The Impact of Denying a Wanted Abortion on Women and Children*

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Abstract

This paper investigates the immediate and long-term effects of denying women a wanted abortion on women and children using high-quality administrative data from Colombia and credibly exogenous variation in abortion access. Women facing barriers to abortion can file a *tutela*, which is randomly assigned to judges. We find that female judges are 20 p.p. (32%) less likely to deny abortion than male judges and use the sex of the assigned judge as an instrument for abortion denial. Denying a wanted abortion has immediate and lasting detrimental effects. Death records reveal that it more than doubles women's risk of dying in the subsequent nine months, primarily due to septicemia and infections, suggesting that women undergo unsafe procedures to terminate unwanted pregnancies. Additionally, many women carry the pregnancy to term, with abortion denial doubling the likelihood of childbearing within nine months. Tracking outcomes up to 15 years later, women denied abortions are more likely to experience long-term health complications and raise children as single mothers. They attain lower educational levels, have reduced labor-force participation, experience increased poverty, and rely more on welfare assistance. These negative impacts extend to their children, who are more likely to grow up in poverty following their mother's abortion denial. For example, older children born before their mother sought an abortion have lower school attendance and higher engagement in child labor. These findings underscore the importance of public health policy and the need for measures to mitigate the impact of restricted access to safe abortion. **JEL:** I14, I18, J13.

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1 Introduction

At least one-fourth of women worldwide undergo abortion at some point in their lives (Bearak et al., 2022; Jones and Jerman, 2022). While abortion is recognized as a human right (OHCHR, 2020), restrictive laws affect 753 million women of reproductive age, or 40% globally (Center for Reproductive Rights, 2024), including many in the United States post *Dobbs v. Jackson*. Women denied legal abortion either continue unwanted pregnancies or resort to unsafe procedures to terminate them, both of which can negatively impact their health and well-being, as well as that of their children.

Understanding the causal effects of limited abortion access is crucial but challenging due to difficulties in observing women seeking abortions and tracking their outcomes. Identifying causal effects also requires exogenous variation in abortion access, as women accessing abortions may differ from those who do not. The most reliable evidence to date comes from the Turnaway Study, which surveyed 1,000 women from 30 U.S. abortion facilities over five years (Foster, 2020). Some women were "turned away" for being above the facility's gestational limit, while others were not. However, these groups differed in baseline socioeconomic conditions (Foster et al., 2018) and likely in unobservable factors, leading to omitted variable bias. Additional concerns include the survey's high attrition rates, recall issues, and non-response (Miller et al., 2020). To address these issues, Miller et al. (2023) used difference-in-differences and longitudinal data from credit reports, finding higher financial distress after denial but often lacked statistical power due to the small sample. Consequently, we still know little about the causal effects of restricting abortion on women and nothing about its impact on children.

This paper studies the causal effect of denying a wanted abortion on women and children in Colombia. Colombia is an ideal setting due to its high-quality administrative data and credibly exogenous variation in abortion access. In 2006, Colombia partially decriminalized abortion without gestational age limits when the pregnancy threatened the woman's physical, mental, emotional, or social health, involved severe fetal malformations, or resulted from rape, incest, or unwanted insemination. However, implementation has been inconsistent, and stigmas remain for women facing unwanted pregnancies and for healthcare providers performing abortions. In practice, barriers such as doctors' conscientious objections and bureaucratic delays prevent many women from accessing legal abortion (Diaz Amado et al., 2010; Baum et al., 2015; Brack et al., 2017; DePiñeres et al., 2017; Stifani et al., 2018; González Vélez and Castro, 2017). Women can protect their reproductive rights by filing an abortion rights claim, or *tutela*. *Tutelas* are randomly assigned to judges, and judges vary in their leniency towards abortion cases. A successful *tutela* in-

creases abortion access, while an unsuccessful one results in denial. To track outcomes, we link women filing *tutelas* to birth and death records and sociodemographic characteristics up to 15 years later.

We utilize data from all *tutelas* filed in Medellín, Colombia's second-largest city. The women seeking abortions through *tutelas* are 28 years old, and one-fifth are teenagers or younger. One-fifth already had children when seeking an abortion, and two-fifths were married or cohabitating. Even before seeking an abortion, these women came from economically disadvantaged backgrounds, with the majority lacking a high school diploma.

About half of these women are denied legal abortion by the judge, with a strong predictor of abortion denial being the sex of the judge randomly assigned to the case. Male judges reject 62% of abortion rights claims, while female judges are 20 percentage points (p.p.) or 32% *less* likely than male judges to deny abortion.[1] To estimate the causal effects of denying legal access to abortion, we instrument abortion denial with the sex of the randomly assigned judge. We also test for robustness by replacing the judge sex indicator with a standard "judge fixed effect" design instrumenting the woman's abortion denial with the average denial rate of all other abortion seekers assigned to the same judge (Chyn et al., 2024; Kling, 2006).

We find that denying women a wanted abortion has immediate and long-lasting detrimental effects. Death records show that abortion denial increases a woman's risk of dying within nine months by 2.5 p.p., or 161% of the non-denied mean. These marginal deaths occur in women who do not give birth and are not due to complications in pregnancy or childbirth or external causes. Instead, the increased deaths come from septicemia and infections, suggesting that women denied legal abortions resort to unsafe procedures to terminate unwanted pregnancies. Still, abortion denial induces many women to carry the unwanted pregnancy to term, with birth records showing a 31 p.p. (106%) increase in the likelihood of giving birth within nine months.

Tracking women's health and sociodemographic characteristics after seeking abortions, we observe women on average six years later. Abortion denial doubles the likelihood of women raising children and increases the number of children by 83%. This underscores that abortion restrictions not only impede women's ability to decide *when* to have children but also distort their decisions about *whether* to have them and how *many*. Denying abortion also impacts women's family formation by making them 15 p.p. more likely to be

[1] This gender gap persists even after accounting for a rich set of judge characteristics. Notably, female judges' attitudes toward abortion do not indicate a general leniency, as there is no gender gap in rulings on other types of *tutelas*. These findings align with previous research reviewed by Harris and Sen (2019), which shows that female and male judges tend to make similar decisions except in gender-related cases, such as those involving sexual harassment and sex-based discrimination.

single mothers, eight p.p. less likely to be married or cohabitating, and nine p.p. more likely to be divorced or separated. Abortion denial also induces women to live with their parents, who help care for the additional child.

Denying abortion leads to long-term health complications for women, increasing their likelihood of experiencing health problems many years later. It lowers women's educational attainment, reducing the likelihood of earning a high school diploma by ten p.p. It also decreases labor-force participation by 15 p.p. and raises the likelihood of becoming homemakers. This reduces household market income and creates enduring economic challenges for the women and their households. Although these households are more likely to receive welfare assistance, which offsets some income loss, various indicators show that they live in worse neighborhoods and are 19 p.p. more likely to experience extreme or moderate poverty due to abortion denial.

Additionally, we leverage variation in the number of years since women sought abortions. For some women, we observe their outcomes shortly after filing; for others, up to 15 years later; and for others, even before they seek abortions. By comparing the effects of abortion denial across time, we find that denial has immediate and lasting adverse effects. The impacts on women's fertility, health, labor-force participation, poverty levels, and welfare assistance remain significant even more than eight years after abortion denial.

Furthermore, the adverse effects of abortion denials also extend to the children these women already had when seeking abortion. Typically, having more siblings can mean sharing financial resources and parental time and attention. However, when siblings are a result of abortion denial, children are more likely to grow up in poverty and with fewer household income. This further hampers parents' ability to meet their children's basic needs and support their education. For older children born before their mother sought an abortion, denial of the procedure lowers school attendance and increases child labor.

Our results are robust to replacing the judge's sex indicator with a standard "judge fixed effect" design. The similarity of our estimates using both approaches suggests that denying abortion has constant effects, whether from random assignment to male or female judges or to judges that systematically vary in their tendency to deny abortion.

These findings contribute to the literature on the impact of abortion policy on women's and children's outcomes, as recently reviewed by Clarke (2024). In a landmark study in the United States, Myers (2017) demonstrated that liberalizing abortion access in the 1970s led to substantial changes in fertility and "shotgun marriages" among young women, with the effects of the contraceptive pill being small in comparison. Unlike most studies that rely on policy or legal reforms without observing individual-level abortion access (e.g., Ananat et al., 2007; Ananat and Hungerman, 2012; Angrist and Evans, 2000;

Antón et al., 2018; Clarke and Mühlrad, 2021; Dench et al., 2024; Farin et al., Forthcoming; Hjalmarsson et al., 2021; Jones and Pineda-Torres, 2023; Mitrut and Wolff, 2011; Mølland, 2016; Pop-Eleches, 2006, 2010), we identify abortion seekers and establish a clear counterfactual for assessing abortion access.[2]

Our work is closely related to Miller et al. (2023), but we explore additional dimensions likely affected by abortion denial, including mortality, health, education, labor-market outcomes, poverty, and government assistance. Our large sample of nearly 20,000 women, compared to their less than 600, allows us to estimate precise effects. For example, we can detect statistically significant differences even in rare outcomes like women's mortality, providing the first individual-level evidence that denying access to legal abortion increases a woman's immediate risk of dying. Our sample size also enables us to compare outcomes by subgroups, revealing pronounced adverse effects for previously childless women and pregnant teenagers. Crucially, we provide the first causal and family-level evidence of abortion denial affecting the well-being of existing children, demonstrating that ensuring access to legal abortion is crucial not only for the life, health, and economic well-being of women but also for the well-being of existing children. These findings are especially important given the current trend of rolling back abortion rights in multiple countries, including the United States, Poland, and El Salvador (Center for Reproductive Rights, 2024).

We also contribute to a broader literature on the effects of family size on women and children, as reviewed by Clarke (2018) and Doepke et al. (2023), with recent contributions from Bailey et al. (2019), Gallen et al. (2023), Adda et al. (2017), Aaronson et al. (2020), and Kleven et al. (forthcoming, 2019). Researchers typically leverage variation in fertility from reforms expanding or restricting access to family planning; use sibling sex mix, twin births, infertility shocks, IVF success, or UID failure as instruments for family size; or compare women's outcomes before and after childbirth. Studies focusing on women generally find adverse educational and labor-market effects, while those focusing on children find mixed evidence on the "quantity-quality" trade-off. Our findings show that *unwanted* childbearing from being denied an abortion imposes additional penalties for women beyond those typically experienced with a new (and presumably desired) child. Not only are the disemployment effects larger than typical child penalties, but women's health, marital status, educational attainment, level of poverty, and reliance on government assistance are also adversely affected. This destabilizing effect of *unwanted* fertility

[2] A recent exception is Brooks and Zohar (2024), who examine the effect of reducing the financial cost of abortion in Israel, where abortion is legal and observed in administrative records. They find that reducing costs leads to higher abortion rates, delayed parenthood, and a decrease in marriage rates.

compounds the disadvantaged backgrounds of these households, which may explain why we observe substantially worse outcomes for older siblings.

2 Background, Data, and Summary Statistics

2.1 Abortion Law in Colombia

Before 2006, Colombia had one of the most restrictive abortion laws in the world, classifying all abortions as a crime with no exceptions (Law 95/1936). Women who self-induced or consented to someone else inducing their abortion faced up to 4.5 years in prison, while those who practiced an abortion faced up to 10 years in prison.

In May 2006, the Colombian Constitutional Court partially decriminalized abortion in the following three cases:

1. *When a physician or psychiatrist certifies that the pregnancy threatens the woman's life or physical, mental, emotional, or social health.* Citing Article 12 of the International Covenant on Economic, Social, and Cultural Rights, the Court clarified that health encompasses not just the absence of disease but the enjoyment of the highest attainable standard of physical and mental health. Therefore, the woman's life does not need to be at risk for abortion to be decriminalized, nor does she need to face imminent, severe, or irreparable health issues. Less severe psychological or emotional pain and mental suffering are valid grounds for a legal abortion. By considering social health, defined as the ability to interact and form meaningful relationships, the Court allowed physicians and psychiatrists to take into account a woman's social context. This includes factors like how continuing the unwanted pregnancy could impact the woman's physical and mental health by affecting her control over her life project, well-being, education, and employment opportunities (Fiscalía General de la Nación, 2016).

2. *When a physician verifies severe fetal malformations incompatible with life.*

3. *When the pregnancy is a result of rape, incest, or unwanted insemination, duly reported to authorities.* However, women under 14 years of age and victims of the internal armed conflict do not need to report to authorities.

Within these guidelines, there were no gestational age limits. Moreover, the Court set forth that all health service providers, public and private, must provide safe abortions free of charge within five days of receiving a request. Nevertheless, the law also established that

individuals could exercise conscientious objection based on religious beliefs. To respect women's right to abortion, objectors must refer to other providers and cannot exercise this right when there is an immediate risk to life or when no other providers are available (Sentence C-355/2006; T-209/2008; T-388/2009).[3]

Later, in February 2022, Colombia decriminalized abortions performed before 24 weeks of gestational age (Sentence C-055/2022), one of the most progressive abortion laws in Latin America and the Caribbean. After 24 weeks, abortions continue being decriminalized under the circumstances outlined in the three cases established by the 2006 ruling.

2.2 Barriers to Abortion Access

While the 2006 decision advanced Colombian women's reproductive rights, significant obstacles remained for those seeking abortions. Despite the legal right to abortion under certain circumstances, it was still a crime outside these exceptions, perpetuating stigma for both women seeking abortions and healthcare providers. These barriers prevented many women from accessing safe abortion services, even when their situations met the legal exceptions. Inconsistent implementation of the Court's rulings further resulted in many women being denied timely access to abortion services (Diaz Amado et al., 2010; Baum et al., 2015; Brack et al., 2017; DePiñeres et al., 2017; Médicos Sin Fronteras, 2019; Stifani et al., 2018; González Vélez and Castro, 2017).

La Mesa por la Vida y la Salud de las Mujeres (henceforth, *La Mesa*) has extensively documented the experiences of Colombian women navigating the process of obtaining abortion services. They revealed substantial barriers on both the supply and demand sides. On the supply side, there was a shortage of committed providers and inconsistent access to care. Medical professionals often refused to participate due to moral, philosophical, or religious beliefs, with some instances of unlawful institutional objection based on conscientious grounds.[4] Providers misinterpreted the 2006 ruling, believing decriminalization only applied when the pregnancy threatened the woman's life, neglecting less severe physical health risks or risks to mental and social health. Health insurers often denied coverage for legal abortions and did not accept certifications from out-of-network physicians or psychiatrists. Some providers did not recognize psychologists as medical professionals and doubted women's claims of sexual assault. Providers frequently requested unnecessary

[3] The Colombian court based its ruling on a woman's right to health, life, and equality, reasoning that illegal abortion was a public health problem and one of the leading causes of maternal mortality. This contrasts with the U.S. *Roe v. Wade*, where the right to abortion rested on a woman's right to privacy.

[4] In conservative Catholic Colombia, the Church has been a vocal and influential opponent of abortion. For instance, in 2006, it threatened to excommunicate the medical team responsible for Colombia's first legal abortion.

documents or judicial permission, causing delays. Consequently, abortion care was often not provided within the required five-day period or was denied altogether. Even before 2022, healthcare providers incorrectly imposed gestational age limits, restricted minors' right to abortion access without parental involvement, discouraged women from seeking abortions, and violated women's right to privacy.

La Mesa also identified barriers on the demand side of abortion services. Many women were misinformed about the availability of abortion services, unaware that such services were free or covered by insurance. Even before 2022, there was a lack of awareness among women about the partial decriminalization of abortion, particularly regarding mental and social health risks as valid grounds for legal termination. Additionally, women faced challenges in promptly accessing abortion services, not knowing how or where to access them, leading to delays. They also feared judgment, mistreatment, breaches of confidentiality, and lengthy waiting periods.

2.3 *Tutelas*

When women encounter obstacles in accessing abortion care, they can assert their right to a legal termination of pregnancy through a legal tool called a *tutela*. A *tutela* is a constitutional writ designed to safeguard fundamental constitutional rights. Established in Colombia's 1991 Constitution, it serves as a means to enforce the immediate protection of one's fundamental constitutional rights when any of these are violated or threatened by the action or omission of public authorities or private actors performing public functions (Article 86), such as health insurers, hospitals, and clinics.[5]

Filing a *tutela* is straightforward, free, and simple. An individual can file it any day of the week and at any time without legal representation (Decree 2591/1991). They can submit *tutelas* on their own behalf or through proxies if unable to do so themselves. The *tutela* petition only requires essential facts for the judge to address the case, such as the involved parties and the jeopardized right. There is no formal written process; sometimes, it may be conducted verbally. There is no direct interaction between the claimant and the judge handling the case as there are no hearings; it is a written procedure.

All judges in the country must hear *tutelas* and respond within ten days by (i) accepting, (ii) denying, or (iii) deeming the claim inadmissible.[6] Compliance with the ruling must occur within 48 hours; failure to do so may result in imprisonment for up to six

[5] The *tutela* is a legal development related to the writ of *amparo* for protecting constitutional rights created in other jurisdictions, e.g., Germany's *verfassungsbeschwerde*, Spain's *recurso de amparo*, Brazil's *mandado de segurança*. It exists in all Latin American legal systems.

[6] Judges may request claimants to correct their claim or provide the required documentation within three days from the initial filing (Art. 17 of Decree 2591/1991).

months and fines of up to 20 times the monthly minimum wage. Claimants have the right to appeal within three days, and judges have 20 days from the initial case submission to decide the appeal.

These characteristics make the *tutela* a relatively easy, inexpensive, and expeditious legal mechanism. Consequently, they are the most popular judicial mechanism, with 83.7% of Colombians familiar with *tutelas* (Cámara de Comercio de Bogota, Ministerio de Justicia & Banco Mundial, 2013). Nearly ten million *tutelas* were submitted between 1991 and 2022, establishing it as the most common legal recourse for Colombian citizens seeking judicial protection of their constitutional rights.

2.3.1 Random Assignment of *Tutelas* to Judges

Tutelas are allocated to judges randomly in the initial stage within a judicial district to decentralize justice administration, ensure fair distribution of caseloads, and prevent claimants from selecting their judge. Claimants cannot choose judges and judges cannot choose which *tutelas* to take on or not take on. All judges, regardless of specialization or hierarchical position, are obligated to handle *tutelas*. This process is explicitly outlined in Articles 86 and 228 of the Constitution along with Article 50 of the Statutory Law, supported by decrees such as Decree 2591/1991, Decree 1382/2000, Decree 1069/2015, Decree 1983/2017, and Decree 333/2021.

The distribution of *tutelas* among judges is based on geographic location and the parties involved (e.g., national, state, or district authorities; bureaucrats; the press). Claimants initiate a *tutela* by filing it in an office within their municipality of residence or where the violation occurred, or where its impact is significant.[7] Within a judicial district (e.g., Medellin), *tutelas* are allocated randomly across judges. Consequently, in large judicial districts like Medellin, hundreds of judges are randomly assigned to handle tens of thousands of *tutelas*.

2.4 Data

Our analysis uses administrative data from the following sources:

1. *Abortion rights claims and judge outcomes.* We use the universe of *tutelas* filed since 1991, encompassing nearly 20,000 abortion rights claims in Medellín between January 2006 and December 2022 (SAMAI, Consejo de Estado; Corte Constitucional).

[7] In the COVID-19 pandemic aftermath, *tutelas* can be filed online. An algorithm assigns *tutelas* to judges randomly using software with no human intervention.

The records provide details such as the claimant's name and place of residence, assigned judge, and the ruling outcome (acceptance, denial, inadmissible).

2. *Judge characteristics:* We extracted copies of judges' *curriculum vitae* from *Rama Judicial*. We obtained information about the judges' postsecondary enrollment, attainment, and performance from *Sistema para la Prevención de la Deserción en la Educación Superior*, SPADIES (MinEducación). SPADIES also records individuals' postsecondary institution attended and share of courses passed. We use SPADIES data from 1998 to 2015.

3. *Births and deaths.* We use information from Vital Statistics Records collected by the National Statistics Agency, DANE. This dataset provides comprehensive coverage of all births and deaths reported by all hospitals, clinics, doctors, nurses, and health professionals in Colombia. For live births, the dataset includes information about the birth (e.g., date, time, municipality, whether a doctor attended the birth, spontaneous delivery, cesarean section), the mother's characteristics (e.g., name, identification number, age, marital status, educational attainment, municipality of residence, social security regime, number of previous live births), the baby's characteristics (e.g., sex, 1-minute APGAR score, 5-minute APGAR score, weight, gestational weeks), and the father's characteristics (when it is available). The death records include the cause of death. Our main sample consists of data from January 2007 to December 2023.

4. *Claimant characteristics and outcomes.* We utilize data from the Department of National Planning's *Sistema de Identificación de Potenciales Beneficiarios de Programas Sociales*, SISBEN, often referred to as Colombia's 'census of the poor.' SISBEN is a proxy-means testing instrument used to target social spending, with over 20 government programs using it to select recipients. It contains information such as individuals' age, education, employment status, marital status, and poverty level.

   The most recent SISBEN surveys were conducted in 2009–10 (SISBEN III) and 2017–2022 (SISBEN IV). We use SISBEN III to gather baseline characteristics of claimants and validate the empirical strategy, excluding claims filed before July 2010. Conversely, we primarily rely on SISBEN IV, as of November 2021, to obtain outcome information.

   SISBEN has evolved over the years. For example, SISBEN III assigns households a wealth score ranging from 0 to 100 based on factors like housing quality, possession of durable goods, access to public utilities, and human capital indicators. In contrast,

SISBEN IV categorizes households into four wealth groups: A (extreme poverty), B (moderate poverty), C (vulnerable), and D (not vulnerable).

Figure A.1 summarizes the main data sources and years of data coverage. To match individuals across datasets, we use their full names, sex, and the municipality where the claim was filed. Panel A of Table A.4 shows the likelihood of matching women filing abortion rights claims with SISBEN III and SISBEN IV. About 82% of women filing these claims were successfully matched to SISBEN III, reflecting the high prevalence of poverty among abortion seekers, as discussed later. While SISBEN III included about 37 million individuals, only 25 million were part of SISBEN IV by November 2021. Consequently, a smaller proportion of abortion rights claimants were found in SISBEN IV (73%) compared to SISBEN III. This indicates that about one in four women filing abortion rights claims are not observed in SISBEN IV. The exclusion of these women from SISBEN, despite the incentives for low-income households to be included, may indicate that they tend to have higher incomes (though some could still be low-income but not part of SISBEN). Importantly, our instrument, described in Section 4.1, is uncorrelated with the match rate: the coefficients are close to zero and not statistically significant, indicating balance in the likelihood of appearing in both SISBEN III and SISBEN IV.

To understand the time span of our outcome data post-abortion encounter, we compare the age of women in SISBEN IV to their age at the time of their abortion encounter for women who filed an abortion rights claim before the SISBEN IV survey. Panel B of Table A.4 demonstrates that, on average, we observe women approximately six years after they sought abortion. However, for about half of them, we observe their outcomes more than six years later, and for a small minority, even up to 15 years later.

2.5 Summary Statistics

Table I provides summary statistics for all *tutelas* (Column 1) and abortion rights claims (Column 2) filed in Medellín between 2006 and 2022. Approximately 1.6 million *tutelas* were filed by 855,351 claimants during this period. Among these, 19,760 pertain to abortion, submitted by 19,649 claimants across four different offices and distributed among 125 judges, 42.3% of whom are female. The acceptance rate for abortion rights claims is notably low at only 38.6%, significantly lower than the higher acceptance rate of 68.9% for all types of *tutelas*. Judges are more inclined to reject abortion rights claims and declare them inadmissible. Of the inadmissible claims, 70% are resubmitted, and among those, 38% are eventually accepted.

To understand who files abortion rights claims, we compare women's baseline characteristics *before* filing an abortion rights claim, as observed in SISBEN III.[8] Table II compares women's sociodemographic characteristics (Column 1) with those of the subset filing any *tutelas* (Column 2) and specifically abortion rights claims (Column 3). When seeking an abortion, women were, on average, 28 years old, with 21% being teenagers or younger, and 22% already mothers. Compared to the average women in SISBEN, those filing abortion rights claims exhibit lower rates of singlehood and higher rates of motherhood. They are also less likely to live in Medellin, suggesting that some of them came to the city to file an abortion rights claim. Moreover, they typically come from lower socioeconomic backgrounds, evident from their lower SISBEN score and reduced likelihood of obtaining a college education.[9]

Figure A.2 illustrates this last point by plotting the likelihood of women filing any *tutela*, as well as an abortion rights claim, based on their baseline household level of wealth. The figure shows there is widespread utilization of *tutelas*, with roughly 30% of women in Medellín ever filing one. Moreover, their prevalence decreases with higher levels of wealth. Over one-third of women in the poorest decile have ever filed a *tutela* between June 2010 and 2022, underscoring the significance of *tutelas* in protecting the fundamental rights of the economically disadvantaged. This wealth gradient is also evident in abortion rights claims, indicating that these women tend to come from lower socioeconomic backgrounds.

The last column of Table II compares women denied a wanted abortion to those who were not and indicates that the two groups exhibit similarities in observable characteristics. However, some differences exist. Women denied abortion are less likely to be single and more likely to be married or cohabitating. Additionally, they are less likely to live in Medellín. Given these baseline differences, we will use an instrumental variables (IV) approach to estimate causal effects, a method we introduce and validate in Section 4.1.

[8] To prevent observing characteristics *after* an abortion encounter, we restrict the analysis to individuals who filed claims after the SISBEN III survey collection ended in June 2010. On average, we analyze these characteristics five years before their abortion encounter.

[9] It is valuable to compare our sample of women seeking abortions to those in the Turnaway Study. In our sample, 21% of women were teenagers, similar to 18% in the Turnaway Study. However, only 22% were already mothers, compared to 61% in the Turnaway Study. Additionally, fewer than 1% sought an abortion more than once (Table IV), compared to 45% in the Turnaway Study. Importantly, our study includes women terminating pregnancies due to known fetal anomalies and severe immediate health risks, which were excluded from the Turnaway Study because researchers lacked a comparison group. As Foster (2020) acknowledges, very little is known about these women's experiences.

3 Female Judges Are Less Likely To Deny Abortion

As Table I showed, abortion rights claims are typically adjudicated more strictly compared to other types of claims, with a higher likelihood of denial and a lower rate of approval. This section explores the factors influencing the probability of ruling in favor of the woman in abortion cases. As a preview of our findings, we show that a judge's sex significantly influences abortion denial.

Before delving into our analysis, it is important to understand the qualifications required to become a judge in Colombia. Colombian citizens aspiring to become judges must be under the age of 65 and hold a law degree. Additionally, they must have accumulated certain years of professional experience either practicing or teaching law, either independently or in public or private roles. Moreover, they must achieve high scores in knowledge and aptitude exams and complete competitive judgeship training. Overall, becoming a judge in Colombia is contingent upon various factors, including exam performance, completion of judgeship training, professional experience in law, possession of advanced law degrees, performance in interviews, and publication records.

Table A.1 provides an overview of judges' observable characteristics for those handling abortion rights claims. Male and female judges are statistically identical in observable characteristics, which is unsurprising given the competitive process for trial judgeship described earlier. On average, both male and female judges are approximately 48 years old and have six years of experience handling *tutelas* at the time of handling an abortion rights claim.[10] The workload is comparable for both sexes, with male and female judges managing around 1,800 *tutelas* and slightly fewer than 170 abortion rights claims, showing no statistically significant difference. In terms of educational background, all judges hold at least a bachelor's degree. While male judges would appear more likely to have earned their law degree from a selective institution, this difference is not statistically significant.

Next, we explore judges' behavior in abortion cases by comparing judges' proclivity to deny a wanted abortion for male and female judges. Figure I plots the distribution of the judge-specific likelihood of denying abortion separately for male and female judges. Despite similarities in their observable characteristics, male and female judges demonstrate starkly distinct patterns in their rulings on abortion cases. Male judges are substantially more inclined to deny abortion compared to their female counterparts. In contrast, female judges are more inclined to rule in favor of the woman seeking the abortion.

We examine this within a regression framework utilizing an ordinary least squares

[10] Figure A.3 plots the age distribution of these judges ruling on abortion rights claims, categorized by sex. The distributions for male and female judges overlap. The youngest judge at the time of the ruling was 29, while the oldest was 58.

(OLS) specification:

$$y_i = \alpha Female_{j(i)} + \delta_{o(i)} + \boldsymbol{X}'_{j(i)}\Gamma + \nu_i \quad (1)$$

where y_i is the judge's j decision of whether to deny, accept, or declare the case i inadmissible, $Female_{j(i)}$ is a female judge indicator, $\delta_{o(i)}$ are office-by-time fixed effects, $\boldsymbol{X}_{j(i)}$ is a vector of other judge characteristics, and ν_i is the error term.

Column (1) of Table A.2 shows that female judges are 19.5 p.p. less likely to deny abortion. Given that male judges deny 61.9% of abortion rights claims, this implies that female judges are 31.5% less likely to deny abortion rights claims than their male counterparts. In Column (2), we include all observable judge characteristics as controls. While none of the other controls are statistically significant (not reported), we continue to observe a large and significant effect of judge sex on the likelihood of denying abortion rights claims. Moreover, the magnitude and statistical significance of this effect remain similar to those in Column (1), indicating that other judge characteristics correlated with sex are unlikely to explain our main findings. Conversely, female judges are 14.5 p.p. (or 44%) more likely to accept an abortion rights claim than male judges. Additionally, rather than outright rejecting claims, female judges are 5.0 p.p. (or 91.8%) more likely to declare abortion rights claims inadmissible, allowing women the opportunity to revise and resubmit their claims.[11] Indeed, while male judges accept 27% of resubmitted abortion rights claims, female judges accept 47%, a 20 p.p. difference.

To test whether female judges exhibit a general tendency towards leniency in their rulings compared to male judges, we examine the decisions of these judges across nearly 160,000 cases unrelated to abortion, such as those concerning access to healthcare, employment, and humanitarian aid. The results, displayed in Table A.3, indicate that the gender gap observed in abortion denial does not extend to the judgment of other claims, *even when considering the same pool of judges*. That is, while female judges demonstrate a lower likelihood of denying *abortion* rights claims and ruling in favor of the woman, this pattern does not extend to *other* rights claims, such as those involving access to healthcare services, work, humanitarian aid, and general petitions. The coefficients for all other cases consistently hover close to zero and are negligible compared to the control means. Hence, the differential attitudes of female judges towards abortion cannot be attributed to a general predisposition towards leniency in their judgments.

[11] For example, judges may deem abortion rights claims inadmissible if the woman fails to provide the required documentation (Sentence C-355/2006; T-988/2007, T-209/2008, T-946/2008 y T-388/2009) or if the claim is inaccurate or incomplete. The observed increase in the likelihood of declaring an abortion rights claim inadmissible suggests that female judges are more inclined to request that the claimant rectify the submission rather than outright rejecting the abortion request.

In summary, our analysis reveals that female judges exhibit a significantly lower propensity to deny abortion rights claims compared to their male counterparts, even though they are identical in all other observable characteristics. Importantly, this gender disparity in abortion rulings does not stem from a general tendency towards leniency among female judges in other types of cases. As all *tutelas* are randomly allocated to judges, our empirical strategy, described in the following section, identifies causal effects by leveraging the random assignment of abortion rights claims to female judges as a source of exogenous variation in women's likelihood of being denied a wanted abortion.

4 The Impacts of Denying Abortion on Women

This section investigates the impact of denying women a wanted abortion on various aspects of women's lives, including their childbearing patterns, mortality rates, long-term health outcomes, household composition, education, workforce participation, poverty levels, household income, and reliance on welfare assistance.

4.1 Empirical Strategy and Validity

We begin by describing our IV approach based on female judges' tendency to rule in favor of the female claimants in cases randomly assigned to them. We discuss how the institutional environment supports the assumptions underlying this identification strategy and provide tests of these assumptions.

We estimate the causal effect of denying a wanted abortion using the following specification:

$$Denied_i = \gamma Female_{j(i)} + \delta_{o(i)} + e_i \tag{2}$$

$$Y_i = \beta Denied_i + \delta_{o(i)} + \epsilon_i \tag{3}$$

where Y_i is the observed outcome for case-individual i (the first abortion rights claim for a given pregnancy), $Denied_i$ is an indicator for whether the case-individual is denied, $Female_{j(i)}$ is an indicator that the case-individual is assigned to a female judge, and $\delta_{o(i)}$ is an office-by-time fixed effect. We cluster standard errors at the judge level.

As a robustness check, we also consider replacing the judge sex indicator with a standard "judge fixed effect" design instrumenting the woman's abortion denial with the av-

erage denial rate of all other abortion seekers assigned to the same judge:

$$Denied_i = \gamma Z_{j(i)} + \delta_{o(i)} + e_i \tag{4}$$

$$Y_i = \beta Denied_i + \delta_{o(i)} + \epsilon_i \tag{5}$$

where $Z_{j(i)}$ is the leave-one-out estimate of stringency for judge j assigned to individual i's case. During our study period, there are 125 judges in Medellín receiving abortion rights claims. We construct the instrument from an average of 158 abortion rights claims per judge. Figure A.4 shows the distribution of judge stringency, defined as the leave-one-out mean abortion denial rate for each judge. The variation in judge stringency is substantial: a 25 p.p. difference between the 10th percentile and 90th percentile of judge stringency.

If the IV assumptions are met, this analysis records a positive weighted average of denying a wanted abortion among compliers (Imbens and Angrist, 1994). In the first approach, compliers are defined as women who would have received a different outcome if their case had been assigned to a male judge. In the second approach, compliers are defined as women who would have received a different outcome if their case had been assigned to a different judge. We will now discuss the conditions for judge sex to be a valid instrument and for the IV estimand to be interpretable as a positive weighted average of local treatment effects on compliers: relevance, exogeneity, exclusion, and monotonicity. Each assumption is discussed and supported with arguments based on institutional details and empirical evidence.

i. Relevance. Table A.5 presents the first-stage estimates from Equations (2) and (4), indicating a large and statistically significant impact of judge sex and judge stringency on abortion denials. Column (1) shows that judge sex has a large and statistically significant impact on abortion denials, with female judges being 19.5 p.p. less likely than male judges to deny abortion (the p-value is 0.00). As Section 3 discussed, this first stage is robust to including other judge characteristics. Similarly, Column (2) shows that judge stringency has a large and statistically significant impact on abortion denials. The Kleibergen-Paap Wald F-statistic is 1735.36.

ii. Exogeneity. Table A.6 shows the result of a standard balance test of random assignment. Column (1) reports the non-denied mean, while Column (2) compares claimants' baseline observable characteristics when the abortion rights claim is denied. As expected, claimants' baseline characteristics predict receiving an abortion denial: women denied an abortion are less likely to be single and more likely to be married or cohabitating. Furthermore, a joint F-statistic of 3.237 implies that we can reject the null hypothesis that the coefficients are jointly equal to zero (the p-value is 0.000). Importantly, claimants' ob-

servable characteristics do not predict the judge randomly assigned to the case. Column (3), which compares individual characteristics when assigned to a female judge, shows that none of the 18 coefficients are statistically significant, and all coefficients are quantitatively small. In addition, we fail to reject the null hypothesis that the coefficients are jointly equal to zero (the p-value is 0.126), consistent with random assignment. Doing the same for judge stringency in Column (4) shows that none of the 18 coefficients are statistically significant and, again, we fail to reject the null hypothesis that the coefficients are jointly equal to zero (the p-value is 0.196).

Additionally, we establish the random assignment of claims to judges using OLS regression followed by an F-test. Specifically, we regress a claimant's characteristics, such as her age, on the office-by-time fixed effect and the judge fixed effects, as in Equation (6):

$$Age_i = \alpha + \beta\sigma_{j(i)} + \delta_{o(i)} + \varepsilon_i \tag{6}$$

where Age is the woman's age in years at the time of filing the claim for a given pregnancy, $\sigma_{j(i)}$ are judge fixed effects, $\delta_{o(i)}$ are office-time dummies, and ε_i is the error term. These judge fixed effects capture time-invariant unobserved differences in sentencing of abortion rights claims across judges. An F-test on the equality of the judge fixed effects tests the hypothesis that abortion rights claims are randomly assigned with respect to the claimant's age. Table III supports this assumption by showing no correlation between the judge's fixed effect and the claimant's age and 17 other baseline characteristics. The p-value of the joint F-test is 0.433.

iii. Exclusion. A third identification assumption of this IV approach is that female judges affect women's outcomes only through the abortion denial. This assumption is plausible in our setting. First, we focus only on cases related to abortion rights. Second, judges can only determine whether to accept, deny, or declare an abortion rights claim inadmissible (Art. 14 of Decree 2195/1991); they do not influence other aspects of the abortion rights claim. Third, judges never interact directly with claimants (there is no court hearing). These features enable us to isolating the impact of the abortion denial.

iv. Monotonicity. In our setting, monotonicity requires that women denied abortion by a female judge would have also been denied abortion by a male judge. Figure I shows that female judges are less likely to deny an abortion than male judges, and the overlap between the distributions of rejection rates is small. Monotonicity is, therefore, a natural assumption in our setting. When using judge stringency as an instrument, monotonicity requires that denied women would also have been denied abortion by a more stringent judge, while non-denied women would have not been denied by a less stringent judge. Typically, this condition can fail if judges are relatively harsh for some types of cases or

individuals and relatively lenient for others. In our setting, however, we construct judge leniency based only on abortion rights claims filed by women (not on all *tutelas*). Furthermore, we test monotonicity by comparing the first-stage estimates for different subsamples of women. Table A.7 shows similar first-stage estimates across women of different age groups, motherhood statuses, marital statuses, educational attainments, and wealth levels. This consistency suggests that the monotonicity assumption is likely to hold.

4.1.1 Compliers' Characteristics

In Table II, Column (6) presents the characteristics of compliers. Compared to all women filing abortion rights claims in Column (3), those denied abortion due to being assigned to a male versus a female judge are poorer, less educated, and less likely to live in Medellin. They are also less likely to have children and more likely to be married.[12]

4.2 Childbearing and Mortality

This section presents the causal effect of denying a woman a wanted abortion on her likelihood of giving birth and her mortality.

Table IV reports the results separately for births and deaths occurring within nine months of filing the abortion rights claim (Panel A) and after nine months of filing (Panel B). The first row in Column (1) shows that 29.0% of women who were *not* denied an abortion gave birth within nine months. This comparison group includes women whose abortion rights claim was accepted or deemed inadmissible, possibly leading to a resubmission. Among the accepted group, a slightly lower share (26.6%) gives birth within nine months. Notably, more than one in four women who successfully navigated the legal process of filing an abortion rights claim still ended up giving birth. Since Colombia did not impose gestational age limits for legal abortions during our study period, it is possible that these women reconsidered their decision or chose to continue the pregnancy by the time they gained access to abortion services.

Column (2) shows the causal effect of denying a wanted abortion on the likelihood of giving birth within nine months, using Specification (2). Abortion denial significantly raises the chances of women carrying the unwanted pregnancy to term by 30.7 p.p. This effect is both statistically significant and economically meaningful, representing a 106% increase compared to the comparison group. This finding counters the argument that restricting legal abortion does not reduce abortion rates but merely drives it underground.

[12] Table A.8 compares the characteristics of always-denied women, never-denied women, and compliers using judge sex and judge stringency as the instrument. Interestingly, the characteristics of compliers using the two instruments (judge sex or judge stringency) are nearly identical.

Instead, we find that abortion denial effectively *doubles* the likelihood of women continuing pregnancies to term. Moreover, since four-fifths of women were childless when they sought an abortion, abortion denial pushes many women into motherhood before they want it.[13,14]

The second row of Table IV shows a 1.6% mortality risk within nine months for non-denied women. This elevated risk is unlikely due to the abortion procedure itself, as clinical literature emphasizes the safety of legal abortion.[15] Instead, most deaths are due to health causes (62%), suggesting that some women seek abortion because their pregnancy poses a health threat, inherently placing them at risk, especially if the abortion procedure is delayed. Still, 0.12% of women died from direct or indirect obstetric causes, exceeding Colombia's maternal mortality rate of 0.075% in 2020 (WHO, UNICEF, UNFPA, World Bank Group, and UNDESA/Population Division, 2023), and the 0.05% maternal mortality rate we estimate for pregnant women pregnant from Medellin in SISBEN IV, underscoring the heightened risk faced by women seeking abortion compared to other pregnant women. Notably, while these women faced childbirth-related risks by carrying the pregnancy to term, the overwhelming majority of deaths (90%) occurred *without* a live birth.

Column (2) shows that abortion denial significantly increases the likelihood of women dying within nine months by 2.5 p.p., a 161% increase. In principle, this could be attributed to several factors. First, as described above, some women seeking abortion have underlying health issues that make pregnancy and childbirth risky for them, and forcing them to carry their pregnancies to term can heighten the risk of complications and fatalities. Second, the psychological distress caused by abortion denial could exacerbate existing mental health conditions or contribute to an increased risk of self-harm or suicide among affected women. Third, there is an increased risk of experiencing domestic violence after giving birth (Massenkoff and Rose, forthcoming), ultimately resulting in fatal outcomes. Lastly, abortion denial might drive women towards seeking unsafe pro-

[13] Consistent with this interpretation, Table A.9 finds an increase in the proportion of babies born to first-time mothers for births occurring within nine months. Moreover, the table shows there is no evidence of sex-selective abortions: these babies do not show a higher likelihood of being of a specific sex. Their APGAR scores and gestational age at birth are similar to other newborns. However, abortion denial seems to increase the incidence of babies with low birth weight delivered via cesarean section.

[14] In our setting, a lower percentage of women denied abortion carry the pregnancy to term (41%) compared to the Turnaway Study (70%). This difference may arise from illegal abortions being more prevalent or from denied women being in an earlier stage of pregnancy, making illegal abortions less complicated than later-stage abortions. To investigate this, the final row of Table A.9 indicates that non-denied women who subsequently gave birth filed their *tutela* at 18 weeks of gestation; an upper bound since women filing abortion rights claims earlier in their pregnancies are less likely to give birth. Denied women compelled to give birth sought abortion five weeks later, on average.

[15] Legal abortions have lower complication rates than routine procedures like wisdom teeth extraction, and abortion pills are safer than common medications like penicillin, Tylenol, and Viagra (Upadhyay et al., 2015).

cedures to terminate pregnancies, which can lead to fatal complications such as infection and hemorrhage.

Analyzing the cause of death provides insight into these possibilities. Septicemia and infections drive the rise in women's mortality, with the likelihood of dying from these causes increasing by 3.4 p.p. or over 1000%. Abortion denial does not affect women's likelihood of dying due to direct or indirect obstetric causes, other health issues, or due to external causes, like homicide or suicide. Moreover, it does not affect the likelihood of giving birth and dying. Therefore, denying access to legal abortion seems to increase women's mortality by pushing them to seek unsafe procedures to terminate pregnancies, leading to fatal outcomes. Figure IV and Table A.10 show that these results are robust to replacing the judge sex indicator with a standard judge fixed effect.[16]

Panel B of Table IV examines the probability of childbirth for a subsequent pregnancy and the mortality rate beyond ten months after filing the abortion rights claim. Approximately 6.1% of women in the comparison group become pregnant again and give birth later in their lives. The fact that abortion denial does not negatively affect this outcome indicates that it impacts not only women's ability to choose the *timing* of childbearing but also their decision on *whether* to have children and how *many*. Moreover, 0.8% of women in the comparison group pass away ten months or more after filing the abortion rights claim, and abortion denial does not influence this outcome.

The last row of Table IV presents the probability of women filing another abortion rights claim at least ten months after their initial one. Interestingly, only 0.7% of women file a subsequent abortion rights claim for another pregnancy after their initial encounter, with virtually all (over 99%) experiencing just one legal abortion encounter during nearly two decades. Furthermore, abortion denial does not significantly influence the likelihood of filing another abortion rights claim; the effect is negative but not statistically significant.

4.3 Long-Term Effects on Fertility and Family Formation

We now turn to the long-term effects of denying a wanted abortion on various outcomes for women. These outcomes, measured using SISBEN IV, are realized nearly six years after women file an abortion rights claim when they are about 33 years old. Specifically, we start by examining the impacts on fertility and family formation.

Table V presents the results. In line with our earlier finding that abortion denial heightens the chances of childbirth, Panel A reveals a 34.6 p.p. increase in the likelihood

[16] Table A.10 shows that the results remain robust even when restricting the sample to cases handled by male judges. This suggests that the impact of judge sex on abortion denial is due to the different tendencies of male versus female judges to deny abortion.

of having children, marking a 97% increase compared to women in the comparison group. This denial also results in 0.510 increase in the number of children (83.3%). This indicates that abortion restrictions not only hinder women's ability to decide *when* to have children but also affect their decisions about whether to have them and how many.[17]

Moreover, 70.0% of non-denied women live with their parents or in-laws, and over three-fourths reside with adult relatives (excluding spouses and cohabitating partners, which we turn to later). While the Turnaway Study women raised their children without family support, women denied abortion in our setting are 13.7 p.p. (19.6%) more likely to reside with parents or in-laws and 18.1 p.p. (24.0%) more likely to live with any adult relative. This is consistent with childbirth inducing reliance on extended families, more common in developing countries (e.g., Aguilar-Gomez et al., 2019). Overall, abortion denial results in a 0.699 increase in household size, representing a 19.9% expansion.

Panel B details the effects on women's marital status. One-third of non-denied women have never been married, and abortion denial has no discernible impact on this outcome. However, abortion denials cause an eight p.p. decrease in the likelihood of being married or cohabitating and an 8.8 p.p. increase in the likelihood of being divorced or separated. As a result, Panel C indicates that abortion denial increases the likelihood of single motherhood by 15.3 p.p., representing a 41.5% increase. This outcome is influenced by several factors: a higher likelihood of having children, a lower likelihood of marriage or cohabitation, and a higher likelihood of divorce or separation. These results, as well as all of our other main estimates, are robust to replacing the judge sex indicator with a standard judge fixed effect (Table A.11).

4.4 Long-Term Effects on Health

Next, we examine the effects of denying wanted abortions on various health outcomes for women, as self-reported in SISBEN IV. Again, these outcomes are realized about six years after women file an abortion rights claim.

Column (1) of Table VI indicates that 22.4% of women in the comparison group reported experiencing an "illness, accident, dental issue, or non-hospitalization-requiring health concern" in the 30 days preceding the SISBEN survey. Column (2) shows that denial of abortion increases the likelihood of experiencing a health issue by 13.8 p.p., equivalent to a 61.6% rise. This increase may stem from the fact that women denied abortion

[17] Importantly, the magnitudes of these effects closely resemble those observed in childbirth, indicating that a minimal number of these women opted for adoption for their child. This aligns with survey findings from the Turnaway Study, where a mere 9% of women who were turned away chose to place their child for adoption.

were compelled to carry their pregnancies to term or resort to unsafe procedures, both of which appear to have led to long-term health complications.

Over 90% of women in the comparison facing health issues sought medical care, and among them, over 97% received the necessary care. However, while abortion denial significantly increases women's likelihood of seeking medical care by 8.1 p.p., this effect size is roughly half the magnitude of the effect on experiencing a health problem. This suggests that denying women abortions may reduce their subsequent inclination to seek healthcare when encountering health problems. It is plausible that some of these women may lack trust in healthcare providers, given their previous experience of delayed or denied access to abortion services.[18]

4.5 Long-Term Effects on Educational and Labor-Market Outcomes

Next, we examine the effect of denying a woman a wanted abortion on her educational attainment and participation in the labor force. Again, we observe these outcomes six years post-abortion encounter, on average.

In Table VII, Column (1) illustrates that most women in the comparison group have not obtained a high school diploma by age 33. Moreover, Column (2) highlights the impact of abortion denial on women's educational attainment. The probability of obtaining a high school diploma significantly decreases by 9.8 p.p., representing a 43.0% reduction. Additionally, there is a marginally significant increase of 4.9 p.p., or 52.9%, in the likelihood of having no education. Moreover, only 8.1% of non-denied women hold a postsecondary degree, and abortion denial does not influence this outcome.

Regarding women's participation in the workforce, Column (1) shows that fewer than one-fourth of non-denied women actively participate in the labor force. Those employed primarily work as self-employed and domestic workers, and some are employed in private firms. However, three-fourths of women do *not* participate in the labor force, with 55.8% being homemakers and 7.4% inactive. Column (2) shows that abortion denial significantly diminishes women's workforce participation, leading to a 10.6 p.p. reduction in the likelihood of employment (a 54.6% decrease) and a 4.7 p.p. decline in job-seeking (a 99.3% drop). This decline in employment is driven by women exiting self-employment and domestic work. Concurrently, the likelihood of becoming a homemaker increases by 12.2 p.p. (a 21.9% rise), while the likelihood of having no activity rises by 8.5 p.p. (a 115.0% increase). These findings underscore the substantial adverse impact of abortion denial on

[18] 16.9% of non-denied women report enduring permanent limitations since birth or due to illness or accidents, and fewer than 1% of them were pregnant at the time of the SISBEN survey, with abortion denial showing no impact on either of these outcomes.

women's economic involvement. As we will see, it will have ramifications into their ability to generate income, with negative repercussions affecting other family members.

4.6 Long-Term Effects on Poverty and Welfare Assistance

We now turn to household-level outcomes and investigate the long-term impacts of abortion denial on poverty and welfare assistance.

Table VIII examines three different measures of household poverty. First, we utilize the household residential stratum (*estrato*) from Colombia's socioeconomic stratification system, categorizing households from 1 to 6 based on poverty determined by neighborhood and dwelling characteristics (with 1 representing the poorest). Column (1) shows that approximately 30.6% of women in the comparison group reside in the most impoverished neighborhoods, in strata 0 or 1.[19] Column (2) indicates that abortion denial catapults the likelihood of women residing in these poorest strata by 12.9 p.p. (42.2%).

A second measure of poverty refers to the SISBEN IV group, categorizing households into four categories (A to D) based on poverty levels and income-generating capacity (A indicating extreme poverty and the least income-generating capacity). About 11.3% of women in the comparison group live in conditions of extreme poverty (group A), and 28.3% endure moderate poverty (group B). Abortion denial heightens the probability of women residing in extreme or moderate poverty by 18.7 p.p., or 47.1%.

A third and final measure of poverty refers to the multidimensional poverty index (MPI), which measures households' overlapping deprivations across ten indicators in three equally weighted dimensions: health, education, and standard of living.[20] Column (1) shows that 26.5% of non-denied women experience multidimensional poverty. Column (2) indicates that abortion denial elevates this figure by 19.1 p.p., representing a 72.2% rise. Thus, all three measures are consistent: denying women a wanted abortion leads them to live in poverty.

Next, Panel B turns to impacts on welfare assistance. Only 3.3% of women in the comparison group receive benefits from *Familias en Acción*, Colombia's main conditional cash transfer program for low-income families with children. Abortion denial increases this probability by 17.3 p.p. or 518.7%. This is both because denying abortion raises the chances that women have children and simultaneously increases their likelihood of living

[19] Tenants in the SISBEN may be categorized as stratum 0 if they reside in a single room within a shared dwelling and use a communal restroom.

[20] The MPI complements the international $2.15 a day poverty rate by identifying who is multidimensionally poor. It was developed by the Oxford Poverty and Human Development Initiative in partnership with the Human Development Report Office of the United Nations Development Program as an internationally comparable index of acute multidimensional poverty (Departamento Nacional de Planeación, 2012).

in poverty.

Table A.12 reports the impacts on household income. Additional government assistance alleviates the income decline resulting from dropping out of the labor force due to abortion denial. This decline in market income is attributed to reduced salary earnings, consistent with abortion denial causing women to work less. Some family members resort to self-employment, resulting in a marginally significant increase in self-employment income. Nonetheless, the overall impact is a 24% decrease in market income. However, the amount of government transfers increases due to households receiving cash transfers from *Familias en Acción*. Consequently, abortion denial reduces post-transfer household incomes, though the coefficient is not statistically significant at conventional levels.

The final rows of Table VIII examine the probability of enrolling in Colombia's subsidized health regime, the publicly funded health insurance program for the poor. In line with abortion denial increasing women's likelihood of living in poverty, it also increases their probability of enrolling in the subsidized health regime by 8.8 p.p. (12.4%). Additionally, there is a non-significant 2.3 p.p. (9.0%) decrease in the likelihood of being part of the contributory health regime for formal workers, consistent with denied women's exit from the labor force.

To summarize, denying a woman a wanted abortion exacerbates household poverty and increases dependence on welfare assistance. Our analysis, using three distinct measures of poverty, consistently shows a significant and economically meaningful increase in poverty levels due to abortion denial, indicating a substantial financial burden for households. Again, these results are robust to replacing the judge sex indicator with a standard judge fixed effect (Figure IV and Table A.11). As we will discuss in Section 5, this financial strain on households has ripple effects on children.

4.7 Impacts Across Time

This section compares the effects of abortion denial across time. On average, we observe individual and household outcomes in SISBEN IV six years after women seek abortion. For some women, we observe outcomes shortly after filing; for others, up to 15 years later; and for others, even before they seek abortions.

Figure II compares the effects of abortion denial on various outcomes by groups of years since filing an abortion rights claim using Specification (2). The sample comprises 14,542 women in SISBEN IV filing abortion rights claims between 2006 and 2022. As expected, abortion denial does not influence women's outcomes before seeking an abortion. However, denial has an immediate adverse effect on their well-being. The point estimate

immediately after abortion denial is large and statistically significant, indicating immediate impacts on women's fertility, health, labor-force participation, poverty levels, and welfare assistance. These adverse effects persist over time, even more than eight years later. For example, abortion denial lowers women's labor-force participation shortly after denial, and this effect remains consistent in both magnitude and statistical significance over the long term. Similarly, the impact on women's likelihood of living in extreme or moderate poverty is immediate and persistent, with the point estimate remaining almost identical more than eight years after abortion denial.

4.8 Heterogeneity by Baseline Characteristics

This section presents the heterogeneous effects of abortion denial based on the women's age and whether she already had children when seeking an abortion. Indeed, our identifying source of variation allows us to estimate and compare the impacts of childbirth among women who were initially childless (the extensive margin) and the effects of having an additional child among women who already had children (the intensive margin), as well as the timing of fertility.

Panel A of Figure III and Table A.13 compare the effects for women aged 19 and under versus 20 or older when seeking an abortion. The effects of abortion denial on subsequent health complications seem to be particularly pronounced among women who were teenagers or younger when seeking abortion. For this group, abortion denial also reduces the likelihood of marriage or cohabitation, raising their likelihood of being single mothers. Similarly, the negative impacts on poverty levels and household income are substantially larger for this group.

Most women seeking abortion did not have children, while about one-fourth already had children. Panel A of Figure III and Table A.14 compare effects for these two groups, showing that previously childless women are much more likely to experience subsequent health complications and raise their children as single mothers due to being denied an abortion. Similarly, their chances of earning a high school degree are more profoundly affected by abortion denial.

In contrast, women who already had children before seeking abortion, who were poorer at baseline, do not appear to experience subsequent health issues, changes in marital status, or lower educational attainment following abortion denial. However, they do experience a more significant disruption in their labor-force participation, likely because they were more likely to participate in the workforce to begin with. For them, having an additional child leads them to drop out of the workforce. As a result, they also experience

poverty and household income as a result of abortion denial. The next section will show the ramifications for their children.

5 The Impacts of Denying Abortion on Children

This section delves into the consequences of denying a wanted abortion on children's outcomes. Having an additional sibling can impact older children's well-being, particularly when resources such as money, parental time, and attention are limited. Moreover, the preceding sections highlighted the negative effects of denying a wanted abortion on the economic stability of households. These financial constraints can hinder parents' capacity to fulfill their children's basic needs and invest in their education.

Table IX focuses on the youngest children born before their mother sought an abortion.[21] These children had already been born when their mother sought an abortion. The analysis includes 2,317 such children, typically aged around 5.5 years when their mothers sought abortion and approximately 12 years old during the SISBEN survey. Six years after the abortion encounter, abortion denial has adversely affected these children's educational attainment. While 78.0% of children in the comparison group attend preschool, school, or college, abortion denial reduces this share by 34.2 p.p., representing a 43.8% decrease. Abortion denial also appears to increase truancy and grade retention, but these effects are not statistically significant.[22] Additionally, denying a wanted abortion significantly raises the likelihood of children turning to child labor, increasing by 10.2 p.p. or nearly 420%. These results are robust to replacing the judge sex indicator with a standard judge fixed effect (Figure IV and Table A.18).

While approximately 56% of non-denied women are homemakers, and about 35.4% of their existing children are cared for by a parent on weekdays, the situation changes when women leave the labor force due to abortion denial. These women appear to be less involved, not more, in caring for their older children: the probability of their youngest child, born before the abortion situation, staying home under a parent's care decreases by 28.2 p.p. (79.6%). Instead, these children are 30.6 p.p., or 365%, more likely to stay home under the supervision of an adult relative, which aligns with previous findings indicating that abortion denial increases women's likelihood of living with parents or in-laws. Importantly, these children are also 49.8 p.p., or 184%, more likely to be left home alone.[23]

Lastly, we examine how the impacts of abortion denial vary by the child's age and

[21] The results are similar using all children born before the abortion rights claim (Table A.15).
[22] Table A.16 reports the effect on the highest grade attained. Abortion denial reduces the likelihood of attaining fourth grade and increases the likelihood of attaining second grade.
[23] Table A.17 shows no detectable effects on children's health outcomes.

sex. We categorize children into two groups: those below and those above the median age at the time of the SISBEN IV survey. On average, younger children were 3 years old when their mothers sought abortions and 8 years old when surveyed; older children were 7 years old when their mothers sought abortions and 15 years old when surveyed. Older children are less likely to attend school and more likely to work following their mother's abortion denial, although the smaller sample makes the letter effect become only marginally significant. Additionally, older children are less likely to stay at home with a parent and more likely to be left with an adult relative or alone (Table A.19).

We also compare the effects by the child's sex. Again, the small sample generates some differences in the first stage by sex when using judge sex as an instrument, but these differences disappear when using judge stringency as the instrument. Therefore, we report impacts using both instruments. Boys appear to be less likely to attend school following their mother's abortion denial. Both boys and girls are more likely to engage in child labor, but these effects are precisely estimated only using judge stringency as the instrument (Table A.20).

6 Conclusion

This paper studied the causal effect of denying a wanted abortion on women and children in Colombia. We leveraged linked administrative microdata, random assignment of abortion rights claims to judges, and variation in the tendency of judges to rule against abortion cases using IV. Our findings consistently demonstrate that denying a wanted abortion inflicts substantial and enduring economic, social, and health harm on women, with meaningful repercussions for their families, including their children. These results underscore the importance of public health policy and the need for measures to mitigate the impact of restricted access to safe abortion.

It is worth discussing some caveats to our findings. First, our data encompasses abortions desired by women who successfully navigated the legal system and filed an abortion rights claim. However, many women with unwanted pregnancies facing barriers to abortion may not even attempt to file a *tutela*, perhaps due to a lack of knowledge about their legal rights or discouragement from relatives or healthcare providers. These women may turn to illegal abortions, putting their lives at risk, and we do not observe illegal abortions, even though they represent the majority of abortions in Colombia (Guttmacher Institute, 2011).

While access to abortion care in a large city like Medellin should not be affected by distance to abortion providers, women living in more remote areas may face additional

barriers to abortion access. They may also be more likely to encounter complications from self-induced procedures or by seeking assistance from unskilled providers. Consequently, the health impacts of restricting legal access to abortion can be even more significant outside large cities.

Lastly, we demonstrated that restricting access to legal abortion leads to health complications and economic hardships for women and their children in an upper-middle-income country with a median per capita GDP. While these results are likely externally valid, the consequences of denying abortions may be even more severe in lower-income nations, which often have more restrictive abortion laws and higher rates of illegal abortions. With 97% of unsafe abortions occurring in developing countries (Haddad and Nour, 2009), and unsafe procedures being six times riskier in these settings (Singh and Maddow-Zimet, 2016), unsafe abortion is a leading cause of maternal deaths and morbidities. Consequently, the health and economic impacts of abortion denials and the continuation of unwanted pregnancies are likely to be amplified in these contexts.

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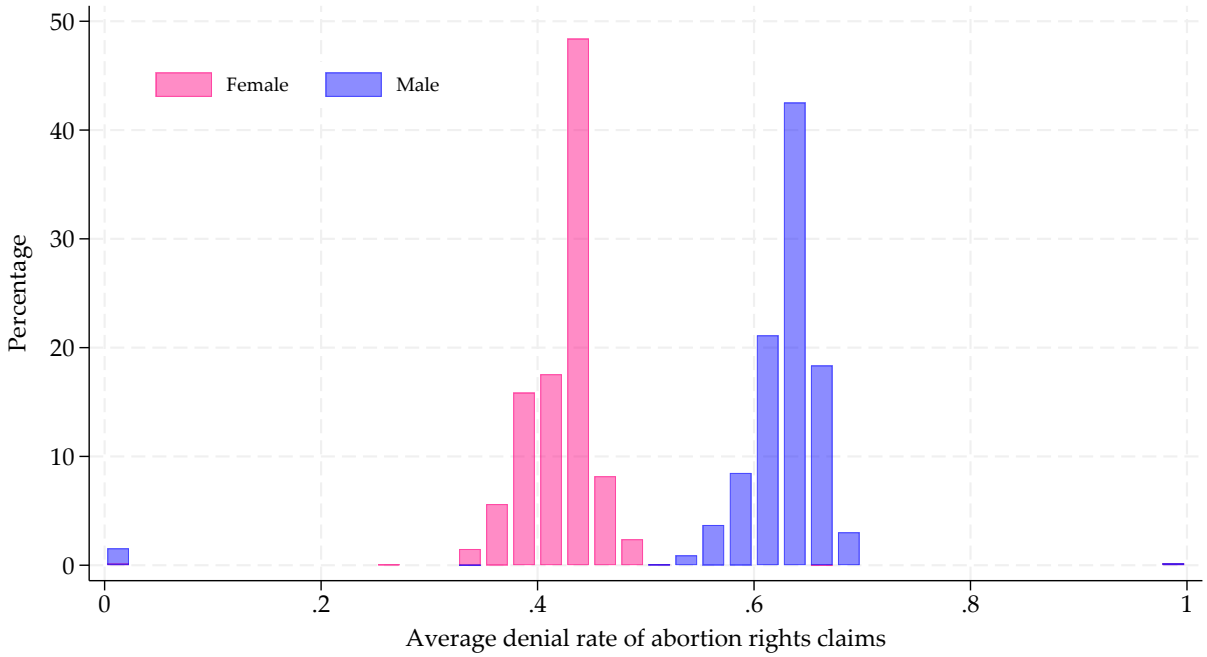
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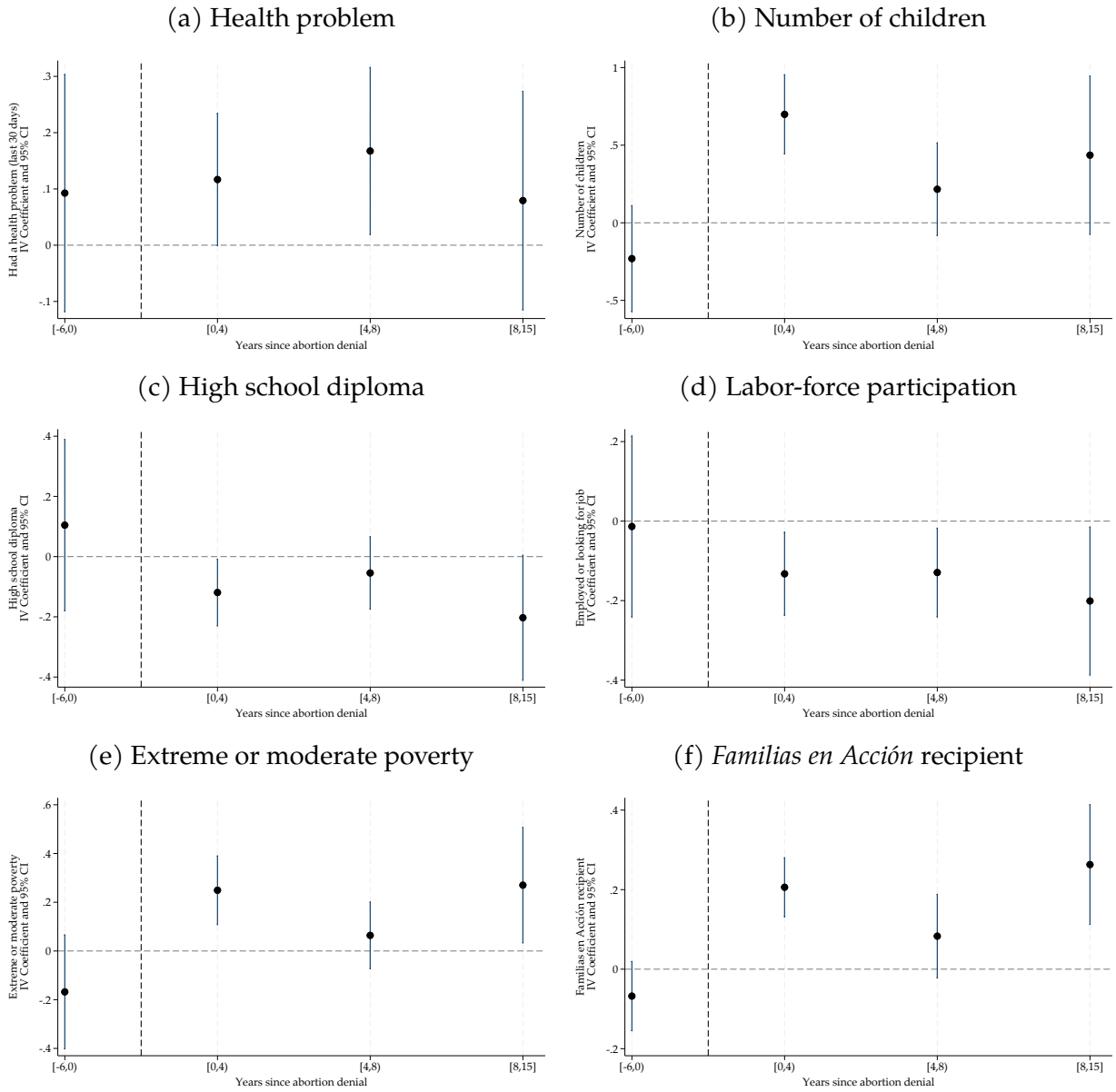
Figures and Tables

Figure I: Female Judges are 20 p.p. Less Likely to Deny Women a Wanted Abortion



Notes: This figure plots the distribution of the judge-specific likelihood of rejecting an abortion rights claim separately for male and female judges, where each judge is weighted by the number of abortion cases handled. 19,759 abortion cases are handled by a total of 125 judges, 42.3% of whom are female. Female judges are 20 p.p. less likely to deny women a wanted abortion than male judges. Column (1) of Table A.5 reports the coefficient and associated standard errors of the difference in abortion denial rates between male and female judges. *Sources:* Authors' calculations using the Constitutional Court and Rama Judicial data.

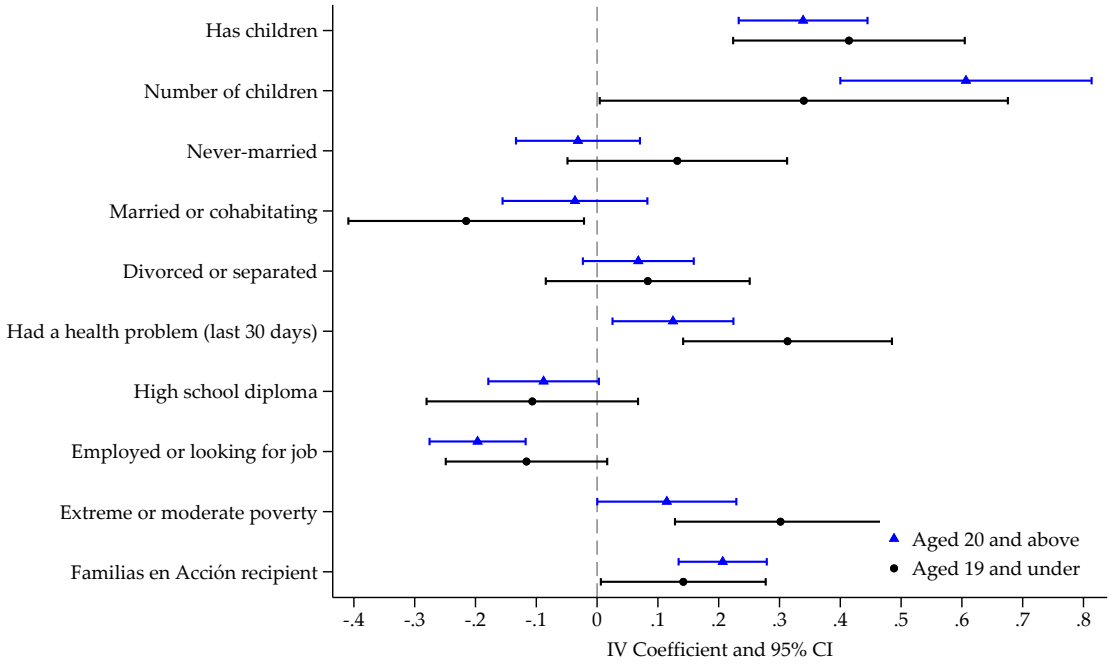
Figure II: Impacts over Time



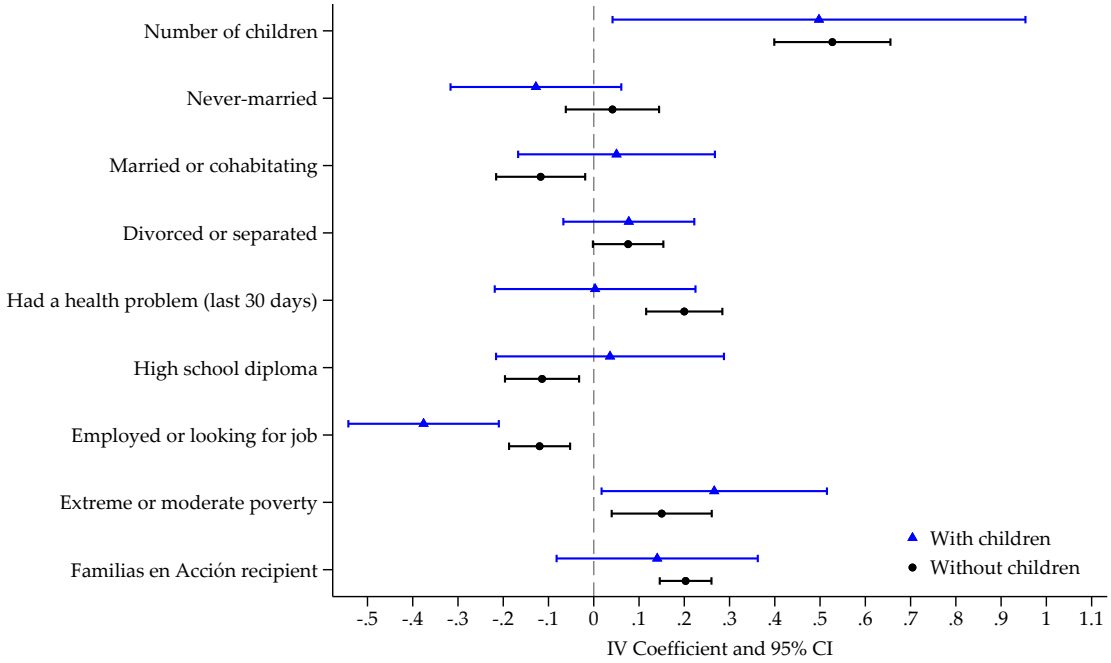
Notes: This figure compares the effects of abortion denial for various outcomes, separately by years since filing an abortion rights claim, augmenting Specification (2) with the woman's age and age squared at the time of the survey. The sample includes 14,542 women in SISBEN IV filing abortion rights claims between 2006 and 2022. Vertical lines indicate 95% confidence intervals. *Sources:* Authors' calculations using Constitutional Court and SISBEN IV data.

Figure III: Heterogeneity by Women's Baseline Characteristics

(a) Younger or older than 20



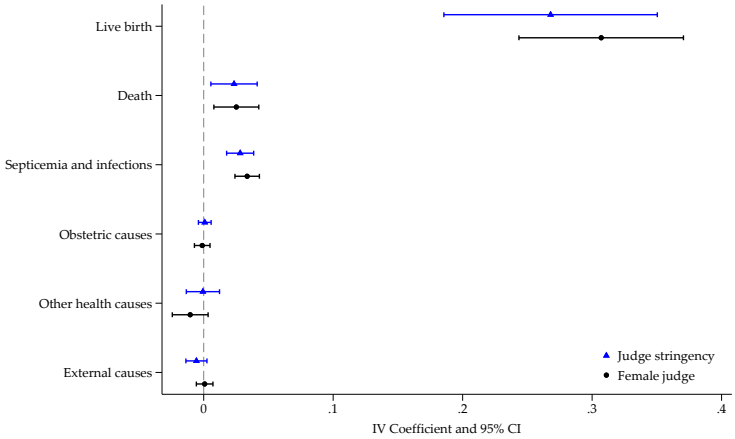
(b) Already had children



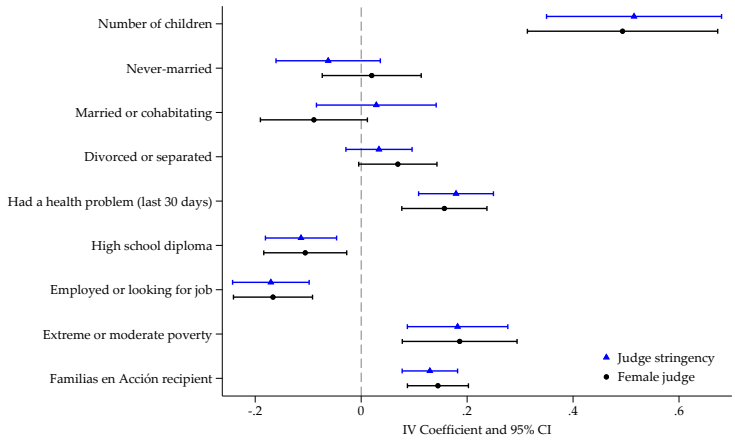
Notes: This figure compares the effects of abortion denial separately by baseline characteristics. Panel A compares impacts by the woman's age when seeking abortion, augmenting Specification (2) with bins of years since the survey. Panel A compares impacts by whether the woman had children when seeking an abortion, augmenting Specification (2) with the woman's age and age squared at the time of the survey. Tables A.13 and A.14 report the corresponding estimates. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Figure IV: Robustness Using Judge Stringency

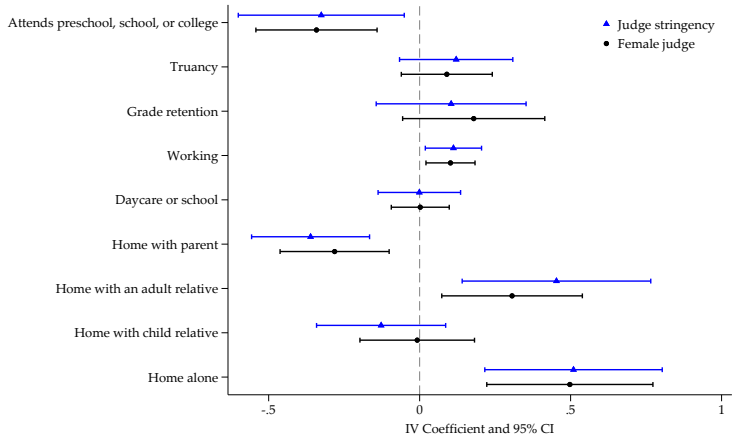
(a) Immediate Childbearing and Mortality



(b) Long-Term Outcomes for Women



(c) Long-Term Outcomes for Children



Notes: This figure compares the estimates using judge sex and leniency as instruments for abortion denial. Tables A.10, A.11 and A.18 report the corresponding estimates. *Sources:* Authors' calculations using data from the Constitutional Court, Vital Statistics, and SISBEN IV.

Table I: Summary Statistics

	Judicial claims (*Tutelas*)	
	All	Abortion care
	(1)	(2)
Female judge (%)	46.0	42.3
Denies (%)	32.8	53.7
Accepts (%)	68.9	38.6
Inadmissible (%)	1.9	7.7
N cases	1,646,255	19,760
N claimants	855,351	19,649
N offices	18	4
N judges	585	125

Notes: This table provides a summary of the statistics for judges in Medellín handling both any *tutela* and abortion-related *tutelas* in Columns (1) and (2), respectively. From 2006 to 2022, approximately 1.6 million claims were filed by 855,351 claimants. Among these, 19,760 pertain to abortion, submitted by 19,649 claimants across four different offices and distributed among 125 judges, 42.3% of whom are female. Judges are notably more inclined to reject abortion rights claims and declare them inadmissible. *Sources:* Authors' calculations using the Constitutional Court and Rama Judicial data.

Table II: Baseline Characteristics of Women Filing Abortion Rights Claims

	All women in Medellin (1)	Women filing *tutelas*: Any *tutela* (2)	Abortion rights claims: All (3)	Denied (4)	Not denied (5)	Compliers (6)	(1)-(2) *p*-value (7)	(1)-(3) *p*-value (8)	(4)-(5) *p*-value (9)
Age at SISBEN III survey	30.457	39.313	21.890	21.943	21.828	21.824	0.000	0.000	0.513
Age at abortion encounter			28.054	28.107	27.991	28.139			0.490
Teenager at abortion encounter			0.208	0.209	0.206	0.178			0.714
No education	0.209	0.125	0.147	0.150	0.143	0.148	0.000	0.000	0.279
Elementary	0.385	0.491	0.498	0.500	0.496	0.548	0.000	0.089	0.697
Middle school	0.163	0.160	0.151	0.145	0.159	0.121	0.000	0.009	0.037
High school	0.179	0.174	0.169	0.171	0.166	0.154	0.000	0.237	0.471
Postsecondary	0.090	0.074	0.058	0.057	0.058	0.029	0.000	0.000	0.734
Wealth (SISBEN score)	42.476	39.765	41.440	41.284	41.623	37.960	0.000	0.000	0.313
Residential strata 0 or 1	0.235	0.307	0.287	0.288	0.285	0.315	0.000	0.601	0.696
Household size	5.226	5.189	4.951	4.923	4.983	4.593	0.000	0.000	0.257
Has children	0.205	0.208	0.217	0.215	0.218	0.188	0.000	0.011	0.765
Number of children	0.304	0.307	0.318	0.311	0.326	0.263	0.002	0.042	0.232
Single	0.519	0.307	0.343	0.327	0.362	0.335	0.000	0.000	0.000
Married or cohabitating	0.309	0.417	0.413	0.431	0.391	0.450	0.000	0.441	0.000
Divorced or separated	0.096	0.156	0.124	0.121	0.129	0.087	0.000	0.000	0.197
Widowed	0.075	0.120	0.119	0.121	0.117	0.129	0.000	0.009	0.546
Lives in Medellin	0.998	0.996	0.905	0.897	0.914	0.818	0.000	0.000	0.002
N	1,283,721	294,757	11,129	6,010	5,119				

Notes: This table compares women's baseline demographic and socioeconomic characteristics based on SISBEN III. Column (1) provides statistics for all women in Medellín. To observe baseline characteristics in SISBEN III, Columns (2) and (3) narrow the sample to women who filed *tutelas* and abortion-related *tutelas* after June 2010. Columns (4) and (5) separately detail information for those denied abortion and those not denied. Column (6) reports compliers' characteristics, instrumenting abortion denial with the sex of the randomly assigned judge. Columns (7) through (9) present *p*-values for various comparisons. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN III.

Table III: Test of Random Claim Assignment to Judges

	F-Statistic (1)	p-value (2)
Age at SISBEN III survey	1.115	0.204
Age at abortion encounter	1.115	0.204
Teenager at abortion encounter	1.165	0.124
No education	0.920	0.703
Elementary	0.975	0.554
Middle school	1.044	0.362
High school	1.062	0.316
Postsecondary	1.495	0.001
Wealth (SISBEN score)	1.155	0.137
Residential strata 0 or 1	1.024	0.416
Household size	0.883	0.792
Has children	0.856	0.847
Number of children	0.809	0.920
Single	0.908	0.734
Married or cohabitating	1.108	0.217
Divorced or separated	1.179	0.107
Widowed	0.512	1.000
Lives in Medellin	0.745	0.974
Joint F-test	1.018	
p-value	0.433	

Notes: This table reports tests of random claim assignment to judges. Each row displays the coefficient from running an OLS regression of each baseline control variable on the judge fixed effect and the office-by-time fixed effect. The p-value reported at the bottom is for a F-test of the joint significance of the variables listed in the rows. To observe baseline characteristics in SISBEN III, the sample is restricted to 11,128 women who filed an abortion rights claim after June 2010. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN III.

Table IV: Impacts of Denying a Wanted Abortion on Childbearing and Mortality

	Non-Denied Mean (1)	IV (2)
Panel A: *Current pregnancy* (*within 9 months from filing claim*)		
Live birth	0.290	0.307
		(0.032)
Death	0.016	0.025
		(0.009)
Septicemia and infections	0.003	0.034
		(0.005)
Obstetric causes	0.001	-0.001
		(0.003)
Other health causes	0.010	-0.010
		(0.007)
External causes	0.002	0.001
		(0.003)
Live birth and death	0.002	-0.003
		(0.003)
Panel B: *Subsequent pregnancy* (*at least 10 months after filing abortion rights claim*)		
Live birth	0.069	-0.019
		(0.020)
Death	0.008	0.002
		(0.007)
Another abortion rights claim	0.007	-0.007
		(0.005)

Notes: This table presents the effects of denying a wanted abortion on childbearing and mortality using Specification (2). Panel A focuses on outcomes realized within nine months of filing an abortion rights claim, while Panel B focuses on outcomes realized at least ten months after filing the claim. The sample in Panel A comprises 19,759 women who filed an abortion rights claim between 2006 and 2022. The four causes of death are mutually exclusive. In Panel B, the first two rows balance the sample to 14,504 women whose outcomes we can observe for 60 months after filing their abortion rights claim. The final row presents the likelihood of filing an abortion rights claim for a subsequent pregnancy. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and Vital Statistics.

Table V: Impacts on Household Composition and Marital Status

	Non-Denied Mean (1)	IV (2)
Panel A: *Household size and composition*		
Has children	0.358	0.346
		(0.050)
Number of children	0.611	0.510
		(0.099)
Lives with parents or in-laws	0.700	0.137
		(0.052)
Lives with adult relative(s)	0.755	0.181
		(0.048)
Number of adult relatives	0.724	0.599
		(0.118)
Household size	3.508	0.699
		(0.169)
Panel B: *Marital status and partner quality*		
Never-married	0.335	-0.005
		(0.047)
Married or cohabitating	0.428	-0.080
		(0.049)
Divorced, separated, or widowed	0.237	0.086
		(0.038)
Spouse or partner's years of education	6.024	0.273
		(1.590)
Single mother	0.370	0.153
		(0.048)

Notes: This table presents the impact of denying a woman a wanted abortion on household size and composition, marital status, partner's educational attainment, and personal characteristics using Specification (2). These outcomes are realized nearly six years after women file an abortion rights claim, when they are about 33 years old. The sample is restricted to 11,018 women filing abortion rights claims before the SISBEN IV survey. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Table VI: Impacts on Women's Self-Reported Health

	Non-Denied Mean (1)	IV (2)
Had a health problem (last 30 days)	0.224	0.138
		(0.041)
Sought healthcare (last 30 days)	0.203	0.081
		(0.038)
Received healthcare (last 30 days)	0.198	0.068
		(0.038)
Disability	0.169	0.025
		(0.041)
Pregnant	0.009	-0.008
		(0.011)

Notes: This table presents the effects of denying a woman a wanted abortion on various health outcomes using Specification (2). These outcomes are realized nearly six years after women file an abortion rights claim, when they are about 33 years old. The first four rows report impacts on a dummy for answering 'Yes' to the following: "*Within the past 30 days, have you experienced any illnesses, accidents, dental issues, or health concerns that did not require hospitalization?*" "*Did you seek assistance from a healthcare provider such as a general practitioner, specialist, dentist, therapist, or another health professional?*" "*Were you assisted?*" and "*Have you experienced permanent limitations in seeing, hearing, speaking, moving independently, bathing, dressing, feeding yourself, going outside without assistance or company, or understanding and learning since birth or due to illness or accidents?*" The last row reports impacts on the likelihood of being pregnant at the time of the SISBEN IV survey. The sample is restricted to 11,018 women filing abortion rights claims before the SISBEN IV survey. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Table VII: Impacts on Women's Educational Attainment and Labor-Force Participation

	Non-Denied Mean (1)	IV (2)
Panel A: *Educational attainment*		
No education	0.093	0.049
		(0.028)
Elementary	0.447	0.014
		(0.040)
Middle school	0.148	-0.005
		(0.035)
High school	0.227	-0.098
		(0.042)
Postsecondary	0.081	0.040
		(0.029)
Panel B: *Labor-force participation*		
Employed	0.194	-0.106
		(0.036)
Self-employment	0.076	-0.052
		(0.020)
Domestic worker	0.030	-0.031
		(0.013)
Private sector employment	0.069	-0.013
		(0.016)
Public sector employment	0.009	-0.005
		(0.007)
Non-remunerated worker	0.002	0.004
		(0.004)
Other employment type	0.008	-0.009
		(0.007)
Looking for job	0.047	-0.047
		(0.017)
Homemaker	0.558	0.122
		(0.048)
No activity	0.074	0.085
		(0.030)
Unable to work due to permanent disability	0.042	0.005
		(0.019)
Student	0.047	0.008
		(0.018)

Notes: This table presents the effects of denying a wanted abortion on women's educational and labor-market outcomes using Specification (2). These outcomes are realized nearly six years after women file an abortion rights claim, when they are about 33 years old. The sample is restricted to 11,018 women filing abortion rights claims before the SISBEN IV survey. Standard errors are clustered at the judge level.
Sources: Authors' calculations using data from the Constitutional Court and SISBEN IV.

Table VIII: Impacts on Household Poverty and Welfare Assistance

	Non-Denied Mean (1)	IV (2)
Panel A: *Household level of poverty*		
Residential strata 0 or 1	0.306	0.129
		(0.049)
Extreme or moderate poverty	0.396	0.187
		(0.054)
Incidence of multidimensional poverty	0.265	0.191
		(0.045)
Panel B: *Welfare assistance*		
Familia en Acción recipient	0.033	0.173
		(0.031)
Subsidized health regime	0.709	0.088
		(0.044)
Contributory health regime	0.252	-0.023
		(0.039)

Notes: This table presents the effects of denying a woman a wanted abortion on the household level of poverty and welfare assistance using Specification (2). These outcomes are realized nearly six years after women file an abortion rights claim, when they are about 33 years old. The sample is restricted to 11,018 women filing abortion rights claims before the SISBEN IV survey. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Table IX: The Impact of Denying a Woman a Wanted Abortion on Existing Children

	Non-Denied Mean (1)	IV (2)
Panel A: *School attendance and child labor*		
Attends preschool, school, or college	0.780	-0.342
		(0.102)
Truancy	0.104	0.090
		(0.077)
Grade retention	0.487	0.179
		(0.120)
Working	0.024	0.102
		(0.041)
Panel B: *During the weekdays, where does the child usually stay and with whom?*		
Daycare or school	0.042	0.002
		(0.049)
Home with parent	0.354	-0.282
		(0.092)
Home with an adult relative	0.048	0.306
		(0.119)
Home with child relative	0.161	-0.008
		(0.097)
Home alone	0.270	0.498
		(0.140)

Notes: This table presents the effects of denying a woman a wanted abortion on the outcomes of her youngest child born *before* filing the abortion rights claim using Specification (2). These children were about 5.5 years old when their mother sought an abortion and 12 years old at the time of the survey. The sample is restricted to the 2,317 youngest existing child of women filing abortion rights claims before the SISBEN IV survey. The question "*During the weekdays, where does the child usually stay and with whom?*" is available only for 882 children. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Online Appendix

A Appendix Figures and Tables

Figure A.1: Summary of Data Sources and Years of Data Coverage

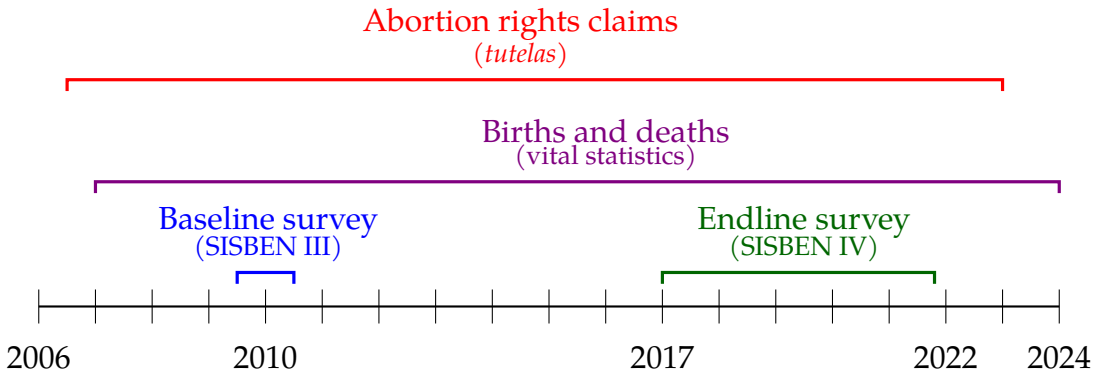
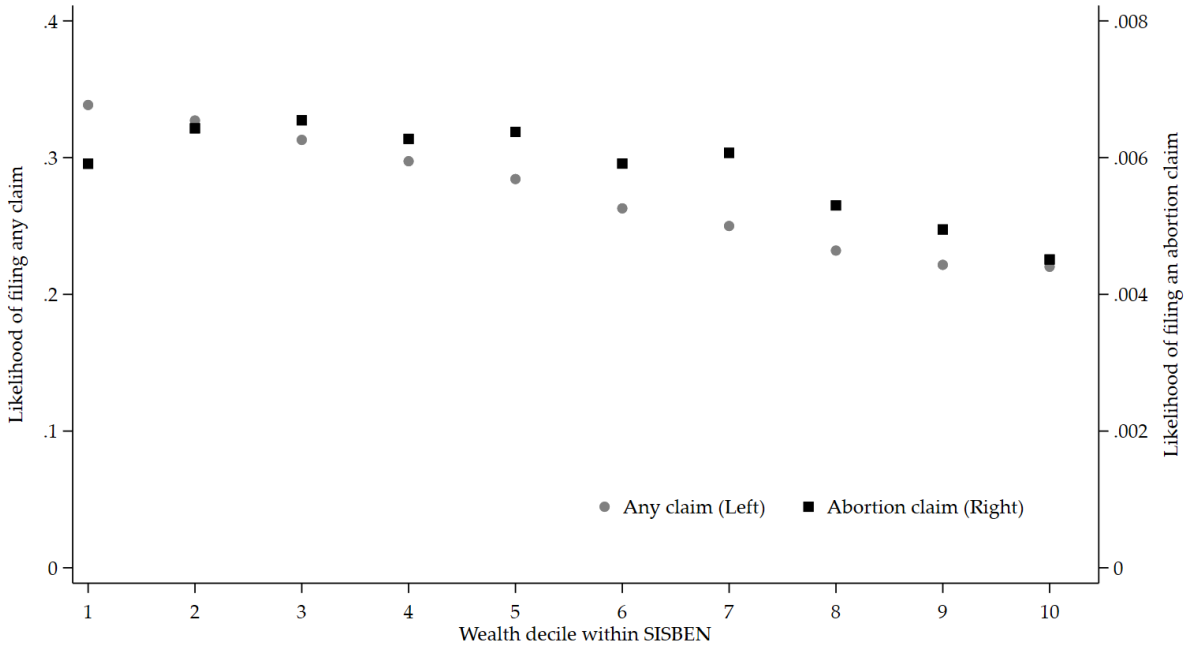
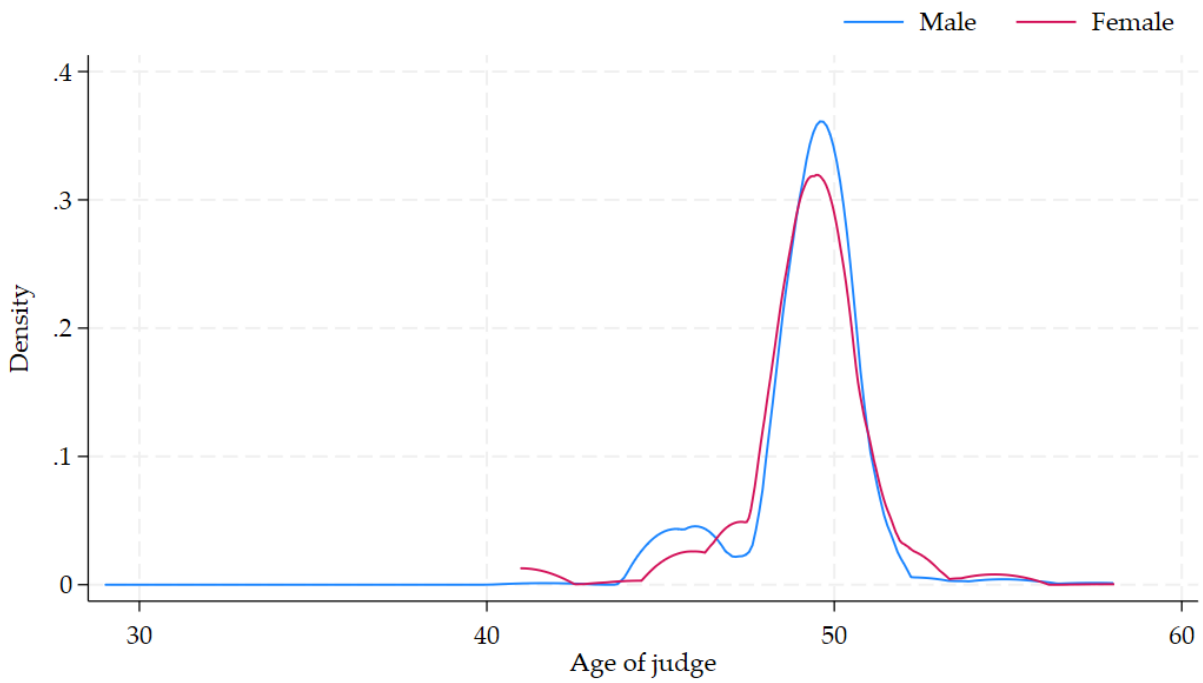


Figure A.2: The Likelihood of Filing an abortion rights claim by Wealth Decile



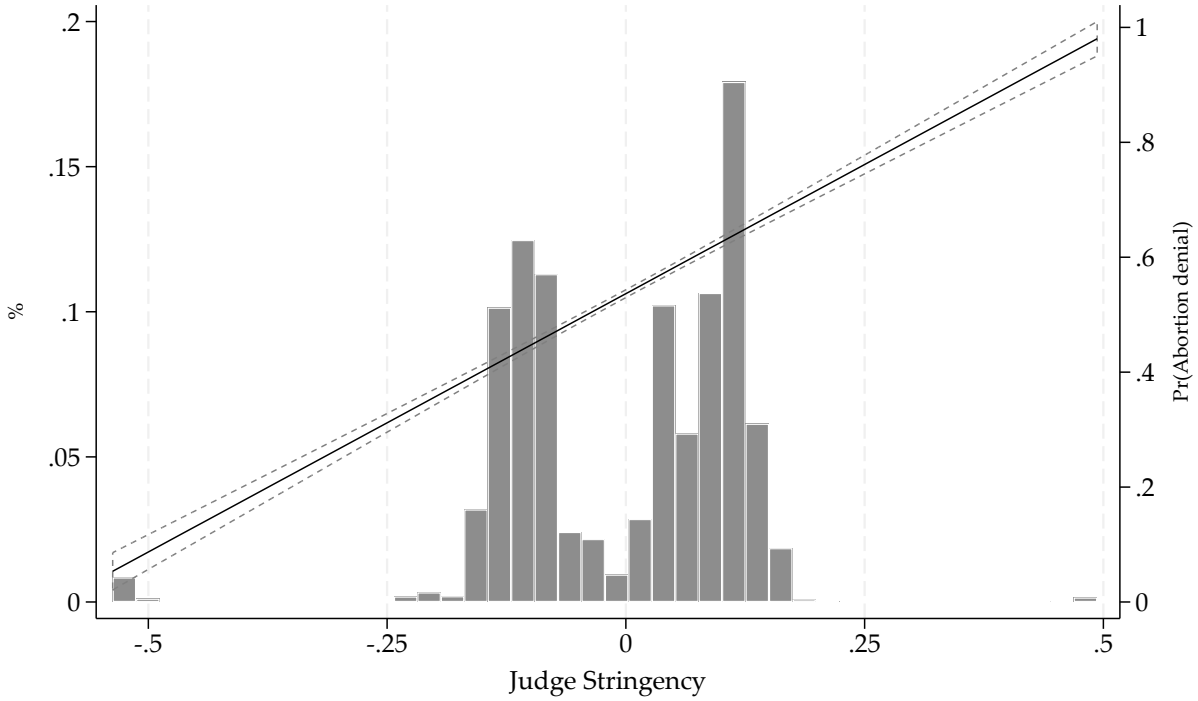
Notes: This figure illustrates the probability of women filing any claim (left axis) and specifically an abortion rights claim (right axis) by wealth decile. The sample consists of women in Medellín included in SISBEN III, Colombia's proxy-means testing instrument. The (baseline) wealth decile is constructed based on the SISBEN III wealth score, and only claims filed after June 2010 are considered. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN III.

Figure A.3: Distribution of Judge Age by Judge Sex



Notes: This figure displays the age distribution of the 125 judges who ruled on abortion rights claims in Medellín between 2006 and 2022, categorized by sex. The distributions for male and female judges overlap. The youngest judge at the time of the ruling was 29 years old, while the oldest was 58. The median age among these judges is 49, with an average age of 49.2. *Sources:* Authors' calculations using data from the Constitutional Court.

Figure A.4: Judge Stringency



Notes: This figure shows a histogram of judge stringency, residualized by office-semester, with the fraction of cases indicated along the left vertical axis. The figure also depicts fitted values from a local linear first-stage regression of abortion denial on judge stringency and office-by-semester fixed effects (solid line, plotted along the right vertical axis). Dotted lines show 95% confidence intervals. *Sources:* Authors' calculations using the Constitutional Court and Rama Judicial data.

Table A.1: Male and Female Judge Characteristics

	Male	Female	(1) - (2) p-value	(1) - (2) p-value w/ $\delta_{o(i)}$
	(1)	(2)	(3)	(4)
Age	48.17	47.87	0.67	0.71
Law degree from selective college	0.35	0.25	0.20	0.84
College course repetition rate	0.12	0.11	0.44	0.13
Years since first claim	6.56	6.07	0.56	0.61
All *tutelas* handled	1817.21	1803.05	0.97	0.82
Abortion rights claims handled	168.71	145.40	0.49	0.27
N	68	57	125	

Notes: This table provides a summary of the statistics for 125 male and female judges handling abortion-related claims (*tutelas*) in Medellín between 2006 and 2022 in Columns (1) and (2), respectively. The p-value comparing differences between male and female judges when excluding and including office-by-time fixed effects is reported in Columns (3) and (4), respectively. *Sources:* Authors' calculations using data from the Constitutional Court, Rama Judicial, and SPADIES.

Table A.2: Female Judges are More Likely to Rule in Favor of Women's Abortion Rights Claims

	Denies		Accepts		Declares inadmissible	
	(1)	(2)	(3)	(4)	(5)	(6)
Female judge	-0.195	-0.185	0.145	0.132	0.050	0.053
	(0.013)	(0.022)	(0.013)	(0.023)	(0.004)	(0.004)
Male judge mean	0.619		0.326		0.055	
Office-by-time FE	Yes	Yes	Yes	Yes	Yes	Yes
Judge controls	No	Yes	No	Yes	No	Yes
R2	0.044	0.045	0.023	0.027	0.011	0.012
N	19,759	19,759	19,759	19,759	19,759	19,759

Notes: This table compares the likelihood of denying, accepting, or declaring an abortion rights claim inadmissible between female and male judges using Specification (1). Standard errors are clustered at the judge level. Female judges are 19.5 p.p. less likely to deny abortion compared to male judges. Given that 61.9% of male judges deny abortion rights claims, this represents a 31.5% difference. Conversely, female judges are 14.5 p.p. (44.3%) more likely to accept abortion rights claims and 5.0 p.p. (91.8%) more likely to declare them inadmissible instead of denying them. Controls include age, age squared, tenure, tenure squared, college course repetition rate, selective college indicator, total number of claims, and number of abortion rights claims. None of the controls are statistically significant. *Sources:* Authors' calculations using data from the Constitutional Court, Rama Judicial, and SPADIES.

Table A.3: Judges Sex Does Not Influence Behavior in Other Types of Claims

	Health-related claims		Labor-related claims		Humanitarian aid claims		General petitions	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: *Probability of rejection*								
Female judge	0.003	0.002	-0.027	-0.057	-0.013	-0.012	0.001	0.000
	(0.004)	(0.004)	(0.025)	(0.031)	(0.006)	(0.006)	(0.003)	(0.003)
Male judge mean	0.190		0.548		0.384		0.376	
Office-by-time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Judge controls	No	Yes	No	Yes	No	Yes	No	Yes
R2	0.004	0.004	0.077	0.081	0.008	0.008	0.002	0.002
N	44,603	44,603	1,424	1,424	29,299	29,299	83,442	83,442
Panel B: *Probability of acceptance*								
Female judge	-0.004	-0.003	0.007	0.014	0.017	0.014	-0.001	0.000
	(0.004)	(0.004)	(0.021)	(0.023)	(0.005)	(0.004)	(0.003)	(0.003)
Male judge mean	0.801		0.216		0.811		0.601	
Office-by-time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Judge controls	No	Yes	No	Yes	No	Yes	No	Yes
R2	0.004	0.004	0.077	0.081	0.007	0.007	0.002	0.002
N	44,603	44,603	1,424	1,424	29,299	29,299	83,442	83,442
Panel C: *Probability of declaring inadmissible*								
Female judge	0.000	0.000	0.020	0.043	0.000	0.000	-0.001	0.001
	(0.001)	(0.001)	(0.026)	(0.026)	(0.001)	(0.001)	(0.001)	(0.001)
Male judge mean	0.009		0.237		0.003		0.023	
Office-by-time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Judge controls	No	Yes	No	Yes	No	Yes	No	Yes
R2	0.004	0.004	0.070	0.081	0.004	0.005	0.002	0.002
N	44,603	44,603	1,424	1,424	29,299	29,299	83,442	83,442

Notes: This table compares the difference in ruling behavior between male and female judges by the type of claim using Specification (1). The sample consists of 125 judges handling abortion rights claims, who also handle many other types of claims related to healthcare, employment, humanitarian aid for victims of conflict, and general petitions. *Sources:* Authors' calculations using data from the Constitutional Court, Rama Judicial, and SPADIES.

Table A.4: Match Rate and Time Between abortion rights claim and SISBEN IV Outcomes

	Non-Denied Mean (1)	IV (2)	N (3)
Panel A: *Match rate*			
Matched with SISBEN III	0.821	-0.042	19,759
		(0.034)	
Matched with SISBEN IV	0.726	-0.037	19,759
		(0.037)	
Panel B: *Conditional on filing abortion rights claim before SISBEN IV survey*			
Age in SISBEN IV	33.353	0.315	11,018
		(1.175)	
Age at abortion encounter	27.576	0.178	11,018
		(1.165)	

Notes: Panel A displays the likelihood of matching the abortion rights claim data with SISBEN III and SISBEN IV. The sample consists of all abortion rights claims filed in Medellin between 2006 and 2022. Column (1), presenting statistics for abortion rights claims *not* denied, shows that 82.1% of women filing such claims were successfully matched to SISBEN III and 72.6% were successfully matched to SISBEN IV. Column (2) examines whether abortion denial affects the match rate using Specification (2). The coefficients are near zero and not statistically significant, meaning no imbalance in the likelihood of appearing in SISBEN III and SISBEN IV. Panel B compares the age of women in SISBEN IV to their age at the time of their abortion encounter for women who filed an abortion rights claim before the SISBEN IV survey. On average, we observe women almost six years after their abortion encounter. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN III.

Table A.5: First Stage

	Female Judge (1)	Judge Stringency (2)
γ	-0.195	0.899
	(0.013)	(0.022)
N	19,759	19,734

Notes: This table reports results from the first stage regression of abortion denial on female judge in Column (1) and judge stringency in Column (2) using Specifications (2) and (4), respectively. 25 judges only handled one abortion case and are included in Column (1) but not in Column (2). *Sources:* Authors' calculations using data from the Constitutional Court.

Table A.6: Testing Balance

	Non-Denied Mean (1)	Denied (2)	Female (3)	Judge Stringency (4)
Age at SISBEN III survey	22.131	0.104	-0.113	-0.006
		(0.163)	(0.228)	(0.818)
Age at abortion encounter	28.294	0.103	-0.112	0.012
		(0.162)	(0.227)	(0.818)
Teenager at abortion encounter	0.206	0.003	0.012	-0.031
		(0.007)	(0.009)	(0.035)
No education	0.143	0.007	-0.007	-0.005
		(0.006)	(0.007)	(0.027)
Elementary	0.496	0.003	0.005	0.009
		(0.009)	(0.010)	(0.038)
Middle school	0.137	-0.015	0.007	-0.037
		(0.007)	(0.007)	(0.027)
High school	0.166	0.005	-0.005	0.029
		(0.007)	(0.007)	(0.028)
Postsecondary	0.058	-0.001	-0.001	0.004
		(0.004)	(0.004)	(0.016)
Wealth (SISBEN score)	41.623	-0.104	0.399	-1.892
		(0.403)	(0.388)	(1.486)
Residential strata 0 or 1	0.285	0.000	0.011	-0.027
		(0.009)	(0.009)	(0.036)
Household size	4.953	-0.025	0.072	-0.195
		(0.055)	(0.051)	(0.207)
Has children	0.201	0.011	0.001	0.039
		(0.009)	(0.007)	(0.039)
Number of children	0.301	0.012	-0.007	0.075
		(0.013)	(0.012)	(0.056)
Single	0.362	-0.034	0.010	-0.033
		(0.010)	(0.008)	(0.031)
Married or cohabitating	0.391	0.039	-0.013	0.044
		(0.010)	(0.009)	(0.035)
Divorced or separated	0.129	-0.008	0.005	-0.023
		(0.006)	(0.006)	(0.025)
Widowed	0.117	0.004	-0.001	0.012
		(0.006)	(0.005)	(0.017)
Lives in Medellin	0.914	-0.010	0.005	-0.016
		(0.006)	(0.005)	(0.019)
Joint F-stat		3.237	1.469	1.338
p-value		0.000	0.126	0.196
N		11,128	11,128	11,104

Notes: Column (1) reports the non-denial mean. Column (2) presents results from a regression of abortion denial on claimant characteristics. Column (2) shows results from a regression of assignment to a female judge on claimant characteristics, while Column (3) presents results from a regression of judge stringency on claimant characteristics. All regressions include office-by-time fixed effects. Standard errors are shown in parentheses and are clustered at the judge level. To observe baseline characteristics in SISBEN III, the sample is restricted to women who filed an abortion rights claim after June 2010. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN III.

Table A.7: First Stage by Baseline Characteristics

	Female Judge	Judge Stringency
	(1)	(2)
Teenager		
1	-0.198	0.843
	(0.020)	(0.067)
0	-0.201	0.877
	(0.015)	(0.033)
p-value of difference	0.891	0.648
Has children		
1	-0.190	0.775
	(0.022)	(0.085)
0	-0.203	0.897
	(0.017)	(0.033)
p-value of difference	0.626	0.185
Married or cohabitating		
1	-0.191	0.830
	(0.018)	(0.057)
0	-0.205	0.899
	(0.017)	(0.036)
p-value of difference	0.553	0.303
Less than middle school		
1	-0.207	0.906
	(0.016)	(0.032)
0	-0.189	0.819
	(0.020)	(0.060)
p-value of difference	0.491	0.198
Below-median wealth		
1	-0.198	0.869
	(0.019)	(0.050)
0	-0.199	0.865
	(0.018)	(0.047)
p-value of difference	0.971	0.959
Residential strata 0 or 1		
1	-0.217	0.950
	(0.022)	(0.056)
0	-0.194	0.844
	(0.015)	(0.040)
p-value of difference	0.393	0.125

Notes: This table presents the first stage across various groups of female claimants. Column (1) instruments abortion denial with assignment to a female judge, while Column (2) uses judge stringency as the instrument. All regressions include office-by-time fixed effects. Standard errors are shown in parentheses and are clustered at the judge level. To observe baseline characteristics in SISBEN III, the sample is restricted to women who filed an abortion rights claim after June 2010. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN III.

Table A.8: Characterizing Compliers

	All	Denied	*Instrument for abortion denial*			
			Judge sex			Judge stringency
			Always-denied	Never-denied	Compliers	Compliers
	(1)	(2)	(3)	(4)	(5)	(6)
Age at SISBEN III survey	21.890	21.943	21.749	21.916	21.824	21.589
			(0.223)	(0.205)	(0.749)	(0.593)
Age at abortion encounter	28.054	28.107	27.873	28.122	28.139	27.947
			(0.164)	(0.228)	(0.669)	(0.546)
Teenager at abortion encounter	0.208	0.209	0.210	0.202	0.178	0.184
			(0.007)	(0.009)	(0.031)	(0.026)
No education	0.147	0.150	0.135	0.151	0.148	0.139
			(0.005)	(0.007)	(0.023)	(0.021)
Elementary	0.498	0.500	0.503	0.488	0.548	0.552
			(0.011)	(0.012)	(0.035)	(0.026)
Middle school	0.129	0.122	0.142	0.131	0.121	0.129
			(0.008)	(0.005)	(0.024)	(0.021)
High school	0.169	0.171	0.164	0.168	0.154	0.147
			(0.007)	(0.008)	(0.025)	(0.021)
Postsecondary	0.058	0.057	0.056	0.061	0.029	0.033
			(0.005)	(0.006)	(0.017)	(0.015)
Wealth (SISBEN score)	41.440	41.284	42.295	40.883	37.960	37.792
			(0.458)	(0.859)	(2.474)	(2.125)
Residential strata 0 or 1	0.287	0.288	0.285	0.285	0.315	0.330
			(0.011)	(0.013)	(0.040)	(0.033)
Household size	4.951	4.923	4.975	4.992	4.593	4.715
			(0.042)	(0.067)	(0.173)	(0.143)
Has children	0.217	0.215	0.213	0.223	0.188	0.199
			(0.008)	(0.008)	(0.024)	(0.020)
Number of children	0.318	0.311	0.327	0.326	0.263	0.282
			(0.013)	(0.012)	(0.037)	(0.032)
Single	0.343	0.327	0.368	0.356	0.335	0.326
			(0.009)	(0.008)	(0.031)	(0.026)
Married or cohabitating	0.413	0.431	0.381	0.403	0.450	0.445
			(0.010)	(0.009)	(0.043)	(0.034)
Divorced or separated	0.124	0.121	0.130	0.128	0.087	0.101
			(0.004)	(0.006)	(0.024)	(0.021)
Widowed	0.119	0.121	0.121	0.113	0.129	0.128
			(0.006)	(0.005)	(0.020)	(0.017)
Lives in Medellin	0.905	0.897	0.927	0.901	0.818	0.816
			(0.012)	(0.015)	(0.062)	(0.053)

Notes: This table presents the characteristics of subgroups of women seeking abortions through *tutelas*. Column (1) reports the baseline characteristics for all abortion seekers, while Column (2) reports the characteristics for the subsample denied abortions. Columns (3)–(5) compare always-denied women, never-denied women, and compliers using judge sex as an instrument for abortion denial. Column (6) compares compliers' characteristics using judge stringency as the instrument. All regressions include office-by-time fixed effects. Standard errors are shown in parentheses and are clustered at the judge level. To observe baseline characteristics in SISBEN III, the sample is restricted to women who filed an abortion rights claim after June 2010. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN III.

Table A.9: Impacts on Birth Outcomes and Baby Characteristics

	Non-Denied Mean (1)	IV (2)
Panel A: *Birth outcomes*		
First-time mother	0.432	0.225
		(0.099)
C-section	0.296	0.258
		(0.103)
Doctor not present	0.010	-0.019
		(0.023)
Panel B: *Baby characteristics*		
Female	0.495	-0.003
		(0.106)
1-min APGAR <7	0.041	-0.039
		(0.044)
5-min APGAR <7	0.013	0.003
		(0.022)
Low birth weight (<2500g)	0.087	0.166
		(0.066)
Gestational weeks		
< 27 weeks	0.002	-0.011
		(0.015)
27-32 weeks	0.013	0.054
		(0.031)
32-37 weeks	0.208	0.016
		(0.092)
38+ weeks	0.781	-0.023
		(0.096)
Filed claim	18.433	5.246
		(1.665)

Notes: This table presents the impact of denying a wanted abortion on birth outcomes and baby characteristics for about 7,000 births occurring within nine months of the mother filing an abortion rights claim using Specification (2). Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and Vital Statistics.

Table A.10: Immediate Childbearing and Mortality: Robustness Using Judge Stringency

	Non-denied Mean	Judge IV		
		Female	Stringency	
			All judges	Male judges only
	(1)	(2)	(3)	(4)
Live birth	0.290	0.307	0.268	0.166
		(0.032)	(0.042)	(0.045)
Death	0.016	0.025	0.023	0.023
		(0.009)	(0.009)	(0.019)
Septicemia and infections	0.003	0.034	0.028	0.014
		(0.005)	(0.005)	(0.003)
Obstetric causes	0.001	-0.001	0.001	0.005
		(0.003)	(0.003)	(0.003)
Other health causes	0.010	-0.010	-0.001	0.024
		(0.007)	(0.007)	(0.018)
External causes	0.002	0.001	-0.006	-0.018
		(0.003)	(0.004)	(0.003)
N		19,759	19,734	11,460

Notes: This table compares the results of using judge sex and leniency as instruments for abortion denial, focusing on childbearing and mortality outcomes within nine months of filing an abortion rights claim. Column (4) restricts the sample to cases handled by male judges, finding similar results. *Sources:* Authors' calculations using data from the Constitutional Court and Vital Statistics.

Table A.11: Long-Term Outcomes for Women: Robustness Using Judge Stringency

	Non-denied	Judge IV	
	Mean	Female	Stringency
	(1)	(2)	(4)
Panel A: *Self-reported health*			
Had a health problem (last 30 days)	0.224	0.138	0.184
		(0.041)	(0.040)
Panel B: *Household composition and marital status*			
Has children	0.358	0.346	0.346
		(0.050)	(0.051)
Number of children	0.611	0.510	0.523
		(0.099)	(0.093)
Never-married	0.335	-0.005	-0.080
		(0.047)	(0.048)
Married or cohabitating	0.428	-0.080	0.033
		(0.049)	(0.056)
Divorced, separated, widowed	0.237	0.086	0.103
		(0.038)	(0.049)
Panel C: *Educational attainment and labor-force participation*			
High school	0.227	-0.098	-0.104
		(0.042)	(0.036)
Employed	0.194	-0.106	-0.109
		(0.036)	(0.031)
Looking for job	0.047	-0.047	-0.059
		(0.017)	(0.017)
Homemaker	0.558	0.122	0.170
		(0.048)	(0.047)
No activity	0.074	0.085	0.066
		(0.030)	(0.032)
Student	0.047	0.008	0.009
		(0.018)	(0.015)
Panel D: *Income, poverty, and welfare assistance*			
Household income ('000s)	1,001,453.50	-195,106.05	-237,797.30
		(127,108.4)	(105,405.8)
Residential strata 0 or 1	0.306	0.129	0.114
		(0.049)	(0.047)
Extreme or moderate poverty	0.396	0.187	0.175
		(0.054)	(0.046)
Incidence of multidimensional poverty	0.265	0.191	0.182
		(0.045)	(0.040)
Familias en Acción recipient	0.033	0.173	0.151
		(0.031)	(0.025)
N		11,018	10,996

Notes: This table compares the results of using judge sex and leniency as instruments for abortion denial, focusing on the outcomes of women and households an average of six years after filing an abortion rights claim. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Table A.12: Impacts on Household Income

	Non-Denied Mean (1)	IV (2)
Pre-transfer income	968,496	-239,585
		(129,057)
Salary	528,543	-403,523
		(95,852)
Self-employment	223,501	167,877
		(92,500)
Other	216,453	40,299
		(52,301)
Transfers	32,957	44,479
		(10,487)
Post-transfer income	1,001,454	-195,106
		(127,108)

Notes: This table presents the effects of denying a woman a wanted abortion on her household's level of income using Specification (2). Income is expressed in November 2021 pesos. The sample is restricted to 11,018 women filing abortion rights claims before the SISBEN IV survey. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Table A.13: Heterogeneity by Age

	Aged 20 and above		Aged 19 and under	
	Non-Denied Mean (1)	IV (2)	Non-Denied Mean (3)	IV (4)
Panel A: *Health*				
Had a health problem (last 30 days)	0.228	0.125	0.204	0.313
		(0.051)		(0.088)
Panel B: *Household composition and marital status*				
Number of children	0.663	0.607	0.451	0.340
		(0.105)		(0.171)
Never-married	0.330	-0.031	0.347	0.132
		(0.052)		(0.092)
Married or cohabitating	0.434	-0.036	0.421	-0.215
		(0.061)		(0.099)
Divorced, separated, widowed	0.236	0.068	0.232	0.083
		(0.047)		(0.086)
Panel C: *Educational attainment and labor-force participation*				
High school diploma	0.239	-0.088	0.196	-0.107
		(0.046)		(0.089)
Employed or looking for a job	0.251	-0.197	0.214	-0.116
		(0.040)		(0.068)
Homemaker	0.549	0.138	0.590	0.141
		(0.049)		(0.081)
No activity	0.080	0.080	0.052	0.035
		(0.031)		(0.062)
Panel D: *Income, poverty, and welfare assistance*				
Household income ('000s)	1000.420	-100.326	1007.087	-695.819
		(138.074)		(324.008)
Residential strata 0 or 1	0.310	0.091	0.293	0.208
		(0.052)		(0.112)
Extreme or moderate poverty	0.401	0.115	0.381	0.302
		(0.058)		(0.089)
Incidence of multidimensional poverty	0.263	0.138	0.266	0.385
		(0.051)		(0.092)
Familias en Acción recipient	0.036	0.207	0.027	0.142
		(0.037)		(0.069)
First stage		-0.202		-0.199
		(0.015)		(0.021)
N	8,297		2,716	

Notes: This table presents the heterogeneous treatment effects on the main outcomes based on the woman's age at the time of filing the abortion rights claim, augmenting Specification (2) with fixed effects for the number of years since the SISBEN IV survey (0 to 4, 4 to 8, and 8 or more). The sample is restricted to women filing abortion rights claims before the SISBEN IV survey. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Table A.14: Heterogeneity by Baseline Motherhood Status

	Without children		With children	
	Non-Denied Mean (1)	IV (2)	Non-Denied Mean (3)	IV (4)
Panel A: *Health*				
Had a health problem (last 30 days)	0.231	0.174	0.199	-0.017
		(0.045)		(0.103)
Panel B: *Household composition and marital status*				
Number of children	0.263	0.484	1.998	0.590
		(0.070)		(0.252)
Never-married	0.363	0.023	0.226	-0.143
		(0.054)		(0.095)
Married or cohabitating	0.377	-0.109	0.630	0.050
		(0.049)		(0.104)
Divorced, separated, widowed	0.260	0.085	0.144	0.093
		(0.041)		(0.074)
Panel C: *Educational attainment and labor-force participation*				
High school diploma	0.204	-0.121	0.319	0.007
		(0.040)		(0.129)
Employed or looking for job	0.212	-0.108	0.355	-0.347
		(0.034)		(0.096)
Homemaker	0.550	0.098	0.590	0.238
		(0.050)		(0.116)
No activity	0.088	0.082	0.019	0.094
		(0.034)		(0.060)
Panel D: *Income, poverty, and welfare assistance*				
Household income ('000s)	999.477	-96.449	1009.325	-650.411
		(138.914)		(313.674)
Residential strata 0 or 1	0.284	0.137	0.394	0.079
		(0.055)		(0.143)
Extreme or moderate poverty	0.355	0.177	0.559	0.220
		(0.058)		(0.126)
Incidence of multidimensional poverty	0.265	0.207	0.263	0.117
		(0.051)		(0.108)
Familias en Acción recipient	0.020	0.167	0.088	0.181
		(0.028)		(0.099)
First stage		-0.206		-0.183
		(0.015)		(0.021)
N	8,708		2,296	

Notes: This table presents the heterogeneous treatment effects on the main outcomes based on whether the woman had children at the time of filing the abortion rights claim, augmenting Specification (2) with the woman's age and age squared at the time of the survey. The sample is restricted to women filing abortion rights claims before the SISBEN IV survey. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Table A.15: Impacts on All Existing Children

	Non-Denied Mean (1)	IV (2)
Panel A: *Age*		
Age at time of SISBEN survey	12.475	-0.073
		(0.764)
Age at time of abortion rights claim	5.911	0.017
		(0.492)
Panel B: *School attendance and child labor*		
Attends preschool, school, or college	0.759	-0.252
		(0.127)
Truancy	0.122	-0.001
		(0.082)
Grade retention	0.538	0.154
		(0.121)
Analphabetic	0.143	-0.117
		(0.092)
Working	0.033	0.051
		(0.054)
Panel C: *During the weekdays, where does the child usually stay and with whom?*		
Daycare or school	0.034	0.007
		(0.041)
Home with parent	0.345	-0.262
		(0.084)
Home with an adult relative	0.056	0.324
		(0.115)
Home with child relative	0.164	-0.031
		(0.093)
Home alone	0.279	0.494
		(0.130)

Notes: This table presents the effects of denying a woman a wanted abortion on the outcomes of all of her children born *before* filing the abortion rights claim using Specification (2). The sample is restricted to 3,063 children of women filing abortion rights claims before the SISBEN IV survey. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Table A.16: Impacts on Existing Children's Highest Grade of Educational Attainment

	Non-Denied Mean (1)	IV (2)
None	0.407	-0.078
		(0.099)
Kindergarten	0.010	0.028
		(0.032)
First grade	0.329	0.144
		(0.102)
Second grade	0.011	0.073
		(0.025)
Third grade	0.005	-0.012
		(0.016)
Fourth grade	0.009	-0.030
		(0.015)
Fifth grade	0.009	-0.012
		(0.022)
Sixth grade	0.024	0.028
		(0.043)
Seventh grade	0.022	-0.012
		(0.035)
Eight grade	0.009	0.016
		(0.022)
Ninth grade	0.052	-0.080
		(0.049)
Tenth grade	0.054	-0.064
		(0.062)
Eleventh grade	0.013	-0.042
		(0.030)
Twelfth grade	0.017	0.003
		(0.026)
Postsecondary	0.030	0.023
		(0.030)

Notes: This table presents the effects of denying a woman a wanted abortion on the educational attainment of her youngest child born *before* filing the abortion rights claim using Specification (2). The outcome is the highest grade of educational attainment, renamed to resemble a K–12 system. The sample is restricted to the 2,317 youngest existing child of women filing abortion rights claims before the SISBEN IV survey. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Table A.17: Impacts on Existing Children's Health

	Non-Denied Mean (1)	IV (2)
Had a health problem (last 30 days)	0.090	0.052
		(0.058)
Sought healthcare (last 30 days)	0.073	0.061
		(0.056)
Disabled	0.095	0.005
		(0.068)

Notes: This table presents the effects of denying a woman a wanted abortion on the health outcomes of her youngest child born *before* filing the abortion rights claim using Specification (2). The sample is restricted to the 2,317 youngest existing child of women filing abortion rights claims before the SISBEN IV survey. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Table A.18: Long-Term Outcomes for Children: Robustness Using Judge Stringency

	Non-denied	Judge IV	
	Mean	Female	Stringency
	(1)	(2)	(4)
Panel A: *School attendance and child labor*			
Attends preschool, school, or college	0.780	-0.342	-0.326
		(0.102)	(0.140)
Truancy	0.104	0.090	0.121
		(0.077)	(0.096)
Grade retention	0.487	0.179	0.104
		(0.120)	(0.127)
Analphabetic	0.134	-0.094	-0.085
		(0.081)	(0.095)
Working	0.024	0.102	0.112
		(0.041)	(0.048)
N		2,317	2,303
Panel B: *During the weekdays, where does the child usually stay and with whom?*			
Daycare or school	0.042	0.002	-0.001
		(0.049)	(0.070)
Home with parent	0.354	-0.282	-0.361
		(0.092)	(0.100)
Home with an adult relative	0.048	0.306	0.453
		(0.119)	(0.159)
Home with child relative	0.161	-0.008	-0.128
		(0.097)	(0.109)
Home alone	0.270	0.498	0.510
		(0.140)	(0.150)
N		882	877

Notes: This table compares the results of using judge sex and leniency as instruments for abortion denial, focusing on the outcomes of women an average of six years after filing an abortion rights claim. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Table A.19: Heterogeneity by Child's Age

	Above-median age		Below-median age	
	Non-Denied Mean (1)	IV (2)	Non-Denied Mean (3)	IV (4)
Panel A: *Age*				
Age at time of SISBEN survey	15.130	0.789	8.208	-0.205
		(0.857)		(0.677)
Age at time of abortion claim	6.809	-0.046	3.876	0.076
		(0.732)		(0.648)
Panel B: *School attendance and child labor*				
Attends preschool, school, or college	0.706	-0.442	0.867	-0.163
		(0.231)		(0.111)
Truancy	0.092	0.087	0.118	0.051
		(0.141)		(0.105)
Grade retention	0.444	0.095	0.537	0.252
		(0.185)		(0.158)
Working	0.038	0.138	0.009	0.055
		(0.084)		(0.057)
First stage		-0.157		-0.195
		(0.035)		(0.029)
N	1,212		1,091	
Panel C: *During the weekdays, where does the child usually stay and with whom?*				
Home with parent	0.299	-0.304	0.317	-0.247
		(0.121)		(0.126)
Home with an adult relative	0.048	0.477	0.097	0.246
		(0.143)		(0.228)
Home with child relative	0.162	-0.200	0.166	0.152
		(0.143)		(0.185)
Home alone	0.365	0.464	0.214	0.306
		(0.216)		(0.198)
First stage		-0.235		-0.210
		(0.048)		(0.066)
N	458		425	

Notes: This table presents the heterogeneous treatment effects of denying a woman a wanted abortion based on the age of her youngest child born *before* filing the abortion rights claim using Specification (2). The sample is restricted to the youngest existing child of women filing abortion rights claims before the SISBEN IV survey. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.

Table A.20: Heterogeneity by Child's Sex

	Boys			Girls		
	Non-Denied	Judge IV		Non-Denied	Judge IV	
	Mean	Female	Stringency	Mean	Female	Stringency
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: *School attendance and child labor*						
Attends preschool, school, or college	0.770	-0.534	-0.618	0.790	-0.189	-0.129
		(0.223)	(0.269)		(0.130)	(0.163)
Truancy	0.100	0.133	0.146	0.108	0.016	0.068
		(0.167)	(0.186)		(0.083)	(0.126)
Grade retention	0.511	0.183	0.066	0.462	0.175	-0.026
		(0.248)	(0.235)		(0.188)	(0.216)
Working	0.023	0.131	0.271	0.026	0.115	0.205
		(0.111)	(0.129)		(0.073)	(0.103)
First stage		-0.127	0.428		-0.215	0.630
		(0.034)	(0.128)		(0.032)	(0.100)
N		1,208			1,094	
Panel B: *During the weekdays, where does the child usually stay and with whom?*						
Home with parent	0.302	-0.263	-0.182	0.108	-0.241	0.018
		(0.161)	(0.204)		(0.114)	(0.176)
Home with an adult relative	0.063	0.361	0.835	0.164	0.357	0.498
		(0.257)	(0.427)		(0.131)	(0.213)
Home with child relative	0.195	-0.296	0.066	0.191	0.024	0.024
		(0.224)	(0.341)		(0.101)	(0.138)
Home alone	0.296	0.658	-0.169	0.047	0.319	0.020
		(0.326)	(0.491)		(0.160)	(0.234)
First stage		-0.164	0.500		-0.280	0.702
		(0.057)	(0.213)		(0.044)	(0.177)
N		450			427	

Notes: This table presents the heterogeneous treatment effects of denying a woman a wanted abortion based on the sex of her youngest child born *before* filing the abortion rights claim using Specification (2). The sample is restricted to the youngest existing child of women filing abortion rights claims before the SISBEN IV survey. Standard errors are clustered at the judge level. *Sources:* Authors' calculations using data from the Constitutional Court and SISBEN IV.