beneficial impact of women in parliament on reducing maternal and infant mortality will be weaker.

> *Hypothesis 1*: The negative association between female parliamentary representation and maternal and infant mortality will be weaker in common law countries than in civil law ones.

Vertical reach refers to decentralization and federalism. Theoretically, decentralization, including devolution and federalism, can enhance state performance by bringing decision-making closer to citizens, improving local information flows, accountability and responsiveness, thereby yielding more efficient, need-responsive public services (Wallis and Oates, 1988). However, critics note that shifting authority to subnational units can fragment policy implementation, reduce economies of scale, and exacerbate regional disparities, sometimes lowering policy quality or enabling phenomena of local corruption and extractive behaviors on behalf of local elites (Cassidy and Velayudhan, 2024; Arends, 2020; Von Braun and Grote, 2002; McCollum et al., 2018). This fragmentation can create a major disconnect between national policy formulation and local implementation, thereby undermining national-level policy objectives, regardless of the political will or the advocacy of increased female representation. Empirical findings are mixed: some studies show that decentralization improves technical efficiency and certain outcomes (e.g., student test scores and infant mortality) under conducive conditions (Faguet, 2021), whereas other analyses find inconsistent or negative effects on health system equity and performance, especially in contexts where local governance capacity is weak (Nakatani et al., 2024; Sapkota et al., 2023). Comparative research on decentralization underscores that devolving health authority can improve accountability in the long run, but it requires significant investments in local capacity and coordination mechanisms (McCollum et al., 2018). We hypothesize that higher levels of decentralization weaken the positive association between female parliamentary representation and improvements in reproductive health outcomes, as the diffusion of authority to subnational entities dilutes the capacity of national legislators to influence health policy design and implementation.

> *Hypothesis 2*: The negative association between female parliamentary representation and maternal and infant mortality will be weaker as the

level decentralization in a given country increases.

Finally, we underline that our argument covers the moderating role of regime type as well: In a democracy, the (horizontal) reach of legislators, their influence over health policies and budgets, is greater than in non-democratic regimes where parliaments may exist but where de facto authority lies with non-elected executive leaders. In the latter case, we argue female representation does not translate into better health policies or more budget allocated to healthcare, in line with Mechkova and Edgell (2024).

Methods

Empirical Approach

We test our hypotheses using a panel dataset structured at the country-year level, covering up to 164 countries between 1991 and 2020, depending on data availability for each outcome. Following MacMillan and coauthors, our country sample is intentionally broad and not restricted to specific groups of countries (e.g., OECD countries, developing countries) to encompass a wide range of political systems (Macmillan et al., 2018), including those shaped by the third wave of democratization following the collapse of the Soviet Union, as well as transitions in sub-Saharan Africa throughout the 1990s (Diamond, 1996). We excluded only those country-years for which key variables were missing.

To examine how *central state reach* moderates the effect of female political representation on reproductive health outcomes, namely infant and maternal mortality, we estimate the following model:

$$
\begin{aligned}
\text{Mortality}_{it} = \beta_1 &\text{Female Representation}_{it} + \beta_2 \text{Central State Reach}_{it} \\
&+ \beta_3(\text{Female Representation}_{it} \times \text{Central State Reach}_{it}) \\
&+ \gamma_i + \delta_t + \mathbf{X}_{it}\theta + \varepsilon_{it}
\end{aligned}
$$

This is a two-way fixed effects (TWFE) model, where γ_i and δ_t denote country and year fixed effects, respectively, and $\mathbf{X}_{it}$ is a vector of time-varying country-level controls. Standard errors are clustered at the country level. Estimation is implemented using high-dimensional fixed effects regression (`reghdfe`[1]) to account for unobserved heterogeneity across both countries and time.

The TWFE is based on the appealing idea of a traditional difference-in-differences (DiD) model where our estimates come from two comparisons, comparing countries before and after their female representation increases, and comparing these changes to the evolution of other countries during the same period whose level of female representation did not change.

As stated in the theoretical framework section, our main prediction is that β_3 is positive and significant. In the main text we present our regression estimate of β_3 and, to aid the interpretation of interaction effects, we calculate and plot average marginal effects of female parliamentary representation across values of central state reach. To evaluate the relative fit of different model specifications, we compute the Bayesian Information Criterion (BIC) for each regression model. This includes a baseline model with the main effect of female parliamentary representation only, and a series of nested models that incorporate interaction terms between female parliamentary representation and central state reach. Improvements in model fit are assessed by examining Δ BIC relative to the *main-effects-only* specification.

[1]The models were estimated in Stata 18.0 SE using the `reghdfe` command, which implements linear regression models with multi-way fixed effects and clustered standard errors. See `https://github.com/sergiocorreia/reghdfe` for documentation.

Data

Dependent Variables The analysis focuses primarily on two dependent variables. The first is *Infant Mortality* rate, defined as the number of infants dying before reaching one year of age, per 1,000 live births in a given year. This indicator is sourced from the World Bank World Development Indicators Database (World Bank, 2024b). Although these data are available from 1960 to 2022, we restrict our analysis to the post-1990 period, in line with the approach adopted by Macmillan et al. (2018). As robustness checks, we present results with alternative dependent variables, namely *Neonatal Mortality* (number of neonates dying before reaching 28 days of age, per 1,000 live births in a given year) and *Child (Under-5) Mortality* (number of deaths of children under age five years per 1,000 live births), which are also drawn from the World Bank data repository (2024b).

Our second key dependent variable is *Maternal Mortality* measured using estimates from the Global Burden of Disease Study 2021, produced by the Institute for Health Metrics and Evaluation (IHME) (Global Burden of Disease Collaborative Network, 2022). This variable captures deaths attributable to maternal disorders, including complications for pregnancy, childbirth, and the postpartum phase. It encompasses causes such as maternal hemorrhage, sepsis, hypertensive disorders, obstructed labor, abortion-related complications, and late maternal deaths. Estimates are generated using IHME's Cause of Death Ensamble modeling (CODEm) framework, which synthesizes data from vital registration systems, surveys, censuses, while adjusting for under-reporting and misclassifications. Maternal mortality is reported as the number of deaths per 100,000 live births (Naghavi et al., 2024). As robustness checks, we repeat the estimation using the World Bank's maternal mortality ratio (modeled per 100,000 births), which is defined as the number of women who die from pregnancy-related causes while pregnant or within 42 days

of pregnancy termination per 100,000 live births (World Bank, 2024b)[2], and the lifetime risk of maternal death[3] sourced from the Quality of Government dataset (Teorell et al., 2025).

All the above-mentioned dependent variables exhibit a right-skewed distribution, with a small number of countries experiencing extremely high rates. To normalize these distributions and improve model fit, we apply a natural logarithmic transformation to each dependent variable prior to estimation. This is a standard practice when modeling rate-based outcomes, as it mitigates heteroskedasticity and allows for the interpretation of coefficients as semi-elasticities, i.e., percentage changes in mortality associated with changes in the covariates.

Key Independent Variables We measure female parliamentarian representation using the 2025 release of the Varieties of Democracy (V-Dem) dataset (Coppedge et al., 2025), which reports the share of seats held by women in each country-year's unicameral or lower-house national legislature. Following Macmillan et al. (2018), in our main analysis we categorize these data into four groups: less than 10%, between 10-20%, between 20-30%, above 30%. As a robustness check, we replicate our analysis using the continuous version of the female representation variable, as employed by Mechkova and Edgell (2024).

To capture variation in the horizontal reach of the central state, we rely on two indicators. The first is based on the legal origin of a country. The seminal study by La Porta et al. (1999) classified countries based on the legal origin of the Company Law or Commercial Code of each country, distinguishing five categories:

[2]Estimates were obtained using a regression model based on information on the proportion of maternal deaths among non-AIDS deaths in women ages 15-49, fertility, birth attendants, and GDP measured using purchasing power parities (PPPs). Computations were executed by the World Bank.

[3]Lifetime risk of maternal mortality is defined as the probability (as a %) that a 15-year-old girl living in the country will die within their lifetime from maternal cause, keeping constant present levels of fertility and general mortality

English Common Law, French, German, Scandinavian Commercial Codes, and Socialist/Communist laws. The classification has been expanded to cover more than 190 present-day countries (Jugl, 2023). For the purpose of this study, we recoded the above-mentioned five-category classification into a binary indicator that takes value 1 if a country has a English Common Law legal origin, and 0 otherwise. As a robustness check, we exploit the alternative categorization of administrative traditions by Peters (2021). Again, to simplify the interpretation of results, we rely on a binary indicator that takes value 1 if the country belongs to the Anglo-American administrative tradition, and 0 otherwise.

The second indicator is a continuous measure of decentralization, derived from V-Dem's *Division of power index* This index captures the extent to which elected subnational (local and regional) governments exist and operate autonomously within a country.[4] To our knowledge, this is the most comprehensive measure of sub-national government power and offers the widest coverage among available alternatives.

To account for the time required for policy adoption, implementation, and potential effects on mortality outcomes, while also mitigating the potential reverse causality and endogeneity, we lag all independent variables. In line with research cautioning that overly long lags may introduce bias and mislead inference (Vaisey and Miles, 2017), we adopt a one-year lag in the main specification. We further test the robustness of our results using five-year lags (similarly to the approach used in Mechkova and Edgell (2024)).

Control Variables All models include year and country fixed effects to reduce the threat of omitted variable bias. Year fixed effects control for any factor that

[4]Specifically, the index assesses whether sub-national governments are elected and the degree of their autonomy from the central government and unelected local bodies. Countries without an elected sub-national government are assigned the lowest score, while the highest score is assigned to countries where sub-national governments exist and operate independently.

affects all countries simultaneously. Most importantly, they allow us to take into account the progress of medical technology that lowers mortality across the world. Country fixed effects control for country characteristics that are constant within the time period we analyze, such as culture or religious composition. A limitation of including country fixed effects is that they absorb all time-invariant characteristics, making it impossible to estimate the standalone effect of *English Legal Origin*, which does not vary within countries over time. However, we argue this is a minor concern in our case, because our main focus lies in the interaction between *English Legal Origin* and *Female Representation*, which remains identifiable. As a robustness check, we further run our regression models without country fixed effects and with random effects instead of fixed effects.

We control for a set of time-varying country characteristics. As a measure of economic development, we control for (logged) gross domestic product per capita in constant purchasing power parity (PPP) (constant 2021 international US dollars) (World Bank, 2024b). As a measure of democracy, we include the electoral democracy index from V-Dem. This index captures the extent to which the ideal of electoral democracy is achieved in a given country. It is computed as a combination of the indices measuring freedom of association, clean elections, freedom of expression, elected officials, and suffrage (Coppedge et al., 2025). In addition, we control for other kinds of demographic risk factors through the crude birth rate, the dependency ratio, and the percentage of the population living in urban settings. We also include female labor force participation rate as a measure of women's status outside politics (World Bank, 2024b). Moreover, we incorporate in the model a measure of performance of the healthcare system in a country using the health equality index from V-Dem (Coppedge et al., 2025), defined as the extent to which high-quality basic healthcare is accessible to all citizens, enabling them to exercise their basic political rights. Finally, we control for an index of

exposure to war defined as the total extent of interstate and civil conflict for a given country in a given year (Marshall, 2019). As with our key independent variables, the controls are lagged by one year in the main analysis and five years as robustness check. Summary statistics for key variables used in the main models are reported in Table S1.

Results

We begin by examining the relationship between female political representation and the main reproductive health outcomes of interest, and how this relationship varies across institutional contexts characterized by different levels of central state reach. Table 3.1 presents the results of our TWFE models with a one-year lag. Columns (1)-(4) report estimates for the log of infant mortality rate, while columns (5)-(8) report results for the log of maternal mortality rate. More in detail, the first specification (Models 1 and 5) is the baseline and regresses the health outcome only on *Female Representation* and the control variables. The second specification (Models 2 and 6) includes interaction terms between *Female Representation* and *English Legal Origin*. The variable *English Legal Origin* does not appear as a constitutive term because of country fixed effects. In the third specification (Models 3 and 7) we include *Decentralization* and its interactions with *Female Representation*. Finally, we include both sets of interactions in the fourth specification (Models 4 and 8). Across both outcomes, we observe an overall consistent pattern: Higher female representation in national parliaments is associated with significantly lower mortality rates. Compared to the reference category (i.e., countries with less than 10% women MPs), countries with 10-19%, 20-29%, and especially 30% or more women MPs experience substantive and statistically significant reductions in infant and maternal mortality. The magnitude of the

association strengthens with increasing levels of representation. For example, in the fully specified models, countries with over 30% female MPs show an estimated 24% lower infant mortality rate (column 4), while maternal mortality declines by approximately 17% (column 8), holding all else constant. Crucially, the results suggest that central state outreach moderates this relationship. The positive and significant coefficients on the interaction between*English Legal Origin* and *Female Representation* (Models 2 and 6) show that the beneficial association of female MPs with lower infant mortality is significantly weakened in common law countries. A similar pattern emerges for *Decentralization* (Models 3 and 7). While *Decentralization* alone is associated with lower mortality, its interaction with *Female Representation* is positive and significant in some specifications, particularly for the highest levels of representation for infant mortality. This result points to a weaker mortality-reducing association of female MPs in more decentralized countries. It is worth underlying that that our fourth specification addresses the concern that *English Legal Origin* and *Decentralization* are highly correlated, which raises the possibility that the second and third specifications capture the same underlying relationship. However, Models 4 and 8 show that this is not the case. Both sets of interaction terms maintain their statistical significance and effect size even when they are included together. Overall, these findings are consistent with our hypothesis that contexts characterized by constrained central state authority or less vertically integrated state configurations may limit the effectiveness of female representation in improving reproductive health outcomes.

Table 3.1: Female Representation, the Central State Reach, and Infant and Maternal Mortality. Baseline specification, 1-year lag.

	DV: Infant Mortality				DV: Maternal Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.043***	-0.061***	-0.029	-0.048*	-0.059**	-0.082***	-0.056	-0.083*
	(0.016)	(0.018)	(0.024)	(0.026)	(0.026)	(0.030)	(0.040)	(0.047)
Female MPs 20 to 29%	-0.050**	-0.094****	-0.086*	-0.150****	-0.074**	-0.122***	-0.138**	-0.214***
	(0.024)	(0.025)	(0.044)	(0.040)	(0.037)	(0.042)	(0.060)	(0.065)
Female MPs 30+ %	-0.072**	-0.122****	-0.186****	-0.241****	-0.013	-0.105**	-0.068	-0.167**
	(0.032)	(0.032)	(0.046)	(0.048)	(0.052)	(0.052)	(0.073)	(0.075)
English Legal Origin × Female MPs 10 to 19%		0.070*		0.057		0.092		0.087
		(0.040)		(0.038)		(0.057)		(0.059)
English Legal Origin × Female MPs 20 to 29%		0.173***		0.179***		0.202**		0.218**
		(0.056)		(0.056)		(0.089)		(0.086)
English Legal Origin × Female MPs 30+ %		0.208***		0.205***		0.382****		0.388****
		(0.069)		(0.063)		(0.106)		(0.106)
Decentralization			-0.192**	-0.194***			-0.157	-0.158
			(0.075)	(0.071)			(0.106)	(0.102)
Decentralization × Female MPs 10 to 19%			-0.023	-0.011			0.003	0.018
			(0.044)	(0.043)			(0.077)	(0.080)
Decentralization × Female MPs 20 to 29%			0.084	0.124*			0.132	0.180*
			(0.071)	(0.065)			(0.105)	(0.106)
Decentralization × Female MPs 30+ %			0.210***	0.228***			0.113	0.130
			(0.080)	(0.073)			(0.117)	(0.113)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,626	4,626	4,626	4,626
R^2	0.985	0.986	0.986	0.986	0.990	0.990	0.990	0.990

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

As for the robustness checks, the replication of the main models with a five-year lag structure (Table S2) confirms the base case findings; plus, the interaction between decentralization and female representation becomes more pronounced for infant mortality. The alternative operationalization of horizontal state reach, i.e., the one based on administrative tradition (Tables S3, S4), overall exhibits the same trends, although weakened in statistical significance, especially for maternal mortality. Results are confirmed and statistical significance is improved when using the continuous version of the share of women parliamentarians (Tables S8, S9, S10, S11). When removing country fixed effects (Tables S16, S17), the core association between female mortality and lower mortality remains largely consistent, and so do the results on the moderating effect of horizontal central state reach. How-

ever, interaction terms involving decentralization lose statistical significance and, in some cases, change sign, especially for maternal mortality. This likely reflects the influence of unobserved, time-invariant country characteristics (e.g., institutional capacity, historical legacies, or baseline healthcare infrastructure) that are otherwise absorbed by country fixed-effects. On the contrary, random effects models confirm the baseline, TWFE results (Tables S20, S21). Finally, also alternative measures of maternal mortality overall confirm the base case findings, although with reduced statistical significance possibly explained by the smaller number of country-year observations available (Table S24).

To visualize and further unpack these interaction effects, Figure 3.1 plots the average marginal effects of increasing levels of female parliamentary representation on infant and maternal mortality, conditional on legal origin and decentralization. The top panels show that in civil law countries increases in female representation are consistently associated with reductions in both infant and maternal mortality, especially for the former. Conversely, in common law countries, the mortality-reducing associations are attenuated or statistically indistinguishable from zero, particularly at high levels of female representation, especially for maternal mortality. As for decentralization, looking at infant mortality, a clear and relatively steady negative association between greater female representation and mortality across low and medium decentralization contexts. However, under high decentralization, the curve flattens substantially. This confirms diminishing returns to representation under fragmented authority structures. The patterns are different for maternal mortality. In medium-decentralized systems, increases in female representation are associated with the most consistent and largest estimated reductions. By contrast, in low and high decentralization contexts the effect becomes less consistent and non-monotonic. Specifically, representation beyond 30% appears less effective in reducing maternal mortality compared to intermediate levels.

Figure 3.1: Marginal Effects of Female Parliamentary Representation on Infant and Maternal Mortality, by Legal Origin (top panels) and Decentralization Terciles (bottom panels).

Infant mortality

Maternal mortality

Infant mortality

Maternal mortality

Turning to additional infant health outcomes, Table 3.2 extends the analysis to neonatal and under-5 mortality, as they are referred to as two closely related indicators that serve as robustness checks for our infant-mortality results while capturing earlier and broader age windows. Overall, results mirror the ones discussed earlier for the main dependent variables. First, we observe a baseline negative association between increased female representation and mortality. Second, there exists a significant, consistent moderating effect of horizontal central state reach: the mortality-decreasing impact of female representation is weakened in common law countries compared to civil law ones. Finally, the estimates point to a moderating role of decentralization, whereby the beneficial effects of female political representation are attenuated in more decentralized state configurations, especially when countries reach the highest thresholds of female MPs. It is worth underlining, however, that the latter interaction reaches statistical significance only for child mortality.

These findings are overall confirmed also under alternative lag structures (Table S5), alternative operationalizations of horizontal central state reach (Tables S6, S7), alternative ways to incorporate the share of female parliamentarians in the models (Tables S12, S13, S14, S7), and when fixed effects are replaced with random effects (Tables S22, S23). Similarly to the case of the main dependent variables, when we remove country fixed effects the statistical significance of the estimates decreases, although signs remain consistent (Tables S18, S19).

Table 3.2: Female Representation, the Central State Reach, and Neonatal and Child (under-5) Mortality. Baseline model, 1-year lag.

	DV: Neonatal Mortality				DV: Under-5 Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.046***	-0.061***	-0.026	-0.042	-0.036**	-0.057***	-0.022	-0.045
	(0.017)	(0.020)	(0.024)	(0.027)	(0.017)	(0.019)	(0.026)	(0.027)
Female MPs 20 to 29%	-0.044	-0.084***	-0.081*	-0.142***	-0.046*	-0.087****	-0.091**	-0.152****
	(0.028)	(0.031)	(0.048)	(0.049)	(0.024)	(0.025)	(0.045)	(0.041)
Female MPs 30+ %	-0.042	-0.092**	-0.104*	-0.161**	-0.075**	-0.119****	-0.211****	-0.260****
	(0.038)	(0.041)	(0.062)	(0.064)	(0.034)	(0.034)	(0.048)	(0.051)
English Legal Origin × Female MPs 10 to 19%		0.060*		0.051		0.081*		0.066
		(0.035)		(0.034)		(0.045)		(0.044)
English Legal Origin × Female MPs 20 to 29%		0.163***		0.172***		0.162***		0.170***
		(0.054)		(0.053)		(0.059)		(0.059)
English Legal Origin × Female MPs 30+ %		0.211****		0.211****		0.182**		0.178**
		(0.061)		(0.059)		(0.082)		(0.074)
Decentralization			-0.114	-0.116			-0.236***	-0.237***
			(0.080)	(0.077)			(0.075)	(0.071)
Decentralization × Female MPs 10 to 19%			-0.039	-0.028			-0.020	-0.007
			(0.043)	(0.043)			(0.046)	(0.046)
Decentralization × Female MPs 20 to 29%			0.076	0.114			0.106	0.143**
			(0.076)	(0.073)			(0.074)	(0.068)
Decentralization × Female MPs 30+ %			0.117	0.133			0.253***	0.269****
			(0.094)	(0.089)			(0.083)	(0.078)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,656	4,656	4,656	4,656
R^2	0.978	0.979	0.979	0.979	0.986	0.986	0.986	0.986

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

As for the visualization of interactions through the average marginal effects, Figure 3.2 confirms that in civil law countries increases in female political representation are associated with a consistent, significant decrease in mortality for both outcome measures. On the contrary, in common law countries slopes are flatter and confidence intervals are close or overlap with zero, indicating weaker or statistically insignificant effects. As for decentralization, the negative association between female representation and mortality is strongest in medium-decentralized settings. Under low and, more clearly, high decentralization, the effects are weaker and less consistent, particularly for neonatal mortality, where trends are flatter and confidence intervals wider.

Finally, to assess model fit and, particularly, the contribution of the interaction

Figure 3.2: Marginal Effects of Female Parliamentary Representation on Neonatal and Child Mortality, by Legal Origin (top panels) and Decentralization Terciles (bottom panels).

Neonatal mortality

Child mortality

Neonatal mortality

Child mortality

terms, we compare BIC values across specifications with and without interactions (Table 3.3). Focusing first on infant mortality, the inclusion of either interaction (female representation by legal origin or by decentralization) substantially improves model fit, with Δ BIC values exceeding -130 in both cases. Including both interactions in the same model specification further improves fit, with a Δ BIC of -284.4, offering support for the more complex model. Similar improvements are observed when using alternative measures of horizontal central state reach (Anglo-American administrative tradition), where Δ BIC reach -164.5 and -273.7 respectively. For neonatal and child mortality, the inclusion of both interaction also yields consistently better-fitting models. Δ BIC values range from -109.4 to -304.3, far surpassing Raftery's (1995) -10 for strong evidence. Finally, for maternal mortality, the gains in model fit are more modest but still consistent: models including legal origin interactions achieve Δ BICs of -108.4 and -117.9, while those using administrative tradition show smaller improvements.

Table 3.3: Bayesian information criterion (BIC) goodness-of-fit statistics: Interaction models.

Infant Mortality				Maternal Mortality			
	Model	**BIC**	Δ BIC		**Model**	**BIC**	Δ BIC
A. Legal Origin Operationalization				**A. Legal Origin Operationalization**			
a.	Main effects only	−6,037.12	–	a.	Main effects only	−1,111.23	–
b.	English Legal Origin × Share Female MPs	−6,173.46	−136.34	b.	English Legal Origin × Share Female MPs	−1,219.63	−108.40
c.	Decentralization × Share Female MPs	−6,173.50	−136.38	c.	Decentralization × Share Female MPs	−1,112.44	−1.21
d.	Both interactions	−6,321.49	−284.37	d.	Both interactions	−1,229.09	−117.86
B. Administrative Tradition Operationalization				**B. Administrative Tradition Operationalization**			
a.	Main effects only	−6,037.12	–	a.	Main effects only	−1,111.23	–
b.	Anglo-American Tradition × Share Female MPs	−6,201.57	−164.45	b.	Anglo-American Tradition × Share Female MPs	−1,120.58	−9.35
c.	Decentralization × Share Female MPs	−6,173.50	−136.38	c.	Decentralization × Share Female MPs	−1,112.44	−1.21
d.	Both interactions	−6,310.86	−273.74	d.	Both interactions	−1,117.72	−6.49

Neonatal Mortality				Child Mortality			
	Model	**BIC**	Δ BIC		**Model**	**BIC**	Δ BIC
A. Legal Origin Operationalization				**A. Legal Origin Operationalization**			
a.	Main effects only	−5,565.57	–	a.	Main effects only	−5,291.52	–
b.	English Legal Origin × Share Female MPs	−5,679.90	−114.33	b.	English Legal Origin × Share Female MPs	−5,381.64	−90.12
c.	Decentralization × Share Female MPs	−5,607.69	−42.13	c.	Decentralization × Share Female MPs	−5,465.38	−173.85
d.	Both interactions	−5,733.57	−168.01	d.	Both interactions	−5,562.44	−270.92
B. Administrative Tradition Operationalization				**B. Administrative Tradition Operationalization**			
a.	Main effects only	−5,565.57	–	a.	Main effects only	−5,291.52	–
b.	Anglo-American Tradition × Share Female MPs	−5,647.32	−81.76	b.	Anglo-American Tradition × Share Female MPs	−5,452.19	−160.66
c.	Decentralization × Share Female MPs	−5,607.69	−42.13	c.	Decentralization × Share Female MPs	−5,465.38	−173.85
d.	Both interactions	−5,674.93	−109.36	d.	Both interactions	−5,595.86	−304.34

Discussion and Conclusion

Increasing the presence of women in policymaking venues is broadly recognized as a potential lever to ensure that women's policy preferences are adequately addressed and that improvements in equality and well-being are achieved. Although many scholars have devoted efforts to assessing whether increased female political representation fosters the achievement of policy outcomes across various domains, the debate remains unsettled. Within this literature, an emerging research stream advocates investigating the scope conditions under which descriptive representation to translates into substantial representation and tangible improvements in key policy outcomes. Particularly, maternal and infant mortality have been used as key indicators in this literature for a number of reasons: their reduction has historically been a crucial objective for global health and development agendas; they are widely employed as indicators of the overall quality of healthcare systems; and, more broadly, healthcare policy tends to be a domain prioritized by female politicians compared to their male counterpart. To date, scholars have examined the extent of democracy and development as moderators of the association between increases in female representation in parliaments and reproductive health outcomes.

In this article, we introduce central state reach as a key moderator of the impact of increased female descriptive representation on reproductive health outcomes. Our operationalization of this construct is twofold, distinguishing between horizontal reach, defined as the parliament's power over other national-level actors (e.g., the government, the bureaucracy, private actors), and vertical reach, referring to any form of decentralization, federalism or devolution of powers to sub-national bodies. We test two hypotheses. First, we expect that the impact of female political representation on reproductive health outcomes is weaker in common law countries, characterized by a contractarian conception of the state

and a more limited role and reach of the state vis-à-vis society, compared to civil law (and socialist legal origin) countries, where state and society are expected to be more organically linked, granting the state a more direct reach over society (La Porta et al., 1999; Peters, 2021). Second, we hypothesize that the impact of female political representation is attenuated as the extent of decentralization increases, since greater decentralization limits the central government's capacity to design and deliver health policies and services, thereby constraining the ability of female legislators at the national level to influence health outcomes (e.g., Cassidy and Velayudhan (2024)).

Our empirical approach is based on TWFE models estimated on a panel dataset consisting of 164 countries followed between 1991 and 2020. As a baseline finding, our estimates consistently show a significant, negative association between increased female parliamentary representation and lower mortality across all indicators examined (infant, maternal, neonatal and child mortality), particularly when the 30% threshold is met, consistently with findings by MacMillan and coauthors 2018. Turning to our main hypotheses, our results confirm the first: The beneficial effect of female parliamentary representation on mortality is significantly weaker in common law countries compared to civil law ones. This finding holds across mortality indicators and variations in model specification. As for our second hypothesis, our results point to a more nuanced story than a simple "more decentralization, weaker impact". The hypothesis is confirmed only for infant and child mortality, and only at higher female parliamentary participation thresholds.

The stronger patterns for infant and child mortality may be due to the fact that these outcomes reflect longer-term conditions and are more likely influenced by broad, national-level health policies, and therefore better fit the logic of our hypothesis. On the contrary, maternal and neonatal mortality are more tightly linked to the short time frame around childbirth and depend more heavily on the quality

of care at the facility level and access to specialized services, which may require levers beyond the direct reach of national legislators. Moreover, the additional analysis on marginal effects seems to indicate that female representation is associated with the steepest and more consistent mortality reductions (across all indicators) in countries with *medium* levels of decentralization. A possible interpretation is that an intermediate degree of fiscal-administrative autonomy offers the "sweet spot" where national female legislators can champion policy priorities and rely on adequate, coordinated sub-national systems to implement them. When power is overly centralized, local service delivery may remain unresponsive to legislative pressure; when it is too fragmented, policies may not be implemented in a coherent way because multiple veto points dilute the influence of national lawmakers. Overall, the evidence suggests a possibly non-monotonic moderation rather than the straightforward dampening effect we hypothesized. Future research should build theory around the institutional "fit" between levels of government and types of health intervention, probe whether similar patterns arise with finer decentralization measures (e.g., health sector fiscal autonomy), and examine causal pathways, such as funding flows, accountability chains, and political bargaining.

Our work does not come without limitations. First, we acknowledge that the TWFE approach may still not mitigate all confounders or potential for endogeneity, especially because countries experience changes in female representation at different times ("staggered timing"). We therefore caution our interpretation of results as associations rather than strictly causal effects. Second, the increase in female parliamentary representation often occurs alongside broader political, cultural, and economic transformations. We attempted at controlling for a set of contextual variables (economic development, demographic and political context, healthcare system quality, and female empowerment outside the political arena). We believe this constitutes our best attempt at striking a balance between parsi-

mony and comprehensiveness. Nevertheless, we acknowledge the possible presence of unobservable confounders that may bias our estimates. However, we underscore that, as we control for birth rate and female labor force participation, which might be influenced by female representation and which can indirectly affect female and infant health outcomes, the total effect of women's representation on health could be greater than the one we find. Third, we recognize that by categorizing legislators solely in terms of sex, our study overlooks intersectional dynamics. Intersectionality theory emerges from critical reflections on politics, activism, and scholarship, and challenges the idea of "women" as a single, homogeneous group by asking whether relatively privileged women can fully grasp and represent the concerns of women who face additional forms of disadvantage (e.g., McCall (2005)). We highlight the lack of comprehensive data that could allow to address this issue and encourage future research to bring an intersectional lens to this type of comparative, cross-national panel analyses.

Overall, our work possibly speaks to multiple literatures, from the broader debate on descriptive and substantive representation (e.g., Mansbridge (1999)) to the growing interest around the scope conditions that link the two (Macmillan et al., 2018; Mechkova and Edgell, 2024), together with the collateral debate on the influence of legal origin and administrative tradition (e.g., La Porta et al. (1999); Scanlon (2016); Botero et al. (2004); Djankov et al. (2003b)) and the federalism and decentralization scholarship Wallis and Oates (1988); Cassidy and Velayudhan (2024); Arends (2020); Von Braun and Grote (2002). Our broadest contribution consists in confirming and reinforcing the notion that, while women in legislatures can advance policies that reflect women's specific interests, whether this potential is realized does depend on contextual, institutional conditions. A possible avenue for future research would be to test whether our findings travel to other aspects of reproductive health and, more broadly, to other policy areas.

References

Helge Arends. The dangers of fiscal decentralization and public service delivery: a review of arguments. *Politische Vierteljahresschrift*, 61(3):599–622, 2020.

Sr Margaret Aringo and Odhiambo Kevin Odongo. Women in Kenyan political culture in light of the Ubuntu spirit. 2025.

Kelly F Austin and Mark D Noble. Measuring gender disparity in the HIV pandemic: A cross-national investigation of female empowerment, inequality, and disease in less-developed nations. *Sociological Inquiry*, 84(1):102–130, 2014.

Oluwafunmilola Deborah Awe, Hillarry Kipruto, Olawale Awe, and Queensley C Chukwudum. Trend analysis of maternal mortality in Kenya: Post-devolution empirical results. *The East African Health Research Journal*, 7(2):166, 2023.

Karen Beckwith. Plotting the path from one to the other: Women's interests and political representation. *Representation: The case of women*, pages 19–40, 2014.

Avi Ben-Bassat and Momi Dahan. Social rights in the Constitution and in practice. *Journal of Comparative Economics*, 36(1):103–119, 2008.

Sonia Bhalotra and Irma Clots-Figueras. Health and the political agency of women. *American Economic Journal: Economic Policy*, 6(2):164–197, 2014.

Sonia Bhalotra, Damian Clarke, Joseph Flavian Gomes, and Atheendar Venkataramani. Maternal mortality and women's political power. *Journal of the European Economic Association*, 21(5):2172–2208, 2023.

Ulrike Boehmer and John B Williamson. The impact of women's status on infant mortality rate: A cross-national analysis. *Social Indicators Research*, 37:333–360, 1996.

Juan C Botero, Simeon Djankov, Rafael La Porta, Florencio Lopez-de Silanes, and Andrei Shleifer. The regulation of labor. *The Quarterly Journal of Economics*, 119(4):1339–1382, 2004.

Yolande Bouka, Eric Kramon, Ngozi Nwogu, and Hannah Wright. Strengthening the leadership and influence of women in politics in kenya. Synthesis report for the east africa research fund (earf), Rift Valley Institute, Nairobi, Kenya, 2017. URL https://riftvalley.net/wp-content/uploads/2018/06/Strengthening-the-leadership-and-influence-of-women-in-politics-in-Kenya-by-Yolande-Bouka-et-al.-RVI-Synthesis-report-for-EARF-2017.pdf. Accessed: June 13, 2025.

Rebekah Burroway. A cross-national analysis of sex-specific HIV prevalence rates and women's access to property, land, and loans in developing countries. *International Journal of Sociology*, 42(2):47–67, 2012.

Rebekah Burroway. Democracy and child health in developing countries. *International Journal of Comparative Sociology*, 57(5):338–64, 2016.

Traviss Cassidy and Tejaswi Velayudhan. Government fragmentation and economic growth. *Review of Economics and Statistics*, pages 1–46, 2024.

Karen Celis, Sarah Childs, Johanna Kantola, and Mona Lena Krook. Rethinking women's substantive representation. *Representation*, 44(2):99–110, 2008.

Sarah Childs and Mona Lena Krook. Analysing women's substantive representation: From critical mass to critical actors. *Government and opposition*, 44(2): 125–145, 2009.

Amanda Clayton and Pär Zetterberg. Quota shocks: Electoral gender quotas and government spending priorities worldwide. *The Journal of Politics*, 80(3): 916–932, 2018.

Michael Coppedge, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg, Jan Teorell, David Altman, Fabio Angiolillo, Michael Bernhard, Agnes Cornell, M. Steven Fish, Linnea Fox, Lisa Gastaldi, Haakon Gjerløw, Adam Glynn, Ana Good God, Sandra Grahn, Allen Hicken, Katrin Kinzelbach, Joshua Krusell, Kyle L. Marquardt, Kelly McMann, Valeriya Mechkova, Juraj Medzihorsky, Natalia Natsika, Anja Neundorf, Pamela Paxton, Daniel Pemstein, Johannes von Römer, Brigitte Seim, Rachel Sigman, Svend-Erik Skaaning, Jeffrey Staton, Aksel Sundström, Marcus Tannenberg, Eitan Tzelgov, Yi-ting Wang, Felix Wiebrecht, Tore Wig, Steven Wilson, and Daniel Ziblatt. V-dem [country-year/country-date] dataset v15. https://doi.org/10.23696/vdemds25, 2025. Varieties of Democracy (V-Dem) Project.

Santiago Lujan Cunial. Do more female politicians translate into better health outcomes? Gender representation and infant mortality in Argentine provinces. *World Medical & Health Policy*, 13(2):349–372, 2021.

Drude Dahlerup. The story of the theory of critical mass. *Politics & Gender*, 2 (4):511–522, 2006.

Larry Jay Diamond. Is the third wave over? *Journal of democracy*, 7(3):20–37, 1996.

Simeon Djankov, Edward Glaeser, Rafael La Porta, Florencio Lopez-de Silanes, and Andrei Shleifer. The new comparative economics. *Journal of comparative economics*, 31(4):595–619, 2003a.

Simeon Djankov, Rafael La Porta, Florencio Lopez-de Silanes, and Andrei Shleifer. Courts. *The Quarterly Journal of Economics*, 118(2):453–517, 2003b.

Laurenz Ennser-Jedenastik. How women's political representation affects spending on family benefits. *Journal of Social Policy*, 46(3):563–581, 2017.

Jean-Paul Faguet. Understanding decentralization: theory, evidence and method, with a focus on least-developed countries. 2021.

Jocelyn E Finlay, Emre Özaltin, and David Canning. The association of maternal age with infant mortality, child anthropometric failure, diarrhoea and anaemia for first births: evidence from 55 low-and middle-income countries. *BMJ open*, 1(2):e000226, 2011.

Susan Franceschet, Mona Lena Krook, and Jennifer M Piscopo. *The impact of gender quotas*. OUP USA, 2012.

Alison M Fraser, John E Brockert, and Ryk H Ward. Association of young maternal age with adverse reproductive outcomes. *New England journal of medicine*, 332 (17):1113–1118, 1995.

Kendall D Funk and Andrew Q Philips. Representative budgeting: Women mayors and the composition of spending in local governments. *Political Research Quarterly*, 72(1):19–33, 2019.

Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2021 (GBD 2021) Results. https://vizhub.healthdata.org/gbd-results/, 2022. Available from: https://vizhub.healthdata.org/gbd-results/.

Robert N Grosse, Christopher Auffrey, et al. Literacy and health status in developing countries. *Annual review of public health*, 10(1):281–297, 1989.

Philipp Hessel, María José González Jaramillo, Davide Rasella, Ana Clara Duran, and Olga L Sarmiento. Increases in women's political representation associated with reductions in child mortality in Brazil: Study assesses the effects of female political representation on mortality among children younger than age five in Brazil. *Health affairs*, 39(7):1166–1174, 2020.

Patricia Homan. Political gender inequality and infant mortality in the united states, 1990–2012. *Social Science & Medicine*, 182:127–135, 2017.

Inter-Parliamentary Union. Data on women. https://data.ipu.org/, 2025. Accessed: April 28, 2025.

Inter-Parliamentary Union (IPU). Angola: National assembly, 2024. URL https://data.ipu.org/parliament/AO/AO-LC01/. Accessed: June 13, 2025.

Dean T Jamison et al. Disease and mortality in sub-Saharan Africa. 2006.

Marlene Jugl. Administrative characteristics and timing of governments' crisis responses: A global study of early reactions to COVID-19. *Public Administration*, 101(4):1408–1426, 2023.

Ichiro Kawachi, Bruce P Kennedy, Vanita Gupta, and Deborah Prothrow-Stith. Women's status and the health of women and men: a view from the states. *Social science & medicine*, 48(1):21–32, 1999.

Susan Kilonzo, Eunice Kamaara, and Kitche Magak. Improving access to maternal health care through devolution in Western Kenya. 2017.

Rafael La Porta, Florencio Lopez-de Silanes, Andrei Shleifer, and Robert W Vishny. Legal determinants of external finance. *The journal of finance*, 52 (3):1131–1150, 1997.

Rafael La Porta, Florencio Lopez-de Silanes, Andrei Shleifer, and Robert Vishny. The quality of government. *Journal of Law, Economics, and organization*, 15 (1):222–279, 1999.

Rafael La Porta, Florencio Lopez-de Silanes, and Andrei Shleifer. Government ownership of banks. *The journal of finance*, 57(1):265–301, 2002.

Rafael La Porta, Florencio Lopez-de Silanes, and Andrei Shleifer. The economic consequences of legal origins. *Journal of economic literature*, 46(2):285–332, 2008.

Hugh F Lena and Bruce London. The political and economic determinants of health outcomes: a cross-national analysis. *International journal of health services*, 23(3):585–602, 1993.

Ross Macmillan, Naila Shofia, and Wendy Sigle. Gender and the politics of death: female representation, political and developmental context, and population health in a cross-national panel. *Demography*, 55(5):1905–1934, 2018.

Paul G Mahoney. The common law and economic growth: Hayek might be right. *The Journal of Legal Studies*, 30(2):503–525, 2001.

Jane Mansbridge. Should blacks represent blacks and women represent women? A contingent" yes". *The Journal of politics*, 61(3):628–657, 1999.

Monty G. Marshall. Major episodes of political violence 1946–2019, 2019. Retrieved from https://www.systemicpeace.org/warlist/warlist.htm.

Brian Barasa Masaba, Rose Mmusi-Phetoe, Bernard Rono, Damaris Moraa, John K Moturi, Jane W Kabo, Samuel Oyugi, and Jonathan Taiswa. The healthcare system and client failures contributing to maternal mortality in rural Kenya. *BMC Pregnancy and Childbirth*, 22(1):903, 2022.

Leslie McCall. The complexity of intersectionality. *Signs: Journal of women in culture and society*, 30(3):1771–1800, 2005.

Rosalind McCollum, Ralalicia Limato, Lilian Otiso, Sally Theobald, and Miriam Taegtmeyer. Health system governance following devolution: comparing expe-

riences of decentralisation in Kenya and Indonesia. *BMJ global health*, 3(5): e000939, 2018.

Valeriya Mechkova and Amanda B Edgell. Substantive representation, women's health, and regime type. *Comparative Political Studies*, 57(14):2449–2481, 2024.

Casey B Mulligan and Andrei Shleifer. Conscription as regulation. *American Law and Economics Review*, 7(1):85–111, 2005a.

Casey B Mulligan and Andrei Shleifer. The extent of the market and the supply of regulation. *The Quarterly Journal of Economics*, 120(4):1445–1473, 2005b.

Mohsen Naghavi, Kanyin Liane Ong, Amirali Aali, Hazim S Ababneh, Yohannes Habtegiorgis Abate, Cristiana Abbafati, Rouzbeh Abbasgholizadeh, Mohammadreza Abbasian, Mohsen Abbasi-Kangevari, Hedayat Abbastabar, et al. Global burden of 288 causes of death and life expectancy decomposition in 204 countries and territories and 811 subnational locations, 1990–2021: a systematic analysis for the global burden of disease study 2021. *The Lancet*, 403(10440):2100–2132, 2024.

Ryota Nakatani, Qianqian Zhang, and Isaura Garcia Valdes. Health expenditure decentralization and health outcomes: The importance of governance. *Publius: The Journal of Federalism*, 54(1):59–87, 2024.

Vicente Navarro, Carles Muntaner, Carme Borrell, Joan Benach, Águeda Quiroga, Maica Rodríguez-Sanz, Núria Vergés, and M Isabel Pasarín. Politics and health outcomes. *The Lancet*, 368(9540):1033–1037, 2006.

Nathan Nunn. Relationship-specificity, incomplete contracts, and the pattern of trade. *The quarterly journal of economics*, 122(2):569–600, 2007.

Phebe Asantewaa Owusu, Samuel Asumadu Sarkodie, and Pål Andreas Pedersen. Relationship between mortality and health care expenditure: Sustainable assessment of health care system. *Plos one*, 16(2):e0247413, 2021.

Boniface Oyugi, Zilper Audi-Poquillon, Sally Kendall, Stephen Peckham, and Edwine Barasa. Policy formulation and actor roles in the expanded Kenyan free maternity policy (Linda Mama): A policy analysis. *PLOS global public health*, 4(11):e0002796, 2024.

Martin Painter and B. Guy Peters, editors. *Tradition and Public Administration*. Palgrave Macmillan, Basingstoke, 2010.

B. Guy Peters. *Administrative traditions: Understanding the roots of contemporary administrative behavior*. Oxford University Press, 2021.

Anne Phillips. *The politics of presence*. Clarendon Press, 1995.

Hanna Pitkin. The concept of representation, 1967.

Sarah Poggione. Exploring gender differences in state legislators' policy preferences. *Political Research Quarterly*, 57(2):305–314, 2004.

Thidar Pyone, Helen Smith, and Nynke van den Broek. Implementation of the free maternity services policy and its implications for health system governance in Kenya. *BMJ global health*, 2(4):e000249, 2017.

Amm Quamruzzaman and Matthew Lange. Female political representation and child health: Evidence from a multilevel analysis. *Social science & medicine*, 171:48–57, 2016.

Adrian E Raftery. Bayesian model selection in social research. *Sociological methodology*, pages 111–163, 1995.

Niharika Rustagi and Sonia Akter. The impact of women's political representation on child health outcomes during 1990–2020: Evidence from a global dataset. *Social Science & Medicine*, 312:115366, 2022.

Sujata Sapkota, Amshu Dhakal, Simon Rushton, Edwin van Teijlingen, Sujan B Marahatta, Julie Balen, and Andrew CK Lee. The impact of decentralisation on health systems: a systematic review of reviews. *BMJ Global Health*, 8(12): e013317, 2023.

Childs Sarah and Lena Krook Mona. Critical mass theory and women's political representation. *Political studies*, 56(3):725–736, 2008.

Cole Scanlon. Health consequences of legal origin. *Unpublished manuscript. available at https://stanfordcomparati-veadvantage. files. wordpress. com/2016/12/scanlon-health-and-legal-origin. pdf (accessed April 2020)*, 2016.

Leslie A Schwindt-Bayer. Still supermadres? Gender and the policy priorities of Latin American legislators. *American Journal of Political Science*, 50(3): 570–585, 2006.

John M Shandra, Jenna E Nobles, Bruce London, and John B Williamson. Multinational corporations, democracy and child mortality: a quantitative, cross-national analysis of developing countries. *Social Indicators Research*, 73:267–293, 2005.

Ce Shen and John B Williamson. Maternal mortality, women's status, and economic dependency in less developed countries: a cross-national analysis. *Social science & medicine*, 49(2):197–214, 1999.

Mathew M. Shilibua. An investigation into the effects of devolution on health care delivery in Kenya: A case study of Kenya's health sector devolved functions.

Master's thesis, Kenyatta University, Nairobi, Kenya, 2012. URL https://ir-library.ku.ac.ke/handle/123456789/4380. Accessed: June 11, 2025.

Liam Swiss, Kathleen M Fallon, and Giovani Burgos. Does critical mass matter? women's political representation and child health in developing countries. *Social forces*, 91(2):531–558, 2012.

Jan Teorell, Aksel Sundström, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon, Cem Mert Dalli, Rafael Lopez Valverde, Victor Saidi Phiri, and Lauren Gerber. The quality of government standard dataset, version jan25. https://www.gu.se/en/quality-government, 2025.

UNICEF Angola. Public expenditure review: Health and nutrition sectors. Technical report, UNICEF, Luanda, Angola, 2023. URL https://www.unicef.org/esa/media/13401/file/UNICEF-Angola-PER-Health-Nutrition-Sectors-2023.pdf. Accessed: June 13, 2025.

United Nations Population Fund (UNFPA). Maternal Health — UNFPA Angola, 2024. URL https://angola.unfpa.org/en/topics/maternal-health-24. Accessed: June 13, 2025.

Stephen Vaisey and Andrew Miles. What you can—and can't—do with three-wave panel data. *Sociological Methods & Research*, 46(1):44–67, 2017.

Joachim Von Braun and Ulrike Grote. Does decentralization serve the poor? In *Managing fiscal decentralization*, pages 84–112. Routledge, 2002.

John Joseph Wallis and Wallace E Oates. Decentralization in the public sector: An empirical study of state and local government. *Fiscal federalism: Quantitative studies*, 5, 1988.

Lena Wängnerud. Women in parliaments: Descriptive and substantive representation. *Annual Review of Political Science*, 12(1):51–69, 2009.

Helen Ware. Effects of maternal education, women's roles, and child care on child mortality. *Population and development review*, 10:191–214, 1984.

World Bank. Gender data portal: Kenya, 2024a. URL https://genderdata.worldbank.org/en/economies/kenya. Accessed: June 11, 2025.

World Bank. World development indicators database. https://databank.worldbank.org/source/world-development-indicators, 2024b. Accessed: November 20, 2024.

World Health Organization, UNICEF, UNFPA, World Bank Group, and United Nations, Department of Economic and Social Affairs, Population Division. Trends in maternal mortality estimates 2000 to 2023: Estimates by who, unicef, unfpa, world bank group and undesa/population division. Technical report, World Health Organization, Geneva, 2025. URL https://cdn.who.int/media/docs/default-source/reproductive-health/maternal-health/trends-in-maternal-mortality-2000-to-2023.pdf. Licence: CC BY-NC-SA 3.0 IGO. Accessed: June 13, 2025.

Sarah Zureick-Brown, Holly Newby, Doris Chou, Nobuko Mizoguchi, Lale Say, Emi Suzuki, and John Wilmoth. Understanding global trends in maternal mortality. *International perspectives on sexual and reproductive health*, 39(1):10–1363, 2013.

Supplementary Materials

Table S1: Summary Statistics for Key Variables

Variable	**Obs**	**Mean**	**SD**	**Min**	**Max**
Infant mortality (log)	5,397	3.08	1.04	0.92	5.37
Maternal mortality (log, IHME)	5,201	0.21	2.11	−4.39	3.69
Neonatal mortality (log)	5,397	2.60	0.90	0.59	4.35
Under-5 mortality (log)	5,397	3.32	1.14	1.06	5.96
Share of women in parliament (%)	5,299	16.60	11.71	0.00	63.75
GDP per capita (log, constant PPP)	5,517	9.25	1.21	6.22	11.85
Electoral democracy index	5,561	0.52	0.27	0.01	0.92
Crude birth rate	5,397	23.88	12.00	4.90	55.17
Dependency ratio	5,561	64.63	19.51	16.17	115.89
Urban population (%)	5,561	55.37	22.89	5.42	100.00
Female labor force participation (%)	5,400	49.72	15.60	4.83	89.97
War exposure index	5,069	0.31	0.99	0.00	7.00
Health equality index	5,561	0.56	1.55	−2.93	3.67

Table S2: Female Representation, the Central State Reach, and Infant and Maternal Mortality. Robustness check, 5-year lag.

	DV: Infant Mortality				DV: Maternal Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.026*	-0.047***	-0.016	-0.040	-0.040*	-0.061**	-0.030	-0.055
	(0.014)	(0.017)	(0.022)	(0.025)	(0.023)	(0.024)	(0.036)	(0.043)
Female MPs 20 to 29%	-0.029	-0.063***	-0.100**	-0.154****	-0.061*	-0.098***	-0.099*	-0.159**
	(0.022)	(0.024)	(0.045)	(0.041)	(0.032)	(0.034)	(0.057)	(0.066)
Female MPs 30+ %	-0.055*	-0.085***	-0.181****	-0.221****	-0.020	-0.098**	-0.100	-0.194**
	(0.030)	(0.031)	(0.048)	(0.049)	(0.052)	(0.049)	(0.068)	(0.076)
English Legal Origin × Female MPs 10 to 19%		0.079**		0.072*		0.085		0.081
		(0.037)		(0.037)		(0.053)		(0.056)
English Legal Origin × Female MPs 20 to 29%		0.133**		0.150***		0.168**		0.178**
		(0.054)		(0.053)		(0.082)		(0.084)
English Legal Origin × Female MPs 30+ %		0.131**		0.136**		0.337***		0.342****
		(0.066)		(0.059)		(0.104)		(0.101)
Decentralization			-0.159**	-0.157**			-0.107	-0.098
			(0.067)	(0.065)			(0.089)	(0.086)
Decentralization × Female MPs 10 to 19%			-0.012	0.002			-0.018	-0.004
			(0.041)	(0.041)			(0.066)	(0.070)
Decentralization × Female MPs 20 to 29%			0.146**	0.179***			0.078	0.117
			(0.071)	(0.065)			(0.085)	(0.095)
Decentralization × Female MPs 30+ %			0.240***	0.259****			0.150	0.183*
			(0.075)	(0.071)			(0.114)	(0.111)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,166	4,166	4,166	4,166	3,976	3,976	3,976	3,976
R^2	0.987	0.987	0.987	0.988	0.992	0.992	0.992	0.992

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S3: Female Representation, the Central State Reach, and Infant and Maternal Mortality. Robustness check, administrative tradition, 1-year lag.

	DV: Infant Mortality				DV: Maternal Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.043***	-0.048***	-0.029	-0.033	-0.059**	-0.063**	-0.056	-0.058
	(0.016)	(0.016)	(0.024)	(0.023)	(0.026)	(0.027)	(0.040)	(0.040)
Female MPs 20 to 29%	-0.050**	-0.068***	-0.086*	-0.092**	-0.074**	-0.085**	-0.138**	-0.142**
	(0.024)	(0.025)	(0.044)	(0.040)	(0.037)	(0.040)	(0.060)	(0.063)
Female MPs 30+ %	-0.072**	-0.095***	-0.186****	-0.183****	-0.013	-0.031	-0.068	-0.067
	(0.032)	(0.031)	(0.046)	(0.045)	(0.052)	(0.050)	(0.073)	(0.072)
Anglo-American Legal Origin × Female MPs 10 to 19%		0.146**		0.159***		0.132		0.142
		(0.057)		(0.058)		(0.121)		(0.117)
Anglo-American Legal Origin × Female MPs 20 to 29%		0.304****		0.287****		0.210		0.193
		(0.052)		(0.051)		(0.171)		(0.161)
Anglo-American Legal Origin × Female MPs 30+ %		0.438****		0.405****		0.341*		0.327
		(0.062)		(0.066)		(0.205)		(0.202)
Decentralization			-0.192**	-0.178**			-0.157	-0.147
			(0.075)	(0.075)			(0.106)	(0.106)
Decentralization × Female MPs 10 to 19%			-0.023	-0.030			0.003	-0.005
			(0.044)	(0.044)			(0.077)	(0.078)
Decentralization × Female MPs 20 to 29%			0.084	0.061			0.132	0.119
			(0.071)	(0.064)			(0.105)	(0.111)
Decentralization × Female MPs 30+ %			0.210***	0.164**			0.113	0.076
			(0.080)	(0.073)			(0.117)	(0.111)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,626	4,626	4,626	4,626
R^2	0.985	0.986	0.986	0.986	0.990	0.990	0.990	0.990

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S4: Female Representation, the Central State Reach, and Infant and Maternal Mortality. Robustness check, administrative tradition, 5-year lag.

	DV: Infant Mortality				DV: Maternal Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.026*	-0.030**	-0.016	-0.018	-0.040*	-0.045*	-0.030	-0.033
	(0.014)	(0.014)	(0.022)	(0.022)	(0.023)	(0.023)	(0.036)	(0.037)
Female MPs 20 to 29%	-0.029	-0.048**	-0.100**	-0.107***	-0.061*	-0.075**	-0.099*	-0.104*
	(0.022)	(0.023)	(0.045)	(0.039)	(0.032)	(0.032)	(0.057)	(0.061)
Female MPs 30+ %	-0.055*	-0.073**	-0.181****	-0.181****	-0.020	-0.040	-0.100	-0.102
	(0.030)	(0.029)	(0.048)	(0.047)	(0.052)	(0.047)	(0.068)	(0.069)
Anglo-American Legal Origin × Female MPs 10 to 19%		0.126****		0.140****		0.124		0.135
		(0.034)		(0.034)		(0.152)		(0.152)
Anglo-American Legal Origin × Female MPs 20 to 29%		0.290****		0.270****		0.232		0.222
		(0.043)		(0.050)		(0.189)		(0.187)
Anglo-American Legal Origin × Female MPs 30+ %		0.373****		0.338****		0.370		0.351
		(0.049)		(0.061)		(0.250)		(0.242)
Decentralization			-0.159**	-0.147**			-0.107	-0.097
			(0.067)	(0.067)			(0.089)	(0.089)
Decentralization × Female MPs 10 to 19%			-0.012	-0.020			-0.018	-0.027
			(0.041)	(0.040)			(0.066)	(0.067)
Decentralization × Female MPs 20 to 29%			0.146**	0.123**			0.078	0.059
			(0.071)	(0.060)			(0.085)	(0.097)
Decentralization × Female MPs 30+ %			0.240***	0.206***			0.150	0.115
			(0.075)	(0.070)			(0.114)	(0.105)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,166	4,166	4,166	4,166	3,976	3,976	3,976	3,976
R^2	0.987	0.987	0.987	0.988	0.992	0.992	0.992	0.992

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S5: Female Representation, the Central State Reach, and Neonatal and Child (under-5) Mortality. Robustness check, 5-year lag.

	DV: Neonatal Mortality				DV: Under-5 Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.026*	-0.051***	-0.009	-0.040	-0.022	-0.040**	-0.014	-0.034
	(0.014)	(0.017)	(0.021)	(0.024)	(0.015)	(0.018)	(0.024)	(0.027)
Female MPs 20 to 29%	-0.015	-0.050*	-0.077*	-0.133***	-0.030	-0.055**	-0.113**	-0.155****
	(0.023)	(0.027)	(0.045)	(0.046)	(0.022)	(0.025)	(0.046)	(0.043)
Female MPs 30+ %	-0.011	-0.051	-0.075	-0.124**	-0.066*	-0.081**	-0.218****	-0.240****
	(0.028)	(0.032)	(0.048)	(0.050)	(0.033)	(0.035)	(0.054)	(0.055)
English Legal Origin × Female MPs 10 to 19%		0.095***		0.092**		0.064		0.056
		(0.036)		(0.036)		(0.041)		(0.040)
English Legal Origin × Female MPs 20 to 29%		0.140***		0.156***		0.096*		0.113**
		(0.053)		(0.052)		(0.054)		(0.052)
English Legal Origin × Female MPs 30+ %		0.168***		0.175***		0.066		0.071
		(0.054)		(0.053)		(0.078)		(0.069)
Decentralization			-0.079	-0.076			-0.198***	-0.197***
			(0.071)	(0.068)			(0.066)	(0.065)
Decentralization × Female MPs 10 to 19%			-0.029	-0.012			-0.005	0.005
			(0.040)	(0.040)			(0.043)	(0.045)
Decentralization × Female MPs 20 to 29%			0.118	0.152**			0.175**	0.200***
			(0.072)	(0.068)			(0.072)	(0.068)
Decentralization × Female MPs 30+ %			0.124	0.145*			0.290****	0.304****
			(0.077)	(0.074)			(0.077)	(0.076)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,166	4,166	4,166	4,166	4,166	4,166	4,166	4,166
R^2	0.982	0.982	0.982	0.983	0.987	0.987	0.988	0.988

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S6: Female Representation, the Central State Reach, and Neonatal and Child (under-5) Mortality. Robustness check, administrative traditions, 1-year lag.

	DV: Neonatal Mortality				**DV: Under-5 Mortality**			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.046***	-0.049***	-0.026	-0.029	-0.036**	-0.040**	-0.022	-0.026
	(0.017)	(0.017)	(0.024)	(0.024)	(0.017)	(0.018)	(0.026)	(0.025)
Female MPs 20 to 29%	-0.044	-0.059**	-0.081*	-0.086*	-0.046*	-0.063**	-0.091**	-0.096**
	(0.028)	(0.029)	(0.048)	(0.046)	(0.024)	(0.025)	(0.045)	(0.042)
Female MPs 30+ %	-0.042	-0.057	-0.104*	-0.102*	-0.075**	-0.101***	-0.211****	-0.207****
	(0.038)	(0.038)	(0.062)	(0.061)	(0.034)	(0.032)	(0.048)	(0.046)
Anglo-American Legal Origin × Female MPs 10 to 19%		0.112*		0.127**		0.145**		0.158**
		(0.057)		(0.057)		(0.061)		(0.062)
Anglo-American Legal Origin × Female MPs 20 to 29%		0.256****		0.245****		0.306****		0.286****
		(0.058)		(0.054)		(0.056)		(0.055)
Anglo-American Legal Origin × Female MPs 30+ %		0.321****		0.304***		0.483****		0.443****
		(0.091)		(0.094)		(0.077)		(0.080)
Decentralization			-0.114	-0.102			-0.236***	-0.221***
			(0.080)	(0.080)			(0.075)	(0.075)
Decentralization × Female MPs 10 to 19%			-0.039	-0.044			-0.020	-0.027
			(0.043)	(0.043)			(0.046)	(0.046)
Decentralization × Female MPs 20 to 29%			0.076	0.056			0.106	0.083
			(0.076)	(0.071)			(0.074)	(0.067)
Decentralization × Female MPs 30+ %			0.117	0.083			0.253***	0.202***
			(0.094)	(0.093)			(0.083)	(0.074)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,656	4,656	4,656	4,656
R^2	0.978	0.979	0.979	0.979	0.986	0.986	0.986	0.987

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S7: Female Representation, the Central State Reach, and Neonatal and Child (under-5) Mortality. Robustness check, administrative traditions, 5-year lag.

	DV: Neonatal Mortality				DV: Under-5 Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.026*	-0.028**	-0.009	-0.011	-0.022	-0.027*	-0.014	-0.017
	(0.014)	(0.014)	(0.021)	(0.020)	(0.015)	(0.016)	(0.024)	(0.024)
Female MPs 20 to 29%	-0.015	-0.030	-0.077*	-0.083**	-0.030	-0.050**	-0.113**	-0.121***
	(0.023)	(0.024)	(0.045)	(0.042)	(0.022)	(0.023)	(0.046)	(0.039)
Female MPs 30+ %	-0.011	-0.025	-0.075	-0.075	-0.066*	-0.086**	-0.218****	-0.218****
	(0.028)	(0.028)	(0.048)	(0.047)	(0.033)	(0.033)	(0.054)	(0.053)
Anglo-American Legal Origin × Female MPs 10 to 19%		0.083**		0.097**		0.126****		0.140****
		(0.038)		(0.038)		(0.037)		(0.036)
Anglo-American Legal Origin × Female MPs 20 to 29%		0.222****		0.209****		0.300****		0.275****
		(0.047)		(0.048)		(0.047)		(0.052)
Anglo-American Legal Origin × Female MPs 30+ %		0.282***		0.264***		0.396****		0.352****
		(0.086)		(0.092)		(0.054)		(0.068)
Decentralization			-0.079	-0.070			-0.198***	-0.186***
			(0.071)	(0.071)			(0.066)	(0.066)
Decentralization × Female MPs 10 to 19%			-0.029	-0.034			-0.005	-0.013
			(0.040)	(0.039)			(0.043)	(0.043)
Decentralization × Female MPs 20 to 29%			0.118	0.100			0.175**	0.152**
			(0.072)	(0.065)			(0.072)	(0.062)
Decentralization × Female MPs 30+ %			0.124	0.098			0.290****	0.255****
			(0.077)	(0.075)			(0.077)	(0.073)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,166	4,166	4,166	4,166	4,166	4,166	4,166	4,166
R^2	0.982	0.982	0.982	0.982	0.987	0.987	0.988	0.988

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S8: Female Representation, the Central State Reach, and Infant and Maternal Mortality. Robustness check using the continuous version of the share of women in parliaments, 1-year lag.

	DV: Infant Mortality				DV: Maternal Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Share of Female MPs	-0.004***	-0.005****	-0.007****	-0.009****	-0.002	-0.005***	-0.006**	-0.010****
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
English Legal Origin × Share of Female MPs		0.008****		0.009****		0.012***		0.013****
		(0.002)		(0.002)		(0.004)		(0.004)
Decentralization			-0.260****	-0.266****			-0.235**	-0.245**
			(0.077)	(0.072)			(0.110)	(0.107)
Decentralization × Share of Female MPs			0.007**	0.008****			0.007*	0.009**
			(0.003)	(0.002)			(0.004)	(0.004)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,626	4,626	4,626	4,626
R^2	0.985	0.986	0.986	0.986	0.990	0.990	0.990	0.990

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S9: Female Representation, the Central State Reach, and Infant and Maternal Mortality. Robustness check using the continuous version of the share of women in parliaments, 5-year lag.

	DV: Infant Mortality				DV: Maternal Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Share of Female MPs	-0.003**	-0.004****	-0.007****	-0.009****	-0.002	-0.005***	-0.006**	-0.009****
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
English Legal Origin × Share of Female MPs		0.006**		0.007***		0.011***		0.012****
		(0.002)		(0.002)		(0.004)		(0.003)
Decentralization			-0.231***	-0.233****			-0.187*	-0.189**
			(0.070)	(0.068)			(0.096)	(0.094)
Decentralization × Share of Female MPs			0.008***	0.009****			0.007*	0.009**
			(0.003)	(0.002)			(0.004)	(0.004)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,166	4,166	4,166	4,166	3,976	3,976	3,976	3,976
R^2	0.987	0.987	0.987	0.988	0.992	0.992	0.992	0.992

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S10: Female Representation, the Central State Reach, and Infant and Maternal Mortality. Robustness check using the continuous version of the share of women in parliaments, administrative tradition, 1-year lag.

	DV: Infant Mortality				DV: Maternal Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Share of Female MPs	-0.004***	-0.004****	-0.007****	-0.007****	-0.002	-0.003*	-0.006**	-0.006**
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Anglo-American Administrative Tradition × Share of Female MPs		0.015****		0.014****		0.013*		0.012*
		(0.002)		(0.002)		(0.008)		(0.007)
Decentralization			-0.260****	-0.235***			-0.235**	-0.214*
			(0.077)	(0.076)			(0.110)	(0.110)
Decentralization × Share of Female MPs			0.007**	0.005**			0.007*	0.006
			(0.003)	(0.002)			(0.004)	(0.004)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,626	4,626	4,626	4,626
R^2	0.985	0.986	0.986	0.986	0.990	0.990	0.990	0.990

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S11: Female Representation, the Central State Reach, and Infant and Maternal Mortality. Robustness check using the continuous version of the share of women in parliaments, administrative tradition, 5-year lag.

	DV: Infant Mortality				DV: Maternal Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Share of Female MPs	-0.003**	-0.004***	-0.007****	-0.007****	-0.002	-0.003**	-0.006**	-0.006**
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
Anglo-American Administrative Tradition × Share of Female MPs		0.015****		0.014****		0.017*		0.016*
		(0.003)		(0.003)		(0.009)		(0.008)
Decentralization			-0.231***	-0.210***			-0.187*	-0.164*
			(0.070)	(0.069)			(0.096)	(0.098)
Decentralization × Share of Female MPs			0.008***	0.007***			0.007*	0.005
			(0.003)	(0.002)			(0.004)	(0.004)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,166	4,166	4,166	4,166	3,976	3,976	3,976	3,976
R^2	0.987	0.987	0.987	0.988	0.992	0.992	0.992	0.992

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S12: Female Representation, the Central State Reach, and Neonatal and Child (Under-5) Mortality. Robustness check using the continuous version of the share of women in parliaments, 1-year lag.

	DV: Neonatal Mortality				DV: Child Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Share of Female MPs	-0.003*	-0.004***	-0.005**	-0.008***	-0.004***	-0.006****	-0.008****	-0.010****
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)
English Legal Origin × Female Representation		0.007***		0.008****		0.007***		0.008***
		(0.002)		(0.002)		(0.003)		(0.002)
Decentralization			-0.186**	-0.193**			-0.307****	-0.313****
			(0.082)	(0.078)			(0.076)	(0.071)
Decentralization × Share of Female MPs			0.006*	0.007**			0.007***	0.009****
			(0.003)	(0.003)			(0.003)	(0.002)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,656	4,656	4,656	4,656
R^2	0.978	0.979	0.979	0.979	0.986	0.986	0.986	0.987

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S13: Female Representation, the Central State Reach, and Neonatal and Child (Under-5) Mortality. Robustness check using the continuous version of the share of women in parliaments, 5-year lag.

	DV: Neonatal Mortality				DV: Child Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Share of Female MPs	-0.001	-0.003**	-0.004**	-0.006***	-0.004***	-0.004***	-0.008****	-0.009****
	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)
English Legal Origin × Female Representation		0.007***		0.007***		0.004		0.005*
		(0.002)		(0.002)		(0.002)		(0.002)
Decentralization			-0.145**	-0.148**			-0.277****	-0.279****
			(0.072)	(0.070)			(0.069)	(0.068)
Decentralization × Share of Female MPs			0.006**	0.007**			0.009****	0.010****
			(0.003)	(0.003)			(0.003)	(0.002)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,166	4,166	4,166	4,166	4,166	4,166	4,166	4,166
R^2	0.982	0.982	0.982	0.982	0.987	0.987	0.988	0.988

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S14: Female Representation, the Central State Reach, and Neonatal and Child (Under-5) Mortality. Robustness check using the continuous version of the share of women in parliaments, administrative tradition, 1-year lag.

	DV: Neonatal Mortality				DV: Child Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Share of Female MPs	-0.003*	-0.003**	-0.005**	-0.005**	-0.004***	-0.005****	-0.008****	-0.008****
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)
Anglo-American Administrative Tradition × Share of Female MPs		0.012***		0.011***		0.016****		0.015****
		(0.004)		(0.004)		(0.002)		(0.002)
Decentralization			-0.186**	-0.167**			-0.307****	-0.282****
			(0.082)	(0.081)			(0.076)	(0.075)
Decentralization × Share of Female MPs			0.006*	0.005			0.007***	0.006**
			(0.003)	(0.003)			(0.003)	(0.002)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,656	4,656	4,656	4,656
R^2	0.978	0.979	0.979	0.979	0.986	0.986	0.986	0.987

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S15: Female Representation, the Central State Reach, and Neonatal and Child (Under-5) Mortality. Robustness check using the continuous version of the share of women in parliaments, administrative tradition, 5-year lag.

	DV: Neonatal Mortality				**DV: Child Mortality**			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Share of Female MPs	-0.001	-0.002*	-0.004**	-0.004**	-0.004***	-0.004****	-0.008****	-0.008****
	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)
Anglo-American Administrative Tradition × Share of Female MPs		0.012***		0.011***		0.015****		0.014****
		(0.003)		(0.004)		(0.003)		(0.003)
Decentralization			-0.145**	-0.129*			-0.277****	-0.256****
			(0.072)	(0.071)			(0.069)	(0.069)
Decentralization × Share of Female MPs			0.006**	0.005*			0.009****	0.008***
			(0.003)	(0.003)			(0.003)	(0.002)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,166	4,166	4,166	4,166	4,166	4,166	4,166	4,166
R^2	0.982	0.982	0.982	0.982	0.987	0.988	0.988	0.988

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S16: Female Representation, the Central State Reach, and Infant and Maternal Mortality. Robustness check without country fixed effects, 1-year lag.

	DV: Infant Mortality				**DV: Maternal Mortality**			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.021	-0.096**	0.032	-0.041	-0.126	-0.153*	-0.098	-0.158
	(0.045)	(0.039)	(0.065)	(0.066)	(0.078)	(0.084)	(0.135)	(0.136)
Female MPs 20 to 29%	-0.057	-0.160****	-0.107	-0.207***	-0.323***	-0.325***	-0.196	-0.207
	(0.057)	(0.047)	(0.076)	(0.076)	(0.108)	(0.119)	(0.168)	(0.181)
Female MPs 30+ %	-0.088	-0.207***	-0.249*	-0.382***	-0.228	-0.256*	-0.219	-0.275
	(0.079)	(0.065)	(0.130)	(0.134)	(0.148)	(0.149)	(0.223)	(0.226)
English Legal Origin		-0.194**		-0.198**		0.283*		0.270*
		(0.086)		(0.085)		(0.149)		(0.145)
English Legal Origin × Female MPs 10 to 19%		0.228**		0.232***		0.123		0.164
		(0.091)		(0.088)		(0.167)		(0.160)
English Legal Origin × Female MPs 20 to 29%		0.324***		0.331***		0.105		0.119
		(0.107)		(0.104)		(0.195)		(0.188)
English Legal Origin × Female MPs 30+ %		0.460***		0.472****		0.378		0.387*
		(0.149)		(0.135)		(0.235)		(0.227)
Decentralization			0.067	0.083			0.298	0.301
			(0.108)	(0.110)			(0.215)	(0.204)
Decentralization × Female MPs 10 to 19%			-0.109	-0.114			-0.059	-0.009
			(0.107)	(0.109)			(0.206)	(0.191)
Decentralization × Female MPs 20 to 29%			0.085	0.074			-0.255	-0.242
			(0.121)	(0.123)			(0.274)	(0.263)
Decentralization × Female MPs 30+ %			0.236	0.251			-0.066	-0.021
			(0.185)	(0.184)			(0.310)	(0.287)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	X	X	X	X	X	X	X	X
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,626	4,626	4,626	4,626
R^2	0.893	0.898	0.895	0.900	0.889	0.896	0.890	0.897

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S17: Female Representation, the Central State Reach, and Infant and Maternal Mortality. Robustness check without country fixed effects, administrative tradition, 1-year lag.

	DV: Infant Mortality				DV: Maternal Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.021	-0.015	0.032	0.031	-0.126	-0.114	-0.098	-0.099
	(0.045)	(0.045)	(0.065)	(0.064)	(0.078)	(0.080)	(0.135)	(0.135)
Female MPs 20 to 29%	-0.057	-0.058	-0.107	-0.104	-0.323***	-0.328***	-0.196	-0.195
	(0.057)	(0.059)	(0.076)	(0.076)	(0.108)	(0.115)	(0.168)	(0.168)
Female MPs 30+ %	-0.088	-0.131*	-0.249*	-0.251*	-0.228	-0.277*	-0.219	-0.221
	(0.079)	(0.074)	(0.130)	(0.129)	(0.148)	(0.148)	(0.223)	(0.223)
Anglo-American Administrative Tradition		-0.265*		-0.257		-0.266		-0.261
		(0.157)		(0.160)		(0.175)		(0.185)
Anglo-American Administrative Tradition × Female MPs 10 to 19%		0.040		0.063		-0.043		-0.071
		(0.125)		(0.126)		(0.255)		(0.242)
Anglo-American Administrative Tradition × Female MPs 20 to 29%		0.190		0.165		0.220		0.236
		(0.141)		(0.146)		(0.192)		(0.209)
Anglo-American Administrative Tradition × Female MPs 30+ %		0.645**		0.618***		0.718**		0.725**
		(0.252)		(0.231)		(0.342)		(0.329)
Decentralization			0.067	0.070			0.298	0.297
			(0.108)	(0.107)			(0.215)	(0.212)
Decentralization × Female MPs 10 to 19%			-0.109	-0.098			-0.059	-0.027
			(0.107)	(0.107)			(0.206)	(0.211)
Decentralization × Female MPs 20 to 29%			0.085	0.082			-0.255	-0.272
			(0.121)	(0.120)			(0.274)	(0.281)
Decentralization × Female MPs 30+ %			0.236	0.177			-0.066	-0.137
			(0.185)	(0.177)			(0.310)	(0.303)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	X	X	X	X	X	X	X	X
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,626	4,626	4,626	4,626
R^2	0.893	0.896	0.895	0.897	0.889	0.890	0.890	0.891

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S18: Female Representation, the Central State Reach, and Neonatal and Child (under-5) Mortality. Robustness check without country fixed effects, 1-year lag.

	DV: Neonatal Mortality				DV: Under-5 Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.012	-0.092**	0.031	-0.049	-0.002	-0.080**	0.048	-0.029
	(0.047)	(0.041)	(0.070)	(0.072)	(0.049)	(0.039)	(0.066)	(0.065)
Female MPs 20 to 29%	-0.003	-0.104**	-0.044	-0.142*	-0.044	-0.151***	-0.096	-0.200***
	(0.058)	(0.049)	(0.079)	(0.079)	(0.062)	(0.047)	(0.076)	(0.074)
Female MPs 30+ %	-0.031	-0.128*	-0.143	-0.251*	-0.085	-0.210***	-0.256*	-0.397***
	(0.073)	(0.068)	(0.135)	(0.137)	(0.086)	(0.065)	(0.132)	(0.136)
English Legal Origin		-0.185**		-0.188**		-0.205**		-0.209**
		(0.086)		(0.085)		(0.095)		(0.093)
English Legal Origin × Female MPs 10 to 19%		0.249***		0.253***		0.242**		0.246**
		(0.094)		(0.092)		(0.099)		(0.096)
English Legal Origin × Female MPs 20 to 29%		0.319***		0.325***		0.336***		0.343***
		(0.108)		(0.105)		(0.116)		(0.114)
English Legal Origin × Female MPs 30+ %		0.366***		0.375***		0.487***		0.500***
		(0.116)		(0.113)		(0.172)		(0.156)
Decentralization			0.053	0.070			0.067	0.084
			(0.113)	(0.115)			(0.108)	(0.110)
Decentralization × Female MPs 10 to 19%			-0.091	-0.090			-0.100	-0.106
			(0.115)	(0.116)			(0.102)	(0.104)
Decentralization × Female MPs 20 to 29%			0.068	0.060			0.091	0.079
			(0.126)	(0.130)			(0.116)	(0.118)
Decentralization × Female MPs 30+ %			0.163	0.174			0.254	0.270
			(0.183)	(0.188)			(0.187)	(0.185)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	X	X	X	X	X	X	X	X
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,656	4,656	4,656	4,656
R^2	0.861	0.866	0.862	0.867	0.904	0.908	0.905	0.910

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S19: Female Representation, the Central State Reach, and Neonatal and Child (under-5) Mortality. Robustness check without country fixed effects, administrative tradition, 1-year lag.

	DV: Neonatal Mortality				DV: Under-5 Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.012	-0.010	0.031	0.030	-0.002	0.007	0.048	0.047
	(0.047)	(0.048)	(0.070)	(0.070)	(0.049)	(0.049)	(0.066)	(0.066)
Female MPs 20 to 29%	-0.003	-0.001	-0.044	-0.042	-0.044	-0.044	-0.096	-0.093
	(0.058)	(0.061)	(0.079)	(0.079)	(0.062)	(0.064)	(0.076)	(0.076)
Female MPs 30+ %	-0.031	-0.049	-0.143	-0.142	-0.085	-0.131*	-0.256*	-0.259*
	(0.073)	(0.076)	(0.135)	(0.135)	(0.086)	(0.079)	(0.132)	(0.132)
Anglo-American Administrative Tradition		-0.213		-0.208		-0.241		-0.232
		(0.165)		(0.168)		(0.153)		(0.157)
Anglo-American Administrative Tradition × Female MPs 10 to 19%		0.048		0.069		-0.008		0.013
		(0.127)		(0.127)		(0.124)		(0.124)
Anglo-American Administrative Tradition × Female MPs 20 to 29%		0.118		0.097		0.162		0.136
		(0.152)		(0.154)		(0.143)		(0.149)
Anglo-American Administrative Tradition × Female MPs 30+ %		0.285*		0.264		0.686**		0.657**
		(0.169)		(0.172)		(0.284)		(0.260)
Decentralization			0.053	0.053			0.067	0.069
			(0.113)	(0.113)			(0.108)	(0.107)
Decentralization × Female MPs 10 to 19%			-0.091	-0.085			-0.100	-0.085
			(0.115)	(0.115)			(0.102)	(0.102)
Decentralization × Female MPs 20 to 29%			0.068	0.073			0.091	0.088
			(0.126)	(0.127)			(0.116)	(0.115)
Decentralization × Female MPs 30+ %			0.163	0.135			0.254	0.190
			(0.183)	(0.186)			(0.187)	(0.174)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	X	X	X	X	X	X	X	X
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,656	4,656	4,656	4,656
R^2	0.861	0.862	0.862	0.863	0.904	0.907	0.905	0.908

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S20: Female Representation, the Central State Reach, and Infant and Maternal Mortality. Robustness check with random effects, 1-year lag.

	DV: Infant Mortality				DV: Maternal Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.041**	-0.064****	-0.026	-0.051*	-0.055**	-0.085***	-0.049	-0.086*
	(0.016)	(0.019)	(0.025)	(0.027)	(0.026)	(0.030)	(0.041)	(0.047)
Female MPs 20 to 29%	-0.049**	-0.093****	-0.077*	-0.143****	-0.073*	-0.122***	-0.123**	-0.201***
	(0.023)	(0.025)	(0.045)	(0.042)	(0.038)	(0.043)	(0.061)	(0.066)
Female MPs 30+ %	-0.079**	-0.131****	-0.164****	-0.223****	-0.025	-0.121**	-0.027	-0.132
	(0.032)	(0.032)	(0.046)	(0.050)	(0.055)	(0.056)	(0.076)	(0.080)
English Legal Origin		0.019		0.030		0.554***		0.557***
		(0.091)		(0.094)		(0.194)		(0.197)
English Legal Origin × Female MPs 10 to 19%		0.086**		0.074*		0.119**		0.115*
		(0.039)		(0.038)		(0.057)		(0.059)
English Legal Origin × Female MPs 20 to 29%		0.179****		0.184****		0.210**		0.223***
		(0.054)		(0.055)		(0.087)		(0.085)
English Legal Origin × Female MPs 30+ %		0.223****		0.220****		0.402****		0.407****
		(0.066)		(0.061)		(0.109)		(0.109)
Decentralization			-0.172**	-0.173**			-0.122	-0.121
			(0.073)	(0.070)			(0.105)	(0.101)
Decentralization × Female MPs 10 to 19%			-0.028	-0.014			-0.009	0.012
			(0.046)	(0.045)			(0.079)	(0.081)
Decentralization × Female MPs 20 to 29%			0.067	0.106			0.097	0.147
			(0.075)	(0.070)			(0.109)	(0.111)
Decentralization × Female MPs 30+ %			0.158**	0.175**			0.013	0.035
			(0.079)	(0.073)			(0.125)	(0.121)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	X	X	X	X	X	X	X	X
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,626	4,626	4,626	4,626

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S21: Female Representation, the Central State Reach, and Infant and Maternal Mortality. Robustness check with random effects, administrative tradition, 1-year lag.

	DV: Infant Mortality				DV: Maternal Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.041**	-0.046***	-0.026	-0.029	-0.055**	-0.060**	-0.049	-0.052
	(0.016)	(0.016)	(0.025)	(0.024)	(0.026)	(0.027)	(0.041)	(0.041)
Female MPs 20 to 29%	-0.049**	-0.065***	-0.077*	-0.083**	-0.073*	-0.083**	-0.123**	-0.128**
	(0.023)	(0.024)	(0.045)	(0.041)	(0.038)	(0.040)	(0.061)	(0.064)
Female MPs 30+ %	-0.079**	-0.100****	-0.164****	-0.161****	-0.025	-0.042	-0.027	-0.027
	(0.032)	(0.030)	(0.046)	(0.044)	(0.055)	(0.053)	(0.076)	(0.075)
Anglo-American Administrative Tradition		-0.621****		-0.618****		-1.083****		-1.084****
		(0.168)		(0.176)		(0.299)		(0.303)
Anglo-American Administrative Tradition × Female MPs 10 to 19%		0.154***		0.166***		0.142		0.152
		(0.053)		(0.054)		(0.111)		(0.108)
Anglo-American Administrative Tradition × Female MPs 20 to 29%		0.305****		0.291****		0.210		0.198
		(0.052)		(0.052)		(0.161)		(0.155)
Anglo-American Administrative Tradition × Female MPs 30+ %		0.438****		0.414****		0.332		0.337
		(0.074)		(0.076)		(0.230)		(0.229)
Decentralization			-0.172**	-0.157**			-0.122	-0.111
			(0.073)	(0.074)			(0.105)	(0.106)
Decentralization × Female MPs 10 to 19%			-0.028	-0.035			-0.009	-0.017
			(0.046)	(0.046)			(0.079)	(0.080)
Decentralization × Female MPs 20 to 29%			0.067	0.045			0.097	0.086
			(0.075)	(0.067)			(0.109)	(0.115)
Decentralization × Female MPs 30+ %			0.158**	0.112			0.013	-0.020
			(0.079)	(0.071)			(0.125)	(0.117)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	X	X	X	X	X	X	X	X
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,626	4,626	4,626	4,626

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S22: Female Representation, the Central State Reach, and Neonatal and Child (under-5) Mortality. Robustness check with random effects, 1-year lag.

	DV: Neonatal Mortality				DV: Under-5 Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.044***	-0.064***	-0.023	-0.046	-0.033*	-0.060***	-0.018	-0.047
	(0.017)	(0.020)	(0.025)	(0.028)	(0.017)	(0.020)	(0.027)	(0.029)
Female MPs 20 to 29%	-0.041	-0.083***	-0.071	-0.133***	-0.044*	-0.087****	-0.081*	-0.144***
	(0.027)	(0.031)	(0.048)	(0.050)	(0.023)	(0.025)	(0.046)	(0.044)
Female MPs 30+ %	-0.047	-0.100**	-0.082	-0.141**	-0.082**	-0.129****	-0.187****	-0.240****
	(0.037)	(0.041)	(0.062)	(0.066)	(0.034)	(0.033)	(0.048)	(0.052)
English Legal Origin		0.042		0.048		0.014		0.027
		(0.088)		(0.090)		(0.097)		(0.100)
English Legal Origin × Female MPs 10 to 19%		0.076**		0.068**		0.100**		0.086**
		(0.034)		(0.034)		(0.044)		(0.043)
English Legal Origin × Female MPs 20 to 29%		0.168***		0.175****		0.171***		0.176***
		(0.052)		(0.052)		(0.057)		(0.058)
English Legal Origin × Female MPs 30+ %		0.224****		0.224****		0.201**		0.197***
		(0.055)		(0.054)		(0.079)		(0.073)
Decentralization			-0.097	-0.098			-0.212***	-0.212***
			(0.078)	(0.075)			(0.073)	(0.070)
Decentralization × Female MPs 10 to 19%			-0.043	-0.030			-0.026	-0.010
			(0.045)	(0.045)			(0.048)	(0.049)
Decentralization × Female MPs 20 to 29%			0.058	0.095			0.088	0.125*
			(0.079)	(0.077)			(0.078)	(0.074)
Decentralization × Female MPs 30+ %			0.065	0.082			0.196**	0.212***
			(0.091)	(0.088)			(0.083)	(0.079)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	X	X	X	X	X	X	X	X
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,656	4,656	4,656	4,656

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S23: Female Representation, the Central State Reach, and Neonatal and Child (under-5) Mortality. Robustness check with random effects, administrative tradition, 1-year lag.

	DV: Neonatal Mortality				DV: Under-5 Mortality			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	-0.044***	-0.048***	-0.023	-0.026	-0.033*	-0.038**	-0.018	-0.021
	(0.017)	(0.017)	(0.025)	(0.025)	(0.017)	(0.018)	(0.027)	(0.026)
Female MPs 20 to 29%	-0.041	-0.056**	-0.071	-0.077*	-0.044*	-0.060**	-0.081*	-0.087**
	(0.027)	(0.029)	(0.048)	(0.046)	(0.023)	(0.024)	(0.046)	(0.043)
Female MPs 30+ %	-0.047	-0.062*	-0.082	-0.080	-0.082**	-0.107****	-0.187****	-0.184****
	(0.037)	(0.038)	(0.062)	(0.061)	(0.034)	(0.031)	(0.048)	(0.046)
Anglo-American Administrative Tradition		-0.605****		-0.605****		-0.615****		-0.612****
		(0.153)		(0.158)		(0.166)		(0.175)
Anglo-American Administrative Tradition × Female MPs 10 to 19%		0.122**		0.136***		0.153***		0.166***
		(0.051)		(0.051)		(0.058)		(0.059)
Anglo-American Administrative Tradition × Female MPs 20 to 29%		0.256****		0.248****		0.308****		0.290****
		(0.053)		(0.050)		(0.058)		(0.058)
Anglo-American Administrative Tradition × Female MPs 30+ %		0.318****		0.310****		0.483****		0.453****
		(0.075)		(0.076)		(0.094)		(0.096)
Decentralization			-0.097	-0.084			-0.212***	-0.196***
			(0.078)	(0.078)			(0.073)	(0.074)
Decentralization × Female MPs 10 to 19%			-0.043	-0.049			-0.026	-0.034
			(0.045)	(0.044)			(0.048)	(0.048)
Decentralization × Female MPs 20 to 29%			0.058	0.039			0.088	0.066
			(0.079)	(0.074)			(0.078)	(0.071)
Decentralization × Female MPs 30+ %			0.065	0.033			0.196**	0.145**
			(0.091)	(0.090)			(0.083)	(0.073)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	X	X	X	X	X	X	X	X
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	4,656	4,656	4,656	4,656	4,656	4,656	4,656	4,656

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$

Table S24: Female Representation, the Reach of the Central State, and Health Outcomes. Alternative maternal mortality measures: maternal mortality ratio (MMR, left panel) and lifetime risk of maternal mortality (LRMM, right panel), 1-year lag.

	DV: MMR				**DV: LRMM**			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female MPs 10 to 19%	0.020	0.021	0.022	0.024	0.006	0.015	0.018	0.030
	(0.024)	(0.025)	(0.034)	(0.040)	(0.024)	(0.026)	(0.036)	(0.043)
Female MPs 20 to 29%	0.009	0.002	-0.051	-0.077	-0.014	-0.010	-0.059	-0.065
	(0.034)	(0.032)	(0.055)	(0.059)	(0.036)	(0.035)	(0.059)	(0.063)
Female MPs 30+ %	-0.048	-0.052	-0.220**	-0.232**	-0.065	-0.073	-0.201*	-0.210*
	(0.050)	(0.056)	(0.092)	(0.101)	(0.055)	(0.062)	(0.111)	(0.119)
English Legal Origin × Female MPs 10 to 19%		-0.008		-0.008		-0.030		-0.034
		(0.054)		(0.057)		(0.056)		(0.059)
English Legal Origin × Female MPs 20 to 29%		0.031		0.064		-0.007		0.016
		(0.093)		(0.091)		(0.098)		(0.097)
English Legal Origin × Female MPs 30+ %		0.023		0.037		0.036		0.044
		(0.100)		(0.093)		(0.107)		(0.103)
Decentralization			-0.031	-0.037			-0.002	-0.006
			(0.094)	(0.092)			(0.098)	(0.096)
Decentralization × Female MPs 10 to 19%			0.015	0.015			-0.013	-0.019
			(0.062)	(0.066)			(0.068)	(0.072)
Decentralization × Female MPs 20 to 29%			0.156*	0.181*			0.114	0.124
			(0.093)	(0.097)			(0.102)	(0.105)
Decentralization × Female MPs 30+ %			0.358**	0.372**			0.279*	0.281*
			(0.139)	(0.143)			(0.168)	(0.170)
Time-varying country characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
N	3,310	3,310	3,310	3,310	3,304	3,304	3,304	3304
R^2	0.991	0.991	0.991	0.992	0.993	0.993	0.993	0.993

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$