CAN POLICIES AFFECT PREFERENCES?

THEORY AND EVIDENCE FROM RANDOM VARIATION IN ABORTION JURISPRUDENCE

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Abstract: Turning to courts to vindicate rights often led to resistance and subsequent acceptance. We formalize these effects in a model where laws can generate temporary backlash. We then exploit two layers of judge randomization to estimate effects of abortion jurisprudence using all abortion appellate and district cases from 1971-2004. Four results emerge. Judges' politics, religion, and ethnicity predict abortion verdicts. Verdicts affect state regulations that restrict abortions and impact individuals. Stated and revealed preference shift against legalized abortion, albeit briefly. Backlash effects are pronounced among Republicans and on attitudes towards discretionary abortions. An original data entry experiment replicate these patterns.

Keywords: Backlash, Expressive Law, Abortion, Norms

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1 Introduction

Whether policies shape preferences and in which direction is an open question. In one view, courts serve as "teachers", telling society what is right or wrong (Caldeira and Gibson 1992). Many survey experiments are consistent with this view. They document that preferences often conform to court rulings.[1] But many observational studies find the opposite. History provides ample examples of court decisions stimulating backlash (Post and Siegel 2007; Sunstein 2007; Dolbeare and Hammond 1971; Bartley 1969).[2] Formal political economy has tried to explain backlash with two sets of models. In one literature, laws in strong conflict with prevailing social norms can be ineffective because whistleblowers do not comply (Acemoglu and Jackson 2014). In another literature, laws convey information that change the social image of norm-breakers (Benabou and Tirole 2012). Neither set of models predicts a temporary backlash followed by acceptance known as "thermostatic effects" in political economy (Ura 2014).

Our model builds on recent theoretical developments on human motivations (Bénabou and Tirole 2011), where actions respond to two sets of factors, external and internal. External factors are determined by laws that affect how easy it is to do an act. Internal factors are perceptions that agents have towards the action. With these two factors, we build a model with steady-state equilibrium. We show that the internal factor can generate backlash to laws. Agents backlash to counter the law's shift in costs to an action. If marginal costs to backlash are high relative to the cost of doing an action, the change in law will have a sizable positive impact on the share of society choosing an action. In this case, backlash is temporary. If the marginal costs to backlash are low, then any change in law can be internalized and this will lead to persistent backlash. The model reconciles both effects of law documented by prior observational and experimental literature. For example, in abortion, a 2-year window around *Roe v. Wade* found immediate backlash by Republicans (Franklin and Kosaki 1989), but subsequent studies found an increase in abortion support among all groups (Hanley et al. 2012; Brickman and Peterson 2006). Extending to all Supreme Court cases and to all

[1] Survey experiments in different legal areas—affirmative action (Clawson et al. 2001), telecom regulation (Clawson et al. 2001), church-state separation (Unger 2008), health care reform (Christenson and Glick 2015), and gay rights (Stoutenborough et al. 2006)—corroborate this view. In particular, Zink et al. (2009) found that the more judges signing onto an opinion or the more precedent there was, the more subjects' preferences were shaped, regardless of whether subjects initially agreed with the opinion.

[2] An exception is Hoekstra and Segal (1996).

state laws, Ura (2014) and Hernandez (2014) also found a pattern of instantaneous backlash and immediate decay in backlash within two years. One drawback of the time-series and panel studies is that policies were not issued randomly for causal inference.

This paper develops causal evidence with Circuit cases, where policymakers are randomly assigned. Circuit Courts, which make rulings on issues of new law, can change the costs of actions. An example is a 2014 Fifth Circuit decision that upheld a Texas state law resulting in one-third of its abortion clinics shutting down. This decision required many women to travel hundreds of miles to obtain a legal abortion. Lindo et al. (2017) found the increased distance to abortion clinics resulted in fewer abortions. We develop evidence that state abortion laws are generally affected by Circuit rulings.

Circuit court rulings establish precedent for jurisdictions of 4-9 states, each of which contain 1-4 federal district courts. Almost all Circuit rulings are final since the Supreme Court hears less than 2% of Circuit cases. Judges are repeatedly randomly assigned to panels of one in the district courts and panels of three in the Circuit courts, and the composition of these panels varies by case. We use the panel composition as an instrument to estimate the causal effects of Circuit rulings. To interpret out estimates as causal, we assume that the identities of the randomly assigned judges affect subsequent outcomes through the legal decision alone. This is a reasonable assumption as newspaper headlines of Circuit Court opinions typically refer to the court and not the identities of the judges on the panel.[3]

We leverage the hierarchical setting of two layers of random judge assignment. The two layers generate a quasi-experiment for the direction of the verdict (based on the Circuit panel assignment) and the presence of a case (based on the District judge assignment). We estimate different group responses to rulings (pro- or anti-abortion). For example, we observe if Republicans backlash to pro-abortion rulings relative to the counterfactual of no-precedent. We analyze all abortion precedents collected by Sunstein et al. (2006) and Kastellec (2013). We extend the data collection to all abortion district cases.

In our model, court rulings on state laws affect the costs of taking actions. Consistent with

[3]Badawi and Chen (2017) also show there is no stock market response to the identity of the judges when their identities are revealed in Delaware Court of Chancery, which handles corporate disputes and are followed closely by the markets.

this assumption for abortion, an extensive empirical literature has examined the impact of state abortion regulations. They are associated with subsequent fertility (Levine et al. 1999), reproductive behavior (Klick and Stratmann 2003), child outcomes (Gruber et al. 1999), adult outcomes (Ananat et al. 2009), and crime (Donohue and Levitt 2001). Abortion access allowed large numbers of women large numbers of women to delay marriage and motherhood (Myers 2017).[4] Many of these studies use variation in when abortion became legal and find large effects. For example, legalizing abortion accounted for 25 percentage points of the 31-percentage-point drop in murder between 1991 and 1998. We complement this literature by showing that state abortion regulations are affected by the Circuit court rulings. This is not surprising when examining the regulations used in prior studies. In 1970, abortion became legal in five states. But four of the five states are all in one Circuit.

Circuit policymakers are randomly assigned and make different policies in our empirical framework. Prior research has documented that Democrats vote differently from Republicans in Circuit Courts (Sunstein et al. 2006).[5] Moreover, in the US population, race and religion predict abortion attitudes (Granberg and Granberg 1980). Consistent with these patterns, a pro-abortion[6] precedent becomes more likely with an additional Democrat, white, or secular judge on a 3-judge panel (by 9%, 17%, or 12%, respectively). Using the quasi-experimental variation in judicial panels, we find that judge assignment affects subsequent state regulations. Within two years after an anti-abortion precedent, states within the Circuit are roughly 18% more likely to restrict abortion access.[7] The effect appears as a level effect rather than a growth effect.

To measure a shift in perceptions that agents have towards the action, we use both stated and revealed preferences (charitable donations). We identify 3.5 million charitable donations to political causes broadly defined as abortion-related. These donations are to causes that might result in subsequent policies that lower the likelihood of having an abortion (funding of pro-life causes or pro-life politicians). We find that anti-abortion precedent increases donations to pro-abortion causes by over 15%. It is worth pausing to show how two layers of judge randomization help unpack

[4] According to the CDC, roughly one million fetuses are legally aborted in the U.S. every year. For 1,000 live births, there are 228 abortions, and for every 1,000 women aged 15-44 years, there are 14.6 abortions, in 2010.

[5] We refer to judges appointed by Democratic presidents as Democrats and those by Republican presidents as Republicans for brevity.

[6] For expositional purpose, we refer to pro-life, anti-abortion, and anti-choice interchangeably. We do the same for pro-choice and pro-abortion.

[7] The dataset on state laws was originally collected by Blank et al. (1996).

this estimate. This estimate of 15% captures two effects—anti-abortion decisions that increase pro-abortion donations *and* pro-abortion decisions that decrease pro-abortion donations. To separate these two channels, we estimate what would have happened in the absence of a decision. To see how, our quasi-experiment uses random variation in the direction of the coin flip (assignment of Circuit judges) and the presence of the coin flip (assignment of District judges). Using this framework, we find that pro-abortion precedent increases donations to anti-abortion causes – a backlash effect. Data limitations make it challenging to study whether court decisions activate partisans rather than affect attitudes among undecided (Green et al. 2004). Consistent with activation of partisans who shift the size of donations rather than undecided non-donors who start to donate, we find effects on the size of donations but not the number of donations.

We next examine abortion attitudes using the General Social Survey. It has the advantage of asking the identical question on abortion attitudes over several decades. It is the only such dataset and is the same dataset used by prior scholars, which makes for easier comparison. We find that pro-abortion precedent spurs backlash in attitudes. This effect is pronounced among Republicans, who sharply antagonize towards abortion. The magnitude of shift is equivalent to the average difference between Republicans and Democrats. This effect size was also found in an event study of one Supreme Court ruling, within 1 month (Huq and Mentovich 2015). Backlash effects appear for each of the abortion reasons surveyed, but are largest for discretionary abortions. This heterogeneity was also found for one Supreme Court ruling (*Roe v. Wade*) (Franklin and Kosaki 1989). We reject the hypothesis of persistent backlash. Both Republican and Democrat abortion attitudes follow legal precedent after two years. This pattern of instantaneous backlash and immediate decay within two years matches time-series analyses of Supreme Court precedent (Ura 2014).

Further probing heteregenous effects across different groups, we would like to know if groups respond to precedents (pro- or anti-abortion) likely perceived as illegitimate or incorrectly decided relative to the counterfactual of no-precedent. We find that anti-abortion decisions affect Democrats, while pro-abortion decisions affect Republicans. To put this in quantitative terms, for Republicans, after a pro-abortion decision, they are 20% more likely to say yes to "Should it be illegal for a woman to obtain abortion for any reason?" For Republicans, the impact of an anti-abortion decision is negligible. For Democrats, after an anti-abortion decision, they are 9% less likely to say yes to

"Should it be illegal for a woman to obtain abortion because the family is poor?" For Democrats, the impact of a pro-abortion decision is negligible. These patterns echo the different group responses found for donations in response to pro- or anti-abortion verdicts.

To provide suggestive evidence of a causal channel, we check that newspapers report abortion Circuit decisions using original data collection of articles from newspapers in the cities of the Circuit Court headquarters. Next, we present evidence that information on court decisions can affect attitudes. We randomly assign newspaper summaries of pro- or anti-abortion decisions to data-entry workers in a transcription task. When exposed to pro-abortion decisions, workers backlash. Their attitudes become more anti-abortion, especially on discretionary abortions, consistent with the population analysis.

Our paper makes three main contributions. First, we present a stylized model for thermostatic patterns. Second, we present causal evidence exploiting the random assignment of policymakers. Third, use a data entry experiment of newsreports to support the information channel. Our results are reasonably robust to perturbations of the empirical specification. Our results are also related to studies of the effects of laws on custom (Aldashev et al. 2012). The remainder of the paper is organized as follows. Details on abortion policies in the U.S. are in Appendix A. Section 2 presents our model. Section 3 describes the data. In Section 4, we detail the empirical strategy. Section 5 presents the impacts of judge identity on abortion rulings. Section 6 estimates the effects of abortion precedents. Section 7 examines newspaper reports. Section 8 describes the data entry experiment. Section 9 concludes.

2 Model

2.1 Assumptions We model the effects of law on attitudes. We assume two periods, where the agent undertakes actions at time $t = 0$ that affects the likelihood of an abortion at $t = 1$. We assume having an abortion is the outcome the agent would like to avoid.[8] We normalize the utility

[8]This is suggested by survey evidence. Chen and Schonger (2016) reports on surveys of prospective parents on whether they would choose to abort a fetus with Down Syndrome. The key result is that as the likelihood of Down Syndrome increased the more likely the parents would choose to abort. This result is consistent with agents having perception motives where they derive negative utility from saying that they would abort a fetus with Down Syndrome.

of having an abortion as negative, denoted by $-u_a < 0$, and 0 otherwise.[9] We also assume that once the agent has had an abortion, there will be no subsequent changes to the utility from additional abortions. This captures a lexicographic utility function.[10] The only behavioral response of interest is by those agents who have not previously had abortions.

The probability that the agent will have an abortion depends on two factors: the outside (exogenous) factor q, and the internal (endogenous) factor p. q captures both societal attitudes towards abortion and laws regulating access to abortion.[11] The higher the q, the greater likelihood of abortion. The internal factor p is the set of actions the agent takes at date $t = 0$ to not have an abortion at $t = 1$. These actions can include backlash in attitudes or campaign donations. These actions come at a cost $c(p) \geq 0$, which are convex: $c' > 0, c'' > 0$. Also, $c(0) = 0$. We assume no strategic play and information is symmetric, so that agent's actions will be truthful representation of their beliefs. Therefore, we may generalize and call these actions as "negative perceptions" towards abortion. The greater is an agent's backlash (intensity of negative attitude, further funding of pro-life causes or politicians), the lower likelihood of having an abortion.

2.2 Static Optimization The overall probability of abortion is $P(q-p)$. For an interior solution, it must be that $P' > 0$. We also assume $P'' > 0$.[12] Normalizing the discount factor between periods to 1, the net utility of the maximizing agent will be given by:

$$\max_p \{ (P(q-p)) (-u_a) - c(p) \}.$$

We can normalize the costs $c(p)$ by u_a, and with slight change of notation, rewrite the new costs again as $c(p)$. Thus, the net utility of the agent will be:

[9] The setup can also be generalized to heterogenous agents, and the intuition will continue to hold. With heterogeneous agents the utility of abortion will be distributed over a support, and some may even obtain positive utility from abortion. But in the representative agent framework, it is safe to assume that the average of the distribution - the mean utility of abortion, is negative.

[10] An intuition for lexicographic utility is to consider acts that are deontological or duty-based (Chen and Schonger 2016). Another intuition comes from the following thought experiment. Suppose an individual (who believes in 1 god) is asked whether s/he believe in 2 gods, and then asked, how much would they have to be paid to say that they believe in 2 gods, 3 gods, and so on. It is plausible that individuals have a lexicographic cost of deviating from saying what they actually believe, such that they report the identical price for each request.

[11] It also captures the costs of not having abortion, such as child-bearing costs.

[12] This will be the case if the overall probability distribution follows an S-shaped curve, and the equilibrium level is on the left part of the distribution. This is a realistic assumption, as the probability of abortion, i.e. the share of abortions in a representative agent framework, is rather small.

$$\max_p \{-P(q-p) - c(p)\}.$$

If the agent has not yet had an abortion, the optimization will have the solution:

$$P'(q-p) = c'(p).$$

Or,

$$p = q - P'^{-1}(c'(p)).$$

If the agent has already had an abortion, the positive costs for any $p > 0$ ensure that their equilibrium level will be $p^* = 0$. There is no point to backlash as it makes no difference to their utility.

2.3 Dynamics To look at the dynamics of laws and norms, we assume that the share of abortions in the society is at a steady-state equilibrium.[13] More specifically, denote by s_0 the share of the population at time $t = 0$ who have not had abortion in the past; $1 - s_0$ have had.

From the former group, the share $s = P(q-p)$ will have an abortion at $t = 1$. Moreover, assume share α of new people enter the population, by becoming of child-bearing age. Also, share β of the population exit, e.g., through death. Note that none in the α share of the population have had abortion in the past, and some of β share may have had abortion in the past.

At period $t = 1$ the share of the population with no prior abortion will then be: $s_0(1-s)(1-\beta) + \alpha$. The steady-state obtains when s_0 satisfies:

$$s_0(1-s)(1-\beta) + \alpha = s_0,$$

[13]This is a standard assumption in models in macroeconomics and natural sciences.

This yields the equilibrium share of the population in the society with no abortion as:

$$s_0 = \frac{\alpha}{s + \beta - s\beta}.$$

Note, that this is also steady-state equilibrium; if the initial value of s_0 is above (below) the equilibrium value, then over time the values will decrease (increase) to the steady state level. Also, the equilibrium satisfies $0 \leq s_0 \leq 1$ for a range of values for s, α, and β. For instance, if $\alpha = \beta$, then

$$0 \leq s_0 = \frac{\alpha}{s + \alpha - s\alpha} \leq 1.$$

This corresponds to the case where the mass of the populations is constant (there's no net growth) of, say, 1, and s_0 is the fraction of the population with no abortion.

To look at the equilibrium effects of abortion decisions, suppose a pro-choice decision is issued, which increases q. From the Implicit Function Theorem, we have:

$$P''(q - p^*)(1 - \frac{\partial p^*}{\partial q}) = c''(p^*)\frac{\partial p^*}{\partial q},$$

or,

$$\frac{\partial p^*(q)}{\partial q} = \frac{P''(q - p^*)}{P''(q - p^*) + c''(p^*)}$$

Since, $P'' > 0$, and $c'' > 0$, we have that:

$$0 < \frac{\partial p^*(q)}{\partial q} < 1.$$

Thus, a pro-choice decision at time $t = 0$ leads to higher p - heightened negative perceptions against abortion. This is the initial backlash effect in the society; the overall level of the negative perceptions in society will equal $s_0 p$.

2.4 Long-Term Effects: Persistent Backlash or Subsequent Acceptance To look at the long-term effects of a pro-choice decision, at time $t = 1$ both p^* and s_0 will change. Recall that the share $s = P(q - p)$ will have an abortion. At $t = 1$, negative perceptions will be:

$$s_0 p^* = \frac{\alpha p^*}{s^* + \beta - s^* \beta} = \frac{\alpha p^*}{P(q - p^*) + \beta - P(q - p^*)\beta}.$$

To understand the level of negative perceptions at $t = 1$ when there is a pro-choice decision at $t = 0$, observe that q increases both the numerator and the denominator of $s_0 p^*$. The overall effect depends on the relative increase of p^* in the numerator compared to the increase of $P(q - p^*)$ in the denominator.

If a large increase in p^* offsets the increase in the probability of abortions, then the long-term equilibrium will also yield backlash. If backlash is relatively costless, then any change in law can be internalized, which renders persistent backlash - in the model, the increase in the numerator is larger than the increase in the denominator. Otherwise, at $t = 1$, the overall effect of a pro-choice decision reduces negative attitudes towards abortion.[14] With costly backlash, the pro-choice decision has a sizable impact on the number of abortions. Then, the overall ratio in the previous equation will decrease. It is intuitive to think of laws that may initially be unpopular, to become accepted by changing the behavior of the population.

[14] To understand the intuition further, by the Intermediate Value Theorem, there is $\hat{q}$, and $\hat{p} \in [p, p^*]$, such that

$$P(q - p^*) - P(q - p) = P'(\hat{q} - \hat{p})\Delta(q - p).$$

Also, since $P'(q - p^*) = c'(p^*)$, and $P'(q - p) = c'(p)$, by continuity, there is $\tilde{q}$, and $\tilde{p} \in [p, p^*]$, such that $P'(\hat{q} - \hat{p}) = c'(\tilde{p})$. Then,

$$s_0 p^* = \frac{\alpha p^*}{s^* + \beta - s^* \beta} = \frac{\alpha p^*}{P(q - p^*) + \beta - P(q - p^*)\beta} = \frac{\alpha p^*}{c'(\tilde{p})\Delta(q - p)(1 - \beta) + \beta}.$$

2.5 Discussion The model has the prediction that a "big bang" approach to legal change yields substantial backlash, which can persist, whereas gradual legal change shifts preferences in the direction the law intends.[15] Justice Ruth Bader Ginsburg has commented that in terms of the potential to shift societal norms, certain Supreme Court rulings may have been litigated "too soon", a comment formalized in our model of backlash and legitimization.

3 Data

3.1 Legal Data We collect four legal datasets. Our first two datasets comprise the universe of Circuit and District rulings on abortion cases. Sunstein et al. (2006) and Kastellec (2013) collected data from 1971 to mid-2004[16] a total of 145 rulings. The authors coded each as either "pro-choice," favoring abortion rights and stronger protections from anti-abortion protest methods, or "pro-life." We follow their method to collect all District Court cases. The cases largely consist of challenges to state statutes, local ordinances, or other government policies regulating abortion access. Examples include parental notification or consent requirements for minors seeking abortions,[17] prohibitions on state funding for abortions,[18] and "partial-birth" abortion bans.[19] A small portion of the cases represents challenges to restrictions on anti-abortion protesting.[20]

We also collected data from the Administrative Office of the U.S. Courts (AOC) and PACER filings on District Court cases to merge judge identities.[21] This administrative data facilitates additional randomization checks. Our data on judge biographical characteristics come from several sources: the Appeals Court Attribute Data, the District Court Attribute Data,[22] the Federal Judicial Center, and our own data collection. All together we have information on judge's geographic history, education, occupational history, governmental positions, military service, religion, race,

[15] To see this formally, observe that the increase in the numerator is flexible since $p^* = q - P'^{-1}(c'(p))$, but the increase in the denominator is limited because $(1-\beta)P < 1$.

[16] They collected using a Lexis search for "core-terms (abortion) and date aft 1960 and constitutional" and "abortion and constitution!" between January 1, 1971 and June 30, 2004.

[17] See, e.g., *Akron Center for Reproductive Health, Inc. v. City of Akron*, 651 F.2d 1198 (6th Cir., 1981); *Manning v. Hunt*, 119 F.3d 254 (4th Cir., 1997); *Planned Parenthood Of Northern New England v. Heed*, 390 F.3d 53 (1st Cir., 2004).

[18] See, e.g., *D R v. Mitchell*, 645 F.2d 852 (10th Cir., 1981); *State of New York v. Sullivan*, 889 F.2d 401 (2nd Cir., 1989)

[19] See, e.g., *Carhart v. Stenberg*, 192 F.3d 1142 (8th Cir., 1999); *Rhode Island Medical Society v. Whitehouse*, 239 F.3d 104 (1st Cir., 2001).

[20] See, e.g., *Cheffer v. Reno*, 55 F.3d 1517 (11th Cir., 1995); *U.S. v. Gregg*, 226 F.3d 253 (3rd Cir., 2000).

[21] Sixteen years of Public Access to Court Electronic Records are available on open source sites for 33 Districts. We used PACER data to obtain judge identities that are missing in the AOC data.

[22] http://www.cas.sc.edu/poli/juri/attributes.html

gender, and political affiliations. Raw data on religion come from Goldman (1999).[23] Judges whose religions remained missing or unknown were coded as having no publicly known religious affiliation. We filled in missing data by searching transcripts of Congressional confirmation hearings and other official or news publications on Lexis.

3.2 Outcomes Data We are interested in four key outcomes to measure the impact of abortion rulings. For impacts on media, we collated mentions of Courts of Appeals decisions in articles from the major newspaper for the city in which each Circuit Court resides. These are: *The Boston Globe, New York Times, Philadelphia Inquirer, Richmond Times Dispatch, Times-Picayune, Cincinnati Post, Chicago Tribune, St. Louis Post-Dispatch, San Francisco Chronicle, Denver Post, Atlanta Journal and Constitution,* and *The Washington Post.* We collected data from 1979 to 2010 from NewsBank.[24]

To study the impacts on laws and regulations, a commonly-used database on state laws provides an index on abortion restrictions. This index includes, for example, mandatory delay, ban on using Medicaid to fund abortion, and requiring parental notification (Blank et al. 1996).[25] Sub-indicators for specific laws are coded as the share of the year in which the law is binding. The overall index is the average of sub-indicators.

We also collate charitable donations for abortion causes from the Database on Ideology, Money in Politics, and Elections (DIME) (Bonica 2013). This data comes from the Federal Election Commission and state reporting agencies that require disclosure of donors' addresses, names, and employers. It contains over 100 million contributions made by individuals and organizations to local, state, and federal elections spanning a period from 1979-2012. We identify charitable contributions made to pro-choice and pro-life tax exempt organizations and political candidates. We identify 113 pro-choice and 307 pro-life donation recipients. Examples of pro-choice recipients in the data include the National Abortion Rights Action League, Planned Parenthood, and political candidates William

[23] Additional religion data are available at http://courseweb.stthomas.edu/gcsisk/religion.study.data/cover.htm. Missing data are collected by our own news searches following their method of searching for wedding announcements or funerals.

[24] We used the search term: "abortion in All Text and Circuit or Circuit in All Text and judgment or "court ruling" in All Text not "Supreme Court" in All Text not state near10 Circuit in All Text".

[25] For example, a number of states have used state funds to pay for Medicaid abortions for low-income women since the passage of the Hyde Amendment prohibited Federal funding. Other examples include parental consent or notification laws for teenagers seeking abortions.

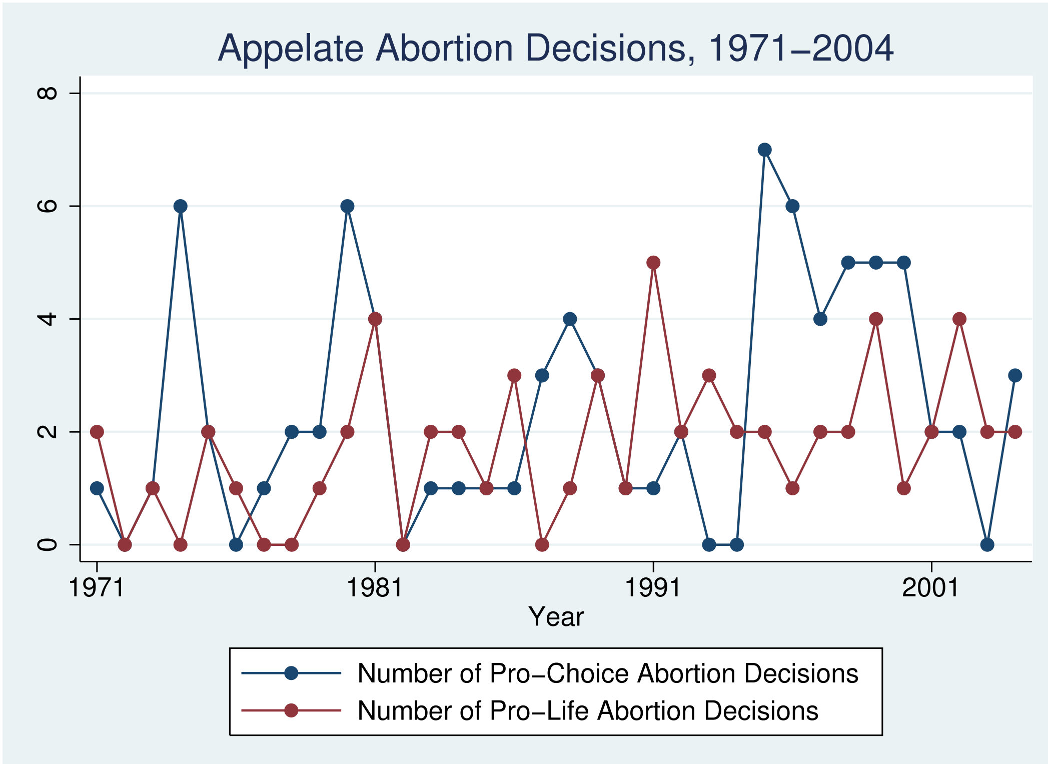
Weld and Barbara Boxer. Examples of pro-life recipients include National Right to Life, the Susan B. Anthony List, and political candidates Paul Ryan and Rick Santorum.

We observe a total of 3.5 million records of individual charitable donations to abortion-related recipients. 13% of the records were of contributions to pro-choice recipients, with a mean of $644 donated; 87% were of contributions to pro-life recipients, with a mean of $272. Over 20,000 cities appear with at least one abortion-related contribution during the time period. We aggregate the individual donations at the city level. Results are similar if aggregated to the state level.

Finally, we use the General Social Survey (GSS) with U.S. State identifiers. The GSS is an annual individual-level survey from 1973 to 1994 (except for 1979, 1981, and 1992), and biannually after 1994. For each year, the GSS randomly selects a cross-sectional sample of 1,500 - 3,000 residents who are at least 18 years old. The GSS asks a variety of abortion attitude questions. These questions are on the legality of abortions in different circumstances. We aggregate responses into an index, where higher values correspond to reduced support for abortion. We construct demographic controls like age, gender, educational attainment, and race. As standard in the literature, we also use survey weights provided by GSS in our regressions.

To preview our data, we find the average Circuit experienced 0.36 abortion decisions in a year. Among the Circuit-years with any abortion decisions, 55% of the panel decisions were pro-choice. Figure 1 shows the yearly frequency of pro-abortion and anti-abortion decisions nationwide. Appendix A provides additional summary statistics on attitudes over time.

FIGURE 1.— Abortion decisions over time



4 Specification

We use regressions of the form:

(1) $$Y_{ict} = \beta_0 + \beta_1 Law_{ct} + \beta_2 \mathbf{1}[M_{ct} > 0] + \beta_3 C_c + \beta_4 T_t + \beta_5 X_{ict} + \beta_6 W_{ct} + \varepsilon_{ict}$$

where β_1 captures the effect of pro-abortion vs. anti-abortion precedent, $\beta_1 + \beta_2$ captures the effect of pro-abortion precedent vs. no precedent, and β_2 captures the effect of anti-abortion precedent vs. no precedent. Y_{ict} is an outcome (index of state abortion regulations, charitable donations, or abortion preferences) for individual, city, or state i in Circuit c and year t. Law_{ct} is the share of pro-abortion precedents (but typically it is 0 or 1, a single verdict). We extend our specification to include the presence of a decision, $1\left[M_{ct-n} > 0\right]$, where M is the number of cases (typically 0 or 1), X_{ict} individual characteristics (such as age and gender), and W_{ct} characteristics of the pool of judges available to be assigned. Due to random assignment being at the Circuit-year level, clustering standard errors yields roughly identical results whether clustering at the Circuit or the Circuit-year level.[26]

We present randomization checks in Appendix B. Our 2SLS can be described more formally as follows. We seek an instrumental variable for Law_{ct} using judges' biographical characteristics. Let N_{ct} be a biographical characteristic, e.g., the number of Democrats assigned to abortion panels. Let $p_{ct} = \frac{N_{ct}}{M_{ct}} * \mathbf{1}\left[M_{ct-n} > 0\right]$, i.e., defined to be 0 when $\mathbf{1}\left[M_{ct-n} > 0\right] = 0$. Then: $\mathbf{E}[(p_{ct} - \mathbf{E}(p_{ct}))\varepsilon_{ict}] = \mathbf{Pr}[M_{ct} > 0]\mathbf{E}[(p_{ct} - \mathbf{E}(p_{ct}))\varepsilon_{ict}|M_{ct} > 0] + \mathbf{Pr}[M_{ct} = 0]\mathbf{E}[(p_{ct} - \mathbf{E}(p_{ct}))\varepsilon_{ict}|M_{ct} = 0] = 0$. Next, $\mathbf{E}[(p_{ct} - \mathbf{E}(p_{ct}))\varepsilon_{ict}] = \mathbf{E}(p_{ct}\varepsilon_{ict}) - \mathbf{E}[\mathbf{E}(p_{ct})\varepsilon_{ict}] = \mathbf{E}(p_{ct}\varepsilon_{ict}) - \mathbf{E}(p_{ct})\mathbf{E}(\varepsilon_{ict}) = \mathbf{E}[p_{ct}\varepsilon_{ict}]$. Our moment condition for causal inference is: $\mathbf{E}[\frac{N_{ct}}{M_{ct}}\varepsilon_{ict}|\mathbf{E}(\frac{N_{ct}}{M_{ct}}), 1\left[M_{ct} > 0\right]] = 0$. We use party, race, and religion for our basic 2SLS (labeled "Naive"). We also use LASSO to select instruments (Belloni et al. 2012).[27] All 2SLS estimates use the limited information maximum likelihood (LIML) estimator because of its better small sample properties. We also present a LIML estimate using all the instruments and a visualization of different 2SLS estimates from the judicial characteristics that are among the top 50 in instrument strength.

It is also worth noting that if we restrict to Circuit-years with $\mathbf{1}[M_{ct} > 0] = 1$, we only estimate β_1. If we follow an intuitive approach of averaging of pro-abortion (+1) and anti-abortion (−1) in constructing Law_{ct}, we likewise restrict $\beta_2 = 0$. If we follow the specification described earlier, we distinguish pro-abortion *vs.* anti-abortion *vs.* a benchmark of no precedent.

5 The Effect of Judge Identity on Court Outcomes

Table I shows that judges' politics, race, and religion predict abortion decisions. To express succinctly, switching from an all-Republican to all-Democrat panel increases the likelihood of a pro-abortion precedent by 29% and switching from an all-minority to all-white panel increases

[26]Barrios et al. (2012) show that random assignment of treatment addresses serial and spatial correlation across treatment units, since "if the covariate of interest is randomly assigned at the cluster level, only accounting for non-zero covariances at the cluster level, and ignoring correlations between clusters, leads to valid standard errors and confidence intervals." We check results using randomization inference that assigns the legal variation to another Circuit and the robustness of our results to using wild bootstrap. The coefficients on the leads serve as an omnibus falsification check for spurious significance.

[27]We analyze characteristics including party affiliation, race, gender, religion, holding a BA degree from an institution within the state, and ABA ratings—the Standing Committee on the Federal Judiciary of the American Bar Association publishes evaluations of nominees to the lower federal courts and judges perceived as high quality may be less likely to be influenced by their biographical characteristics. We include interactions of all mentioned variables. The characteristics are defined as dummies. Some characteristics, like Black and non-White (which includes include Hispanics and Asians), are included as separate dummies.

the likelihood of an pro-abortion precedent by 51% (Column 4).[28] Two of the LASSO-selected characteristics are Democrat and secular, but LASSO also picks minority Republican judges and black judges with a bachelor's degree from within the state.[29] These judges tend to vote against abortion.[30] Were we to use the predicted estimate from the first stage (akin to judge leniency) instead of biographical characteristics, we greatly strengthen the F-statistic. Weighting the regressions using the geometric mean of decisions in a Circuit-year also greatly strengthens the instrument.

Table II shows these judicial patterns are also found in the population. The variable "in-state" (whether the respondent lives in the same state where s/he grew up) is the closest proxy for an in-state BA degree in the GSS. The collection of Naive and LASSO-selected instruments predict abortion support.

An unusual feature of U.S. federal appellate courts is that, technically, cases should only appear in the appellate courts if they present new legal issues that require interpretation of the law. Cases with identical fact patterns should not be appealed. Therefore, we can present another check of our identification strategy: We should not expect the assignment of judges in a previous year to predict the decisions in a subsequent year. This is reported in Appendix B.

Previous research has found that district judge demographic characteristics are correlated with reversal rates in the Courts of Appeals (Haire, Songer, and Lindquist 2003; Sen 2015; Barondes 2010; Steinbuch 2009). Expected reversal rates could encourage litigants to pursue an appeal. To instrument for $\mathbf{1}[M_{ct} > 0]$, we define $w_{ct} = \frac{\sum_{d=1}^{J} K_{cdt} * \left(\frac{L_{cdt}}{K_{cdt}}\right)}{\sum_{d=1}^{J} K_{cdt}}$, where K_{cdt} denotes the number of cases filed in District *court* d within Circuit c at time t (J goes from 5 to 13 depending on the District). L_{cdt} denotes the number of judges with a particular characteristic assigned to cases. District Courts are discussed further in Appendix C. We find that District Court cases assigned judges with prior congressional counsel experience are approximately 33% more likely to be appealed. Cases assigned judges born in the 1920s and with other federal experience are 7% more likely to be appealed. One reason for certain judges to be appealed more often may be that their decisions may be perceived

[28] Bivariate correlations are omitted due to space constraints.

[29] The instruments chosen by LASSO do not vary much with the inclusion or exclusion of controls. The instruments chosen by LASSO differ for the state law outcomes since the GSS is population representative while the state law dataset will weight sparsely populated regions more. However, the demographic characteristics selected by LASSO are still intuitive: Evangelical Republicans, Black Catholics, and Minority Catholics.

[30] The difference in the judge-level sample size between Columns 1 and 5 (326 vs 325) is due to the lack of data for one judge on whether the BA degree is from within the state.

TABLE I.— First Stage: Judicial Politics, Race, and Religion and Pro-Abortion Precedent

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Democrat	0.165**	0.227+	0.375*	0.288+	0.179**	0.240*	0.298+	0.221
	(0.0469)	(0.107)	(0.125)	(0.144)	(0.0411)	(0.108)	(0.143)	(0.152)
Secular	0.0744	0.228	0.366	0.379	0.0667	0.209	0.323+	0.301
	(0.0530)	(0.143)	(0.207)	(0.245)	(0.0556)	(0.128)	(0.169)	(0.184)
Non-white	0.0127	-0.171	-0.453*	-0.512*				
	(0.0942)	(0.160)	(0.162)	(0.177)				
Repub. X Non-white					0.0787	0.256	-1.052*	-1.261*
					(0.224)	(0.572)	(0.429)	(0.422)
In-state BA X Black					-0.171	-0.900**	-1.259**	-1.002*
					(0.157)	(0.176)	(0.269)	(0.346)
N	326	142	44897	44897	325	142	44897	44897
R-sq	0.0318	0.0395	0.640	0.646	0.0347	0.0680	0.671	0.674
F-stat	11.89	2.232	8.327	4.982	7.761	9.674	15.51	16.26
Pro-choice measure	Judge Vote	Panel Vote	% Pro-choice	% Pro-choice	Judge Vote	Panel Vote	% Pro-choice	% Pro-choice
Controls	No	No	No E(x)	Yes	No	No	No E(x)	Yes
Analysis level	Judge	Panel	GSS	GSS	Judge	Panel	GSS	GSS

First stage regressions at different levels of data aggregation. For judge level, the outcome variable is judge vote (1 if pro-choice), for panel level - the 3-judge panel decision, for GSS level - the share of pro-choice decisions in a given Circuit-year. Controls are omitted at the judge and panel level, but included at the GSS level, where we always include a control for the presence of a case as well as fixed effects for Circuit and year. In additions, Columns 4 and 8 control for expected proportion of panel judges with the analyzed characteristics. Heteroskedasticity-robust standard errors are in parentheses. Standard errors are clustered at the Circuit-year level. + Significant at 10%; * Significant at 5%; ** Significant at 1%.

TABLE II

Relationship between Abortion Attitudes and Demographic Characteristics in GSS

	(1) Index	(2) Index	(3) Index	(4) Index	(5) Index	(6) Index
Democrat	-0.00168					-0.0149**
	(0.00503)					(0.00472)
Secular		-0.208**				-0.205**
		(0.00602)				(0.00589)
Non-white			0.0685**			0.0645**
			(0.00664)			(0.00643)
Repub. X Non-white				0.0899**		
				(0.0171)		
Repub. X In-state					0.0886*	
					(0.0286)	
Observations	32982	32982	32982	32982	887	32982

The dependent variable is an index of abortion attitudes - created as an average of answers to questions about the legality of abortions in different circumstances. Larger values of the index correspond to greater support for making abortion illegal. The biographical characteristics correspond to instruments used in the main model. Variable "in-state" is the best proxy for in-state BA degree found in the GSS – whether the respondent lives in the same state where s/he grew up. All models include Circuit and year fixed effects. Standard errors are clustered on Circuit-year level. + significant at 10%, * significant at 5%, ** significant at 1%.

as more political and easier to be reversed. We examine estimates of the effects of Circuit rulings with and without using this District court instrument.

TABLE III

First Stage: Judicial Biographical Characteristics in District Cases and the Presence of an Appeal in Circuit Courts

	(1)	(2)
Prior Congressional Counsel	0.380**	0.335**
	(0.0832)	(0.0972)
Democrat X High ABA Score	-0.0231	-0.0218
	(0.0232)	(0.0251)
Republican X Age<40 When Appointed	0.00676	-0.0120
	(0.101)	(0.0963)
Born in 1920s X Other Federal Exp.		0.0675*
		(0.0287)
N	44897	44897
R-sq	0.300	0.309
F-stat	25.81	19.83
Controls	FE	FE
Analysis level	GSS	GSS

First stage regressions at the GSS level - the presence of a Circuit case in a given Circuit-year regressed on the share of District cases with a particular judge biographical characteristic. We control for Circuit and year fixed effects and expected proportion of District cases with the analyzed judge characteristics. Heteroskedasticity-robust standard errors are in parentheses. Standard errors are clustered at the Circuit-year level. + Significant at 10%; * Significant at 5%; ** Significant at 1%.

6 Estimating the Impact of Abortion Precedents

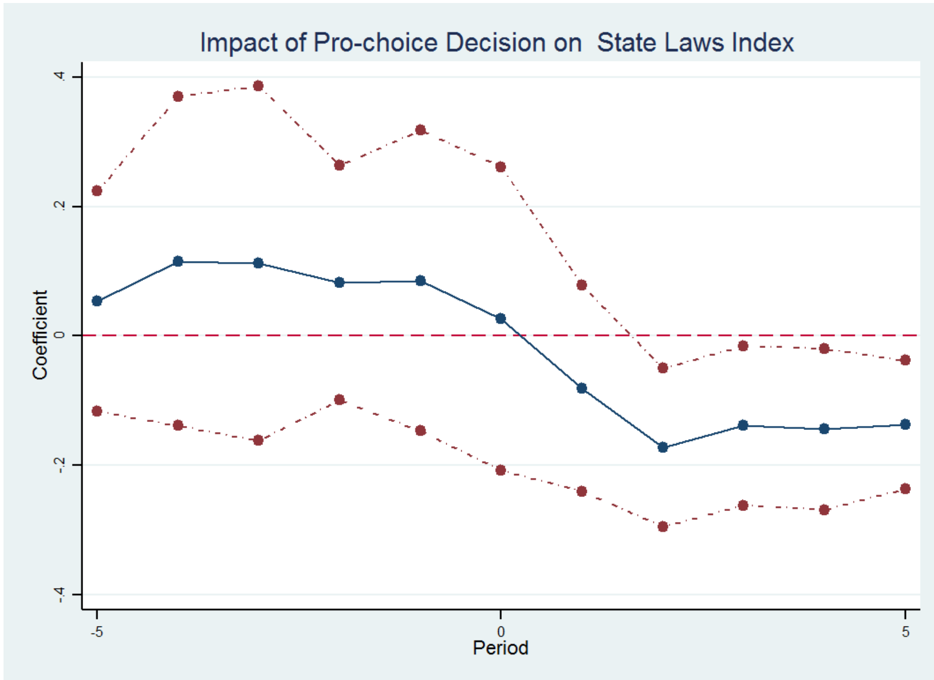
6.1 State Abortion Regulations In baseline estimates, within two years after an anti-abortion decision, states are roughly 20% more likely to restrict abortion through regulations requiring mandatory delay, banning the use of Medicaid payments to fund abortion, and requiring parental notification. Figure 2 displays the results.[31] The effect appears as a level effect rather than a growth effect. Effects are observed immediately and become statistically significant by the second year and remain statistically significant thereafter.

To interpret the coefficient size, roughly one pro-abortion precedent reduces the chance of having the state abortion regulation by 18 percentage points in *all* states and for *all* three regulations. The magnitude of the effects indicate that the response is not "mechanical" in the sense that if the state's law is being litigated and it is rejected, we should expect that state under litigation to terminate the law. Instead we observe that all the states in the Circuit are following

[31] All β_1 coefficients come from a single-lag model in which the contemporaneous outcome variable (state law index) is regressed on the law variable and presence of a case. Lower values mean fewer restrictions to abortion access.

the pro-abortion precedent.[32]

Figure 2.— Pro-Abortion Precedent Impact on State Laws Restricting Abortion



Lower values of the state law index indicate fewer restrictions on abortions. All coefficients come from single-lag model in which contemporaneous outcome variable (state law index) was regressed on the law variable and presence of a case. Counterfactual is anti-abortion precedent. Instruments are Democrat, Secular, and Non-white judge characteristics. 95% confidence intervals are presented as dashed lines.

It is worth noting that an extensive empirical literature has examined the impact of state abortion regulations on reproductive behavior (Levine et al. 1999; Klick and Stratmann 2003), child and adult outcomes (Gruber et al. 1999; Ananat et al. 2009), and crime (Donohue and Levitt 2001). In particular, liberalized access to abortion allowed large numbers of women to delay marriage and motherhood (Myers 2017). Our results contribute to a large political economy literature that argues that court rulings have no effect (Rosenberg 1993). The LIML estimates in Table IV appear strongest for parental notification.

We check if our results are due to the a handful of panel compositions of cases. We estimate 2SLS for each judicial composition that comprise the top fifty in statistical significance for the first stage instruments. These estimates are visualized in Figure 3. We see the impact on parental notification laws is most salient in the lower right panel.[33]

[32] Assuming that all the Circuit cases involve litigation over laws recorded in Blank et al. (1996) would mean that the effects are roughly twice the impact of the mechanical effect.

[33] Similar checks are displayed for other results in Appendix E.

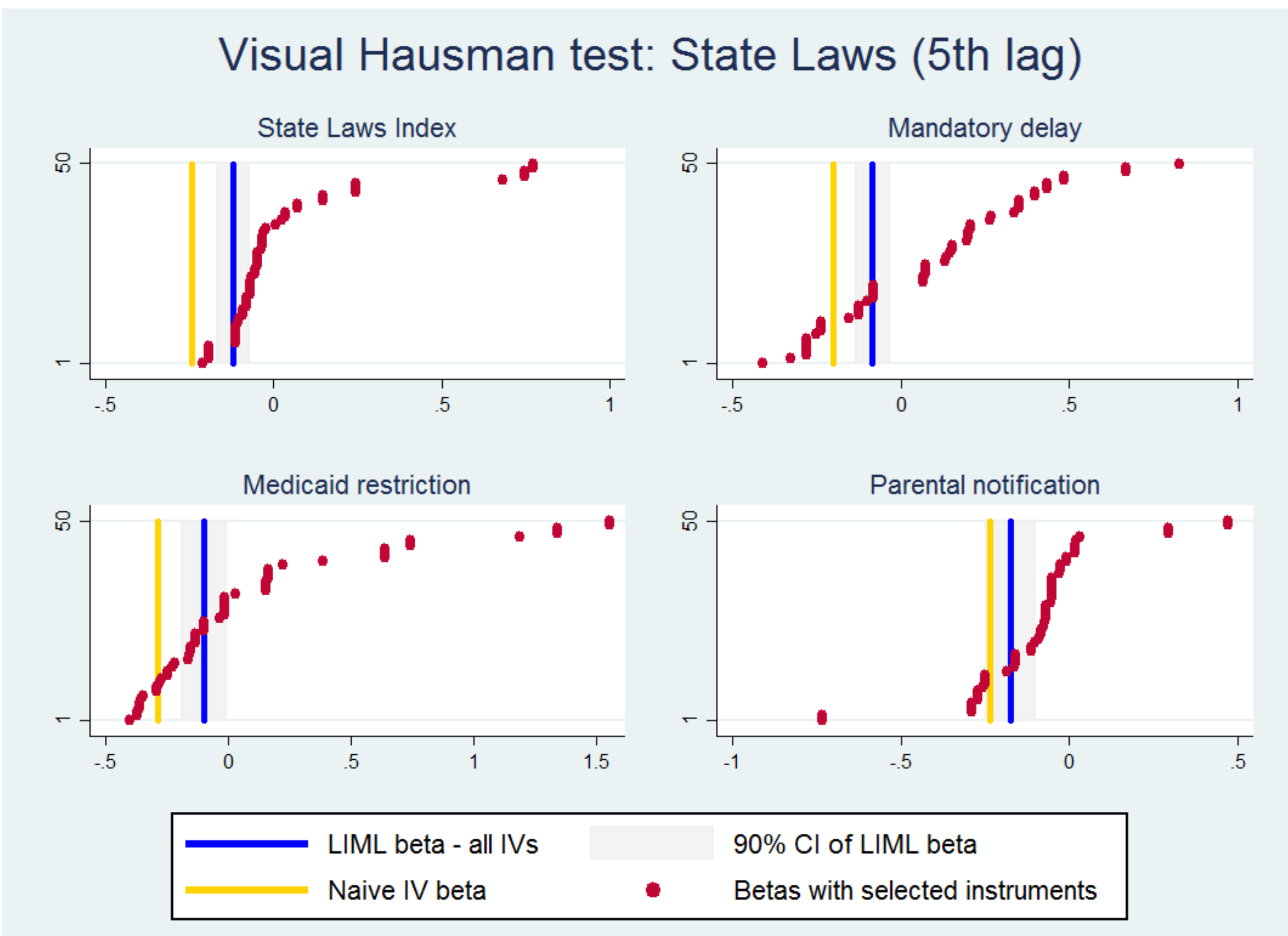
TABLE IV

PRO-ABORTION PRECEDENT IMPACT ON STATE LAWS RESTRICTING ABORTION FIVE YEARS LATER

	State Laws Index	P-value	Mandatory delay	P-value	Medicaid restriction	P-value	Parental notification	P-value
OLS	-0.0749**	0.000599	-0.0729**	0.00344	-0.0422	0.205	-0.110**	0.00675
Naive	-0.241**	0.00409	-0.201*	0.0215	-0.286**	0.00541	-0.236	0.124
LIML	-0.119**	0.0000269	-0.0849**	0.00405	-0.0956+	0.0782	-0.174**	0.0000681
LASSO	-0.218**	0.00868	-0.407**	0.00464	-0.122	0.261	-0.125	0.208
N	1224		1224		1224		1224	

State laws index is the average of indicators for: mandatory delay required, ban on using Medicaid to fund abortion, and parental notification required. Main independent variable is pro-abortion precedent in the Circuit-year. Counterfactual is anti-abortion precedent. Law variable is instrumented in rows 2-4 with judicial characteristics, i.e. share of judges with given characteristic on abortion panels. Regressions control for Circuit and year fixed effects. We also control for probabilities of being assigned a judge with these characteristics. Naive instruments are Democrat, Secular, and Non-white judicial characteristics. LASSO instruments are the following judicial characteristics: Republican X Evangelical; Catholic X Black; Catholic X Non-white. P-values are based on standard errors clustered by Circuit-year. + Significant at 10%; * Significant at 5%; ** Significant at 1%.

FIGURE 3.— Alternative Impacts of Pro-Abortion Precedent on State Laws Five Years Later



The yellow lines indicate the Naive 2SLS and the blue lines indicate the LIML estimates (which uses all the biographical characteristics). The shaded gray area is the LIML confidence interval. The red dots indicate alternative estimates using other biographical characteristics whose first stage F-statistics in Circuit-year level regressions yield the top 50 F-statistics controlling for $\mathbf{E}(p_{ct})$.

Next, we show that pro-abortion and anti-abortion precedents have opposite effects relative to the baseline of no precedent. In LIML estimates, Table V finds that pro-abortion precedents reduce the state law index by 0.067 while anti-abortion precedents increase the index by 0.053. This supports the approach of treating pro- and anti- decisions as +1 and −1 in empirical analyses of cumulative laws used in Ura (2014) and Hernandez (2014).

TABLE V

Impact of Pro-Abortion *vs.* No *vs.* Anti-Abortion Precedent on State Laws Five Years Later

	OLS	Naive IV	LIML	LASSO	N
State Laws Index					1224
Law (Pro-choice)	-0.075**	-0.122+	-0.121**	-0.137**	
P-value	0.001	0.059	0	0	
Present	0.031+	0.247	0.053**	0.104	
P-value	0.071	0.457	0.006	0.277	
Law + Present	-0.044*	0.126	-0.067**	-0.033	
P-value	0.010	0.709	0	0.762	

State laws index is the average of indicators for: mandatory delay required, ban on using Medicaid to fund abortion, and parental notification required. Main independent variable is pro-abortion precedent in the Circuit-year. The law variable is instrumented in Columns 2-4 with judicial characteristics. Regressions control for Circuit and year fixed effects. We also control for probabilities of being assigned a judge with these characteristics. Naive instruments are Democrat, Secular, and Non-white judicial characteristics. LASSO instruments are the following judicial characteristics: Republican X Evangelical; Catholic X Black; Catholic X Non-white. Presence of an appeal is instrumented for with District IVs. LIML uses the entire available instruments set. P-values are based on standard errors clustered by Circuit-year. + Significant at 10%; * Significant at 5%; ** Significant at 1%.

6.2 Campaign Donations Turning to campaign donations, Table VI shows the combined effect of (i) anti-abortion precedents stimulating pro-abortion donations and (ii) pro-abortion precedents reducing pro-abortion donations (e.g., after a win, donors are satisfied). The dependent variable is in logs, which means the LIML estimates correspond to roughly 15% shift. The effect appears on the total amount rather than the number of donors. This would be consistent with court decisions activating partisans–people who were pro-abortion becoming more so–and the strengthening of existing attitudes rather than the shift of attitudes among non-donors (Green et al. 2004).

Table VII suggests that anti-abortion precedents appear to fully account for the LIML effect on pro-abortion donations. The Naive 2SLS estimate suggests that pro-abortion precedents increase anti-abortion donations. However, in general, the results here and in Table VI suggest that anti-abortion donations may be more inelastic than pro-abortion donations.[34]

[34] Appendix D presents additional results and robustness checks.

TABLE VI

Impact of Pro-Abortion Precedent on Abortion-Related Donations

	Tot. amount Pro-choice	P-value	Tot. amount Pro-life	P-value	N Pro-choice	P-value	N Pro-life	P-value
OLS	-0.102	0.167	0.0751	0.481	-0.0473	0.113	0.0780	0.842
Naive	-0.240**	0.00655	0.144	0.296	0.332	0.766	0.0658	0.940
LIML	-0.153*	0.0132	-0.0209	0.796	-0.152	0.510	-0.0774	0.688
LASSO	-0.347	0.242	-0.688	0.148	-0.260	0.592	-0.932	0.200
N	26203		48117		596592		596592	

Dependent variables are log of total donations to pro-life and pro-choice organizations as well as number of individuals who donate to these organizations. Main independent variable is pro-abortion precedent in the Circuit-year. Counterfactual is anti-abortion precedent. The law variable is instrumented in rows 2-4 with judicial characteristics. Regressions control for Circuit and year fixed effects. We also control for probabilities of being assigned a judge with these characteristics. Naive instruments are Democrat, Secular, and Non-white judicial characteristics. LASSO instruments are the following judicial characteristics: Democrat, Secular, Non-white Republican, and Black judge with an in-state BA degree. LIML uses the entire available instruments set. P-values are based on standard errors clustered by Circuit-year. + Significant at 10%; * Significant at 5%; ** Significant at 1%.

TABLE VII

Impact of Pro-Abortion *vs.* No *vs.* Anti-Abortion Precedent on Abortion-Related Donations

	OLS	Naive IV	LIML	LASSO	N
Total Amount Pro-choice					26203
Law (Pro-choice)	-0.102	-0.235	-0.104	0.029	
P-value	0.159	0.105	0.249	0.836	
Present	0.098+	0.027	0.099+	0.034	
P-value	0.060	0.763	0.092	0.751	
Law + Present	-0.004	-0.208	-0.005	0.063	
P-value	0.923	0.106	0.920	0.303	
Total Amount Pro-life					48117
Law (Pro-choice)	0.075	0.245+	0.103	-0.226	
P-value	0.367	0.099	0.287	0.586	
Present	-0.081	-0.083	-0.096	0.076	
P-value	0.237	0.515	0.212	0.759	
Law + Present	-0.006	0.162	0.007	-0.150	
P-value	0.936	0.329	0.918	0.435	

Dependent variables are log of total donations to pro-life and pro-choice organizations aggregated to the contributor city level. Main independent variable is pro-abortion precedent in the Circuit-year. The law variable is instrumented in Columns 2-4 with judicial characteristics. Regressions control for Circuit and year fixed effects. We also control for probabilities of being assigned a judge with these characteristics. Naive instruments are Democrat, Secular, and Non-white judicial characteristics. LASSO instruments are the following judicial characteristics: Democrat, Secular, Non-white Republican, and Black judge with an in-state BA degree. LIML uses the entire available instruments set. P-values are based on standard errors clustered by Circuit-year. + Significant at 10%; * Significant at 5%; ** Significant at 1%.

6.3 Abortion Attitudes

In this sub-section we study the impact of abortion rulings on abortion attitudes. Table VIII shows that Republicans[35] strongly increase anti-abortion attitudes in response to pro-abortion precedents, especially for "Should it be illegal for a woman to obtain abortion for *any reason*?" The magnitudes are roughly equivalent to the differential between Republicans and Democrats. The effects are observed individually for "does not want more children", "woman is single", "family is poor", "pregnancy is a result of rape", but not for "high chance of child's defect" and "mother's health is endangered". This would be consistent with Franklin and Kosaki (1989)'s finding of backlash over "discretionary" abortions. Democrats are less significantly affected than Republicans.

Republicans seem to respond to pro-abortion precedent and not to anti-abortion precedent. Naive IV estimates in Table IX illustrate for "Should it be illegal for a woman to obtain abortion for any reason?" A pro-abortion precedent makes Republicans more likely to oppose abortion for this reason by roughly 20% and this is almost entirely due to pro-abortion precedent vs. no precedent.

Naive IV estimates in Table IX illustrate for Democrats. An anti-abortion precedent causes them to increase pro-abortion attitudes[36] by 8.7% relative to the counterfactual of no precedent. However, for other discretionary reasons, like for any reason and desired fertility, Democrats also backlash. Appendix E shows the effects are reasonably robust to alternative specifications.

[35] We label as Republicans the GSS respondents who identify themselves as strong or leaning Republicans (and not as Independent).

[36] "Should it be illegal for a woman to obtain abortion because the family is poor?"

TABLE VIII.— Impact of Pro-Abortion Precedent on Abortion Attitudes

	Republicans					Democrats				
	OLS	Naive IV	LIML	LASSO	N	OLS	Naive IV	LIML	LASSO	N
Z-score index	0.110*	0.456*	0.127*	0.176**	2000	0.087	0.123	0.111*	0.048	2601
P-value	0.038	0.016	0.023	0.009		0.135	0.310	0.045	0.538	
Simple average index	0.048*	0.216*	0.056*	0.089**	2000	0.040	0.058	0.051*	0.023	2601
P-value	0.041	0.014	0.025	0.004		0.131	0.293	0.043	0.520	
High chance of child's defect	0.050+	0.013	0.056*	-0.028	2460	0.030	0.006	0.031	0.014	3444
P-value	0.052	0.854	0.028	0.434		0.134	0.930	0.140	0.681	
Does not want more children	0.042	0.379*	0.048	0.140**	2472	0.076+	0.123	0.083*	0.043	3421
P-value	0.148	0.024	0.101	0.002		0.050	0.164	0.020	0.474	
Woman is single	0.055+	0.326*	0.067*	0.164**	2471	0.055+	0.119	0.057+	0.012	3411
P-value	0.075	0.015	0.031	0.002		0.090	0.208	0.064	0.826	
Family is poor	0.047+	0.249*	0.048+	0.144**	2465	0.031	0.136	0.031	-0.007	3417
P-value	0.099	0.035	0.095	0.006		0.278	0.115	0.268	0.832	
Mother's health is endangered	0.021	0.077	0.029	0	2475	0.015	0.045	0.018	-0.015	3447
P-value	0.294	0.238	0.181	0.995		0.270	0.435	0.186	0.684	
Pregnancy is result of rape	0.056**	0.156+	0.059**	0.007	2462	0.023	0.046	0.029	0.002	3432
P-value	0.005	0.078	0.002	0.871		0.213	0.344	0.125	0.944	
Any reason	0.063*	0.305*	0.074**	0.167**	2176	0.027	0.064	0.043	0.025	2857
P-value	0.012	0.016	0.005	0.001		0.399	0.455	0.146	0.603	

Dependent variables are abortion attitudes recorded in GSS answers to questions related to whether the respondent believes abortion for certain reasons should be illegal. Main independent variable is pro-abortion precedent in the Circuit-year. Counterfactual is anti-abortion precedent. The law variable is instrumented in Columns 2-4 and 6-8 with judicial characteristics. Regressions control for age and sex of the respondent and Circuit and year fixed effects. We also control for probabilities of being assigned a judge with these characteristics. Naive instruments are Democrat, Secular, and Non-white judicial characteristics. LASSO instruments are the following judicial characteristics: Democrat, Secular, Non-white Republican, and Black judges with an in-state BA degree. LIML uses the entire available instruments set. Models use subsample restricted to Circuit-years with at least one case. Columns 1-4 use sample of GSS respondents who declare identification with the Republican Party. Columns 5-8 use respondents identifying with the Democrat Party. P-values are based on standard errors clustered by Circuit-year. + Significant at 10%; * Significant at 5%; ** Significant at 1%.

TABLE IX

Impact of Pro-Abortion *vs.* No *vs.* Anti-Abortion Precedent on Abortion Attitudes

	Republicans					Democrats				
	OLS	Naive IV	LIML	LASSO	N	OLS	Naive IV	LIML	LASSO	N
Z-score index					6317					9092
Law (Pro-choice)	0.049	0.267+	0.048	0.132+		0.112**	-0.002	0.116*	0.015	
P-value	0.317	0.053	0.391	0.067		0.006	0.981	0.011	0.831	
Present	-0.065+	-0.076	-0.065	-0.051		-0.036	-0.079	-0.038	-0.037	
P-value	0.080	0.476	0.101	0.625		0.217	0.294	0.204	0.619	
Law + Present	-0.016	0.191+	-0.017	0.082		0.076*	-0.081	0.077*	-0.022	
P-value	0.645	0.071	0.655	0.302		0.012	0.311	0.017	0.731	
Simple average index					6317					9092
Law (Pro-choice)	0.021	0.124*	0.020	0.064+		0.049**	-0.003	0.052**	0.007	
P-value	0.338	0.048	0.419	0.051		0.006	0.943	0.009	0.821	
Present	-0.026	-0.034	-0.026	-0.025		-0.016	-0.038	-0.017	-0.020	
P-value	0.113	0.478	0.140	0.584		0.224	0.256	0.190	0.541	
Law + Present	-0.005	0.090+	-0.006	0.038		0.034*	-0.041	0.035*	-0.013	
P-value	0.726	0.063	0.727	0.280		0.012	0.250	0.014	0.647	

Table notes similar to that of Table VIII.

6.4 Medium-Run Impact Within two years, we find persuasive effects of law in Table X. Several specifications yield consistent evidence of persuasive effects–after pro-abortion precedent, people are less likely to be anti-abortion two years later. A larger set of sensitivity analyses are presented in Appendix E.

In separating the effects of pro-abortion and anti-abortion precedents, Table XI and Appendix E show that pro-abortion decisions cause Republicans to have more pro-abortion attitudes two years later.

TABLE XI

Impact of Pro-Abortion *vs.* None *vs.* Anti-Abortion Precedent on Abortion Attitudes Two Years Later

	Republicans					Democrats				
	OLS	Naive IV	LIML	LASSO	N	OLS	Naive IV	LIML	LASSO	N
Z-score index					6317					9092
Law (Pro-choice)	-0.050	-0.426*	-0.038	-0.244**		0.017	-0.058	0.022	-0.010	
P-value	0.336	0.012	0.583	0.001		0.654	0.653	0.634	0.878	
Present	0.073+	-0.034	0.066	-0.117		-0.019	-0.088	-0.021	-0.097	
P-value	0.099	0.730	0.222	0.167		0.508	0.157	0.502	0.114	
Law + Present	0.023	-0.459**	0.028	-0.360**		-0.002	-0.146	0	-0.108	
P-value	0.492	0.001	0.429	0		0.955	0.189	0.997	0.114	
Simple average index					6317					9092
Law (Pro-choice)	-0.023	-0.188*	-0.017	-0.103**		0.009	-0.030	0.011	-0.012	
P-value	0.329	0.012	0.578	0.001		0.592	0.600	0.597	0.682	
Present	0.031	-0.020	0.028	-0.059		-0.010	-0.042	-0.011	-0.045+	
P-value	0.115	0.637	0.244	0.106		0.450	0.124	0.458	0.082	
Law + Present	0.008	-0.208**	0.011	-0.162**		-0.001	-0.071	0	-0.057+	
P-value	0.562	0.001	0.491	0		0.966	0.136	0.996	0.055	

Table notes similar to that of Table X.

Table X.— Impact of Pro-Abortion Precedent on Abortion Attitudes Two Years Later

	Republicans					Democrats				
	OLS	Naive IV	LIML	LASSO	N	OLS	Naive IV	LIML	LASSO	N
Z-score index	-0.012	-0.333*	-0.012	-0.028	2004	0.037	-0.071	0.036	-0.122*	2751
P-value	0.824	0.025	0.829	0.768		0.419	0.509	0.416	0.035	
Simple average index	-0.006	-0.154*	-0.006	-0.008	2004	0.016	-0.039	0.015	-0.062*	2751
P-value	0.804	0.021	0.811	0.836		0.429	0.391	0.426	0.012	
High chance of child's defect	0.001	-0.068	0.003	-0.021	2527	0.016	0.005	0.020	-0.008	3577
P-value	0.962	0.241	0.881	0.628		0.481	0.943	0.366	0.853	
Does not want more children	0.016	-0.192*	0.018	-0.042	2524	0.004	-0.110+	0.010	-0.099**	3555
P-value	0.625	0.016	0.573	0.377		0.831	0.070	0.631	0.003	
Woman is single	-0.003	-0.199*	-0.001	-0.039	2500	-0.011	-0.062	-0.007	-0.110**	3529
P-value	0.902	0.028	0.960	0.405		0.594	0.264	0.711	0	
Family is poor	-0.016	-0.211**	-0.010	-0.064+	2526	0.013	-0.081	0.019	-0.103**	3551
P-value	0.481	0.010	0.642	0.096		0.554	0.192	0.382	0.006	
Mother's health is endangered	0.019	-0.039	0.017	-0.049	2534	-0.006	0.012	-0.001	0.014	3588
P-value	0.359	0.436	0.405	0.112		0.701	0.825	0.941	0.630	
Pregnancy is result of rape	-0.017	-0.055	-0.015	-0.027	2512	0.015	0.040	0.019	0.011	3547
P-value	0.436	0.301	0.501	0.517		0.388	0.483	0.278	0.716	
Any reason	0.007	-0.206*	0.008	0.042	2204	0.038+	-0.005	0.038+	-0.050	3000
P-value	0.818	0.033	0.776	0.408		0.085	0.911	0.077	0.118	

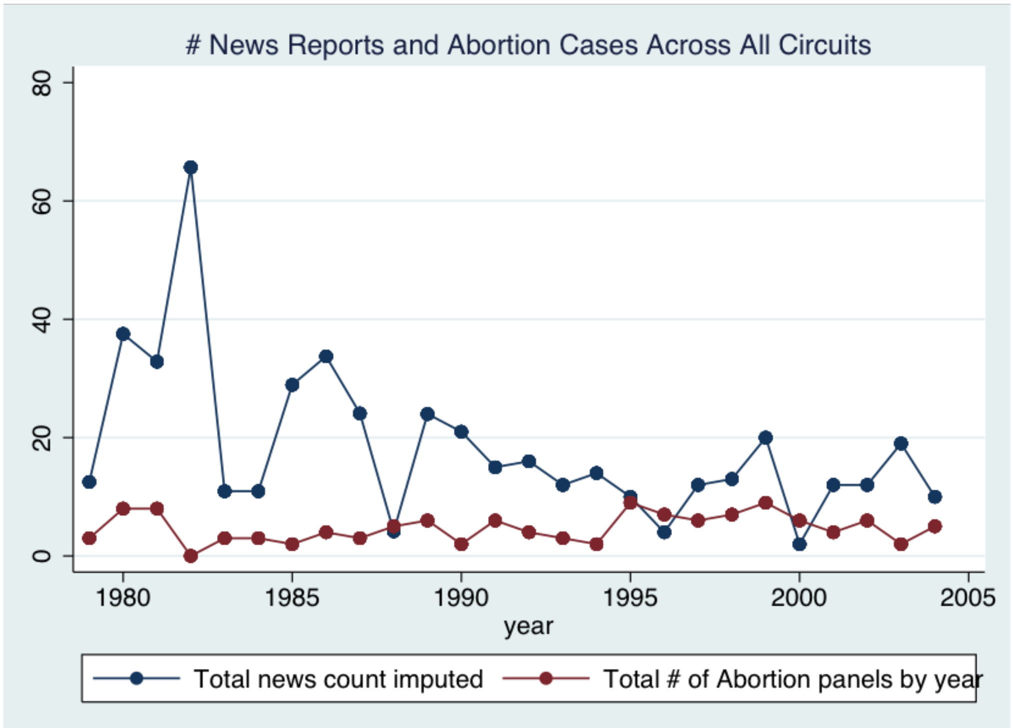
Dependent variables are abortion attitudes recorded in GSS answers to questions related to whether the respondent believes abortion for certain reasons should be illegal. Main independent variable is pro-abortion precedent in the Circuit-year. Counterfactual is anti-abortion precedent. The law variable is instrumented in Columns 2-4 and 6-8 with judicial characteristics. Regressions control for age and sex of the respondent and Circuit- and year fixed effects. We also control for probabilities of being assigned a judge with these characteristics. Naive instruments are Democrat, Secular, and Non-white judicial characteristics. LASSO instruments are the following judicial characteristics: Democrat, Secular, Non-white Republican, and Black judges with an in-state BA degree. LIML uses the entire available instruments set. Models use subsample restricted to Circuit-years with at least one case. Columns 1-4 use sample of GSS respondents who declare identification with the Republican Party. Columns 5-8 use respondents identifying with the Democrat Party. P-values are based on standard errors clustered by Circuit-year. + Significant at 10%; * Significant at 5%; ** Significant at 1%.

7 Newsreports

To support the causal channel from court rulings to preferences, previous studies have linked Supreme Court precedents with subsequent changes in public opinions about abortion (Franklin and Kosaki 1989). Hoekstra (2000) suggests that local media are more likely to report on cases in their community and that local residents are more likely to be aware of those cases than cases in other jurisdictions.

This section reports an analysis for abortion decisions using the simple search detailed previously. We show a plot that correlates the number of abortion rulings and the number of newsreports about abortion rulings from 1979 to 2004. Controlling for Circuit and year fixed effects, we find a positive relationship between the number of abortion decisions and the number of newspaper mentions. The relationship is statistically significant ($p < 0.05$) for abortion precedents that ruled against abortion. Our liberal-leaning newspaper sample may mobilize readers by reporting on anti-abortion precedents.

FIGURE 4.— Newspaper Reports on Abortion Decisions



Not every newspaper is available for every year, so we divide the number of newspaper articles by the proportion of newspapers available (e.g., if only half of the typical newspaper coverage is available because of data limitations, we multiply by a factor of two to make a consistent series in the figure). This allows us to compare graphically the number of Circuit decisions and newspaper articles about abortion precedents over time.

8 Data Entry Experiment

Our final step in the causal chain checks if newsreports activate people to shift stated preferences. We conduct an online experiment. We recruit workers through Amazon Mechanical Turk to transcribe text. The transcription is randomized to be a pro-abortion court decision, an anti-abortion court decision, or a placebo about jazz music. All workers see identical instructions. Details are in Appendix F. We recruited 345 data entry workers.

We define treatment as $1, 0, -1$ when they face Pro-Abortion Decision, Control Group, and Anti-Abortion Decision, respectively. The empirical specification is:

$$Outcome_{it} = \alpha + \beta_1 Treatment_t + \beta_2 X_{it} + \varepsilon_{it} \tag{1}$$

Workers exposed to Pro-Abortion Decisions become anti-abortion on two dimensions of abor-

TABLE XII

The Experimental Effect of Exposure to Pro-Abortion Decisions on Abortion Attitudes

	Full sample		Males only		Females only	
Abortion Summary Index	0.0262	(0.0203)	0.0137	(0.0251)	0.0419	(0.0341)
It should NOT be possible not obtain legal abortion if:						
There is strong chance of serious defect in the baby	-0.00464	(0.0252)	-0.0181	(0.0321)	0.0104	(0.0410)
She is married and she does not want any more children	0.0304	(0.0324)	-0.00576	(0.0423)	0.0868+	(0.0509)
The woman's health is seriously endangered by the pregnancy	-0.0135	(0.0174)	-0.0110	(0.0238)	-0.0148	(0.0254)
The family has low income and cannot afford any more children	0.0576+	(0.0327)	0.0427	(0.0427)	0.0727	(0.0515)
She became pregnant as a result of rape	0.0129	(0.0220)	0.0219	(0.0290)	-0.00604	(0.0339)
She is not married and does not want to marry the man	0.0323	(0.0329)	0.00751	(0.0431)	0.0606	(0.0514)
The woman wants the abortion for any reason	0.0686*	(0.0326)	0.0586	(0.0424)	0.0836	(0.0519)
N	345		150		150	

tion attitudes: whether it should NOT be possible to have a legal abortion if the family has very low income (pro-abortion decisions increase this percentage by 6% points) and cannot afford any more children, and whether the woman wants abortion for any reason (pro-abortion decisions increase this percentage by 7% points). These effects are statistically significant at the 10% and 5% level, respectively, and are similar in magnitude to the estimates in the population sample. The backlash also occurs especially for discretionary abortions. Table XII displays the effects controlling for gender, age, and log error rates. The effects are robust to the exclusion of these controls or the inclusion of additional controls, such as dummy indicators for region of origin.

9 Conclusion

Whether laws shape values, and in which direction, is important for at least two reasons. Empirical results can arbitrate between competing theories about the effects of laws. Empirical results can inform judges who want to conduct cost-benefit analyses of judicial decisions (Posner 1998) or know whether their decisions accord with the democratic will of the people (Breyer 2006). The latter effect often motivates arguments for or against policies.

We present a formal model with backlash and persuasive effects suggested by previous empirical studies (Ura 2014; Brickman and Peterson 2006; Franklin and Kosaki 1989; Hanley et al. 2012). Backlash in attitudes or in campaign donations can counteract laws that affect abortion access. In the long-run, laws can have persuasive effects if the population share of behavior changes. The model formalizes a comment by Justice Ruth Bader Ginsburg about legal changes that are too big. A "big bang" approach yields substantial backlash that can persist, whereas gradual legal change yields persuasive effects in our model.

We then present causal evidence exploiting the random assignment of U.S. federal judges who create geographically local precedent and the fact that judges' background characteristics predict abortion precedents. We show that abortion precedents affect states abortion regulations that are associated with subsequent fertility, reproductive choices, child outcomes, adult outcomes, and crime (Levine et al. 1999; Klick and Stratmann 2003; Gruber et al. 1999; Ananat et al. 2009; Donohue and Levitt 2001).

Turning to preferences, we observe a backlash in charitable donations to abortion causes and polarization of abortion attitudes. The impact of an abortion precedent is equivalent to doubling the average difference between Republicans and Democrats. However, within two years, the precedents have persuasive effects. We verify the causal channel with newsreports of abortion rulings and a data entry experiment of newsreports that match the qualitative patterns from the population analysis.

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ONLINE APPENDIX FOR THE PAPER "DO POLICIES AFFECT PREFERENCES? THEORY AND EVIDENCE FROM RANDOM VARIATION IN ABORTION JURISPRUDENCE"

Table of contents

A Background

A.1 Abortion policy Abortion policy in the United States is represented at several levels. In the seminal 1973 *Roe v. Wade* decision, the U.S. Supreme Court found that constitutional due process rights extend to individual abortions, but any abortion regulation must be balanced with state interests. In the controversial aftermath, states may not completely prohibit abortion but have discretion to regulate it, subject to review by the courts. This discretion has led to much variation in abortion policy across states and localities. Laws on whether a woman can get an abortion can be codified in state statutes and local ordinances, as well as in regulations by government agencies. While there is no single comprehensive Federal statute on abortion, a handful of Federal laws target specific components of access to abortions.[37] At the state level, statutory provisions can impose various criteria on women seeking abortions as well as on abortion providers.[38] Other state laws address the public funding of abortions; for example, a majority of states disallow the use of state funds for abortions except when the woman's life is in danger or if the pregnancy was the result of incest or rape.[39] At the local level, cities can impose additional ordinances on abortion access and provision. While governments have discretion in enacting their own abortion laws, they must not conflict with laws of a higher level (e.g., Federal statutes) and they must meet constitutional requirements, which are determined by the courts. Therefore, the Federal Circuit Courts play a prominent role in determining abortion policy by adjudicating legal challenges against government statutes and deciding whether they are unenforceable. A sample of some statutes and subsequent litigation in the courts is provided in Appendix Table A.1.

[37]Among these are Title X, enacted in 1970, which allocates Federal funding to family planning services for low income persons but does not directly fund abortions; the Hyde Amendment, enacted in 1976, which bars Medicaid for funding abortions; the Freedom of Access to Clinic Entrances Act of 1994, which made it a Federal crime to block individuals' access to clinics; and the Partial Birth Abortion Ban Act of 2003, which bans late-term abortions.

[38]Examples include requiring parental consent or notification for minors (36 states), gestational limits that forbid abortions after a specified period into a pregnancy (38 states), and imposing specific licensing requirements on clinics and physicians.

[39]An overview of state-level abortion laws is available at:

http://www.guttmacher.org/statecenter/spibs/spib_OAL.pdf.

APPENDIX TABLE A.1

Federal Statutes and Doctrinal Developments in Abortion Rights Law

Statute or Legal Decision	Year	Statutory Provision or Doctrinal holding	Regulation challenged
Roe v. Wade, 410 U.S. 113	1973	The Court recognized the right to choose to have an abortion as part of a broader constitutional right of privacy. States may proscribe abortion only in the third trimester, with an exception for the mother's health.	Texas statute
Doe v. Bolton, 410 U.S. 179	1973	The Court overturned provisions requiring that abortion be performed in an accredited hospital, approved by a hospital committee, and that three physicians confirm that an abortion should be performed.	Georgia statute
Hyde Amendment	1976	Federal provision (amendment to Title XIX of the Social Security Act) prohibited states from receiving federal Medicaid funding for abortions, except when the pregnancy jeopardized the mother's life or the pregnancy was the result of rape or incest.	Federal statute
Maher v. Roe, 432 U.S. 464	1977	The Court upheld a state policy that refused to provide Medicaid funding for non-therapeutic abortions, allowing funding only for "medically necessary" first trimester abortions.	Connecticut statute
Beal v. Doe, 432 U.S. 438	1977	The Court held that Title XIX of the Social Security Act does not require states to fund elective or non-therapeutic first trimester abortions to receive Medicaid funding.	Federal statute
Harris v. McRae, 448 U.S. 297	1980	The Court upheld the Hyde Amendment.	Federal statute
Planned Parenthood of Southeastern Pennsylvania v. Casey, 505 U.S. 833	1992	The Court upheld statutory provision requiring parental notification for minors seeking an abortion, certain reporting requirements for abortion provider, and an "informed consent" provision requiring abortion providers to inform women of the age of the fetus and health risks of abortion and childbirth 24 hours before the procedure. The Court overturned the provision requiring husband notification for married women seeking an abortion and rejected the trimester framework of *Roe* in favor of a viability inquiry more in line with medical advances.	Pennsylvani[a] statute
Freedom of Access to Clinic Entrances Act, 18 U.S.C. § 248	1994	Federal statute made it a crime to injure, intimidate, or interfere with persons seeking to obtain or provide reproductive health services or to intentionally damage or destroy property of a reproductive health care facility.	Federal statute
Schenck v. Pro-Choice Network of Western New York, 519 U.S. 357	1997	The Court upheld "fixed buffer zones" around abortion clinics that prohibit protestors from demonstrating while invalidating "floating buffer zones" around moving persons and cars.	Injunction
Stenberg v. Carhart, 530 U.S. 914	2000	The Court overturned a ban on the "partial-birth" abortion, a specific and unusual method of second-trimester abortion. Because the statute's language broadly encompassed the standard second-trimester abortion procedure as well as this variant, the statute imposed an undue burden on a woman's right to choose. The statute also lacked an exception for the mother's health.	Nebraska statute
Partial Birth Abortion Ban Act	2003	This statute prohibited the "partial birth" abortion.	Federal statute
Gonzales v. Carhart, 550 U.S. 124	2007	The Court upheld the federal Partial Birth Abortion Ban Act of 2003, whose wording was sufficiently narrow.	Federal statute

State regulations have been documented to affect reproductive behavior and socioeconomic outcomes. Donohue and Levitt (2001) suggest that abortion legalization prevented the births of "unwanted" children who would have been more prone to be involved in crime. Gruber et al. (1999) found that children born post-legalization were significantly less likely to live in a single-parent family, to live in poverty, to receive welfare, and to die as an infant. By the time this birth cohort reached their 30s, they are more likely to graduate from college, and less likely to either use welfare as an adult or be a single-parent (Ananat et al. 2009). This positive selection is widely attributed to two related factors: cohort selection and size. Women may use abortion to avoid bearing children in adverse circumstances, raising the living standards of the children who are born (Levine et al. 1999; Donohue and Levitt 2001). At the same time, the legalization of abortion has been shown to reduce birthrates by approximately 6% in the seven years following Roe vs. Wade (Kane and Staiger 1996; Levine et al. 1996). Abortion legalization may also hinder a woman's ability to withhold premarital sexual favors to men (Akerlof et al. 1996; Lott and Whitley 2007). Women who are opposed to abortion would receive competition from women who are willing to obtain abortion as men "seek satisfaction elsewhere" (Akerlof et al. 1996). Consistent with this theory, Lott and Whitley (2007) finds evidence that abortion increases the number of out-of-wedlock births.

Both Levine et al. (1999) and Donohue and Levitt (2001) used the staggered abortion legalization across states to determine the causal impact of changes in abortion law. Prior to the Supreme Court case of *Roe vs. Wade* in 1973, a handful of states implemented reforms legalizing abortion for women in very special circumstances – mental health, fetal deformity, or pregnancy by rape or incest (McBride 2008). The legislative history provided previous researchers natural experiments in which states can be categorized by abortion legality in different years. Several methodologies using this variation have been employed for literature on the impact of abortion. Gruber et al. (1999) compared the outcomes of youths born in early repeal states relative to the other states. This "natural experiment" has been criticized since the difference between birth rates in repeal and non-repeal states eventually converged once abortion was legalized nationwide, while abortion rates continued to remain much higher in repeal states than non-repeal states (Donohue and Levitt 2004). Instead, Donohue and Levitt (2001) regressed the arrest rate by individuals' state and birth year against the abortion rate in the state and year that the individual was born. However, this strategy has also generated controversy. In particular, Joyce (2004; 2009) has argued that abortion rate should not appear on the right hand side of the regression as it is endogenous.

Contemporary examples of appellate precedent illustrate how Circuit Courts continually provide new interpretations or distinctions of pre-existing precedents that expand or contract the space of allowable state regulations. A Mississippi statute would have shut down its sole abortion clinic by requiring its doctors to obtain admitting privileges at local hospitals, but on July 2014, the Fifth Circuit required that the statute not be implemented while substantive issues were considered further by a Federal District Court. In March 2014, the same Circuit Court upheld a Texas law requiring the same admitting privileges, which resulted in one-third of abortion clinics in Texas shutting down, forcing some women to drive more than 100 miles to obtain an abortion. The reason the Fifth Circuit could render identical state laws upheld in one state but delayed in another is that the court took into account the potential consequences on abortion access for women living in the state. A subsequent Texas statute required abortion clinics to meet the building standards of ambulatory surgery centers; this statute was allowed by the Fifth Circuit in the Fall of 2014 while it considered the appeal to invalidate the new statute. If allowed, this statute would reduce the number of centers operating in the state to fewer than 10.[40] Finally, similar laws in some states have been temporarily blocked by some Federal Courts, while they have taken effect in other states, which illustrates that precedents in one Circuit need not be followed in other Circuits.

Several institutional features enable Circuit decisions to shape abortion law. First, the U.S. has a common law system where judges both apply the law as well as make the law. This judicial lawmaking occurs as judges' decisions in current cases become precedents that guide decisions in future cases within the jurisdiction. Second, the Federal Courts system consists of three levels. Litigation, such as a lawsuit asserting that government-mandated waiting periods for an abortion procedure are unenforceable, begin in the District Courts, which are the general trial courts with juries that typically decide *issues of fact*. On appeal, cases go to Circuit Courts, which examine whether the District Court was in error and typically decide *issues of law*; they take facts as given from District Courts, have no juries, and typically only hear cases presenting new legal issues. The 94 District Courts currently receive over 300,000 cases a year and the 12 Circuit Courts 60,000 cases a year, but the Supreme Court hears roughly 100 cases a year. This feature means that Circuit judges create the vast majority of precedents that constitute the law. Also, the random assignment of judges to a small legal topic is unlikely to be systematically related to the assignment in another area of law.

Together, these features of the Federal Court system are important in creating random variation in abortion precedents across regions of the U.S. and over time. Circuit Court decisions form abortion policy by setting legal precedents that become the law of the Circuit and by affirming or invalidating government statutes, ordinances, and regulations. Their injunctions can block enforcement of anti-abortion statutes, thereby ensuring access to abortions. The randomness of the judicial assignment creates wide variation and uncertainty in outcomes even within the same Circuit. Note that any spillovers whereby circuits are expected to follow other circuits (with some delay) would suggest the true effect would be larger than what we estimate.

Between 1973-2006, 56% of individuals said Yes in response to "Should it be *illegal* for a woman to obtain abortion because she does not want more children", 55% said Yes for "Woman is single", 60% says Yes for "Any reason", 17% said Yes for "Pregnancy is a result of rape", 19% said Yes for "High chance of child's defect", and 10% for "Mother's health is endangered" (Appendix Table A.2). Appendix Figure A.1 presents variation in the abortion attitude over time with an index–an average of answers to questions about the legality of abortions in different circumstances). Some attitudes have shifted more than others. Forty years after *Roe v. Wade*, fewer people support allowing abortions in the case of a serious birth defect or because the mother cannot afford more children or is

[40] http://www.nytimes.com/2014/07/30/us/mississippi-abortion-clinic-Federal-court-blocks-closing.html

unmarried; yet more people also support allowing abortions for any reason.

APPENDIX TABLE A.2

Summary Statistics for GSS Attitudes

	mean	sd	min	max	count
GSS respondents					
Age	45.276	17.498	18	89	44736
Female	.563	.496	0	1	44897
Should it be illegal to have an abortion for a following reason:					
Does not want more children	.558	.497	0	1	31876
Mother's health is endangered	.099	.299	0	1	32182
Family is poor	.521	.499	0	1	31825
Pregnancy is result of rape	.174	.379	0	1	31812
Woman is single	.553	.497	0	1	31807
Any reason	.599	.490	0	1	26092
High chance of child's defect	.188	.391	0	1	32040

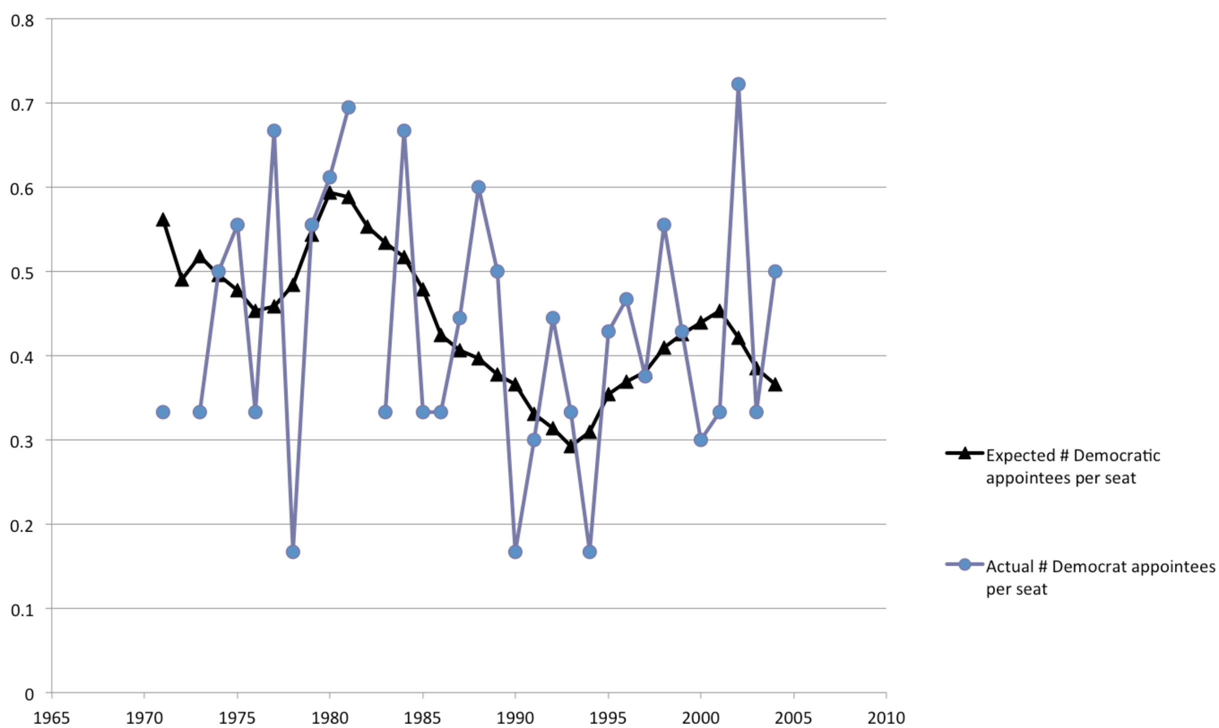
Appendix Figure A.1.— Historical Trends

B Assessment of Random Assignment

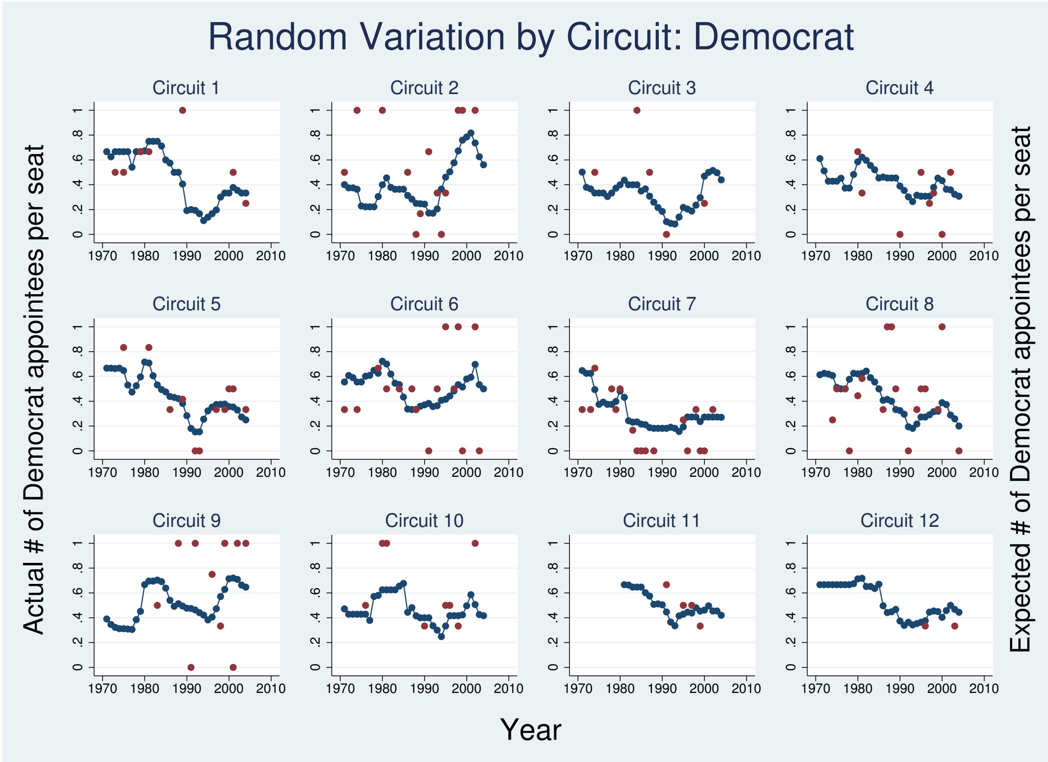
According to interviews, each court implements randomization differently. In some Circuits, two to three weeks before the oral argument, a computer program randomly assigns available judges to panels who will hear cases. In other Circuits, judges are randomly assigned to panels up to a year in advance; cases that arise are randomly assigned to panels. Some judges take a reduced caseload if retired or visiting, but all are randomly assigned by a computer algorithm. Senior judges can opt out of death penalty cases in some Circuits, but they would do so before random assignment. Chen and Sethi (2016) formally tests for randomization by showing that case characteristics as determined by District Courts are not correlated with the characteristics of the Courts of Appeals judges assigned to the case. For more information about random assignment of cases at the Circuit level, see Brown Jr. and Lee (2000).

Even if judges are randomly assigned, because our data comprise published opinions, several additional issues need to be considered: settlement, publication, and strategic use of keywords or citation. In Courts of Appeals, judges are revealed very late, after litigants file their briefs, sometimes only a few days before the hearing, if there is a hearing, which gives little opportunity and incentive for settlement upon learning the identity of the panel. Most of the litigation costs are sunk by that point, and when the D.C. Circuit began announcing judges earlier, it did not affect settlement rates (Jordan 2007). Unpublished cases are not supposed to have precedential value. Unpublished cases are deemed as routine and easy: studies find that judicial ideology predicts neither the decision in unpublished cases (Keele et al. 2009) nor the decision to publish (Merritt and Brudney 2001). Appendix Figures B.1 and B.2 indicate that panel composition does not appear to be serially correlated. The connected blue dots represent the expected number of Democrats per seat calculated using the composition of the Circuit pool of judges available to be assigned, while the unconnected red dots represent the actual number of Democrats per seat on abortion cases.

Appendix Figure B.1.— Judicial Composition and Random Assignment, 1971-2004



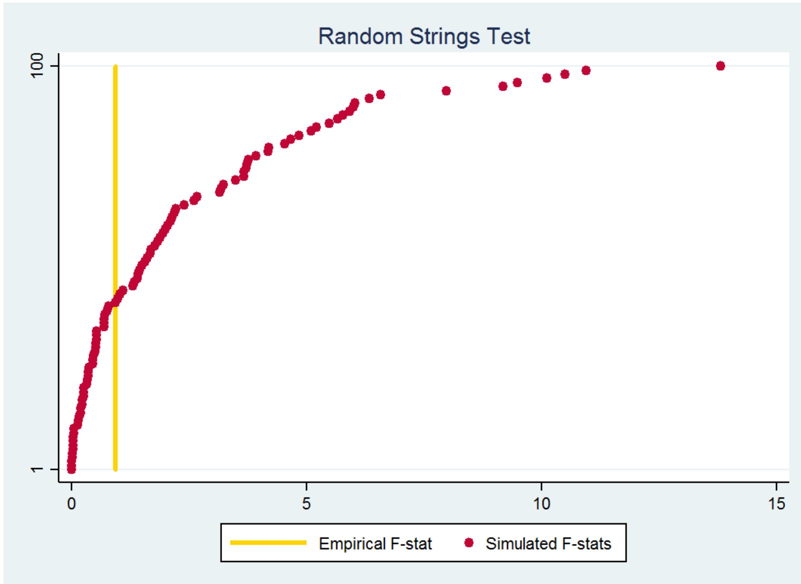
Appendix Figure B.2.— Identification Strategy



Omnibus tests can formally address these potential deviations from strict exogeneity. *First*, we examine lead coefficients to check whether our instrumental variables are endogenous to pre-existing trends. *Second*, we stack the strings across Circuits and across biographical characteristics and run an autocorrelation test and compare the F statistic with F statistics generated from randomly assigning available judges to cases. The results are displayed in Appendix Figure B.3. The empirical F is ranked in the middle of the distribution of the simulated F statistics.

Third, we also confirm that contemporaneous judicial composition is not correlated with abortion decisions in the "wrong year" in the Circuit. The association between current year's decisions with biographical characteristics for cases in a different year is substantially smaller or even of the wrong sign. The joint F test and R-square fall sharply. These tests support the hypothesis that judge assignments are not serially correlated over time in violation of our research design.

In Appendix Table B.1, Column 1 repeats Column 8 from Table I for comparability. Column 2 reports the association between the current year's decisions with biographical characteristics in the previous year's cases. Column 3 reports the association between the current year's decisions and the biographical characteristics in cases two years ago. Columns 4 and 5 do the same for cases in the following year and two years from the current year. These tests support the hypothesis that judge assignment in published cases is not serially correlated over time and that subsequent published cases are not simply reflecting the exact precedent in the cases from the previous two years.



Appendix Figure B.3.— Randomization Check: F-statistics for autocorrelation coefficient

APPENDIX TABLE B.1

Falsification Test of Instruments: Relationship between Pro-Choice Abortion Decisions and Composition of Abortion Panels in Previous and Subsequent Years.

	(1)	(2)	(3)	(4)	(5)
Democrat	0.221				
	(0.152)				
Secular	0.301				
	(0.184)				
Repub. X Non-white	-1.261*				
	(0.422)				
In-state BA X Black	-1.002*				
	(0.346)				
Democrat (-1)		-0.211			
		(0.147)			
Secular (-1)		0.0994			
		(0.167)			
Repub. X Non-white (-1)		-0.314			
		(0.392)			
In-state BA X Black (-1)		-0.318			
		(0.288)			
Democrat (-2)			-0.000551		
			(0.100)		
Secular (-2)			0.0571		
			(0.154)		
Repub. X Non-white (-2)			-0.352		
			(0.246)		
In-state BA X Black (-2)			-0.486		
			(0.335)		
Democrat (+1)				-0.175	
				(0.241)	
Secular (+1)				-0.388	
				(0.253)	
Repub. X Non-white (+1)				-0.474+	
				(0.261)	
In-state BA X Black (+1)				0.751	

Other variations from random assignment include: remanded cases from the Supreme Court are returned to the original panel; en banc cases that are heard by the entire pool of judges (or a significant fraction in the Ninth Circuit); judges with conflict of interests opt out after random assignment, which is extremely rare. We do not use remanded or en banc cases, which are also relatively infrequent. Judges can also take sick leave or go on vacation, but this is determined far in advance.

Our identification strategy assumes that idiosyncratic deviations from random assignment are ignorable. Even a gold-standard random process — the roll of a die — has a deterministic element. If known with precision, the force and torque applied to the die, the subtle air currents, the hardness of the surface, etc., might allow us (or a physicist) to determine with certainty the outcome of these "random" rolls. Despite this obvious non-randomness, we would still have faith in the outcome of a trial with treatment assignments based on die rolls because we are certain that the factors affecting the assignment have no impact on the outcome of interest and hence are ignorable.

C District Courts

District Courts assign one judge to a case randomly or rotationally (Taha 2009; Bird 1975). Cases being returned on remand from the Courts of Appeals are not randomly assigned. We do not use remanded cases in our dataset. For example, one District told us that random assignment occurs within 24 hours of a case filing, which is handled in the order of its arrival. Waldfogel (1995) reports that one District Court uses three separate randomization wheels and each wheel corresponds to the anticipated case length. Related cases (meaning that one decision will substantially resolve all cases), if filed within a few weeks, may be consolidated. Waldfogel (1995) reports that plaintiffs can argue the case is related to another pending case and, if the judge agrees, the cases will be consolidated. A clerk reported 8% of filed cases were accepted as related in 1991 in SDNY. In another District Court, if a clerk identifies and two judges agree that a new civil case is related to another open civil case, they will be consolidated in the interests of justice or judicial economy. The clerk brings the possible connection to the attention of the judge of the new case, who then confers with the judge of the earlier case to determine whether they are in fact related cases. Consolidation would only occur for relatively high-frequency case types. For the handful of District cases that do overlap such that they are consolidated, we assume the decisions about case relatedness occur in a manner exogenous to judge assignment.

Unlike for Courts of Appeals cases, we cannot use the random strings test as an omnibus assessment for violations of random assignment, because some Districts use rotational assignment or random drawing of judges from card decks without replacement. So we discuss the concerns qualitatively and suggest another empirical test. First, District Courts judges are revealed much earlier than Courts of Appeals judges. Ideally, we would use docket filings in the Administrative Office of the U.S. Courts, but judges are omitted for most cases prior to 2000, so we must use published District opinions to construct our District IV. So, we buttress the assumption that settlement, publication, and strategic use of keywords or citations are exogenous: 1) in District Courts, judges are much more constrained and ideology has been found to play hardly any role. Judicial ideology does not predict settlement rates (Ashenfelter et al. 1995; Nielsen et al. 2010), settlement fees (Fitzpatrick 2010), publication choice (Taha 2004), or decisions in published or unpublished cases (Keele et al. 2009)—this last fact is consistent with the District judge identity only affecting outcomes through the presence of an appeal but not through the District Court decision, but this exclusion restriction is not necessary for the primary counterfactual; 2) we examine these issues directly as follows.

Since the random strings test is ineffective for District Courts, we test whether District Court judicial biographical characteristics in *filed* cases jointly predict publication. We link PACER filing data, which has judge identity, to AOC data, which has information on publication. We obtained all freely available PACER (Public Access to Court Electronic Records) data on District cases from 32 districts for 1980 to 2008 for a total of 359,595 non-duplicated cases. This data contains the name of the District where the case was filed, the filing and termination date (missing for 10% of cases), the assigned docket number, and the name of the District or magistrate judge presiding on the case. We merge the names of the judges into the Administrative Office of the U.S. Courts (AOC) database. We use LASSO to select biographical characteristics and no characteristic was chosen. We assume that remaining deviations from random assignment, like vacation days, are ignorable.

D Additional Results on Donations

Appendix Table D.1 reports robustness checks with alternative 2SLS specifications. Rows 1 and 5-7 repeat previous results. These rows are labeled as "subsample" because only years with abortion cases are included. Rows 2-4 present models where years without abortion cases are included but a dummy indicator is included for the fact that there were no abortion cases. Focusing on log of total pro-choice donations, the Naive 2SLS and LIML 2SLS point estimates are very close. Rows 8-10 present models where the effect of pro-choice and pro-life decisions are assumed to be opposite but equal in absolute value (β_2 is approximately assumed to be 0) (i.e., specification 2). We should expect β_1 to be approximately half the size, and that does appear to be the case for the Naive and LIML 2SLS models.

APPENDIX TABLE D.1

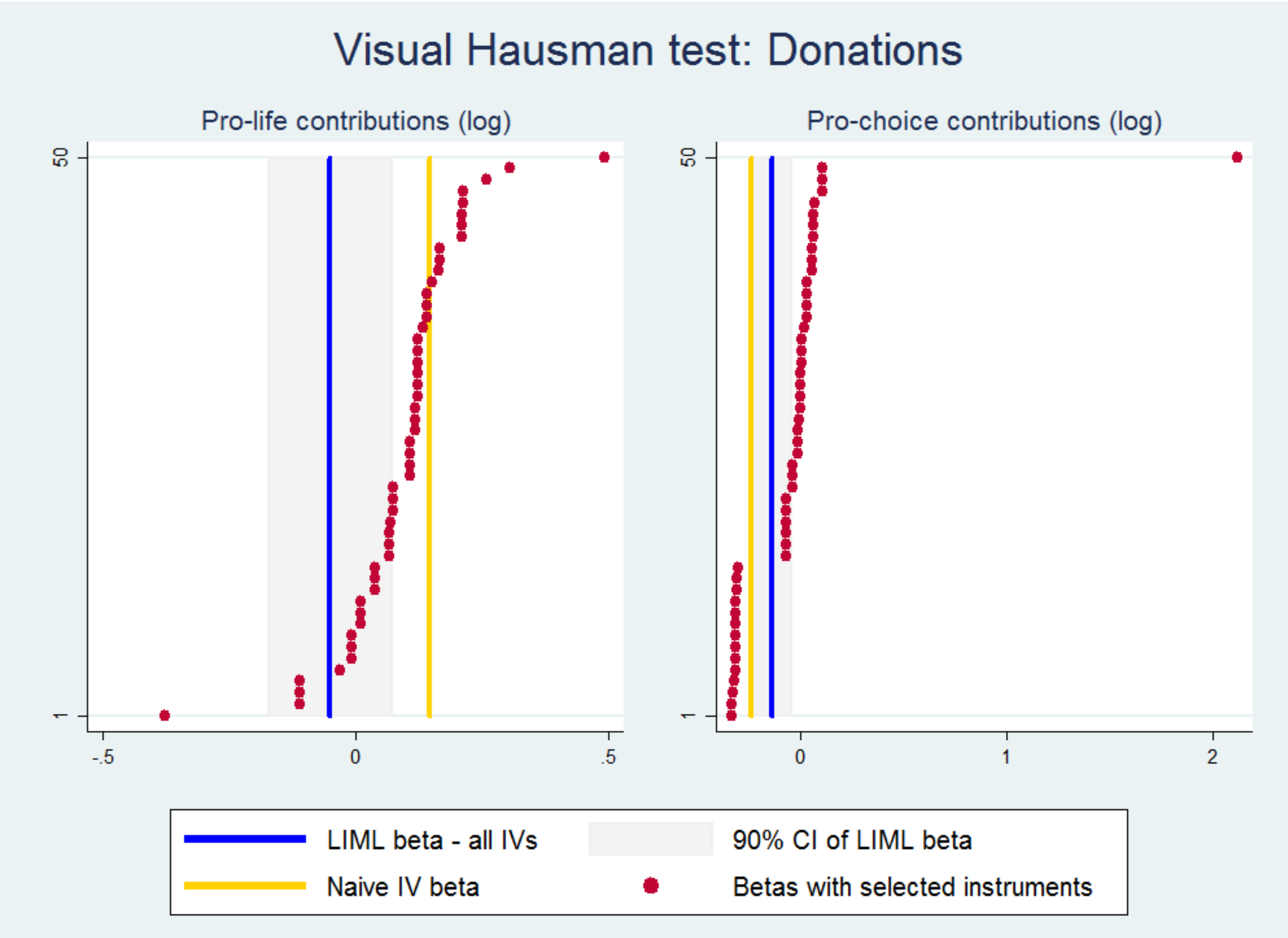
Impact of Pro-Abortion *vs.* Anti-Abortion Precedent on Abortion-Related Political Contributions

	Amount Pro-Choice	P-value	Amount Pro-Life	P-value	N Pro-Choice	P-value	N Pro-Life	P-value
OLS	-0.102	0.167	0.0751	0.481	-0.0473	0.113	0.0780	0.842
Naive IV	-0.235	0.105	0.245+	0.0994	-0.0352	0.971	-0.368	0.499
LIML	-0.119	0.194	0.128	0.168	-0.0246	0.919	0.0250	0.913
LASSO	0.0291	0.836	-0.226	0.586	0.253	0.376	-0.252	0.621
Naive (subsample)	-0.240**	0.00655	0.144	0.296	0.332	0.766	0.0658	0.940
LIML (subsample)	-0.153*	0.0132	-0.0209	0.796	-0.152	0.510	-0.0774	0.688
LASSO (subsample)	-0.347	0.242	-0.688	0.148	-0.260	0.592	-0.932	0.200
Naive (-1/+1)	-0.117	0.114	0.118	0.110	0.0260	0.958	-0.177	0.548
LIML (-1/+1)	-0.0475	0.300	0.0482	0.318	0.0784	0.487	0.000788	0.994
LASSO (-1/+1)	0.0980	0.397	-0.0973	0.662	0.114	0.416	-0.124	0.633
N	26203		48117		596592		596592	

Dependent variables are log of total donations to pro-life and pro-choice organizations as well as number of pro-life and pro-choice donations aggregated to the contributor city level. Main independent variable is the percent of pro-choice abortion decisions in the Circuit-year. First four rows are based on full sample and include control for presence of an appellate case in given Circuit-year. Rows 5-7 restrict sample to Circuit-years with at least one case. Rows 8-10 use recoded law which assigns a value of -1 to pro-life decisions and +1 to pro-choice decisions and takes the average in a Circuit-year, assigning a 0 when there were no cases. Regressions control for Circuit and year fixed effects. We also control for probabilities of being assigned a judge with these characteristics. Naive instruments are shares of Democrats, Secular, and Non-White judges. LASSO instruments are shares of judges from the following groups: Democrats, Secular, Non-White Republicans, and Black judges with an in-state BA degree. LIML uses the entire available instruments set. P-values are based on standard errors clustered by Circuit-year.

Appendix Figure D.1 reports the Visual Hausman test for campaign donations.

Appendix Figure D.1.— Alternative Estimates of Pro-Abortion *vs.* Anti-Abortion Precedent on Campaign Donations



The yellow lines indicate the Naive 2SLS and the blue lines indicate the LIML estimates (which uses all the biographical characteristics). The shaded gray area is the LIML confidence interval. The red dots indicate alternative estimates using other biographical characteristics whose first stage F-statistics in Circuit-year level regressions yield the top 50 F-statistics controlling for $\mathbf{E}(p_{ct})$.

E Additional Results on Attitudes

E.1 Results by Abortion Reason To illustrate what Appendix Table E.1 implies for Democrats, focusing on Naive IV for "Should it be illegal for a woman to obtain abortion because the family is poor?" shows that an anti-abortion precedent causes them to increase pro-abortion attitudes by 8.7% relative to the counterfactual of no precedent. However, for some discretionary reasons, like for any reason and desired fertility, Democrats also appear to backlash to pro-abortion precedent.

APPENDIX TABLE E.1

Impact of Pro-Abortion *vs.* No *vs.* Anti-Abortion Precedent on Abortion Attitudes

	Republicans					Democrats				
	OLS	Naive IV	LIML	LASSO	N	OLS	Naive IV	LIML	LASSO	N
High chance of child's defect					8237					12436
Law (Pro-choice)	0.024	0.056	0.016	0.008		0.030	0.027	0.014	0.029	
P-value	0.292	0.417	0.521	0.851		0.112	0.609	0.566	0.402	
Present	-0.024	0.026	-0.019	0.039		-0.013	-0.024	-0.005	-0.010	
P-value	0.164	0.617	0.287	0.412		0.361	0.559	0.794	0.794	
Law + Present	0	0.081	-0.004	0.047		0.016	0.003	0.009	0.019	
P-value	0.993	0.101	0.832	0.318		0.255	0.935	0.547	0.535	
Does not want more children					8209					12384
Law (Pro-choice)	0.003	0.195*	0.005	0.120**		0.067**	0.031	0.076**	0.045	
P-value	0.907	0.020	0.892	0.005		0.004	0.553	0.003	0.235	
Present	-0.019	-0.079	-0.019	-0.085		-0.017	-0.047	-0.022	-0.035	
P-value	0.390	0.206	0.411	0.154		0.296	0.248	0.195	0.387	
Law + Present	-0.015	0.116+	-0.015	0.035		0.050**	-0.016	0.054**	0.010	
P-value	0.404	0.092	0.469	0.460		0.004	0.719	0.003	0.799	
Woman is single					8176					12334
Law (Pro-choice)	0.024	0.183*	0.030	0.110*		0.053*	0.040	0.045+	0.016	
P-value	0.378	0.014	0.353	0.019		0.016	0.401	0.083	0.674	
Present	-0.025	-0.072	-0.028	-0.074		-0.023	-0.079+	-0.018	-0.069	
P-value	0.210	0.251	0.209	0.231		0.143	0.067	0.260	0.115	
Law + Present	-0.001	0.111+	0.001	0.036		0.030+	-0.039	0.026	-0.053	
P-value	0.954	0.073	0.940	0.447		0.064	0.351	0.141	0.177	
Family is poor					8194					12365
Law (Pro-choice)	0.028	0.166*	0.023	0.120**		0.036+	0.041	0.030	0.004	
P-value	0.286	0.034	0.460	0.005		0.058	0.427	0.164	0.900	
Present	-0.030	-0.064	-0.027	-0.085		-0.018	-0.087*	-0.015	-0.062+	
P-value	0.138	0.262	0.203	0.149		0.208	0.020	0.314	0.087	
Law + Present	-0.002	0.101	-0.004	0.035		0.018	-0.045	0.016	-0.058+	
P-value	0.928	0.108	0.840	0.485		0.228	0.233	0.333	0.065	
Mother's health is endangered					8278					12493
Law (Pro-choice)	0.017	0.074	0.021	0.043+		0.022+	0.035	0.010	-0	
P-value	0.277	0.112	0.264	0.071		0.091	0.385	0.503	0.995	
Present	-0.024+	-0.039	-0.026*	-0.013		-0.007	0.005	-0.001	0.020	
P-value	0.060	0.221	0.047	0.647		0.477	0.861	0.949	0.459	
Law + Present	-0.007	0.035	-0.005	0.030		0.015	0.040	0.010	0.020	
P-value	0.610	0.379	0.714	0.284		0.167	0.185	0.372	0.407	
Pregnancy is result of rape					8192					12337
Law (Pro-choice)	0.039+	0.122+	0.028	0.030		0.030*	0.011	0.016	-0.003	
P-value	0.054	0.081	0.236	0.487		0.047	0.769	0.425	0.917	
Present	-0.047**	-0.046	-0.041*	-0.025		-0.010	-0.018	-0.002	-0.005	
P-value	0.004	0.303	0.026	0.542		0.440	0.533	0.914	0.853	
Law + Present	-0.007	0.076	-0.012	0.005		0.021+	-0.007	0.014	-0.009	
P-value	0.637	0.149	0.434	0.918		0.095	0.819	0.307	0.749	
Any reason					6933					9933
Law (Pro-choice)	0.031	0.205*	0.036	0.117**		0.049*	-0.062	0.058**	-0.022	
P-value	0.233	0.023	0.219	0.007		0.026	0.308	0.008	0.579	
Present	-0.010	-0.034	-0.012	-0.018		-0.001	0.010	-0.006	0.032	
P-value	0.653	0.580	0.570	0.754		0.965	0.794	0.725	0.409	
Law + Present	0.021	0.171*	0.024	0.099*		0.048**	-0.051	0.052**	0.010	
P-value	0.271	0.021	0.258	0.030		0.003	0.335	0.001	0.807	

Table notes similar to that of Table VIII.

In separating the effects of pro-abortion and anti-abortion precedents, Appendix Table E.2 shows that pro-abortion decisions cause Republicans to have more pro-abortion attitudes two years later. This is because β_1 often equals $\beta_1 + \beta_2$.

APPENDIX TABLE E.2

Impact of Pro-Abortion *vs.* None *vs.* Anti-Abortion Precedent on Abortion Attitudes Two Years Later

	Republicans					Democrats				
	OLS	Naive IV	LIML	LASSO	N	OLS	Naive IV	LIML	LASSO	N
High chance of child's defect					8237					12436
Law (Pro-choice)	-0.008	-0.124*	-0.010	-0.086**		-0.002	0.026	0.019	0.042	
P-value	0.727	0.046	0.726	0.008		0.930	0.644	0.465	0.289	
Present	0.028	-0.012	0.029	-0.030		0.001	-0.019	-0.010	-0.026	
P-value	0.158	0.787	0.176	0.453		0.925	0.603	0.595	0.510	
Law + Present	0.020	-0.136**	0.019	-0.116**		-0	0.007	0.009	0.016	
P-value	0.198	0.010	0.290	0.003		0.986	0.901	0.548	0.738	
Does not want more children					8209					12384
Law (Pro-choice)	-0.016	-0.204**	-0.035	-0.091*		0.008	-0.039	0.007	-0.018	
P-value	0.582	0.010	0.350	0.024		0.681	0.561	0.785	0.609	
Present	0.025	-0.060	0.036	-0.115*		-0.018	-0.080*	-0.018	-0.086	
P-value	0.288	0.215	0.191	0.013		0.259	0.033	0.348	0.013	
Law + Present	0.010	-0.265**	0.001	-0.206**		-0.010	-0.119*	-0.011	-0.104**	
P-value	0.602	0	0.944	0		0.502	0.037	0.543	0.007	
Woman is single					8176					12334
Law (Pro-choice)	-0.033	-0.188*	-0.028	-0.098*		-0.008	0.006	-0.022	-0.035	
P-value	0.238	0.025	0.421	0.010		0.691	0.916	0.366	0.307	
Present	0.023	-0.058	0.021	-0.106*		-0.020	-0.067*	-0.012	-0.059+	
P-value	0.325	0.253	0.444	0.020		0.189	0.032	0.487	0.074	
Law + Present	-0.010	-0.246**	-0.008	-0.204**		-0.027+	-0.061	-0.034+	-0.094*	
P-value	0.604	0	0.708	0		0.084	0.232	0.054	0.016	
Family is poor					8194					12365
Law (Pro-choice)	-0.027	-0.216*	-0.014	-0.103*		0.008	-0.068	0.010	-0.048	
P-value	0.310	0.018	0.681	0.045		0.675	0.335	0.690	0.254	
Present	0.016	-0.070	0.009	-0.121**		-0.019	-0.062	-0.020	-0.074*	
P-value	0.468	0.136	0.734	0.004		0.256	0.126	0.308	0.044	
Law + Present	-0.011	-0.286**	-0.005	-0.224**		-0.010	-0.129*	-0.009	-0.122**	
P-value	0.570	0	0.796	0		0.483	0.028	0.564	0.006	
Mother's health is endangered					8278					12493
Law (Pro-choice)	-0.005	-0.112*	-0.007	-0.073*		-0.011	-0.016	-0.004	0.024	
P-value	0.811	0.046	0.774	0.043		0.427	0.730	0.821	0.383	
Present	0.013	0.011	0.014	-0.006		0.005	0.017	0.001	0.004	
P-value	0.423	0.791	0.434	0.871		0.676	0.466	0.960	0.885	
Law + Present	0.008	-0.100*	0.007	-0.079*		-0.006	0.001	-0.003	0.029	
P-value	0.546	0.027	0.623	0.037		0.495	0.975	0.752	0.295	
Pregnancy is result of rape					8192					12337
Law (Pro-choice)	-0.032	-0.097+	-0.017	-0.084		0.004	0.016	0.021	0.045	
P-value	0.153	0.092	0.571	0.012		0.793	0.732	0.252	0.125	
Present	0.024	-0.028	0.016	-0.058		0.002	-0.012	-0.008	-0.003	
P-value	0.204	0.436	0.487	0.120		0.902	0.646	0.587	0.922	
Law + Present	-0.008	-0.126*	-0.001	-0.142**		0.006	0.004	0.013	0.042	
P-value	0.567	0.021	0.934	0.001		0.652	0.931	0.294	0.125	
Any reason					6933					9933
Law (Pro-choice)	-0.027	-0.205*	-0.007	-0.069*		0.035+	0.055	0.030	0.019	
P-value	0.350	0.011	0.848	0.049		0.093	0.340	0.257	0.659	
Present	0.029	-0.047	0.018	-0.106		-0.023	-0.060*	-0.020	-0.044	
P-value	0.224	0.321	0.542	0.017		0.143	0.033	0.265	0.106	
Law + Present	0.002	-0.252**	0.010	-0.175**		0.012	-0.005	0.009	-0.026	
P-value	0.915	0.001	0.615	0		0.484	0.922	0.605	0.564	

Table notes similar to that of Table X.

E.2 Robustness of Backlash Result Appendix Table E.3 display results of the second (Columns 2-4) and third specification (Columns 8-10) described in the methodology section. Anderson-Rubin test statistics are also reported. The significant impacts on Republican abortion attitudes reported in Appendix Table VIII all have Anderson-Rubin test statistics between roughly 12 and 44. The inference that Republican abortion attitudes are elastic to abortion decisions and which reasons respond to abortion decisions are robust across specifications.

APPENDIX TABLE E.3

Impact of Pro-Abortion *vs.* Anti-Abortion Precedent on Abortion Attitudes

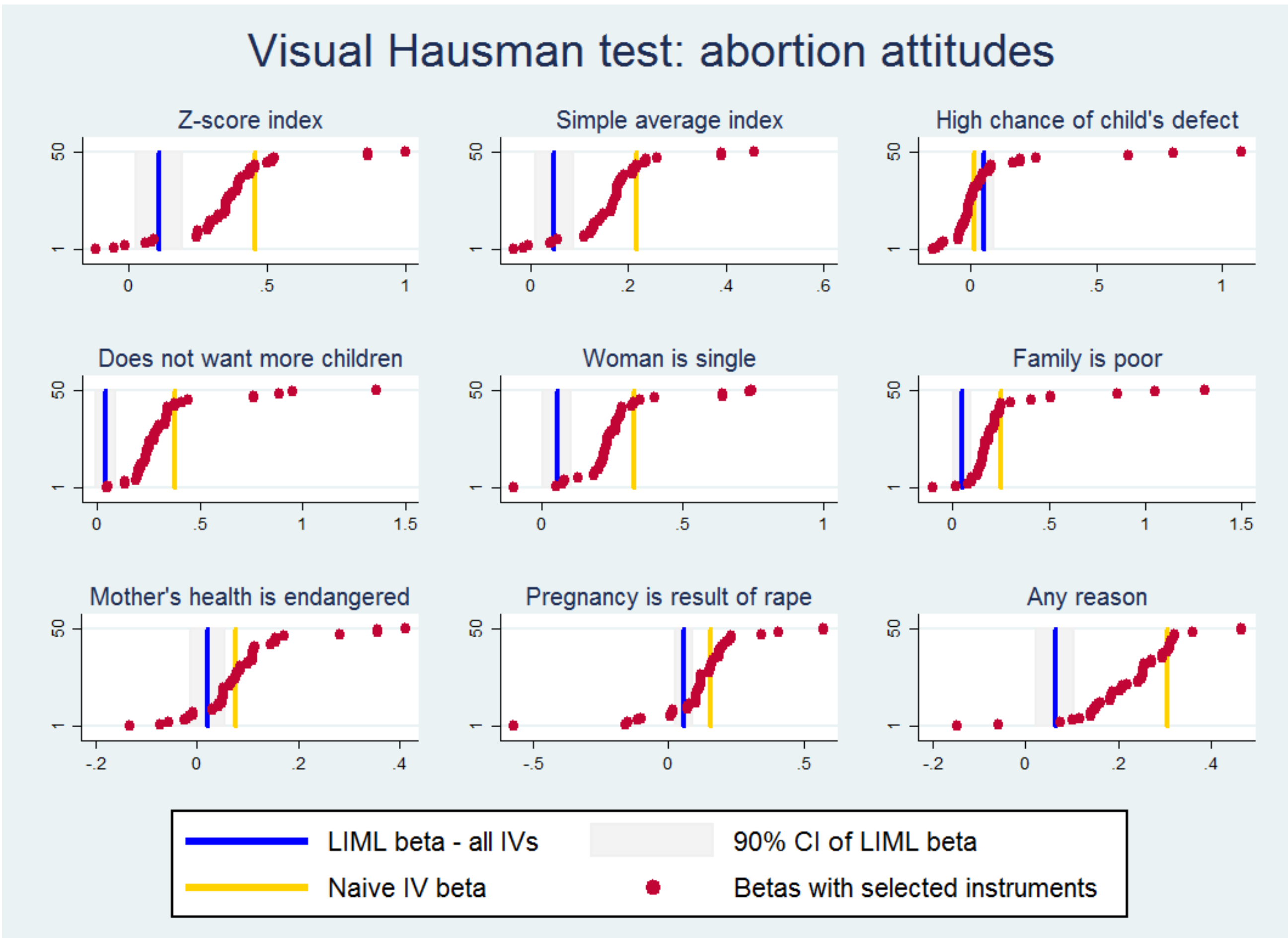
	Republicans subsample										
		Full sample			Restricted sample			Law -1/+1			
	OLS	Naive IV	LIML	LASSO	Naive IV	LIML	LASSO	Naive IV	LIML	LASSO	N
Z-score index	0.049	0.267+	0.048	0.132+	0.456*	0.127*	0.176**	0.140*	0.022	0.107**	6317
P-value	0.317	0.053	0.391	0.067	0.016	0.023	0.009	0.037	0.440	0.004	
Anderson-Rubin Stat	.	10.877	.	16.572	24.953	.	20.925	10.763	.	6.716	
Simple average index	0.021	0.124*	0.020	0.064+	0.216*	0.056*	0.089**	0.065*	0.009	0.051**	6317
P-value	0.338	0.048	0.419	0.051	0.014	0.025	0.004	0.033	0.462	0.002	
Anderson-Rubin Stat	.	10.305	.	16.228	25.812	.	23.449	10.247	.	7.468	
High chance of child's defect	0.024	0.056	0.016	0.008	0.013	0.056*	-0.028	0.032	0.007	0.036	8237
P-value	0.292	0.417	0.521	0.851	0.854	0.028	0.434	0.360	0.580	0.141	
Anderson-Rubin Stat	.	3.556	.	12.527	2.497	.	3.599	3.460	.	3.146	
Does not want more children	0.003	0.195*	0.005	0.120**	0.379*	0.048	0.140**	0.100*	0.001	0.083**	8209
P-value	0.907	0.020	0.892	0.005	0.024	0.101	0.002	0.016	0.963	0	
Anderson-Rubin Stat	.	13.380	.	20.556	35.936	.	43.819	13.529	.	13.683	
Woman is single	0.024	0.183*	0.030	0.110*	0.326*	0.067*	0.164**	0.093*	0.014	0.085**	8176
P-value	0.378	0.014	0.353	0.019	0.015	0.031	0.002	0.011	0.399	0	
Anderson-Rubin Stat	.	11.425	.	21.814	25.534	.	34.728	11.411	.	11.976	
Family is poor	0.028	0.166*	0.023	0.120**	0.249*	0.048+	0.144**	0.083*	0.010	0.078**	8194
P-value	0.286	0.034	0.460	0.005	0.035	0.095	0.006	0.029	0.526	0.001	
Anderson-Rubin Stat	.	6.988	.	10.892	11.660	.	18.819	7.015	.	8.384	
Mother's health is endangered	0.017	0.074	0.021	0.043+	0.077	0.029	0	0.038	0.009	0.007	8278
P-value	0.277	0.112	0.264	0.071	0.238	0.181	0.995	0.111	0.354	0.632	
Anderson-Rubin Stat	.	18.759	.	20.773	9.294	.	20.221	18.696	.	0.229	
Pregnancy is result of rape	0.039+	0.122+	0.028	0.030	0.156+	0.059**	0.007	0.061+	0.012	0.029	8192
P-value	0.054	0.081	0.236	0.487	0.078	0.002	0.871	0.082	0.336	0.156	
Anderson-Rubin Stat	.	26.834	.	28.051	35.341	.	32.707	27.402	.	3.321	
Any reason	0.031	0.205*	0.036	0.117**	0.305*	0.074**	0.167**	0.102*	0.018	0.091**	6933
P-value	0.233	0.023	0.219	0.007	0.016	0.005	0.001	0.017	0.207	0	
Anderson-Rubin Stat	.	11.584	.	24.931	21.345	.	33.237	12.630	.	21.472	

	Democrats subsample										
		Full sample			Restricted sample			Law -1/+1			
	OLS	Naive IV	LIML	LASSO	Naive IV	LIML	LASSO	Naive IV	LIML	LASSO	N
Z-score index	0.112**	-0.002	0.116*	0.015	0.123	0.111*	0.048	-0.008	0.060*	-0.031	9092
P-value	0.006	0.981	0.011	0.831	0.310	0.045	0.538	0.865	0.011	0.408	
Anderson-Rubin Stat	.	0.370	.	0.478	3.283	.	2.722	0.143	.	0.901	
Simple average index	0.049**	-0.003	0.052**	0.007	0.058	0.051*	0.023	-0.005	0.027**	-0.014	9092
P-value	0.006	0.943	0.009	0.821	0.293	0.043	0.520	0.821	0.009	0.390	
Anderson-Rubin Stat	.	0.356	.	0.495	3.667	.	2.644	0.143	.	0.956	
High chance of child's defect	0.030	0.027	0.014	0.029	0.006	0.031	0.014	0.013	0.007	0.007	1243
P-value	0.112	0.609	0.566	0.402	0.930	0.140	0.681	0.627	0.546	0.627	
Anderson-Rubin Stat	.	0.255	.	0.693	0.619	.	4.456	0.240	.	0.240	
Does not want more children	0.067**	0.031	0.076**	0.045	0.123	0.083*	0.043	0.012	0.040**	-0.016	1238
P-value	0.004	0.553	0.003	0.235	0.164	0.020	0.474	0.645	0.002	0.516	
Anderson-Rubin Stat	.	0.592	.	5.350	5.466	.	5.172	0.397	.	1.165	
Woman is single	0.053*	0.040	0.045+	0.016	0.119	0.057+	0.012	0.016	0.023+	-0.033+	1233
P-value	0.016	0.401	0.083	0.674	0.208	0.064	0.826	0.497	0.082	0.081	
Anderson-Rubin Stat	.	1.937	.	3.531	3.928	.	1.182	2.105	.	3.209	
Family is poor	0.036+	0.041	0.030	0.004	0.136	0.031	-0.007	0.014	0.015	-0.034	1236
P-value	0.058	0.427	0.164	0.900	0.115	0.268	0.832	0.594	0.172	0.120	
Anderson-Rubin Stat	.	1.253	.	3.889	5.241	.	2.637	0.788	.	5.799	
Mother's health is endangered	0.022+	0.035	0.010	-0	0.045	0.018	-0.015	0.019	0.006	-0.004	1249
P-value	0.091	0.385	0.503	0.995	0.435	0.186	0.684	0.363	0.458	0.791	
Anderson-Rubin Stat	.	2.268	.	3.822	2.609	.	9.030	2.597	.	2.491	
Pregnancy is result of rape	0.030*	0.011	0.016	-0.003	0.046	0.029	0.002	0.005	0.009	-0.007	1233
P-value	0.047	0.769	0.425	0.917	0.344	0.125	0.944	0.802	0.384	0.631	
Anderson-Rubin Stat	.	0.476	.	1.500	2.942	.	3.909	0.495	.	0.221	
Any reason	0.049*	-0.062	0.058**	-0.022	0.064	0.043	0.025	-0.032	0.032**	-0.017	9933
P-value	0.026	0.308	0.008	0.579	0.455	0.146	0.603	0.303	0.006	0.420	
Anderson-Rubin Stat	.	1.511	.	0.637	6.179	.	5.930	1.609	.	0.861	

Dependent variables are abortion attitudes recorded in GSS answers to questions related to whether the respondent believes abortion for certain reasons should be illegal. Main independent variable is the percent of pro-choice abortion decisions in the Circuit-year. In Columns 2-10, the law variable is instrumented with judicial characteristics, i.e. share of judges with given characteristic on abortion panels. Regressions control for age and sex of the respondent and Circuit and year fixed effects. We also control for probabilities of being assigned a judge with these characteristics. Naive instruments are shares of Democrats, Secular, and Non-white judges. LASSO instruments are shares of judges from the following groups: Democrats, Secular, Non-white Republicans, and Black judges with an in-state BA degree. LIML uses the entire available instruments set. First four columns are based on full sample and include control for presence of an appellate case in given Circuit-year. Columns 5-7 restrict sample to Circuit-years with at least one case. Columns 8-10 use recoded law which assigns a value of -1 to pro-life decisions and +1 to pro-choice decisions and takes the average in a Circuit-year, assigning a 0 when there were no cases. The top panel uses sample of GSS respondents who declare identification with the Republican Party. The bottom panel uses respondents identifying with the Democrat Party. P-values are based on standard errors clustered by Circuit-year. + Significant at 10%; * Significant at 5%; ** Significant at 1%.

Appendix Figure E.1 shows that abortion attitudes for Republicans consistently backlash against Circuit Court decisions. Almost all alternative 2SLS estimates are positive for the z-score and simple average indices. The impacts on the components of the indices are also robust as are the impacts on the discretionary abortions. Notably, the LIML estimates are all smaller in absolute value than the extreme estimates.

Appendix Figure E.1.— Alternative Estimates of Pro-Abortion *vs.* Anti-Abortion on Republican Abortion Attitudes



Appendix Table E.4 yields the consistent inference that abortion attitudes are affected by $\beta_1 Law_{ct}$ when instrumenting for $\beta_2 \mathbf{1}[M_{ct} > 0]$ with District Court judges. The effects are similar in magnitudes in all of the outcomes that were previously shown to be significantly affected, i.e., among Republicans. However, estimates of $\beta_1 Law_{ct} + \beta_2 \mathbf{1}[M_{ct} > 0]$ and of $\beta_2 \mathbf{1}[M_{ct} > 0]$ are less precise.[41]

[41] To illustrate: For "Should it be illegal for a woman to obtain abortion for any reason?", Republicans become 18% more likely to oppose abortion in response to pro-choice precedent when the counterfactual is no precedent in Column 4; For "Should it be illegal for a woman to obtain abortion because woman is single?", Democrats become significantly more pro-choice in response to pro-life decisions in Columns 6 and 8.

APPENDIX TABLE E.4

Impact of Pro-Abortion *vs.* None *vs.* Anti-Abortion Precedent on on Abortion Attitudes with District IVs

	Republicans					Democrats				
	OLS	Naive IV	LIML	LASSO	N	OLS	Naive IV	LIML	LASSO	N
Z-score index					6317					9092
Law (Pro-choice)	0.049	0.206*	0.017	0.120+		0.112**	0.081	0.135**	0.091	
P-value	0.317	0.030	0.766	0.058		0.006	0.279	0.005	0.142	
Present	-0.065+	-0.290	-0.031	0.030		-0.036	-0.149	-0.034	-0.153	
P-value	0.080	0.158	0.447	0.848		0.217	0.380	0.305	0.188	
Law + Present	-0.016	-0.083	-0.014	0.150		0.076*	-0.068	0.101**	-0.062	
P-value	0.645	0.725	0.737	0.305		0.012	0.717	0.003	0.587	
Simple average index					6317					9092
Law (Pro-choice)	0.021	0.096*	0.007	0.057*		0.049**	0.036	0.058**	0.041	
P-value	0.338	0.023	0.799	0.043		0.006	0.271	0.007	0.134	
Present	-0.026	-0.134	-0.011	0.013		-0.016	-0.079	-0.013	-0.077	
P-value	0.113	0.140	0.534	0.851		0.224	0.293	0.366	0.132	
Law + Present	-0.005	-0.038	-0.005	0.070		0.034*	-0.042	0.044**	-0.036	
P-value	0.726	0.720	0.791	0.287		0.012	0.611	0.003	0.479	
High chance of child's defect					8237					12436
Law (Pro-choice)	0.024	0.066	0.006	0.025		0.030	-0.006	0.050*	-0.001	
P-value	0.292	0.181	0.807	0.496		0.112	0.891	0.019	0.971	
Present	-0.024	-0.034	-0.004	0.115		-0.013	0.141	-0.021	0.079	
P-value	0.164	0.786	0.823	0.144		0.361	0.219	0.202	0.301	
Law + Present	0	0.032	0.002	0.140+		0.016	0.135	0.029+	0.078	
P-value	0.993	0.822	0.932	0.063		0.255	0.237	0.084	0.242	
Does not want more children					8209					12384
Law (Pro-choice)	0.003	0.123*	-0.004	0.077*		0.067**	0.064	0.072*	0.058	
P-value	0.907	0.023	0.916	0.030		0.004	0.116	0.023	0.106	
Present	-0.019	-0.055	0	0.048		-0.017	-0.097	-0.009	-0.193**	
P-value	0.390	0.693	0.993	0.593		0.296	0.407	0.675	0.006	
Law + Present	-0.015	0.068	-0.003	0.125		0.050**	-0.033	0.063**	-0.134+	
P-value	0.404	0.674	0.884	0.168		0.004	0.793	0.006	0.070	
Woman is single					8176					12334
Law (Pro-choice)	0.024	0.150**	0.031	0.091*		0.053*	0.062	0.055+	0.030	
P-value	0.378	0.004	0.341	0.011		0.016	0.119	0.065	0.444	
Present	-0.025	-0.056	-0.010	0.072		-0.023	-0.205*	-0.015	-0.236**	
P-value	0.210	0.710	0.653	0.424		0.143	0.044	0.479	0	
Law + Present	-0.001	0.094	0.021	0.163+		0.030+	-0.143	0.040*	-0.205**	
P-value	0.954	0.585	0.361	0.066		0.064	0.182	0.046	0.003	
Family is poor					8194					12365
Law (Pro-choice)	0.028	0.141**	0.004	0.099**		0.036+	0.046	0.019	0.017	
P-value	0.286	0.010	0.903	0.004		0.058	0.232	0.414	0.561	
Present	-0.030	-0.113	-0.015	-0.048		-0.018	-0.055	0.001	-0.139*	
P-value	0.138	0.432	0.523	0.557		0.208	0.579	0.968	0.024	
Law + Present	-0.002	0.028	-0.011	0.051		0.018	-0.009	0.020	-0.122+	
P-value	0.928	0.871	0.613	0.554		0.228	0.936	0.261	0.059	
Mother's health is endangered					8278					12493
Law (Pro-choice)	0.017	0.030	0.017	0.025		0.022+	0.030	0.038*	0.002	
P-value	0.277	0.340	0.393	0.224		0.091	0.344	0.012	0.943	
Present	-0.024+	0.035	-0.021	-0.027		-0.007	0.072	-0.015	0.038	
P-value	0.060	0.704	0.183	0.568		0.477	0.389	0.167	0.474	
Law + Present	-0.007	0.065	-0.004	-0.002		0.015	0.103	0.023+	0.040	
P-value	0.610	0.516	0.815	0.972		0.167	0.241	0.073	0.432	
Pregnancy is result of rape					8192					12337
Law (Pro-choice)	0.039+	0.093+	0.018	0.029		0.030*	0.027	0.046*	0.007	
P-value	0.054	0.095	0.409	0.441		0.047	0.358	0.032	0.775	
Present	-0.047**	0.071	-0.018	0.013		-0.010	-0.051	-0.014	-0.003	
P-value	0.004	0.489	0.307	0.873		0.440	0.501	0.400	0.952	
Law + Present	-0.007	0.163	0	0.042		0.021+	-0.024	0.032*	0.004	
P-value	0.637	0.134	0.999	0.610		0.095	0.764	0.034	0.946	
Any reason					6933					9933
Law (Pro-choice)	0.031	0.146**	0.024	0.085*		0.049*	-0.001	0.063*	0.028	
P-value	0.233	0.008	0.423	0.016		0.026	0.986	0.012	0.415	
Present	-0.010	-0.087	0.005	0.103		-0.001	-0.085	0	-0.028	
P-value	0.653	0.455	0.843	0.218		0.965	0.440	0.992	0.701	
Law + Present	0.021	0.059	0.029	0.188*		0.048**	-0.086	0.063**	0.001	
P-value	0.271	0.674	0.191	0.023		0.003	0.479	0	0.993	

Dependent variables are abortion attitudes recorded in GSS answers to questions related to whether the respondent believes abortion for certain reasons should be illegal. Main independent variable is the percent of pro-choice abortion decisions in the Circuit-year. The law variable is instrumented in Columns 2-4 with judicial characteristics, i.e. share of judges with given characteristic on abortion panels. Regressions control for Circuit- and year fixed effects. We also control for probabilities of being assigned a judge with these characteristics. Naive instruments are shares of Democrats, Secular, and Non-white judges. LASSO instruments are shares of judges from the following groups: Democrats, Secular, Non-white Republicans, and Black judges with an in-state BA degree. LIML uses the entire available instruments set. P-values are based on standard errors clustered by Circuit-year. + Significant at 10%; * Significant at 5%; ** Significant at 1%.

E.3 Robustness of Persuasive Effects Columns 5-7 repeat Table X for comparison. Analyses with the full sample are in Columns 2-4.

F Data Entry Experiment

Because subjects are unaware of an on-going experiment, differential attrition may arise at the time treatment is revealed (Reips 2001). We successfully minimize differential attrition through a commitment mechanism: in all treatment conditions, workers first face an identical "lock-in" task before the treatment is revealed. For this, we ask all workers to transcribe paragraphs from a Tagalog translation of Adam Smith's *The Wealth of Nations* as well as English paragraphs of dictionary definitions. This task is sufficiently tedious that no one is likely to do it "for fun," and it is sufficiently simple that all market participants can do the task.[42]

The payment for each paragraph is 10 cents with workers able to receive much more in bonuses, including a 50-cent bonus for completing the survey from the GSS at the end. A paragraph takes about 100 seconds to enter so the offered payment of 10 cents per paragraph is equivalent to $86.40 per day. At the time of the experiment, the federal minimum wage in the Unites States was $58/day. In India, payment rate depends on the type of work done, although the "floor" for data entry positions appears to be about $6.38/day.[43] An example paragraph is displayed on the first page of the external hosting site so workers are aware of the high payment before entering the study. In fact, one worker emailed saying that 10 cents was too high and that the typical payment for this sort of data entry was 3 cents per paragraph. After a lock-in task of three paragraphs, treatment is revealed. This lock-in successfully reduces attrition and was first developed as a method for online experiments in Chen (2016).

The following are the treatments in our information experiment:

1 of 3 Lock-in Tasks: Kaya sa isip o diwa na tayo ay sa mga ito, excites ilang mga antas ng parehong damdamin, sa proporsyon ng kasiglahan o dulness ng kuru-kuro.Ang labis na kung saan sila magbuntis sa kahirapan ng mga wretches nakakaapekto sa partikular na bahagi sa kanilang mga sarili ng higit pa sa anumang iba pang; dahil sa takot na arises mula sa kathang isip nila kung ano ang kani-kanilang mga sarili ay magtiis, kung sila ay talagang ang wretches kanino sila ay naghahanap sa, at kung sa partikular na bahagi sa kanilang mga sarili ay talagang apektado sa parehong miserable paraan. Ang tunay na puwersa ng mga kuru-kuro na ito ay sapat na, sa kanilang mga masasaktin frame, upang gumawa ng na galis o hindi mapalagay damdam complained ng.

Treatment 1 (Anti-Abortion Decision): The Casey ruling upheld the right of states to regulate abortions. The legislators had passed a law that restricted abortion by, among other things, requiring a mandatory waiting period, state-written counseling, parental consent and husband notification. The Court of Appeals upheld

[42]Time and money are the most cited reasons for participation in Mechanical Turk (http://behind-the-enemy-lines.blogspot.com/2008/03/mechanical-turk-demographics.html). Some workers do it out of need. A disabled former United States Army linguist became a Turk Worker for various reasons and in nine months he made four thousand dollars (New York Times, March 25, 2007). Some drop out of college to pursue a full time career with these disaggregated labor markets (Web Worker Daily, October 16, 2008, Interview with oDesk CEO). For more information about the motivation and demographics of Mechanical Turk workers, see, e.g. Paolacci et al. (2010).

[43]Payscale, Salary Snapshot for Data Entry Operator Jobs, http://www.payscale.com/research/IN/Job=Data_Entry-_Operator/Salary?, accessed June 17, 2011.

APPENDIX TABLE E.5

Impact of Pro-Abortion *vs.* Anti-Abortion Precedent on Abortion Attitudes Two Years Later (sensitivity analyses)

	Republicans subsample										
	Full sample				Restricted sample			Law -1/+1			
	OLS	Naive IV	LIML	LASSO	Naive IV	LIML	LASSO	Naive IV	LIML	LASSO	N
Z-score index	-0.050	-0.426*	-0.038	-0.244**	-0.333*	-0.012	-0.028	-0.228**	-0.012	-0.184**	6317
P-value	0.336	0.012	0.583	0.001	0.025	0.829	0.768	0.009	0.721	0.005	
Anderson-Rubin Stat	.	24.705	.	24.708	22.693	.	28.199	28.900	.	33.571	
Simple average index	-0.023	-0.188*	-0.017	-0.103**	-0.154*	-0.006	-0.008	-0.101**	-0.006	-0.080**	6317
P-value	0.329	0.012	0.578	0.001	0.021	0.811	0.836	0.009	0.704	0.006	
Anderson-Rubin Stat	.	25.088	.	24.475	23.547	.	30.407	29.916	.	34.413	
High chance of child's defect	-0.008	-0.124*	-0.010	-0.086**	-0.068	0.003	-0.021	-0.069*	-0.002	-0.071**	8237
P-value	0.727	0.046	0.726	0.008	0.241	0.881	0.628	0.032	0.893	0.001	
Anderson-Rubin Stat	.	9.516	.	11.220	2.504	.	1.845	11.311	.	22.527	
Does not want more children	-0.016	-0.204**	-0.035	-0.091*	-0.192*	0.018	-0.042	-0.115**	-0.015	-0.083*	8209
P-value	0.582	0.010	0.350	0.024	0.016	0.573	0.377	0.008	0.428	0.035	
Anderson-Rubin Stat	.	21.032	.	17.853	17.416	.	18.445	25.731	.	26.863	
Woman is single	-0.033	-0.188*	-0.028	-0.098**	-0.199*	-0.001	-0.039	-0.101*	-0.013	-0.085**	8176
P-value	0.238	0.025	0.421	0.010	0.028	0.960	0.405	0.019	0.443	0.008	
Anderson-Rubin Stat	.	16.325	.	16.951	21.995	.	27.888	24.418	.	33.193	
Family is poor	-0.027	-0.216*	-0.014	-0.103*	-0.211**	-0.010	-0.064+	-0.119*	-0.007	-0.096*	8194
P-value	0.310	0.018	0.681	0.045	0.010	0.642	0.096	0.014	0.685	0.025	
Anderson-Rubin Stat	.	25.938	.	24.328	17.167	.	14.048	34.793	.	37.314	
Mother's health is endangered	-0.005	-0.112*	-0.007	-0.073*	-0.039	0.017	-0.049	-0.061*	-0.002	-0.052*	8278
P-value	0.811	0.046	0.774	0.043	0.436	0.405	0.112	0.036	0.862	0.027	
Anderson-Rubin Stat	.	10.525	.	8.299	1.027	.	3.323	12.542	.	11.509	
Pregnancy is result of rape	-0.032	-0.097+	-0.017	-0.084*	-0.055	-0.015	-0.027	-0.053+	-0.007	-0.063**	8192
P-value	0.153	0.092	0.571	0.012	0.301	0.501	0.517	0.089	0.608	0.002	
Anderson-Rubin Stat	.	8.816	.	14.552	11.223	.	17.482	10.774	.	20.632	
Any reason	-0.027	-0.205*	-0.007	-0.069*	-0.206*	0.008	0.042	-0.109**	-0.002	-0.058+	6933
P-value	0.350	0.011	0.848	0.049	0.033	0.776	0.408	0.007	0.928	0.082	
Anderson-Rubin Stat	.	20.117	.	18.070	21.114	.	35.321	24.618	.	28.076	

	Democrats subsample										
	Full sample				Restricted sample			Law -1/+1			
	OLS	Naive IV	LIML	LASSO	Naive IV	LIML	LASSO	Naive IV	LIML	LASSO	N
Z-score index	0.017	-0.058	0.022	-0.010	-0.071	0.036	-0.122*	-0.019	0.009	-0.003	9092
P-value	0.654	0.653	0.634	0.878	0.509	0.416	0.035	0.787	0.676	0.942	
Anderson-Rubin Stat	.	10.024	.	10.344	7.913	.	38.669	11.577	.	7.724	
Simple average index	0.009	-0.030	0.011	-0.012	-0.039	0.015	-0.062*	-0.011	0.005	-0.007	9092
P-value	0.592	0.600	0.597	0.682	0.391	0.426	0.012	0.726	0.642	0.731	
Anderson-Rubin Stat	.	10.941	.	11.263	8.922	.	46.029	12.826	.	8.295	
High chance of child's defect	-0.002	0.026	0.019	0.042	0.005	0.020	-0.008	0.023	0.009	0.025	12436
P-value	0.930	0.644	0.465	0.289	0.943	0.366	0.853	0.457	0.458	0.317	
Anderson-Rubin Stat	.	9.070	.	12.308	7.809	.	12.947	9	.	9.759	
Does not want more children	0.008	-0.039	0.007	-0.018	-0.110+	0.010	-0.099**	-0.021	0.001	-0.020	12384
P-value	0.681	0.561	0.785	0.609	0.070	0.631	0.003	0.591	0.914	0.383	
Anderson-Rubin Stat	.	11.337	.	11.265	12.236	.	26.714	13.847	.	5.447	
Woman is single	-0.008	0.006	-0.022	-0.035	-0.062	-0.007	-0.110**	0.002	-0.015	-0.023	12334
P-value	0.691	0.916	0.366	0.307	0.264	0.711	0	0.959	0.225	0.265	
Anderson-Rubin Stat	.	6.224	.	10.263	6.080	.	49.891	6.998	.	2.274	
Family is poor	0.008	-0.068	0.010	-0.048	-0.081	0.019	-0.103**	-0.033	0.003	-0.035	12365
P-value	0.675	0.335	0.690	0.254	0.192	0.382	0.006	0.424	0.814	0.248	
Anderson-Rubin Stat	.	7.694	.	10.122	5.034	.	26.333	11.596	.	12.550	
Mother's health is endangered	-0.011	-0.016	-0.004	0.024	0.012	-0.001	0.014	-0.001	-0.002	0.028+	12493
P-value	0.427	0.730	0.821	0.383	0.825	0.941	0.630	0.948	0.799	0.094	
Anderson-Rubin Stat	.	4.022	.	6.058	3.909	.	3.773	2.718	.	4.630	
Pregnancy is result of rape	0.004	0.016	0.021	0.045	0.040	0.019	0.011	0.016	0.011	0.034*	12337
P-value	0.793	0.732	0.252	0.125	0.483	0.278	0.716	0.530	0.230	0.044	
Anderson-Rubin Stat	.	6.361	.	9.737	7.981	.	11.463	6.358	.	6.017	
Any reason	0.035+	0.055	0.030	0.019	-0.005	0.038+	-0.050	0.033	0.014	0.008	9933
P-value	0.093	0.340	0.257	0.659	0.911	0.077	0.118	0.277	0.280	0.762	
Anderson-Rubin Stat	.	5.868	.	5.437	4.583	.	14.068	7.038	.	2.262	

Dependent variables are abortion attitudes recorded in GSS answers to questions related to whether the respondent believes abortion for certain reasons should be illegal. Main independent variable is the percent of pro-choice abortion decisions in the Circuit-year. In Columns 2-10, the law variable is instrumented with judicial characteristics, i.e. share of judges with given characteristic on abortion panels. Regressions control for age and sex of the respondent and Circuit- and year fixed effects. We also control for probabilities of being assigned a judge with these characteristics. Naive instruments are shares of Democrats, Secular, and Non-white judges. LASSO instruments are shares of judges from the following groups: Democrats, Secular, Non-white Republicans, and Black judges with an in-state BA degree. LIML uses the entire available instruments set. First four columns are based on full sample and include control for presence of an appellate case in given Circuit-year. Columns 5-7 restrict sample to Circuit-years with at least one case. Columns 8-10 use recoded law which assigns a value of -1 to pro-life decisions and +1 to pro-choice decisions and takes the average in a Circuit-year, assigning a 0 when there were no cases. The top panel uses sample of GSS respondents who declare identification with the Republican Party. The bottom panel uses respondents identifying with the Democrat Party. P-values are based on standard errors clustered by Circuit-year. + Significant at 10%; * Significant at 5%; ** Significant at 1%.

every restriction except one. Abortion, they said, was no longer a fundamental constitutional right, but rather a "limited fundamental right." This "right," in other words, could be limited by any law a legislature passed and a court thought was "reasonable."

Treatment 2 (Anti-Abortion Decision): The court upheld a law, considered the most restrictive in the nation, that required women to consult with a doctor face-to-face at least 24 hours before getting an abortion, except in certain cases of rape and incest. The law required doctors to provide specific information about the procedure, risks, alternatives and social service programs, and hand out a booklet containing pictures of developing fetuses. Furthermore, the material doctors distribute will be developed by the state Department of Health and Social Services.

Treatment 3 (Pro-Abortion Decision): The court reviewed a Massachusetts law requiring parental consent before abortions can be performed on minor girls. The court struck down a part of the law that required any woman seeking an abortion to wait 24 hours after signing an informed consent form before having the abortion procedure. The court also struck down the part of the law that required the consent form to contain a description of the fetus.

Treatment 4 (Pro-Abortion Decision): Seven Missouri laws regulating abortion were challenged in a class action lawsuit. The court declared all seven statutes unconstitutional, including a requirement that physicians perform certain medical tests when there was reason to believe a fetus had reached at least 20 weeks of gestational age. These tests, which included assessments of fetal weight and lung maturity, were designed to determine the viability of an unborn child. The statute's indicated that "[t]he life of each human being begins at conception" was also struck down.

Treatment 5 (Control): The focus of art music was characterized by exploration of new rhythms, styles, and sounds. Jazz evolved and became a significant genre of music over the course of the 20th century, and during the second half of that century, rock music did the same. Jazz is an American musical art form that originated in the beginning of the 20th century in African American communities in the Southern United States from a confluence of African and European music traditions. The style's West African pedigree is evident in its use of blue notes, improvisation, polyrhythms, syncopation, and the swung note. From its early development until the present, jazz has also incorporated music from 19th and 20th century American popular music. Jazz has, from its early 20th century inception, spawned a variety of subgenres.