Judge Ideology and Corporate Tax Planning

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Abstract: We investigate whether judges' political ideology affects corporate tax behaviors. We find firms engaging in less aggressive tax planning when Circuit Court judges are more liberal. Cross-sectionally, the deterrent effect of liberal judge ideology is more pronounced for firms that engage in judiciary-sensitive tax strategies, face higher enforcement risk from the Internal Revenue Service, or have larger reputational costs from tax disputes. Our findings further suggest that liberal judge ideology reduces firms' R&D investments and market value by constraining tax planning. Overall, our evidence highlights the importance of judge ideology to firm behavior in the context of corporate tax planning.

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1. Introduction

Taxation plays a crucial role in resource allocation in society and has a significant impact on firms' operating, investing, and financing decisions (Slemrod 2003). In the U.S., the political ideologies of politicians, legislators, and members of the judiciary can have a profound effect on tax policy. On the conventional liberal-to-conservative political spectrum, liberals tend to favor increasing tax revenue, especially by taxing businesses, whereas conservatives often prefer to lower taxes, favoring corporations (Howard 2005, 2010; see also the model assumptions in Dixit and Londregan 1998; Roemer 1999; Krasa and Polborn 2014). The judicial branch is vital to the enforcement of tax policy, as it connects the executive and legislative branches of tax enforcement by interpreting tax laws to resolve disputes between taxpayers and the Internal Revenue Service (IRS). Legal research suggests that liberal judges are more likely than conservative judges to rule in favor of the government in corporate tax lawsuits (Staudt, Epstein, and Wiedenbeck 2006). In this study, we investigate whether judges' political ideology affects corporate tax planning, with the aim of providing insights into the role of the judicial branch in corporate decision-making.[1]

U.S. tax laws are ambiguous due to their complex nature and lawmakers' divergent political views (Mashaw 1985; Logue 2005; Kopczuk 2006). While firms assert that their tax strategies comply with the letter of the law, many of these strategies are challenged by the IRS, which argues that they provide firms with tax benefits not intended by Congress (Blank 2009; Lawsky 2009). When firms and the IRS cannot agree, firms may file lawsuits in federal courts. Federal judges then make rulings based on their interpretation of the relevant tax laws.

As courts are the ultimate recourse for resolving firm–IRS disputes, judges' ideology not only affects the parties engaged in tax litigation but also loom over the entire tax collection

[1] We use "corporate tax planning" to refer to transactions that reduce firms' explicit tax liabilities. These range from "less aggressive" transactions, such as municipal bond investments, to "more aggressive" transactions, such as abusive tax shelters (Hanlon and Heitzman 2010).

process. In the U.S. common law system, judicial decisions in the Courts of Appeals and the Supreme Court become case law (i.e., they have binding constraints on subsequent cases) and thus affect the expected costs and benefits for other firms of using similar tax strategies in the future. The literature also suggests that judges' ideology can have a significant impact on settlement negotiations between the IRS and firms (Internal Revenue Manual [IRM]; Guttman 1993; Fogel 2003; Blank and Staudt 2012) and on IRS audit attention (Howard and Nixon 2003). We therefore expect firms under the jurisdiction of more liberal judges to engage in less aggressive tax planning, particularly through firms' evaluation of the net benefits of tax planning.

All federal judges are appointed by the U.S. president. As presidents almost always appoint judges whose ideology reflects that of their political party (Dorsen 2006; Federal Judicial Center [FJC] 2006), we follow prior research in using the partisanship of the appointing president to identify judges' ideology (Sunstein, Schkade, and Ellman 2004). That is, we label judges appointed by a Democratic president as liberal and those appointed by a Republican president as conservative. Within the federal courts, we focus on judges in the Courts of Appeals (i.e., the Circuit Courts), as these courts have the most significant influence on corporate tax planning.[2] Empirically, we calculate each circuit's judge ideology as the probability that a randomly selected three-judge panel from the circuit is dominated by liberal judges (Huang, Hui, and Li 2019). As changes in a court's judge ideology depend only on judge turnover and the party of the appointing president, these changes are arguably exogenous to corporate tax planning decisions. For instance, firms' economic conditions are unlikely to

[2] We discuss the four federal courts that handle the vast majority of U.S. tax cases—the Tax Court, the District Courts, the Circuit Courts, and the Supreme Court—in Section 3.1 and Internet Appendix IA.1. In short, we focus on the Circuit Courts because the Supreme Court rarely hears tax cases and decisions from Tax and District Courts are subject to mandatory review by the Circuit Courts if the losing party appeals. As a result, Tax and District Courts' judges must consider the probability that their decisions will be reviewed and reversed by Circuit Courts. Consistent with this, prior research finds that judges in lower courts take the political preference of Circuit Court judges into consideration when making decisions (Schanzenbach and Tiller 2007; Randazzo 2008).

determine judges' eligibility to retire or the partisanship of the president that appoints judges. In sum, this measure takes advantage of variation in judges' departures and appointments, which occur at different times across circuits, for empirical identification.

We begin by analyzing the relation between judge ideology and tax case outcomes to validate the influence of ideology in the Circuit Courts and to corroborate the proposed mechanism through which ideology affects firms' tax planning. Using a manually collected sample of 328 corporate tax cases decided by the Circuit Courts between 1996 and 2016, we find that panels with a majority of liberal judges are 21.3% more likely to rule in favor of the IRS than panels with a majority of conservative judges, after controlling for these judges' senior status, aptitude, and gender, as well as for circuit and year fixed effects.

Using the federal General Accepted Accounting Principles (GAAP) effective tax rate (hereafter, federal ETR) as a proxy for firms' aggressiveness in federal tax planning, we find that firms engage in less aggressive tax planning when judges in the Circuit Court with jurisdiction over the firm are more liberal. This finding is consistent with the notion that a more liberal judge ideology increases the expected cost of aggressive tax planning. The deterrent effect is economically significant: a one-standard-deviation increase in the liberal judge ideology of the Circuit Court is associated with an increase of 0.6 percentage points in the federal ETR, which amounts to a $1.62 million increase in the annual federal tax expense for the average firm in our sample (which has a mean pre-tax domestic income of $270 million).

We then conduct three sets of cross-sectional analyses to explore the mechanism through which judge ideology affects tax planning. Intuitively, the effect of judge ideology should be stronger when tax planning is more likely to attract disputes and when these disputes impose higher costs on firms. We measure firms' likelihood of tax disputes through (1) their use of uncertain and thus judiciary-sensitive tax strategies, including cross-border income shifting, Domestic Production Activities Deduction (DPAD), and research and development

(R&D) tax credits (Klassen and Laplante 2012; Lester and Rector 2016; De Simone, Mills, and Stomberg 2019) and (2) the degree of IRS tax enforcement risk faced by firms (Hoopes, Mescall, and Pittman 2012; Fox and Wilson 2023). We proxy for the costs of potential tax disputes using an indicator of consumer-brand status, as these companies face greater reputational fallout from tax controversies (Graham, Hanlon, Shevlin, and Shroff 2014; Dyreng, Hoopes, and Wilde 2016). Our findings are consistent with our prediction. We find that the effect of judge ideology on federal ETR is more pronounced among firms that engage in judiciary-sensitive tax strategies, those with a greater likelihood of being audited by the IRS, those receiving more attention from the IRS, and those with consumer brands.

Next, we examine whether judge ideology influences firms' financial outcomes through its effect on tax planning. We focus specifically on two outcomes, R&D investment and firm valuation, both of which are of significant interest to the finance audience and highly sensitive to tax strategies (e.g., Desai and Dharmapala 2006; Akcigit and Stantcheva 2020). The results of mediation tests suggest that liberal judge ideology reduces firms' R&D investments and firm valuation by deterring tax planning. These findings suggest that the ideological stance of judges can have a broad influence on corporate financial outcomes, highlighting the importance of judicial discretion in shaping corporate behavior beyond the legal domain.

We include several additional analyses to ensure the robustness of our results and to yield further insights. Our findings are unchanged across alternative samples and model specifications, such as further including financial and utility firms, the use of firm fixed effects, alternative standard errors adjustments, Fama-MacBeth regressions, an instrumental variable approach, and a placebo test. We also find stronger effects among firms with greater tax planning capacity, consistent with their ability to adjust strategies quickly in response to changes in the regulatory environment. To further explore whether judge characteristics moderate the effect of judge ideology, we analyze judges' qualifications, experience, age, and

gender. We find that liberal ideology has a stronger deterrent effect in circuits with female judges. This pattern is consistent with prior evidence that women, on average, exhibit greater conservatism and risk aversion than men in tax-related contexts (Powell and Ansic 1997; Francis, Hasan, Wu, and Yan 2014), which may amplify the influence of liberal ideology in discouraging aggressive tax strategies.

Our paper makes several important contributions to the literature. The first concerns the economic determinants of corporate tax planning (Allingham and Sandmo 1972; Andreoni, Erard, and Feinstein 1998; Slemrod 2007). Prior studies examine the effect of tax enforcement on tax evasion (Slemrod and Yitzhaki 2002; Almunia and Lopez-Rodriguez 2018; Slemrod 2019), focusing on actions by the legislative branch, such as the passage of a new tax law or the modification of existing ones (e.g., Auerbach 2018; Slemrod 2018; Garrett and Suárez Serrato 2019; Hanlon, Hoopes, and Slemrod 2019), and by the executive branch (i.e., the IRS) (Reinganum and Wilde 1988; Mills 1998; Hoopes et al. 2012; DeBacker, Heim, and Tran 2015; Bozanic, Hoopes, Thornock, and Williams 2017; Kubick, Lockhart, Mills, and Robinson 2017; Ayers, Seidman, and Towery 2019; Nessa, Schwab, Stomberg, and Towery 2020). While both the IRS and the judiciary play key roles in tax enforcement, their roles and responsibilities differ considerably. The IRS actively detects and prosecutes tax underpayments and serves as the representative of the federal government. In contrast, the judiciary is an independent branch that should remain impartial in resolving disputes between taxpayers and the IRS. Its status as the final arbiter of tax disputes and its ability to establish precedents constrain the power of the IRS and influence future IRS enforcement. Our study is the first to show that the judicial branch, through its critical role in interpreting tax law, has a significant influence on corporate tax planning.

Second, we contribute to the growing body of research examining the role of the judiciary in corporate finance decisions and outcomes. Prior studies establish the relation

between judge ideology and corporate financial disclosures (Huang et al. 2019). The finance, economics, and accounting literature also well documents the importance of taxation in shaping R&D investment (e.g., Akcigit and Stantcheva 2020; Mukherjee, Singh, and Žaldokas 2017; Williams and Williams 2021; Goldman, Lampenius, Radhakrishnan, Stenzel, and de Almeida 2023; Cowx 2025) and firm valuation (Desai and Dharmapala 2006; Desai, Dyck, and Zingales 2007). Building on this foundation, our analyses show that the ideological orientation of the judiciary influences corporate decisions and valuation processes by shaping tax strategies. This finding not only highlights the critical role of tax planning in financial outcomes but also offers the novel insight that judge ideology is a significant factor in this relation. Our research thus connects the fields of taxation, legal studies, and finance, providing valuable insights for academia, practitioners, and regulators into how judge ideology interacts with corporate financial outcomes.

Third, we contribute to the literature on tax disputes and litigation. Although Staudt et al. (2006) examine how judge ideology influences corporate tax litigation outcomes, they focus cases heard by the Supreme Court. We are the first to document how Circuit Court judge ideology affects rulings on corporate tax cases. Furthermore, as most corporate tax disputes are settled between the firm and the IRS before a case is filed in court (Gerdes, Langdon, and Louthan 2001; IRS 2017), our evidence based on firms' ex-ante actions (i.e., tax-planning strategies) helps to reveal the full effect of the judicial branch on corporate taxation.

2. Background and Literature Review

2.1 Government and Corporate Tax Planning

Corporate tax planning, which includes all transactions that affect a firm's explicit tax liability, is an important issue for businesses and governments and attracts widespread attention from politicians and the media (Dyreng, Hanlon, and Maydew 2008; Hanlon and Heitzman 2010; Dyreng et al. 2016; Chen, Schuchard, and Stomberg 2019). In its report on the tax gap,

the IRS estimated that corporate underreporting worth $37 billion occurred annually between 2014 and 2016, suggesting an underreporting rate of 12%. Unsurprisingly, therefore, researchers in accounting, finance, economics, and law make significant efforts to understand the determinants of corporate tax planning (e.g., Shackelford and Shevlin 2001; Slemrod 2007; Hanlon and Heitzman 2010; Wilde and Wilson 2018).

Numerous political science studies investigate the influence of the legislative branch, including governors, state legislators (Alt and Lowry 1994; Poterba 1994; Reed 2006; Besley, Persson, and Sturm 2010), and key congressional committees (Young, Reksulak, and Shughart 2001; Baloria and Klassen 2018), on corporate tax collection. They find that the dynamics of these political bodies (e.g., their competition, partisanship, and representation) explain the variation in local tax rates and IRS enforcement efforts. The literature also examines the influence of the executive branch (i.e., the IRS), which administers tax laws by translating these laws into detailed rules, regulations, and procedures and then enforcing them via audits. These studies generally find that firms engage in less aggressive tax planning when IRS enforcement increases, including when the expected probability of an IRS audit is higher and when a nearby IRS office employs industry specialists (Hoopes et al. 2012; Kubick et al. 2017).[3]

The third government branch (i.e., the judiciary) interprets tax laws and resolves tax disputes between the IRS and taxpayers through its rulings. Given that courts are the ultimate recourse for tax disputes, judges' ideology directly affects tax case rulings and also looms over the entire tax collection process, including settlement negotiations (IRM; Guttman 1993; Fogel 2003) and IRS audits (Howard and Nixon 2003). Despite the importance of the judicial branch

[3] However, Nessa et al. (2020) find no evidence that corporate taxpayers are less likely to take aggressive tax positions when IRS resources are high. In a similar vein, using the setting of assignments to the IRS's Coordinated Industry Case program, in which firms are under continuous audit (see Internet Appendix IA.1 for more details about the program), Ayers et al. (2019) find that a further increase in audit probability does not deter aggressive tax planning when firms already have a high chance of being audited.

in tax collection, the potential effects of the judiciary on corporate tax planning remain under-explored.

2.2 Political Ideology and Tax Collection

When considering disputes between firms and the government, those related to tax are arguably among the most important and controversial, because of their widespread potential impacts. As stated by Howard (2005, p. 146), "the collection and distribution of revenue is the single most important and politically charged issue that any government must confront. Who or what should pay and how much, and who or what should receive this revenue and how much, are inescapably political questions charged with ideological overtones." The traditional liberal–conservative distinction suggests that liberal ideology favors the government, whereas conservative ideology favors firms in tax disputes (Howard 2002, 2005; Howard and Nixon 2002). For instance, the Republican Party platform states that "Republicans advocate lower taxes, reasonable regulation, and smaller, smarter government" (Republican National Committee 2004, 2008).

Ample evidence indicates that ideological preferences affect all three government branches in tax matters. For example, Republican presidents and congressmen are far more likely than their Democratic counterparts to favor tax cuts. Analyzing presidential State of the Union addresses, Bagchi (2016) finds that 81.2% of tax policy statements made by Republican presidents are in favor of tax cuts, compared with 44.8% of such statements made by Democratic presidents. During the legislation of the two Bush tax cuts in 2001 and 2003 and the Tax Cuts and Jobs Act of 2017, most members of Congress cast their votes along party lines.[4] Furthermore, Democrat-controlled Congresses allocate larger budgets and more

[4] During the passage of the Economic Growth and Tax Relief Reconciliation Act of 2001, all 216 Republican members of Congress voted in favor, but only 13 out of the 210 Democratic members did so. The Jobs and Growth Tax Relief Reconciliation Act of 2003 was supported by 218 out of the 229 Republicans but only 7 out of the 205 Democrats in the House. In 2017, the Republicans passed one of the most sweeping tax cuts in the past 30 years

resources for IRS personnel (Scholz and Wood 1998; Bagchi 2016). Anecdotally, from 2011 to 2018, congressional Republicans repeatedly cut IRS budgets, leading to a one-third decrease in IRS enforcement staff (Kiel and Eisinger 2018). As a result, the IRS generally conducts fewer corporate audits under a Republican regime than under a Democratic one.

In the judiciary branch, both legal and political science studies find that ideology is among the most important personal attributes of judges in terms of influence on civil liberties and economic lawsuit outcomes (Johnston 1976; Tate 1981; Segal and Cover 1989; Staudt et al. 2006).[5] Due to liberals' pro-government tendencies, liberal judges are expected to be more likely than conservative judges to rule in favor of the government in corporate tax lawsuits. Consistent with this conjecture, Staudt et al. (2006) find that liberal justices in the Supreme Court are more likely to vote in favor of the government in tax cases than are conservative justices.[6]

2.3 How Judge Ideology Affects Corporate Tax Planning

Tax planning is by nature forward-looking and requires managers and tax directors to consider the expected costs and benefits of a tax strategy when determining whether to adopt it and, if it is adopted, how aggressively to pursue it.[7] This assessment requires managers to assess the expected outcome if the strategy is challenged, i.e., the court ruling if the dispute

(Tax Cuts and Jobs Act of 2017) when they controlled both the House of Representatives and the Senate and had a Republican president. The most important changes in that reform concerned corporate taxes, including lowering the federal corporate tax rate from 35% to 21% (Auerbach 2018). The legislative history of the bill shows that most voting followed party lines. For example, no Democrat voted for the bill in the House or the Senate.

[5] Even judges acknowledge the importance of ideology in their decisions (Wald 1987; Edwards 1991, 2003; Posner 2005).

[6] We do not focus on the Supreme Court because it rarely hears tax cases (Hoffman et al. 2017). According to the Westlaw Classic database, the Supreme Court only heard seven corporate tax cases between 1996 and 2016.

[7] Financial reporting for income taxes under ASC 740-10/FIN 48 requires firms to evaluate and measure the benefits of tax positions that are "more likely than not" to be sustained upon tax audit and examination based on their technical merit.

goes to trial or the settlement amount if the case is settled, as well as the likelihood of an IRS challenge, all of which are influenced by judge ideology.

First, liberal judges are more likely than conservative judges to rule against firms (in favor of the IRS), which reduces the expected net benefits of aggressive tax planning that may end up before the court. After losing tax cases, firms pay taxes and penalties and both firms and managers face reputational damage arising from unfavorable media coverage and negative publicity (Graham et al. 2014; Dyreng et al. 2016; Chen et al. 2019). Furthermore, because judicial precedents are either binding or persuasive when deciding subsequent cases with similar issues or facts under the common law system, current judge ideology can affect firms' tax planning decisions through the litigation outcomes of recent cases (Heitzman and Ogneva 2019; Donelson, Glenn, and Yust 2022; Nesbitt, Outslay, and Persson 2023).

Second, judge ideology can have a significant impact on the negotiation between the taxpayer and the IRS and therefore on settlement outcomes. During negotiations between a firm and the IRS, both sides are likely to consider judicial attributes, such as judges' ideology and biases, when estimating the lawsuit outcome should the dispute reach court (see Internet Appendix IA.1 for details of the settlement negotiation). As noted by Blank and Staudt (2012, p. 1665), "the parties negotiate in the shadow of litigation" throughout the tax dispute process. The IRS explicitly requires its officers to review the strengths and weaknesses of the respective positions taken in the case and to propose a settlement and penalties based on the "hazards of litigation," i.e., the likelihood that the IRS will prevail in a lawsuit (Internal Revenue Manual;

Fogel 2003).[8] Judges can even play a direct role in guiding the parties to reach an agreement by offering a tentative view on how they may rule in the case.[9]

Third, research finds that the IRS is more likely to audit firms when judges are more liberal, which suggests that judge ideology can affect IRS enforcement actions. For instance, using state-level audit data from 1960 to 1988, Howard and Nixon (2003) document that when a Court of Appeals has more liberal judges, the IRS's audit attention in states that are under that court's jurisdiction shifts away from individuals and toward corporate taxpayers. This observation is consistent with the findings of Nessa et al. (2020), which suggest that the IRS allocates more resources to taxpayer positions that are supported by weaker facts and more likely to be settled in the IRS's favor. Thus, to the extent that IRS enforcement actions are affected by judge ideology, current judge ideology can have a significant effect on firms' tax planning. In sum, we argue that, given its effects on tax dispute outcomes and IRS audits, judge ideology is likely to influence firms' tax planning through their evaluation of the net benefits of aggressive tax planning.[10]

[8] Guttman (1993) gives an example of how the IRS considers the hazards of litigation: "Unless there is an IRS policy to the contrary, the hearing officer in the appeals office (of the IRS) makes a settlement offer on the basis of the quality of the case set up by the auditor and the hazards of litigation. For example, if the officer thinks that the IRS has only a 30-percent chance of succeeding in litigation, an offer will be made to settle the case for 30 cents on the dollar."

[9] Smith (1993) describes how judges may assist firms and the IRS in arriving at a consensus by offering an opinion: "In the typical chambers conference, the judge first will ask each party to explain its case and how it expects to prove that case. After both sides have spoken, the judge may try to focus them on mutual areas of agreement or suggest a procedure for coming to agreement. The judge also may ask the parties if they would be interested in hearing the judge's tentative views on how he or she would rule in the case, assuming the parties presented the evidence they said they would present. The judge sometimes will give his or her views as a percentage, as in: 'I think there is a 60% chance I will rule for the petitioner on this issue.' Giving views in this way often lends to quick settlements on the stated percentage basis."

[10] Anecdotally, external tax service providers such as the Big 4 firms and law firms offer controversy services to their clients. It is reasonable for these accountants and lawyers to consider the recent tax landscape (e.g., case rulings, settlements, and IRS behaviors) when advising firms on tax planning (McGuire, Omer, and Wang 2012; Klassen, Lisowsky, and Mescall 2016; Gallemore, Gipper, and Maydew 2019; Acito and Nessa 2022; White 2023). There is also evidence that such tax planning knowledge and awareness are valued by firms. For example, a large proportion of in-house tax directors have graduate training in law and/or prior experience in external tax service firms (Chen, Cheng, Chow, and Liu 2021). As such, Barrios and Gallemore (2023) find that planning knowledge can be widely disseminated through the labor market.

3. Variable Measurement and Sample Description

3.1 Variable Measurement

The U.S. federal court hierarchy that handles the vast majority of tax cases consists of four courts spanning three levels: two trial courts, the Tax Court and the District Courts; intermediate appeals courts, the Circuit Courts; and the highest court in the federal judiciary, the Supreme Court (see Figure 1 and Internet Appendix IA.1 for details). We do not focus on the Supreme Court, because it rarely hears tax cases (Hoffman, Raabe, and Maloney 2017). Of the three remaining courts, we expect the Circuit Courts to exert the most significant influence on corporate tax planning for two reasons. First, Tax Court and District Court decisions are subject to mandatory review by the Circuit Courts if the losing party appeals. Thus, Tax Court and District Court judges consider the ideology of the Circuit Court judges when deciding cases (Schanzenbach and Tiller 2007; Randazzo 2008). Second, Circuit Court decisions are binding in the trial courts within their jurisdictions. That is, both the Tax Court and District Courts must follow the case precedents set by the Circuit Court that has jurisdiction over the case.[11] As Cross (2007, p. 2) argues, "In large measure, it is the Circuit Courts that create U.S. law. They represent the true iceberg, of which the Supreme Court is but the most visible tip. The Circuit Courts play by far the greatest legal policymaking role in the United States judicial system."

As Circuit Courts assign each case to a randomly selected three-judge panel, we measure judge ideology as the probability of the panel's being dominated by Democratic presidents' appointees (*Liberal Circuit*). We obtain the name of the president who appointed each judge from the Federal Judicial Center (FJC). While using the partisanship of the appointing presidents to measure federal judge ideology aligns with prior empirical legal

[11] Although the Tax Court is a national court, it must follow the precedents of the regional circuit that would handle the potential appeal (i.e., the circuit with jurisdiction over the state in which the firm is headquartered) even if Tax Court judges disagree with those precedents (Hoffman et al. 2017). Accordingly, the IRS requires its appeals officers to consider the most recent legal precedent of the applicable circuit when developing its settlement offer (IRM 8.6.4.1.6, IRS 2007).

studies (Sunstein et al. 2004), it is important to note that judges may not always strictly adhere to party lines on tax issues and that judicial behavior can be influenced by factors beyond political affiliation, which can introduce noise to the measure.

Following the literature, we include both active and senior judges in the circuit (Huang et al. 2019). As firms that sue the IRS in a District Court must file their cases in the district where they are headquartered (28 U.S.C. $1402(a)(2) 2006), we assign each firm–year observation to the corresponding courts based on the firm's historical headquarters location. We calculate each court's ideology at the end of the first month of the firm's fiscal year, as this is likely to be when managers make tax-planning decisions. In doing so, we measure the current judge ideology that affects the outcomes of recent tax cases with similar strategies and reflect firms' expectations of judge ideology in potential future tax disputes (Heitzman and Ogneva 2019; Donelson et al. 2022; Nesbitt et al. 2023).[12]

To validate our measure, we examine the relation between judge ideology and the outcomes of corporate tax cases in the Circuit Courts. We manually collect detailed information— including the docket number, docket year, appellant identity, case outcome, judge's name, tax year of the litigated tax position, and lower court from which the appeal was taken—on 328 Circuit Court cases involving disputes between the IRS and corporate taxpayers decided from 1996 to 2016 using the Westlaw Classic database. Of these cases, 156, 116, and 56 originate from appeals of decisions by the District Courts, the Tax Court, and the Court of Federal Claims, respectively. We estimate a probit model in which the dependent variable is whether the court rules in favor of the IRS and the key independent variable is an indicator of whether at least two judges on the three-judge panel were appointed by Democratic presidents. We control for lower court type and judges' senior status, ability, and gender, obtained from

[12] Using data from October 1981, the date when the last circuit (the 11th Circuit) was created, we calculate the mean one-, three-, and five-year persistence in judge ideology in Circuit Courts as 0.872, 0.597, and 0.334, respectively (all values are significant at the 1% level).

FJC and Google searches, and include circuit and decision year fixed effects. The results, presented in Internet Appendix Table IA.2, show that panels with a liberal majority are 21.3% more likely to rule in favor of the IRS than a panel with a conservative majority, confirming the significant influence of judge ideology on corporate tax case outcomes in the Circuit Courts.

Our main measure of corporate tax planning is the federal ETR (*Fed ETR Dom*), defined as total federal tax expense divided by pre-tax domestic income. As federal judge ideology should only affect corporate tax obligations related to the federal government, we use total federal tax expense as the numerator to exclude amounts related to state and foreign tax issues and use pre-tax domestic income as the denominator to focus on domestic tax planning. A higher value of *Fed ETR Dom* indicates that the firm incurs a greater federal tax expense per dollar of pre-tax domestic income, indicating less aggressive domestic tax planning.

3.2 Sample Description

Table 1 reports the sample selection procedures for our main tests. Our sample includes firm–year observations in Compustat from 1996 to 2016.[13] We begin the sample period in 1996 because firm filings from the SEC's Electronic Data Gathering, Analysis and Retrieval (EDGAR) system, from which we extract firms' historical headquarters locations, have sparse coverage before 1996. We require firms to be incorporated in the U.S. and headquartered in a U.S. state so that they are subject to U.S. income tax and we can determine which courts have jurisdiction over them. We exclude financial and utility firms and further eliminate firm–year observations if they are missing the data necessary to construct the variables in our tests. Our main sample includes 43,650 firm–year observations from 5,766 unique firms. Some tests have smaller sample sizes due to additional data requirements.

[13] We end the sample period in 2016 to avoid potential confounding factors related to the Tax Cuts and Jobs Act (TCJA) of 2017. The TCJA introduced significant changes, including a reduction in the tax rate from 35% to 21%, limitations on the amount and carrybacks of net operating losses, expensing of R&D credits, and treatment of foreign income, which probably had a considerable impact on firms' motivations and capabilities for tax planning.

Panel A of Table 2 presents the descriptive statistics of the variables included in the main regression. The mean and median *Fed ETR Dom* are 0.268 and 0.305, respectively. An average firm–year in our sample has total assets of $3,398 million, a market-to-book ratio of 2.97, and leverage of 22.6% (of total assets). Of the sample firm–years, 34.5% report positive foreign income and 37.7% report a loss carryforward. The descriptive statistics are consistent with those reported in previous studies (e.g., Dyreng, Hanlon, and Maydew 2010; Hoopes et al. 2012; Rego and Wilson 2012).

Panel B of Table 2 presents the means and standard deviations of judge ideology across circuits and over time. The statistics show substantial variation across jurisdictions, with an average cross-sectional standard deviation of 0.17. During the sample period, the Second, Fourth, Ninth, and Eleventh Circuits are, on average, more liberal, and the First, Seventh, and Eighth Circuits are more conservative. The majority of changes in judge composition are driven by judge deaths, with the remainder due to retirements, resignations, and reappointments. As such, we consider judges' departures to be largely exogenous to contemporaneous factors, including firm characteristics and tax policy.[14] In addition, because judge departures and appointments occur at different times across circuits, court ideology does not always move in tandem. For example, from 2006 to 2012, the Seventh and Eighth Circuits became more conservative, while the First, Second, and Ninth Circuits became more liberal. In Internet Appendix Table IA.3, we tabulate the numbers of judge changes by ideology in each circuit–year.

This combination of cross-sectional and time-series variations in judge ideology

[14] There are 123 cases of judge departure from the Circuit Courts during our sample period from 1996 to 2016, or 10.25 departures per circuit over 21 years. Of these departures, 96 cases are due to judge deaths, while the remaining occur due to retirement (19 cases), resignation (5 cases), and Supreme Court appointment (3 cases). Note that judges are eligible for retirement based on their age and their appointment date (usually years earlier). In a robustness test, we use an instrumental variable approach to further mitigate endogeneity concerns and find results similar to those of our main analyses (see Section 6.1 for details).

enables us to study the impact of the judicial branch on corporate tax planning while maintaining adequate statistical power.

4. Judge Ideology and Corporate Tax Planning

4.1 Judge Ideology and Federal GAAP ETR

To examine the relation between judge ideology and tax planning, we use ordinary least squares (OLS) to estimate the following model:

$$Fed\ ETR\ Dom = a + b_1 \cdot Liberal\ Circuit + Controls + MSA\ FE + Industry \times Year\ FE + \varepsilon. \quad (1)$$

As outlined in Section 2.3, we predict that firms engage in less aggressive federal tax planning when they are in a circuit with a more liberal ideology, (i.e., a positive coefficient on circuit judge ideology, b_1). We follow prior research in controlling for a number of firm characteristics associated with tax planning (e.g., Dyreng et al. 2010; Hoopes et al. 2012; Rego and Wilson 2012), including firm size (*Size*); market-to-book ratio (*MTB*); leverage (*Leverage*); asset intensity (*Inventory*, *R&D*, *Capital Intensity*, and *Intangibility*); pre-tax profitability (*ROA*); income from foreign operations (*Foreign Income*); multinationality (*Foreign*); advertising expenditure (*Advertising*); an indicator of loss carried forward (*NOL*); the change in *NOL* (*ΔNOL*); sales growth (*Sales Growth*); selling, general, and administrative expenditures (*SG&A*); minority interest (*Minority Interest*); and income or loss reported under the equity method (*Equity Income*). We include the IRS audit probability (*IRS Audit Prob Rank*) to control for the average IRS enforcement level faced by firms in a certain size group in a given year (Hoopes et al. 2012). We also include IRS attention (*IRS Attention Rank*) to control for firm-specific scrutiny imposed by the IRS in a given year, based on the IRS's downloads of firm filings from EDGAR (Hoopes et al. 2012; Bozanic et al. 2017; Fox and Wilson 2023).[15]

[15] We obtain the data from https://zackeryfox.github.io/data.html. In the regressions, we also include the indicator variable *IRS Attention Missing* to denote firm–year observations not covered by the data.

To mitigate concerns that our observed effects are confounded by local economic and political factors, we control for state-level economic growth, unemployment rate, and an indicator variable for blue states, defined based on the voting percentage for the Democratic candidate in the last presidential election. Appendix A provides detailed definitions of the variables. Finally, we include metropolitan statistical area (MSA) fixed effects to account for unobservable time-invariant differences across geographic regions, including economic, demographic, and political characteristics, and industry-by-year fixed effects to control for differences in tax planning across industries and changes in regulatory and political environments over time, such as those driven by changes in the president, the IRS, or Congress or by the passage of new federal tax laws (Hoopes et al. 2012; Bagchi 2016; Nessa et al. 2020).

Table 3 presents the regression results for the relation between *Fed ETR Dom* and circuit judge ideology. Column (1) shows that the coefficient on *Liberal Circuit* is positive and significant (0.0358, $t = 3.58$), consistent with our expectation that firms are less aggressive in their federal tax planning when circuit judges are more liberal. In terms of economic significance, a one-standard-deviation increase in *Liberal Circuit* is associated with an increase in *Fed ETR Dom* of 0.6 percentage points. For the average firm in our sample (with a mean annual pre-tax domestic income of $270 million), the estimated effect amounts to a $1.62 million increase in the annual total federal tax expense. The results for the control variables are generally consistent with those reported in the literature (e.g., Dyreng et al. 2010; Hoopes et al. 2012). For example, we find that *Fed ETR Dom* is negatively associated with *Leverage*, *R&D Intensity*, *NOL*, and *Minority Interest* and positively associated with *Size*, *Inventory*, *Intangibility*, and *IRS Audit Prob Rank*.[16]

In Columns (2) and (3), we replace *Liberal Circuit* with the judge ideology in the Tax

[16] An examination of the variance inflation factors suggests that multicollinearity is not a significant concern in our regressions.

and District Courts, respectively, as measured as the percentage of judges appointed by a Democratic president. We do not find evidence that judge ideology in the two lower courts affects tax planning (the coefficients on *Liberal Tax Court* and *Liberal District* are not significant). The nonsignificant result for *Liberal Tax Court* can be attributed to a lack of cross-sectional variation in judge ideology in the Tax Court. District Court judges' lack of influence is consistent with prior studies' finding that judge ideology is less important in District Court decisions than in Circuit and Tax Court decisions (Howard 2005, 2010; Huang et al. 2019) due to District Court judges' lack of tax expertise and incentives to avoid reversals, as well as the constraints applied by Circuit Courts (Randazzo 2008; Choi, Gulati, and Posner 2012). In Column (4), we include all three judge ideology measures in one model and obtain similar results. In subsequent analyses, we omit *Liberal Tax Court* and *Liberal District* because of their insignificant effects.[17]

Overall, our findings are consistent with the prediction that in making tax planning decisions, firms consider judge ideology at the Circuit Court level: they are less aggressive when Circuit Court judges are more liberal.

4.2. Judge Ideology and Federal GAAP ETR: Cross-Sectional Tests

We conduct a series of cross-sectional analyses to provide evidence of the mechanisms through which judge ideology affects tax planning. If firms consider judges' political leaning when constructing tax strategies due to expected tax litigation costs, we expect the effect to be stronger when tax planning is more likely to attract disputes and when such disputes impose higher costs on firms. Empirically, we measure firms' likelihood of tax disputes with (1) the extent to which they employ uncertain tax strategies, which are more likely to be challenged, and (2) the degree of IRS tax enforcement risk they face. We proxy for the costs associated

[17] In untabulated tests, we find that our results are not affected by including these measures as control variables.

with potential tax disputes using an indicator of whether firms operate in a consumer-brand industry.

4.2.1 Tax Dispute Likelihood

First, we examine the effect of judge ideology on a subset of more uncertain tax strategies. As these strategies are more likely to be challenged by the IRS and are thus more likely to be the subject of a tax dispute than other tax strategies, we refer to them as judiciary-sensitive tax strategies. We expect judge ideology to have stronger effects if firms use these strategies, and we test this prediction using Equation (2):

$$\begin{aligned} Fed\ ETR\ Dom\ (Fed\ ETR\ WW) \\ = a + b_1 \cdot Liberal\ Circuit \times Tax\ Strategy \\ + b_2 \cdot Liberal\ Circuit + b_3 \cdot Tax\ Strategy \\ + Controls + MSA\ FE + Industry \times Year\ FE + \varepsilon. \end{aligned} \tag{2}$$

Our variable of interest is the coefficient on the interaction term *Liberal Circuit* × *Tax Strategy* (b_1), which captures the incremental effect of circuit judge ideology on tax planning for firms that engage in judiciary-sensitive tax strategies. We examine three types of tax strategies, cross-border income shifting, DPAD, and R&D tax credits, as prior literature suggests that firms frequently report these strategies in Uncertain Tax Position filings to the IRS (Klassen and Laplante 2012; Lester and Rector 2016; Towery 2017; De Simone et al. 2019).

We use two methods to identify firms that are likely to have engaged in cross-border income shifting. First, we consider the use of tax haven operations (*#Tax Haven*) by multinational firms (Klassen and Laplante 2012; Bennedsen and Zeume 2018; Gómez-Cram and Olbert 2023), as reported in Exhibit 21 of firms' 10-K filings (Dyreng et al. 2015; Chen and Lin 2017). Second, we classify outbound income shifting firms as those with a lower average foreign tax rate than the U.S. statutory rate and an abnormally high foreign return on sales, following prior research (Collins, Kemsley, and Lang 1998; Klassen and Laplante 2012).

Table 2 indicates that the mean number of material subsidiaries in tax havens is 4.13, and approximately 28.9% of firm–years are identified as outbound income shifters.

For the DPAD, we first identify firms using it by searching their annual reports for related words and phrases (Lester 2019). We then measure the intensity of DPAD usage, which we refer to as *DPAD Intensity*, based on the size of qualifying activities, following the methodology described in Ohrn (2018). Concerning R&D tax credits, we define an indicator variable (*R&D Credit*) that equals one if a firm mentions claiming R&D tax credits in its annual report for a given year, and zero otherwise.[18] As shown in the summary statistics in Table 2, approximately 14.1% of the sample firms disclose the use of R&D tax credits.

Table 4 reports the results of estimating Equation (2). In Panel A, we first analyze how liberal judge ideology affects the magnitude of federal tax savings associated with cross-border tax planning.[19] Column (1) presents the results for firms' tax haven operations (*#Tax Haven*). We find that the coefficient on *Liberal Circuit* × *#Tax Haven* is positive and significant (0.0149, $t = 2.63$), suggesting that the deterrent effect of liberal judge ideology is stronger for firms with more extensive tax haven operations. In Column (2), we observe a positive and statistically significant coefficient (0.0339, $t = 2.16$) for *Liberal Circuit* × *Outbound Shifters*, indicating that the effect of judge ideology on tax planning strengthens when firms conduct outbound income shifting.

Columns (3) and (4) show that the coefficients on the interaction terms (*Liberal Circuit* × *DPAD Intensity* and *Liberal Circuit* × *R&D Credit*) are positive and statistically significant (1.8716 and 0.0415, respectively), at the 5% and 1% significance levels. These findings support

[18] The sample period for this analysis spans the 2001–2016 period because the EDGAR advanced search feature only allows access to the full text of electronic filings from 2001.

[19] For these two cross-sectional tests, we use worldwide pre-tax income as the denominator when calculating the federal ETR (*Fed ETR WW*) to capture tax rate effects related to cross-border tax planning. Shifting domestic pre-tax income out of the U.S. reduces U.S. income tax liabilities but does not affect pre-tax worldwide income, resulting in a reduction of *Fed ETR WW*.

our prediction that firms that use more DPAD and R&D tax credits are more concerned about liberal judge ideology in tax planning.[20] In summary, our findings in this section demonstrate that judge ideology's effect on aggressive tax planning is particularly strong when firms engage in judiciary-sensitive tax strategies.

4.2.2 IRS Enforcement Risk

We examine IRS enforcement risk in the second set of cross-sectional tests. During a tax audit, the IRS makes a detailed examination of the taxpayer's return, seeks justification for and verification of the reported income and expenditures, and determines whether the taxpayer complied with the tax code. When the IRS enforcement risk is high, firms should weigh judge ideology more heavily in their tax decisions for two reasons. First, IRS scrutiny increases both the likelihood of a tax dispute and the amount of tax deficiencies, and consequently the chance of tax litigation in courts. Second, when the IRS devotes more resources to enforcement, it increases its focus on more challenging cases that it is less certain of winning (Nessa et al. 2020). Such cases are more ambiguous, which gives judges more room to exercise their discretion and increases the potential impact of judge ideology.

Following prior research, we employ two approaches to assess firms that are exposed to higher IRS enforcement risk. First, we consider IRS audit probability, measured as the

[20] Note that these tests also allow us to assess how much liberal judge ideology constrains firms' use of these strategies to save tax. By comparing the coefficient of interaction relative to the main effect of the tax strategy across the columns, we find that the most economically impactful moderation by judge ideology occurs with DPAD deduction, with an approximately 34.7% reduction in firms' tax benefits per within-sample standard deviation increase in liberal judge ideology (1.8716 × 0.186 / 1.0023 = 0.347). This magnitude is followed closely by that of R&D tax credits (34.5% = 0.0415 × 0.184 / 0.0222). Concerning cross-border tax strategies, the results based on the *Outbound Shifters* measure indicate a 26.7% reduction (0.0339 × 0.190 / 0.0241) in firms' tax benefits per within-sample standard deviation increase, while the *#Tax Haven* measure suggests a 20.4% reduction (0.0149 × 0.176 / 0.0129) in firms' tax benefits per within-sample standard deviation increase. These findings imply that cross-border transfer pricing strategies are influenced by judge ideology to a lesser extent than are DPAD deduction and R&D tax credits. One possible explanation for this variation is the timing and complexity involved in implementing these strategies. Establishing subsidiaries in tax havens often requires longer-term planning and complex execution, making this strategy less sensitive to changes in judicial deterrence within the Circuit. In contrast, strategies such as claiming the DPAD deduction and utilizing R&D tax credits usually involve less complex legal or structural changes and are often available within a given tax year, allowing firms to modify their tax strategies relatively quickly in response to changes in judicial environments.

number of face-to-face corporate audits that the IRS conducts in fiscal year *t* for a firm size (asset) group, divided by the total number of Form 1120 tax returns filed in the previous year for that firm size group (Hoopes et al. 2012; Bauer, Fang, and Pittman 2021). Second, we consider the IRS's attention, measured as the number of times during year *t* that a computer with an IRS IP address downloaded any SEC filings from EDGAR for a given firm (Bozanic et al. 2017; Fox and Wilson 2023). Unlike IRS audit probability, which is constant for all firms within each asset size and year group, IRS attention is specific to each firm–year. To facilitate interpretation of the results, we define two variables, *High IRS Audit Prob* and *High IRS Attention*, to denote firm–years with above-median IRS audit probability and IRS attention, respectively.

To test our prediction, we re-estimate Equation (1) while including the IRS enforcement risk and its interaction with *Liberal Circuit*, with the interaction as our variable of interest. Table 4 Panel B reports the results. In Column (1), the coefficient on *Liberal Circuit* × *High IRS Audit Prob* is positive and statistically significant (0.0226, $t = 2.05$), consistent with judge ideology's much stronger effect (82% = 0.0226 / 0.0274) for firms with high (vs. low) IRS audit probability. In Column (2), the coefficient for the interaction term (*Liberal Circuit* × *High IRS Attention*) is likewise positive and statistically significant (0.0249, $t = 1.99$). This result indicates that, as with IRS audit probability, judge ideology has a more pronounced effect when firms face high (vs. low) IRS attention. Overall, these findings suggest that the impact of liberal judge ideology on tax planning is more substantial when firms face greater IRS enforcement risks, supporting the notion of a complementary relationship between the judicial and executive branches.

4.2.3 Reputational Concern

In the third set of cross-sectional tests, we investigate how costs associated with reputational concerns influence the deterrent effect associated with liberal judge ideology.

Firms that depend more heavily on a strong brand image are more concerned about the reputational damage from tax controversies. This pattern aligns with prior research indicating that firms with prominent consumer brands tend to engage in less tax avoidance (Austin and Wilson 2017) and that companies respond to public pressure by reducing their international tax avoidance activities (Dyreng et al. 2016). Additionally, Graham et al. (2014) surveyed tax executives and found that approximately 70% believe that firm reputation significantly influences their tax planning decisions. We thus expect firms with heightened reputational concerns to be more likely to be deterred by liberal judge ideology in tax planning.

To empirically test this prediction, we define a variable *High Reputational Concern* to indicate firms in consumer-brand industries (based on the Fama–French 48 industry classification) and include this variable and its interaction with *Liberal Circuit* in Equation (1). The results are reported in Column (3). Consistent with our expectations, the interaction terms are significant and positive, suggesting that the deterrent effect of liberal judge ideology is stronger for firms with higher reputational concerns from tax disputes. The magnitude of the estimated coefficient indicates that firms in consumer-brand industries are more than twice as sensitive to judge ideology in tax planning than firms in other industries.

Taken together, the cross-sectional tests highlight that the influence of judge ideology on tax planning operates through firms' anticipation of tax litigation costs. Firms become more cautious in their tax strategies when the likelihood and potential costs of disputes are higher, demonstrating that judicial ideology shapes corporate behavior by altering the perceived risks of aggressive tax planning.

5. Judge Ideology, Tax Planning, and Firms' Financial Outcomes

Building on the finding that firms consider judge ideology in tax planning, we examine whether this influence extends to firms' financial outcomes. Specifically, we examine its

impact on two key financial outcomes widely studied in the finance literature: R&D investment and firm value.

5.1 Judge Ideology, Tax Planning, and R&D Investment

We focus on R&D investment for two reasons. First, R&D plays a critical role in driving technological progress and economic growth. Recognizing the importance of fostering innovation to maintain competitive advantages and promote sustainable development, governments worldwide implement various tax policies, such as R&D tax credits, deductions, and incentives, to encourage firms to increase their R&D investments.[21] Second, R&D investment is highly sensitive to taxation. Extensive research shows that tax incentives influence firms' decisions on where to locate intellectual property (Bartelsman and Beetsma 2003; Dischinger and Riedel 2011; Karkinsky and Riedel 2012; Baumann, Böhm, Knoll, and Riedel 2020; Ciaramella 2023). Relatedly, tax policies, including changes in tax rates and enforcement, have a strong influence on corporate R&D investment. For instance, Rao (2016) estimates that a 10% reduction in the user cost of R&D through tax credits increases a firm's research intensity, measured as the ratio of R&D spending to sales, by 19.8% in the short run. Similarly, Mukherjee et al. (2017) find that increases in state-level corporate income tax rates lead to a decline in R&D investment. Moreover, the risk of IRS scrutiny can discourage R&D activities and reduce the effectiveness of tax incentives in promoting innovation (Williams and Williams 2021; Goldman et al. 2023; Cowx 2025).

We examine whether liberal judge ideology discourages R&D investment by deterring tax planning, as proxied by *Fed ETR*, using the Sobel–Goodman mediation test. Following prior research (e.g., Mukherjee et al. 2017; Cowx 2025), we measure R&D investment through R&D expenditures (*R&D Intensity*). The results are presented in Table 5. Column (1)

[21] In the U.S., firms are allowed to deduct R&D expenses in calculating taxes, and both the federal government and some state governments offer tax credits for qualified R&D activities.

reproduces the relation between liberal judge ideology and *Fed ETR* (as reported in Table 3, Column (1)). In Column (2), we observe a significant and negative relation between *Fed ETR* and *R&D Intensity*, indicating that higher corporate income tax burden impedes R&D investment, consistent with prior research (Mukherjee et al. 2017). Most importantly, the indirect effect of liberal judge ideology on R&D investment through tax planning is negative and significant at the 1% level, suggesting that liberal judge ideology reduces R&D investment by constraining tax planning. Column (3) shows that the direct, non-tax-related effect of liberal judge ideology on R&D investment is not statistically significant. The estimates imply that this indirect pathway, mediated by tax planning deterrence, accounts for approximately 30.4% of the total effect of liberal judge ideology on R&D investment. These results underscore the role of judicial enforcement beyond IRS scrutiny in influencing corporate innovation investment through the tax planning channel (Williams and Williams 2021; Goldman et al. 2023; Cowx 2025).

5.2 Judge Ideology, Tax Planning, and Firm Value

Having demonstrated that liberal judge ideology significantly influences corporate R&D investment by deterring tax planning, we now turn to its implications for firm value. The traditional view suggests that tax planning enhances firm value by generating tax savings and increasing after-tax cash flows (Desai and Dharmapala 2006; Desai et al. 2007). In contrast, the agency perspective emphasizes potential risks, arguing that aggressive tax planning may facilitate managerial rent extraction, which could reduce or even offset the benefits of tax savings (Desai and Dharmapala 2006; Desai et al. 2007; Bennedsen and Zeume 2018). However, Blaylock (2015) finds no evidence of managerial rent extraction associated with

aggressive tax planning in U.S. firms, indicating that tax planning in this context should primarily enhance firm value through tax savings.

To investigate whether liberal judge ideology reduces firm value through its impact on tax planning, we again analyze both indirect and direct effects using a mediation analysis framework. Following prior research, we measure firm value using Tobin's Q (Desai and Dharmapala 2006; Bennedsen and Zeume 2018). In Column (4) of Table 5, we observe a significant and negative relation between *Fed ETR* and Tobin's Q (at the 1% level), aligning with findings in prior studies that more aggressive tax planning (lower effective tax rate) increases firm value through additional tax savings.

The indirect effect of liberal judge ideology on firm value through tax planning is negative and significant (-0.004, significant at the 1% level), consistent with the notion that liberal judge ideology reduces firm value by constraining tax planning. In Column (5), we find that the coefficient of *Liberal Circuit* is positive but statistically insignificant, suggesting that the total effect of judge ideology on firm value is inconclusive.[22] Nevertheless, the estimated coefficients indicate that this indirect effect, mediated through tax planning, accounts for 10.3% of the overall effect of liberal judge ideology on firm value.[23]

In summary, our results suggest that liberal judge ideology, by restricting corporate tax planning, negatively impacts both firms' R&D investments and overall firm value. These results emphasize the broader economic significance of judicial ideology in shaping corporate decision-making, innovation, and financial performance.

[22] As political ideology reflects judges' general preferences, judge ideology can influence the outcomes of a wide set of cases affecting firms, such as securities litigation, labor relations, product liabilities, and environmental issues, rendering the total effect of judge ideology on firm value inherently uncertain.

[23] We also examine how judge ideology influences, through tax planning, firms' cost of capital using three expected return proxies: (i) the JLR proxy (Lewellen 2015), (ii) the LPV proxy (Lyle and Wang 2015; Chattopadhyay, Lyle, and Wang 2022), and (iii) the CER proxy (Lee, So, and Wang 2021), a composite of the first two. The results, presented in Internet Appendix Table IA.4, demonstrate findings similar to those for Tobin's Q, further indicating that judge ideology affects firm value via corporate tax planning.

6. Additional Analyses

6.1 Judge Ideology and Federal GAAP ETR: Robustness Tests

We conduct a battery of robustness tests to ensure that our main results are not sensitive to alternative sample, fixed effects, and model specifications, and are not driven by endogeneity or spurious correlations. The results are reported in Table IA.5 of the Internet Appendix. In Column (1), we include financial and utility firms in the sample, and the results remain consistent. Column (2) replaces the high-dimensional Industry × Year fixed effects with separate Industry and Year fixed effects, while Column (3) replaces MSA fixed effects with firm fixed effects to control for unobserved firm-specific characteristics that may influence tax planning. Across these variations, our main results remain robust.

To address concerns about cross-correlation in residuals, we apply Newey–West (1987) standard errors with a three-year lag in Column (4) to correct for potential serial correlation and heteroskedasticity. The results remain similar. In Column (5), we use the Fama and MacBeth (1973) approach, which relies on cross-sectional variations. While the mean of the yearly coefficients (0.0291, $t = 3.33$) is slightly lower than the OLS estimate (0.0358 in Column (1) of Table 3), it remains statistically significant at the 1% level.

To further address endogeneity concerns, we adopt an instrumental variable approach. We use the number of judges eligible for retirement in the next five years within the Circuit Court where the firm is headquartered (*Eligible-to-Retire*) as an instrument. Under Section 371(c) of Title 28 of the U.S. Code, federal judges may retire or take senior status once they meet the "Rule of 80," when the sum of their age plus years of service equals at least 80. Column (6) presents a positive and significant (at the 1% level) coefficient on *Eligible-to-Retire* in the first-stage regression, confirming the relevance of the instrument. In the second-stage regression (Column (7)), using the predicted *Liberal Circuit*, the coefficient remains significant and positive, demonstrating that our primary findings are not driven by endogeneity.

Last, we conduct a placebo test to rule out the possibility of spurious correlations. We randomly reassign the value of *Liberal Circuit* within each circuit across the sample years and re-estimate Equation (1) to obtain a counterfactual coefficient on *Liberal Circuit*. Repeating this procedure 3,000 times, we plot the distribution of these counterfactual estimates in Internet Appendix Figure IA.6. Only one of the counterfactual estimates exceed the magnitude of our baseline result, yielding a Fisher *p*-value of 0.0003. This indicates that our findings are unlikely to be driven by randomness.

In summary, our robustness tests confirm that the effect of judge ideology on federal tax planning is consistent across alternative empirical specifications and is not driven by endogeneity or spurious correlations.[24]

6.2 Judge Ideology and Federal GAAP ETR: Additional Variations

Our final set of tests examines whether the sensitivity of corporate tax policies to judge ideology depends on firms' existing tax planning capacity and judge characteristics. By definition, firms with higher tax planning capacity are those with greater potential to lower their effective tax rates, offering more flexibility to adjust and optimize tax strategies. Such firms often have complex organizational structures and legal arrangements, such as subsidiaries or special-purpose entities, that can be restructured as needed. Additionally, these firms typically possess substantial financial resources, enabling them to invest in new tax planning strategies or to make modifications without significant constraints. This enhanced tax planning capacity translates into greater agility, allowing these firms to swiftly adjust their tax strategies

[24] We test whether firms adjust their tax planning in anticipation of future, or in response to past, shifts in judge ideology. First, using lead-lag specifications, we find no significant effects for pre- or post-period changes (untabulated), indicating no anticipatory or delayed responses. Second, we test presidential election years, when shifts in judicial composition may be expected, and find no evidence of proactive adjustment: the interaction between future judge ideology changes and *Election Year,* an indicator variable that equals one if the year is a presidential election year, is insignificant (untabulated).

in response to increased regulatory scrutiny. Thus, we expect the influence of judge ideology to be more pronounced for firms with higher tax planning capacity.

We use two measures of tax planning capacity. The first is an indicator variable, *High Tax Volatility*, for firms with above-median volatility in effective tax rates, as these firms are likely to have greater potential to enhance their tax outcomes through strategic adjustments (Guenther, Matsunaga, and Williams 2017). The second measure is an indicator of an above-median ratio of foreign sales to total sales (*High Foreign Sales Ratio*), as firms generating a larger share of sales from foreign jurisdictions are more likely to have cross-border tax planning opportunities (Dyreng et al. 2015; Dyreng et al. 2016).[25]

To test our prediction, we re-estimate Equation (1), incorporating the high tax planning capacity indicators and their interactions with *Liberal Circuit*, our variable of interest. The results, presented in Table 6, show that the interaction terms are significant and positive. These findings are consistent with our expectation that the deterrent effect of liberal judge ideology is more pronounced for firms with high (vs. low) tax planning capacity. In terms of economic significance, the estimated coefficients indicate that the deterrent effect on firms with high tax planning capacity is about twice as strong as that on firms with low tax planning capacity.

To further explore whether judge characteristics moderate the effect of judge ideology on corporate tax planning, we examine the roles of judge qualification, experience, age, and gender. We define four circuit–year–level indicator variables: *High Well-Qualified*, *High Experience*, and *High Age*. The first three variables equal one if the circuit–year's proportion of well-qualified judges, average judge experience, and average judge age exceed their respective sample medians (i.e., 0.61, 16 years, and 66.8 years, respectively). *Female* equals

[25] We limit the analysis using the second measure to firms with non-zero foreign sales, as identified from the Compustat Geographic Segment database.

one if at least one female judge serves in the circuit during the year, and zero otherwise. In our sample, about 12 percent of circuit–year observations have at least one female judge.

We re-estimate Equation (1), incorporating these indicators and their interactions with *Liberal Circuit*. The results, presented in Table 7, indicate that the interaction terms for *High Well-Qualified*, *High Experience*, and *High Age* (Columns (1) to (3)) are statistically insignificant. These findings align with the theoretical ambiguity regarding how judicial expertise and experience influence the relation between judge ideology and corporate tax planning (Howard 2005). On the one hand, more experienced judges may have greater discretion in their rulings, potentially amplifying the effect of their ideology. On the other hand, experienced judges may possess deeper knowledge of tax regulations, which could lead them to rely less on discretion, thereby mitigating the influence of ideology.

Interestingly, as shown in Column (4), we find that the interaction between *Female* and *Liberal Circuit* is significant and positive, suggesting that female liberal judges have a stronger deterrent effect on corporate tax planning than male liberal judges. Prior research indicates that female decision-makers often adopt more conservative or risk-averse approaches to financial decision-making, as highlighted by scholars such as Powell and Ansic (1997) and evidence of female CFOs' levels of tax aggressiveness (Francis et al. 2014). Our findings thus extend this literature by demonstrating that conservative stances by female judges may compliment liberal ideology in deterring aggressive tax strategies.[26]

7. Conclusion

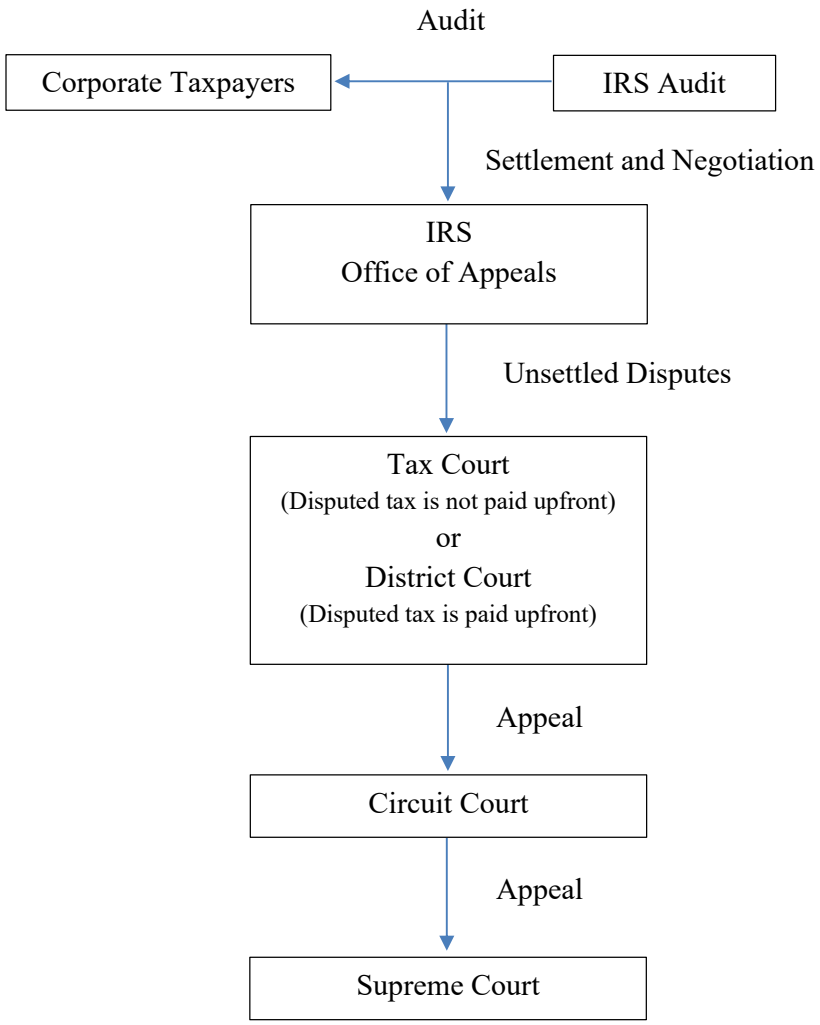
[26] We also examine how the political affiliations of the CEO, board, and county of corporate headquarters influence the impact of liberal judge ideology on corporate tax planning. We measure the CEO's and directors' political orientations using donation data from Federal Election Commission campaign finance dataset, and county partisanship using presidential election votes. We then interact these measures with judge ideology in our models. The results in Internet Appendix IA.7 show that neither the CEO's political orientation, the overall political makeup of the board, nor county partisanship moderates the effect of judge ideology. These findings suggest that liberal judge ideology acts as an external enforcement mechanism, constraining corporate behavior regardless of internal or local political preferences.

Ideological preferences play a powerful role in shaping U.S. tax policy, yet little is known about how judge ideology impacts corporate tax planning. Using the political party of the appointing president as a proxy for judicial ideology, we find that more liberal judges are associated with less aggressive corporate tax planning, as measured by firms' federal ETR. This effect is economically significant and robust across multiple specifications. Further analysis demonstrates that the deterrent effect of liberal judge ideology is stronger in scenarios where tax litigation imposes higher costs on firms, such as when they employ judicially sensitive tax strategies, face heightened IRS enforcement, or are exposed to reputational risks. Additionally, we find that liberal judge ideology influences firms' R&D investments and valuation, underscoring the broader economic consequences of judicial decisions beyond tax compliance.

This study is the first to empirically examine the relation between the judicial branch and corporate tax planning, a critical corporate decision shaped by competing liberal and conservative views on tax enforcement. By focusing on the judiciary, we provide a novel perspective that complements research on the roles of the legislative and executive branches in shaping corporate taxation. Our findings also highlight the judiciary's often-overlooked role as an active participant in the regulatory environment, particularly in areas where legal interpretation and discretion significantly influence corporate behavior.

Ultimately, this study underscores the importance of judicial ideology as a key factor influencing corporate tax policies and strategic decisions, including innovation and investment decisions. As debates over judicial appointments and tax enforcement continue, our findings provide timely insights into the broader economic implications of judicial decision-making. By connecting perspectives from finance, economics, law, and political science, this study deepens understanding of how political ideology shapes corporate behavior and the regulatory landscape in both meaningful and lasting ways.

Figure 1: Diagram of Tax Litigation in the Federal Judicial System



This figure demonstrates the procedure for tax disputes in the federal judicial system. Internet Appendix IA.1 provides a detailed explanation.

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Appendix A: Variable Definitions

Variable Names	Variable Definitions
Liberal Circuit	The probability of a three-judge panel randomly selected from a Circuit Court having at least two judges appointed by Democratic presidents; that is, $[C(x,3) + C(x,2) \times C(y-x,1)] \,/\, C(y,3)$, where y is the total number of judges in the Circuit Court and x is the number of judges in the Circuit Court appointed by Democratic presidents. $C(a,b)$ is the number of combinations of selecting b objects from a distinct objects. For each firm-year observation, we use the *Liberal Circuit* measure of the firm's headquarters at the beginning of the fiscal year. Historical headquarters data is extracted from firms' 10-K and 10-Q filings. We obtain data on Circuit Court judges' appointing presidents from the FJC website.
Liberal Tax Court	The percentage of judges in the Tax Court that were first appointed by Democratic presidents. For each firm-year observation, we use the *Liberal Tax Court* at the beginning of the fiscal year. We obtain Tax Court judges' appointing presidents from the website of the U.S. Tax Court.
Liberal District	The percentage of judges in a District Court appointed by Democratic presidents. For each firm-year observation, we use the *Liberal District* measure of the firm's headquarters at the beginning of the fiscal year. Historical headquarters information is extracted from firms' 10-K and 10-Q filings. We obtain District Court judges' appointing presidents from the FJC website.
Fed ETR Dom	The federal total tax expense divided by the domestic pre-tax income in year *t*, with the non-missing federal total tax expense (TXFED + TXDFED) or the domestic pre-tax income (PIDOM), winsorized at zero and one. For observations missing both the domestic and foreign pre-tax income (PIDOM and PIFO), we replace the missing PIDOM with the pre-tax income (PI). Observations with a negative denominator are set as missing.
Fed ETR WW	The federal total tax expense divided by the worldwide pre-tax income in year *t*, with the non-missing federal total tax expense (TXFED + TXDFED) or pre-tax income (PI), winsorized at zero and one. Observations with a negative denominator are set as missing.
#Tax Haven	The natural logarithm of one plus the total number of material subsidiaries located in a tax haven jurisdiction (Dyreng et al. 2016).
Outbound Shifters	An indicator variable that equals one if the firm-year is classified as outbound income shifting, and zero otherwise (Collins et al. 1998; Klassen and Laplante 2012). Firms are classified as outbound income shifters if they meet both of the following criteria: (i) they have an incentive to move income from the U.S. to foreign jurisdictions, i.e., their average foreign tax rate is lower than the U.S. statutory rate; and (ii) the firm-year residual from an income shifting regression (Klassen and Laplante 2012) is positive, indicating that their actual foreign return on sales exceeds the predicted foreign return on sales.

DPAD Intensity	The estimated Qualifying Production Activity Income (QPAI) for the industry-asset class-year multiplied by the DPAD deduction rate, which equals 3% in 2005–2006, 6% in 2007–2009, and 9% from 2010 onward (Ohrn 2018). The SOI Corporate Source Book provides corporate tax return data on taxable income and the DPAD, both of which are aggregated by the 12 asset classes and by the NAICS industry from 2005–2013. Following Ohrn (2018), for each asset class-industry-year, we first calculate the Qualified Production Activities Income (QPAI) by grossing up the total DPAD using the phase-in DPAD rate (i.e., 3% in 2005–2006, 6% in 2007–2009, and 9% from 2010 onward). We then calculate the QPAI percentage (QPAI Percent), which is obtained by dividing the QPAI by the income before the DPAD (i.e., the sum of the QPAI and taxable income). Finally, we multiply QPAI Percent with the phase-in DPAD rate to define *DPAD Intensity*, which varies across approximately 8,640 (= 80×12×9) industry-size-year bins during the 2005–2013 sample period.
R&D Credit	An indicator variable that equals one if the firm mentions an R&D tax credit in its annual financial statements in year *t*, and zero otherwise (Hoopes 2018).
High IRS Audit Prob	An indicator variable that equals one for firm–years with above-median IRS audit probability, and zero otherwise. The IRS audit probability is the number of face-to-face corporate audits the IRS completes in fiscal year *t* for size (asset) group *k* that the IRS assigns the firm to, divided by the number of corporate tax returns (Form 1120) filed in calendar year *t*–1 for firm size group *k* (Hoopes et al. 2012). *IRS Audit Prob Rank* ranges from 1 to 4.
High IRS Attention	An indicator variable that equals one for firm–years with above-median IRS attention, and zero otherwise. IRS attention is defined as the number of times during year *t* that a computer with an IRS IP address downloaded any SEC filings from EDGAR for the firm (Bozanic et al. 2017; Fox and Wilson 2023). The data on IRS attention are obtained from Professor Zackery Fox's website, covering fiscal years 2003 to 2016.
High Reputational Concern	An indicator variable that equals one if the firm belongs to one of the following industry categories based on the Fama-French 48 Industry Classification (FF48, categories 2-10): Food Products; Candy and Soda; Beer and Liquor; Tobacco Products; Recreation; Entertainment; Printing and Publishing; Consumer Goods; Apparel; as well as categories from the Fama-French 23, 33, 42, and 43 classifications, specifically: Automobiles and Trucks (FF23); Personal Services (FF33); Retail (FF42); and Restaurants, Hotels, Motels (FF43).
TobinsQ	The ratio of (i) the sum of the book value of assets plus the difference between the market value and the book value of equity (calculated as AT + PRCC_F × CSHO – CEQ), to (ii) the book value of assets (AT).
High Tax Rate Volatility	An indicator variable that equals one if the firm's volatility of Fed ETR Dom exceeds the sample median in a given year, and zero otherwise. The firm's federal ETR volatility (*Tax Rate Volatility*)

	is measured by the standard deviation of its federal ETR over the previous five years (from t-5 to t-1).
High Foreign Sales Ratio	An indicator variable that equals one if the firm's *Foreign Sales Ratio* exceeds the sample median for that year, and zero otherwise. The firm's *Foreign Sales Ratio* is measured by foreign sales to total sales. This analysis is restricted to multinational firms, i.e., those with non-zero foreign sales.
High Well-Qualified	An indicator variable that equals one if the ratio of well-qualified judges to total judges in the circuit-year exceeds the median, and zero otherwise.
High Experience	An indicator variable that equals one if the average years of experience of judges in the circuit-year exceeds the median, and zero otherwise.
High Age	An indicator variable that equals one if the average age of judges in the circuit-year exceeds the median, and zero otherwise.
Female	An indicator variable that equals one if there is at least one female judge in the circuit-year, and zero otherwise.

Control Variables

Size	Natural logarithm of total assets (AT).
MTB	Market-to-book ratio, calculated as PRCC_F×CSHO/CEQ.
Leverage	Long-term debt (DLTT) scaled by the lagged total assets (AT); set to zero if missing.
Inventory	Inventory (INVT) scaled by the lagged total assets (AT); set to zero if missing.
R&D Intensity	R&D expenditures (XRD) scaled by the lagged total assets (AT); set to zero if missing.
Capital Intensity	Property, plant, and equipment (PPENT) scaled by the lagged total assets (AT); set to zero if missing.
Intangibility	Intangible assets (INTAN) scaled by the lagged total assets (AT); set to zero if missing.
ROA	Operating income before depreciation and amortization (OIBDP) scaled by the lagged total assets (AT).
Foreign Income	Pre-tax foreign income (PIFO) scaled by the lagged total assets (AT).
Foreign	An indicator variable that equals one if the pre-tax foreign income (PIFO) is positive, and zero otherwise.
Advertising	Advertising expenditures (XAD) scaled by the lagged total assets (AT); set to zero if missing.
Sales Growth	Annual growth in sales (SALE) between years t–1 and t.
SG&A	Selling, general, and administrative expenses (XSGA) scaled by the lagged total assets (AT).
NOL	An indicator variable that equals one if the firm has a net operating loss carry-forward (TLCF), and zero otherwise.

ΔNOL	The difference in the net operating loss carry-forward (TLCF) between years t and t–1, scaled by the lagged total assets (AT); set to zero if missing.
Minority Interest	Income (loss) attributable to minority interest (MII) scaled by the lagged total assets (AT).
Equity Income	Equity income in earnings (ESUB) scaled by the lagged total assets (AT).
IRS Audit Prob Rank	The quartile rank of the firm's IRS audit probability in year t. The IRS audit probability is the number of face-to-face corporate audits the IRS completes in fiscal year t for size (asset) group k that the IRS assigns the firm to, divided by the number of corporate tax returns (Form 1120) filed in calendar year t–1 for firm size group k (Hoopes et al. 2012). *IRS Audit Prob Rank* ranges from 1 to 4.
IRS Attention Rank	The quartile rank of the firm's IRS attention in year t. IRS attention is defined as the number of times during year t that a computer with an IRS IP address downloaded any SEC filings from EDGAR for the firm (Bozanic et al. 2017; Fox and Wilson 2023). The data on IRS attention are obtained from Professor Zackery Fox's website, covering fiscal years 2003 to 2016.
IRS Attention Missing	An indicator for missing IRS attention data in year t.
GSP Growth	Gross state product growth rate from year t–1 to year t.
Unemployment	State unemployment rate in year t.
Blue State	An indicator variable that equals one if a state is identified a "blue" state, and zero otherwise. We define a blue state as one where the Democratic share of total votes exceeded the Republican share of total votes in the most recent presidential election.

Table 1: Sample Selection

This table reports the sample selection procedure for our main test.

	Number of Firm-Years
U.S. incorporated firms in Compustat with at least $10 million in total assets, with headquarters in a U.S. state, from 1996 to 2016	124,025
Retain: Firm-years with sufficient data to calculate the control variables	93,373
Retain: Firm-years included in the regression where *Fed ETR Dom* is non-missing (i.e., non-negative domestic pre-tax income and non-missing federal tax expense)	48,809
Retain: Firm-years in non-financial or non-utility sectors (i.e., excluding SIC1 = 6 or SIC2 = 49)	43,650

Table 2: Descriptive Statistics

Panel A: Summary Statistics
This panel reports the summary statistics of the variables used in the regression analysis. Appendix A provides the variable definitions.

	N	Mean	SD	P25	P50	P75
Liberal Circuit	43,650	0.374	0.170	0.227	0.360	0.500
Liberal Tax Court	43,650	0.308	0.056	0.269	0.318	0.346
Liberal District	43,650	0.456	0.146	0.363	0.455	0.538
Fed ETR Dom	43,650	0.268	0.183	0.164	0.305	0.341
Fed ETR WW	23,550	0.221	0.155	0.112	0.236	0.313
#Tax Haven (*unlogged*)	23,550	4.134	13.219	0	0	4
Outbound Shifters	9,189	0.289	0.453	0	0	1
DPAD Intensity	13,857	0.010	0.013	0	0.004	0.015
R&D Credits	31,963	0.141	0.349	0	0	0
High IRS Audit Prob	25,798	0.438	0.496	0	0	1
High IRS Attention	43,650	0.307	0.461	0	0	1
High Reputational Concern	43,650	0.297	0.457	0	0	1
TobinsQ	43,650	1.988	1.340	1.177	1.547	2.265
High Tax Rate Volatility	35,029	0.500	0.500	0	1	1
High Foreign Sales Ratio	22,035	0.501	0.500	0	1	1
High Well-Qualified	43,650	0.466	0.499	0	0	1
High Experience	43,650	0.535	0.499	0	1	1
High Age	43,650	0.595	0.491	0	1	1
Female	43,650	0.119	0.324	0	0	0
Control Variables						
Size	43,650	6.274	1.994	4.794	6.192	7.616
Total Assets (*unlogged*)	43,650	3,397.5	8,948.8	120.8	488.6	2030.2
MTB	43,650	2.969	5.870	1.349	2.121	3.543
Leverage	43,650	0.226	0.273	0.006	0.164	0.333
Inventory	43,650	0.149	0.172	0.011	0.095	0.223
R&D Intensity	43,650	0.033	0.078	0	0	0.032
Capital Intensity	43,650	0.333	0.304	0.107	0.238	0.474
Intangibility	43,650	0.185	0.254	0	0.083	0.279
ROA	43,650	0.150	0.085	0.098	0.138	0.19
Foreign Income	43,650	0.012	0.031	0	0	0.011
Foreign	43,650	0.345	0.475	0	0	1
Advertising	43,650	0.014	0.037	0	0	0.008
Sales Growth	43,650	0.195	0.511	0.014	0.096	0.231
SG&A	43,650	0.313	0.401	0.095	0.235	0.424
NOL	43,650	0.377	0.485	0	0	1
ΔNOL	43,650	0.005	0.250	0	0	0
Minority Interest	43,650	0.001	0.004	0	0	0
Equity Income	43,650	0.001	0.004	0	0	0
IRS Audit Prob Rank	43,650	1.981	0.878	1	2	3
IRS Attention Rank	43,650	1.997	1.288	1	1	3
IRS Attention Missing	43,650	0.585	0.493	0	1	1
GSP Growth	43,650	0.051	0.031	0.035	0.049	0.068
Unemployment	43,650	5.752	1.881	4.500	5.300	6.500
Blue State	43,650	0.667	0.471	0	1	1

Table 2: Descriptive Statistics (continued)

Panel B: Summary Statistics for Circuit-Court-Level Judge Ideology
This panel reports the annual means and standard deviations for *Liberal Circuit* across jurisdictions and years during the sample period (1996–2016). Appendix A provides the variable definitions.

Circuit	Mean	SD	N
1st	0.220	0.062	2,322
2nd	0.499	0.123	4,940
3rd	0.247	0.083	4,078
4th	0.434	0.127	3,014
5th	0.263	0.113	4,763
6th	0.309	0.058	3,511
7th	0.188	0.027	3,502
8th	0.215	0.132	3,207
9th	0.584	0.080	8,703
10th	0.346	0.091	2,170
11th	0.441	0.069	3,291
DC	0.290	0.094	149
Total	0.374	0.170	43,650

Year	Mean	SD	N
1996	0.333	0.108	3,116
1997	0.341	0.120	3,111
1998	0.348	0.118	2,800
1999	0.394	0.137	2,652
2000	0.415	0.143	2,362
2001	0.449	0.141	1,873
2002	0.438	0.142	1,931
2003	0.408	0.155	2,033
2004	0.364	0.151	2,231
2005	0.344	0.163	2,202
2006	0.338	0.168	2,164
2007	0.328	0.164	2,026
2008	0.310	0.172	1,663
2009	0.315	0.178	1,606
2010	0.320	0.183	1,855
2011	0.352	0.192	1,811
2012	0.385	0.207	1,756
2013	0.403	0.223	1,715
2014	0.419	0.215	1,708
2015	0.453	0.215	1,572
2016	0.461	0.219	1,463
Total	0.374	0.170	43,650

Table 3: Judge Ideology and Tax Planning

This table reports the results for the relation between judge ideology and corporate tax planning. The sample period is from 1996 to 2016. Intercepts are included but not tabulated. We cluster the standard errors by state and year and report the *t*-statistics in parentheses below the coefficients. *, **, and *** indicate significance at the two-tailed 0.1, 0.05, and 0.01 levels, respectively. Appendix A provides the variable definitions.

	(1)	(2)	(3)	(4)
Dependent Variable		*Fed ETR Dom*		
Liberal Circuit	0.0358***			0.0359***
	(3.58)			(3.63)
Liberal Tax Court		-0.0891		-0.0961
		(-1.43)		(-1.49)
Liberal District			0.0096	0.0039
			(0.85)	(0.36)
Size	0.0101***	0.0102***	0.0101***	0.0101***
	(5.48)	(5.48)	(5.47)	(5.48)
MTB	-0.0002	-0.0002	-0.0002	-0.0002
	(-1.01)	(-0.98)	(-1.00)	(-0.99)
Leverage	-0.0275***	-0.0274***	-0.0274***	-0.0274***
	(-3.65)	(-3.59)	(-3.62)	(-3.62)
Inventory	0.0505***	0.0504***	0.0507***	0.0503***
	(3.41)	(3.38)	(3.39)	(3.39)
R&D Intensity	-0.1650***	-0.1651***	-0.1653***	-0.1649***
	(-4.86)	(-4.82)	(-4.91)	(-4.78)
Capital Intensity	-0.0001	-0.0003	-0.0003	-0.0001
	(-0.02)	(-0.04)	(-0.04)	(-0.01)
Intangibility	0.0492***	0.0494***	0.0494***	0.0493***
	(8.55)	(8.63)	(8.58)	(8.57)
ROA	0.1396***	0.1393***	0.1395***	0.1396***
	(7.77)	(7.71)	(7.75)	(7.73)
Foreign Income	0.6970***	0.6980***	0.6979***	0.6973***
	(7.43)	(7.38)	(7.43)	(7.36)
Foreign	0.0109**	0.0108**	0.0108**	0.0109**
	(2.46)	(2.42)	(2.42)	(2.44)
Advertising	0.0557	0.0591	0.0584	0.0560
	(1.29)	(1.37)	(1.34)	(1.32)
Sales Growth	-0.0070**	-0.0070**	-0.0070**	-0.0070**
	(-2.40)	(-2.37)	(-2.37)	(-2.38)
SG&A	-0.0037	-0.0038	-0.0037	-0.0037
	(-0.94)	(-0.94)	(-0.95)	(-0.94)
NOL	-0.0261***	-0.0259***	-0.0260***	-0.0260***
	(-8.17)	(-7.96)	(-8.10)	(-8.02)
Δ*NOL*	-0.0003	-0.0003	-0.0003	-0.0002
	(-0.05)	(-0.05)	(-0.06)	(-0.04)
Minority Interest	-3.2773***	-3.2675***	-3.2632***	-3.2789***
	(-10.43)	(-10.36)	(-10.31)	(-10.41)
Equity Income	-1.3718***	-1.3775***	-1.3730***	-1.3721***
	(-5.09)	(-5.12)	(-5.08)	(-5.01)

Table 3: Judge Ideology and Tax Planning (continued)

	(1)	(2)	(3)	(4)
IRS Audit Prob Rank	0.0054*	0.0055*	0.0055*	0.0055*
	(1.95)	(1.97)	(1.96)	(1.97)
IRS Attention Rank	-0.0013	-0.0015	-0.0014	-0.0014
	(-0.67)	(-0.81)	(-0.73)	(-0.76)
IRS Attention Missing	-0.0083	-0.0086	-0.0084	-0.0086
	(-1.18)	(-1.20)	(-1.19)	(-1.19)
GSP Growth	-0.0632	-0.0661	-0.0692	-0.0623
	(-1.45)	(-1.43)	(-1.55)	(-1.39)
Unemployment	-0.0050***	-0.0054***	-0.0052***	-0.0054***
	(-3.56)	(-3.63)	(-3.65)	(-3.57)
Blue State	-0.0015	0.0005	0.0004	-0.0015
	(-0.33)	(0.11)	(0.09)	(-0.33)
Fixed Effects		MSA + Industry×Year		
N	43,650	43,650	43,650	43,650
Adjusted R^2	0.12	0.12	0.12	0.12

Table 4: Judge Ideology and Tax Planning – Cross-sectional Analyses

Panel A: Judiciary-Sensitive Tax Strategies

This panel reports the results for the effect of judge ideology on tax aggressiveness, conditional on judiciary-sensitive tax strategies. Columns (1) and (2) report the results for U.S. multinational firms that have substantial operations in tax havens and those that engage in outbound income shifting respectively. Columns (3) and (4) report the results for firms that utilize the DPAD and R&D tax credit, respectively. In Columns (1) and (2), we restrict the sample to U.S. multinational firms and use *Fed ETR WW* as the dependent variable to capture the ETR effect of international tax planning. In Column (3), the sample period is limited to the years 2007 to 2013 due to the availability of IRS data required to calculate DPAD Intensity. In Column (4), the sample period is extended from 2001 to 2016 because the new EDGAR advanced search feature only provides access to the full text of electronic filings starting from 2001. We include the same set of control variables as in Table 3, but do not tabulate them for brevity. Intercepts are included but not tabulated. We cluster the standard errors by state and year and report the *t*-statistics in parentheses below the coefficients. *, **, and *** indicate significance at the two-tailed 0.1, 0.05, and 0.01 levels, respectively. Appendix A provides the variable definitions.

	(1)	(2)	(3)	(4)
Dependent Variables	*Fed ETR WW*		*Fed ETR Dom*	
Liberal Circuit ×				
#Tax Haven	0.0149**			
	(2.63)			
Outbound Shifters		0.0339**		
		(2.16)		
DPAD Intensity			1.8716**	
			(2.19)	
R&D Credit				0.0415***
				(2.75)
Liberal Circuit	0.0186	-0.0262	0.0161	0.0398***
	(1.19)	(-1.26)	(0.58)	(2.98)
#Tax Haven	-0.0129***			
	(-3.82)			
Outbound Shifters		-0.0241***		
		(-3.86)		
DPAD Intensity			-1.0023**	
			(-2.45)	
R&D Credit				-0.0222**
				(-2.42)
Control Variables	Yes	Yes	Yes	Yes
Fixed Effects		MSA + Industry×Year		
N	23,550	9,189	13,857	31,963
Adjusted R^2	0.22	0.29	0.14	0.13

Table 4: Judge Ideology and Tax Planning – Cross-sectional Analyses

Panel B: IRS Enforcement Risk and Reputational Concerns

This panel reports the results for the relation between judge ideology and tax planning, conditional on IRS enforcement risk and firms' reputational concerns. IRS enforcement risk is measured by the probability of IRS audits (Column 1) and the total number of IRS downloads of firms' SEC filings in a given year (Column 2). We include the same set of control variables as in Table 3, but do not tabulate them for brevity. Intercepts are included but not tabulated. The sample period is from 1996 to 2016. We cluster the standard errors by state and year and report the *t*-statistics in parentheses below the coefficients. *, **, and *** indicate significance at the two-tailed 0.1, 0.05, and 0.01 levels, respectively. Appendix A provides the variable definitions.

	(1)	(2)	(3)
Dependent Variable		*Fed ETR Dom*	
Liberal Circuit × High IRS Audit Prob	0.0226**		
	(2.05)		
Liberal Circuit × High IRS Attention		0.0249**	
		(1.99)	
Liberal Circuit × High Reputational Concern			0.0311**
			(2.48)
Liberal Circuit	0.0274***	0.0465***	0.0304***
	(3.02)	(2.88)	(2.71)
High IRS Audit Prob	-0.0082		
	(-1.05)		
High IRS Attention		-0.0085	
		(-1.63)	
High Reputational Concern			Subsumed by FE
Control Variables	Yes	Yes	Yes
Fixed Effects		MSA + Industry×Year	
N	43,650	25,798	43,650
Adjusted R^2	0.12	0.14	0.12

Table 5: Judge Ideology, Tax Planning, and Firms' Financial Outcomes

This table reports the results for role of corporate tax planning on the relation between judge ideology and firms' corporate finance decisions and outcomes using Sobel-Goodman Mediation Test. Column (1) reports the baseline effect of liberal judge ideology on federal ETR (as in Table 3, Column (1)); Columns (2) and (3) report results for role of corporate tax planning on the relation between judge ideology and R&D expenditures. Columns (4) and (5) report results for role of corporate tax planning on the relation between judge ideology and Tobin's Q. We include the same set of control variables as in Table 3 (except excluding R&D expenditure in Columns (2) and (3)), but do not tabulate them for brevity. Intercepts are included but not tabulated. The sample period is from 1996 to 2016. We cluster the standard errors by state and year and report the *t*-statistics in parentheses below the coefficients. *, **, and *** indicate significance at the two-tailed 0.1, 0.05, and 0.01 levels, respectively. Appendix A provides the variable definitions.

	(1)	(2)	(3)	(4)	(5)
Dependent Variables	*Fed ETR Dom*	*R&D Intensity*		*TobinsQ*	
Liberal Circuit (*a*)	0.0358***				
	(3.58)				
Fed ETR Dom (*b*)		-0.0205***		-0.1099***	
		(-11.94)		(-4.02)	
Total effect:					
Liberal Circuit			-0.002		0.038
			(-0.72)		(0.71)
Non-tax-planning Effect:					
			-0.002		0.042
			(-0.50)		(0.79)
Tax-planning Effect:					
coefficient *a*×*b*:			-0.001***		-0.004***
			(-3.61)		(-2.74)
Proportion of total effect mediated:			0.304		-0.103
Control Variables	Yes	Yes	Yes	Yes	Yes
Fixed Effects			MSA + Industry×Year		
N	43,650	43,650	43,650	43,650	43,650
Adjusted R^2	0.12	0.33	0.33	0.36	0.36

Table 6: Judge Ideology and Tax Planning – Tax Planning Capacity

This table reports the results for the relation between judge ideology and tax planning, conditional on firms' tax planning capacity. We include the same set of control variables as in Table 3, but do not tabulate them for brevity. Intercepts are included but not tabulated. The sample period is from 1996 to 2016. We cluster the standard errors by state and year and report the *t*-statistics in parentheses below the coefficients. *, **, and *** indicate significance at the two-tailed 0.1, 0.05, and 0.01 levels, respectively. Appendix A provides the variable definitions.

	(1)	(2)
Dependent Variable	*Fed ETR Dom*	
Liberal Circuit × High Tax Rate Volatility	0.0321***	
	(3.89)	
Liberal Circuit × High Foreign Sales Ratio		0.0330**
		(2.01)
Liberal Circuit	0.0275**	0.0368*
	(2.23)	(1.88)
High Tax Rate Volatility	0.0016	
	(0.41)	
High Foreign Sales Ratio		-0.0465***
		(-5.87)
Control Variables	Yes	Yes
Fixed Effects	MSA + Industry×Year	
N	35,029	22,035
Adjusted R^2	0.12	0.10

Table 7: Judge Ideology and Tax Planning – Judge Characteristics

This table reports the results for the relation between judge ideology and tax planning, conditional on judge characteristics. We include the same set of control variables as in Table 3, but do not tabulate them for brevity. Intercepts are included but not tabulated. The sample period is from 1996 to 2016. We cluster the standard errors by state and year and report the *t*-statistics in parentheses below the coefficients. *, **, and *** indicate significance at the two-tailed 0.1, 0.05, and 0.01 levels, respectively. Appendix A provides the variable definitions.

	(1)	(2)	(3)	(4)
Dependent Variable		*Fed ETR Dom*		
Liberal Circuit × High Well-Qualified	-0.0135			
	(-0.59)			
Liberal Circuit × High Experience		0.0181		
		(1.12)		
Liberal Circuit × High Age			0.0139	
			(1.03)	
Liberal Circuit × Female				0.0623***
				(4.59)
Liberal Circuit	0.0220**	0.0243*	0.0259**	0.0297***
	(2.14)	(1.87)	(2.34)	(3.33)
High Well-Qualified	-0.0017			
	(-0.36)			
High Experience		-0.0028		
		(-0.34)		
High Age			-0.0035	
			(-0.51)	
Female				-0.0091**
				(-2.28)
Liberal Circuit + Liberal Circuit × Panel Trait	0.0355**	0.0424***	0.0398***	0.0902***
	(3.02)	(3.71)	(3.39)	(5.71)
Control Variables	Yes	Yes	Yes	Yes
Fixed Effects		MSA + Industry×Year		
N	43,650	43,650	43,650	43,650
Adjusted R^2	0.12	0.12	0.12	0.12

Internet Appendix to Judge Ideology and Corporate Tax Planning

IA.1: Tax Dispute Procedure

1.1 IRS Audits

A tax dispute begins with an IRS audit, in which the IRS "examines the corporation's accounts and financial information to ensure information is reported correctly according to the tax laws and to verify the reported amount of tax is correct" (IRS 2020b). Audits of large corporations (those with more than $10 million in assets) are carried out by IRS examiners in the Large Business & International Division (LB&I, titled the Large and Mid-Size Business Division before 2010). In 2015, the LB&I completed audits on more than 11% of large firms, while smaller firms had an audit rate of 0.9% (GAO 2017). LB&I audits are further divided into two groups: Coordinated Industry Cases (CICs) and Industry Cases (ICs). CICs involve very large firms with complex issues, with a team of revenue agents and specialists auditing them on a continual basis. In a given year, between 500 and 1,500 of the largest public and private firms are assigned to the program (Ayers et al. 2019).[1] IC firms are generally less complex, not audited every year, and only audited by one revenue agent.[2] Nessa et al. (2020) show that less than 10% of Compustat firm-years belong to the CIC program; the rest belong to the IC program.

During an audit, IRS revenue agents routinely request information from the firm and propose adjustments.[3] After the audit is concluded, if there remain unresolved issues that result

[1] The IRS uses point criteria to classify firms as CIC firms. The factors used in computing the point criteria include a firm's gross assets, gross receipts, operating entities, multiple industry status, total foreign assets, total related transactions, and foreign tax (IRM 4.46.2.5). A firm may qualify as a CIC if it has at least 12 points. However, due to limited IRS resources, not all firms with sufficient points are classified as a CIC (Ayers et al. 2019). The IRS also includes firms that it believes are sufficiently complex. For publicly traded firms with at least $250 million ($500 million) in total assets, 19.5% (25.2%) are classified as CICs (Ayers et al. 2019).

[2] In the GAO (2017) report titled "IRS Return Selection," the LB&I identifies 14 methods for selecting returns to audit in the IC program. One method is the Discriminant Analysis System, a mathematical system that ranks returns based on their probability of being profitable for the IRS to audit. The audit rate was 28.6% for these firms from 2000 to 2010 (Nessa et al. 2020).

[3] From 2000 to 2010, 49% of all audited returns (including those of firms in the CIC program) received a proposed deficiency from the IRS, with an average magnitude of $5.2 million (Nessa et al. 2020).

in a tax deficiency, the IRS issues a letter notifying the firm of its right to appeal the examiner's adjustment with the Office of Appeals within 30 days, commonly referred to as the "30-day letter" (IRM 4.46.5.7.1). The Office of Appeals is an independent organization within the IRS that aims to resolve tax controversies without litigation (IRS 2020a). Upon receiving a 30-day letter, a firm can file a protest to request an appeal with the Office of Appeals or pursue its claim directly in court (IRS Pub 5 1999).

If the firm appeals, an appeals officer or settlement officer reviews the strengths and weaknesses of the respective positions taken in the case and proposes a settlement based on the IRS's "hazards of litigation," which is the likelihood of the IRS losing in a lawsuit (Guttman 1993). Settlement negotiation is one of the most important phases in tax disputes because of its large impact on the final tax paid. For example, during the calendar years of 2012–2014, the IRS proposed a total of $10.5 billion in adjustments for cases that included at least one transfer pricing issue with appealed adjustments. The Office of Appeals reduced this amount to $2 billion. After post-appeals processes, only $321 million was assessed on those taxpayers (Treasury Inspector General for Tax Administration 2016-30-090). It is important to note that the IRM specifically requires the appeals officer to consider the most recent applicable legal precedent in the Circuit Court that has jurisdiction over the firm's headquarters location (*Golsen v. Commissioner of Internal Revenue* 1970, IRM 8.6.4.1.6, Internal Revenue Code IRC 2007).[4]

If the firm does not respond to the 30-day letter (i.e., it skips the appeal system) or reach an agreement with the Office of Appeals, the IRS will issue a Notice of Deficiency, also referred to as the "90-day letter" (IRC Section 6212 (a)).

[4] The IRM 8.6.4.1.6 (4) requires appeals officers to propose a settlement following the "Golsen Rule." In *Golsen v. Commissioner of Internal Revenue*, the Tax Court held that it would follow the rule of law laid down by the Circuit Court that would receive the appeal for the case (54 T.C. 742 1970).

1.2 Federal Courts for Tax Cases

1.2.1 Overview

If the firm disagrees with the IRS determination of tax deficiencies detailed in the 90-day letter, it can file a petition against the Commissioner of Internal Revenue in a federal court.[5] Firms can file a deficiency case in the Tax Court without paying the deficiency listed in the 90-day letter (26 U.S. Code § 6213 (a)), or pay the full deficiency under protest, file an administrative claim for a refund with the IRS, and sue the IRS for a refund in either a District Court (Section 7422; 28 U.S.C. § 1346) or the Court of Federal Claims (Section 7422; 28 U.S.C. § 1491).[6]

The Tax Court is a national court established by Congress under Article I of the Constitution with 19 authorized judgeships. The court is exclusively a tax tribunal with limited jurisdiction. As described in IRC Sec. 7442, its jurisdiction includes income, estate, gift, and certain excise taxes under Chapters 41–45 of the Code. It is also the only forum that does not require taxpayers to pay tax before filing a suit.[7]

Taxpayers can sue the IRS for a tax refund in the District Courts and the Court of Federal Claims. The U.S. has 94 District Courts, organized geographically. Firms that sue the IRS in a District Court must file the suit in the district where their principal place of business or office is located (i.e., their headquarters; 28 U.S.C. §1402(a)(2) 2006). The Court of Federal

[5] During the litigation process, a firm can continue to negotiate with the IRS if the case is filed in the Tax Court, or with the Department of Justice (DOJ) if it is filed in a District Court or the Court of Federal Claims. Both IRS counsels and DOJ attorneys are explicitly required to consider the litigation hazards when offering settlements (IRM 35.5.2.4, DOJ Tax Division Settlement Reference Manual 2012.

[6] Once a firm files a case in the Tax Court, it cannot dismiss the petition and file a refund case in a District Court or in the Court of Federal Claims for the same tax and the same year (26 U.S.C. § 6512(a)).

[7] A firm that has already filed bankruptcy before a tax issue arises can also petition against the IRS in the U.S. Bankruptcy Courts (IRS Pub 908), which are Article I courts (created under Article I of the U.S. Constitution) established by Congress in 1984 (U.S. Code Section 151). Each District Court has its own bankruptcy court, with judges appointed by the Circuit Court for a renewable term of 14 years (28 U.S.C. § 152). Bankruptcy Court decisions can be appealed either to the District Court or, in a few circuits, to the Bankruptcy Appellate Panels of the circuit (28 U.S.C. § 158). The decision of the District Court or the Bankruptcy Appellate Panels can be appealed to the Circuit Court. After the passage of the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, some circumstances permit a direct appeal to be made to the Circuit Court (George 2007).

Claims is a special trial court that has nationwide jurisdiction over cases that claim money damages against the U.S. Tax cases make up about 6% of its cases (404 out of a total of 6,372 cases from 2009 to 2014).

If the losing party wants to appeal the Tax Court's or the District Court's decision, the Circuit Court with jurisdiction over the firm's headquarters state handles the appeal. It is important to note that although the Tax Court is a national court, it follows the precedent of the relevant Circuit Court for each case, similar to the District Courts (*Golsen v. Commissioner of Internal Revenue* 54 T.C. 742 1970). Appeals from the Court of Federal Claims go to the U.S. Court of Appeals for the Federal Circuit. Finally, the U.S. Supreme Court decides whether to hear appeals from all of the Courts of Appeals, including the Circuit Courts and the U.S. Court of Appeals for the Federal Circuit. The Supreme Court reviews less than 1% of such appeals and is not particularly inclined to hear tax cases (Richards 2001).

1.2.2 Other Differences Among the Three Trial Courts

In addition to whether a tax deficiency has to be paid (a deficiency case versus a refund case) and the appellate jurisdiction (appeals from the Tax and District Courts are handled by the Circuit Courts), the most significant differences among the three trial courts are their judges and tax case volume. Specifically, the Tax Court exclusively handles tax-related issues, and all of its judges are tax specialists. The District Courts have generalist judges who are typically not tax specialists. Although the Tax Court only hears deficiency cases, firms can mitigate the interest accrual and file in the Tax Court by paying a deposit of tax before receiving the Notice of Deficiency (IRC 6603) or by making a tax payment after receiving the Notice of Deficiency (IRC 6213(b)(4)).

Other differences between the three trial courts include the trial location, the government attorneys, evidentiary rules, procedural rules, the settlement authority and opportunities, the publicity around the proceedings, and the handling of new issues (for a

detailed discussion of these differences, please refer to Henkel 2007; Greenaway 2009; Howard 2010).

IA.2: Judge Ideology and Circuit Court Tax Case Outcomes

We examine the relation between judge ideology and the outcomes of corporate tax cases in the Circuit Courts. To execute the test, we identify 328 Circuit Court cases between the IRS and a corporate taxpayer decided during 1996 to 2016 from the Westlaw Classic database. Specifically, we first search in case texts for cases from the Federal Court of Appeals in which the IRS (e.g., "Commissioner of Internal Revenue" or "United States of America") is an appellant or an appellee. We then identify corporate taxpayers by searching for company signifiers, such as "Co.," "Company," or "Inc.," in appellant or appellee names, and reading the case texts. We exclude eight cases that are appealed from the Bankruptcy Court or the Court of International Trade and ten cases in which the judge panel has fewer than three Circuit Court judges (i.e., when a District Court judge is sitting by designation).

For each case, we manually collect the following information from the case text: the docket number, docket year, appellant identity (i.e., whether it is a taxpayer or the IRS), the case outcome, the judge's name, the tax year of the litigated tax position, and lower court from which the appeal was taken. We collect the name of the president who appointed each judge from the FJC. Of our sample cases, 156, 116, and 56 are appeals from the District Courts, the Tax Court, and the Court of Federal Claims, respectively.

We test the effect of circuit judge ideology on corporate tax case outcomes by estimating the following probit model:

$$\begin{aligned} IRS\ Favored\ Appeal\ Outcome = {} & a + b_1 \cdot Liberal\ Panel \\ & + b_2 \cdot District\ Court\ Appeal + b_3 \cdot Senior\ Judge\ Count \\ & + b_4 \cdot Judge\ ABA\ Rating + b_5 \cdot Female\ Judge\ Count \\ & + Circuit\ Court\ FE + Year\ FE + \varepsilon. \end{aligned} \quad \text{(I)}$$

We define case outcomes using an indicator variable, *IRS Favored Appeal Outcome*, which equals one if a Circuit Court ruling favors the IRS (i.e., the Circuit Court reverses [affirms] the lower court rulings for cases that the IRS [the firm] appealed), and zero otherwise.

We set the ideology of the three-judge panel that handles the case, *Liberal Panel*, as one if the panel has at least two judges appointed by Democratic presidents, and zero otherwise. We control for the lower court type by including *District Court Appeal*, an indicator variable that equals one if the appeal is made from a District Court, and zero otherwise. We control for the characteristics of the judges on the panel, including their senior status (*Senior Judge Count*), their ability (*Judge ABA Rating*, their American Bar Association's standing committee rating), and their gender (*Female Judge Count*), obtained from FJC and Google searches. We also include circuit and decision year (of the appeal ruling) fixed effects to control for time-invariant differences at the circuit level and macroeconomic factors over time that may affect case outcomes.

Table IA.2, Panel B reports the results for Equation (I). In Column (1), we include fixed effects but omit the control variables. We find that the effect of *Liberal Panel* is positive and significant, suggesting that a liberal panel is more likely to rule in favor of the IRS. In Column (2), we additionally include the control variables and continue to document a similar effect. The marginal effect in Column (2) indicates that a liberal panel is 21.3% more likely to rule in favor of the IRS than a conservative panel. In terms of control variables, we observe that cases appealing from the District Court are less likely to be ruled in favor of the IRS and that senior and female judges are less likely to rule in favor of the IRS. The area under the receiver operating characteristic (ROC) curve ranges from 0.76 to 0.78, suggesting that our probit model has sufficient discriminatory power (Hosmer et al. 2013). Overall, our results confirm a significant influence of judge ideology on corporate tax case outcomes in the Circuit Courts.

Table IA.2: Judge Ideology and Circuit Court Tax Case Outcomes

Panel A: Summary Statistics

	N	Mean	SD	P25	P50	P75
IRS Favored Appeal Outcome	328	0.564	0.497	0	1	1
Liberal Panel	328	0.302	0.459	0	0	1
District Court Appeal	328	0.472	0.500	0	0	0
Senior Judge Count	328	0.543	0.629	0	0	1
Judge Panel ABA Rating	328	1.584	0.319	1.333	1.667	1.667
Female Judge Count	328	0.698	0.710	0	1	1

Panel B: Regression Analysis

This panel reports the results for the relation between circuit judge ideology and corporate tax case outcomes in the Circuit Court using probit estimation. Marginal effects are reported. Our sample consists of 328 case rulings involving the IRS and a corporate taxpayer decided in the U.S. Courts of Appeals from 1996 to 2016. In both regressions, we control for Federal Circuit jurisdictions, docketed year at the Circuit Court, and Internal Revenue Code (IRC) topic fixed effects. Intercepts are included but not tabulated. We cluster the standard errors by the federal circuit and report the *z*-statistics in parentheses below the coefficients. *, **, and *** indicate significance at the two-tailed 0.1, 0.05, and 0.01 levels, respectively. Appendix A of the main paper and Table IA.8 provide the variable definitions.

	(1)	(2)
Dependent Variable:	*IRS Favored Appeal Outcome*	
Liberal Panel	0.1775**	0.2127**
	(2.08)	(2.42)
District Court Appeal		-0.2206***
		(-3.37)
Senior Judge Count		-0.1019**
		(-2.26)
Judge Panel ABA Rating		-0.1788
		(-1.57)
Female Judge Count		-0.1265**
		(-2.34)
Fixed Effects	Circuit + Year + IRC	Circuit + Year + IRC
N	328	328
Pseudo R^2	0.15	0.19
Area under ROC	0.76	0.78

Table IA.3: Summary Statistics on Judge Turnovers by Circuit, Year and Partisanship

This table presents summary statistics on judge turnovers by circuit, calendar year, and partisanship during our sample period (1996–2016). The value of each cell represents the net change in the number of judges nominated by democratic or republican presidents in that circuit-calendar year.

Court/	DC		1st		2nd		3rd		4th		5th		6th		7th		8th		9th		10th		11th	
Year	D	G	D	G	D	G	D	G	D	G	D	G	D	G	D	G	D	G	D	G	D	G	D	G
1996	0	0	0	0	0	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1	0	0	-1
1997	1	0	0	0	0	0	1	0	0	0	0	0	1**	-1	0	0	0	-1	-2	0	0	0	2	0
1998	-1	0	1	0	4	-1	-1	0	2	-1	0	0	-1	0	0	0	0*	0	5	0	-1	0	-1	0
1999	-1	0	0	0	1	-1	1	-1	-1	-1	0	-1	0	0	0*	0	0	0	2	0	0	0	-2#	0
2000	0	0	0	0	0	0	2	0	0*	0	0	0	0	0	0	-1	1	0	4	-1	0	0	0	0
2001	0	0	0	0	1	0	0	0	0	0	0	1	0	-1	0	0	-1	1	0	0	0	1	-1	0
2002	0	0	0	0*	0	1	0	0*	0	1	-3	0	-1	2	0	0	0	2	0	0*	0	2	0	0
2003	0	1	-1	0	-1	1	0	2	0	1	0	1	0	2	0	0	0	1	0	3	0	1	0	0
2004	0	0	0	0	0	0*	0	1	0	0	-1	0*	0	-1	0	1	-1	2	0	-1	0	0	0	1
2005	0	1**	0	0	0	0	0	-1	0	0	0	1	0	3	0	-1	0	0	0	0	0	0	-1	0
2006	0	1	0	0	0	0	0	-1^^	-1	-1	0	0	0	-1	0	0	-2	1	0	2	0	2	0	-1
2007	0	0	0	0	0	-1^	0	1	0	-1	0	2	0	0	-1	1	-1	0	0	1	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0*	0	1	0	2	0	-1	0	0	-1	-1	0	0	0	0
2009	0	0	-1	0	0*	0	0	0	1	0	0	0	0	0	1	0	0	0	0	-1	0	-1	-1	0
2010	0	0	1	0	2	0	2	0	3	0	0	0	1	-1	0	0	0	0	0	0	0*	0	1	-1
2011	0	0	0	0	2	0	0	0	0*	0	2	-1	1	0	-1	0	0	0	0*	-4	0	-2	0	0
2012	0	0	0	0	0	-1	0	0	1	0	0	0	0	0	0	-1	0	0	1***	-1	0	0	1	0
2013	3	0	1	0	0	-1	1	0	0	-1	0	0	-1	-1	0	0	1	-2	0	0	2	-1	-1	0
2014	1	0	1	0	-1	0	0*	-1	1	0	1	0	-1	0	0	0	0	-1	2	0	1**	0	3	0
2015	0	0	0	0	0	-1	0	0	0	0	0	-2	0	0	-1	-1	0	-1	-1	0	0	0	0	0
2016	0	0	0	-1	0	0	1	-1	0	0	0	0	0	-2	0	0	-1	0	0	0	0	0	0	0

* indicates one departing judge and one incoming judge, resulting in zero net change.
** indicates one departing judge and two incoming judges, resulting in a net increase of one judge.
*** indicates three departing judges and four incoming judges, resulting in a net increase of one judge.
^ indicates two departing judges and one incoming judge, resulting in a net decrease of one judge.
^^ indicates three departing judges and two incoming judges, resulting in a net decrease of one judge.
# indicates three departing judges and one incoming judge, resulting in a net decrease of two judges.
In all other cases, a positive number indicates only incoming judges and a negative number indicates only departing judges.

Table IA.4: Judge Ideology, Tax Planning, and Cost of Capital

This table reports the results for role of corporate tax planning on the relation between judge ideology and firms' cost of capital using Sobel-Goodman Mediation Test. We include the same set of control variables as in Table 3 of the main paper, but do not tabulate them for brevity. Intercepts are included but not tabulated. The sample period is from 1996 to 2016. We cluster the standard errors by state and year and report the *t*-statistics in parentheses below the coefficients. *, **, and *** indicate significance at the two-tailed 0.1, 0.05, and 0.01 levels, respectively. Appendix A of the main paper and Table IA.8 provide the variable definitions.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent Variables	*Fed ETR Dom*		*JLR*		*LPV*		*CER*
Liberal Circuit (*a*)	0.0315**						
	(2.74)						
Fed ETR Dom (*b*)		0.0052***		0.0045***		0.0049***	
		(5.93)		(7.66)		(7.35)	
Total effect:							
Liberal Circuit			0.000		0.002		0.001
			(0.27)		(1.43)		(0.93)
Non-tax-planning Effect:							
			0.000		0.001		0.001
			(0.175)		(1.31)		(0.81)
Tax-planning Effect:							
coefficient *a*×*b*:			0.0001**		0.0001**		0.0001**
			(2.71)		(2.83)		(2.81)
Proportion of total effect that is mediated:			0.359		0.088		0.130
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed Effects				MSA + Industry×Year			
N	35,837	35,837	35,837	35,837	35,837	35,837	35,837
Adjusted R^2s	0.12	0.76	0.76	0.76	0.76	0.76	0.76

Table IA.5: Judge Ideology and Tax Planning – Robustness Tests

This table reports the robustness test results for the relation between judge ideology and corporate tax planning. The sample period is from 1996 to 2016. Column (1) shows the results when additionally including financial and utility firms. In Column (2), we replace high-dimensional Industry × Year fixed effects with separate Industry and Year fixed effects. In Column (3), we replace MSA fixed effects with firm fixed effects to account for any unobserved firm characteristics that may influence differences in tax planning. In Column (4), we use Newey and West (1987) standard errors adjusted with a three-year lag to correct for unobserved serial correlation and heteroskedasticity in the error terms. In Column (5), we use a Fama and MacBeth (1973) approach. Columns (6) and (7) report an instrumental variable approach. We include the same set of control variables as in Table 3 of the main paper, but do not tabulate them for brevity. Intercepts are included but not tabulated. We cluster the standard errors by state and year and report the *t*-statistics in parentheses below the coefficients. *, **, and *** indicate significance at the two-tailed 0.1, 0.05, and 0.01 levels, respectively. Appendix A of the main paper and Table IA.8 provide the variable definitions.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Including Financial & Utility Firms	*MSA + Industry + Year Fixed Effects*	*Firm + Industry×Year Fixed Effects*	*Newey-West S.E. Adjusted with 3-Year Lag*	*Fama-MacBeth Regression*	*IV Regression*	
Dependent Variables			*Fed ETR Dom*			*Liberal Circuit*	*Fed ETR Dom*
Liberal Circuit	0.0282**	0.0431***	0.0512***	0.0358***	0.0291***		
	(2.66)	(3.74)	(3.18)	(3.19)	(3.33)		
Eligible-to-Retire						0.1597***	
						(3.74)	
Pred. Liberal Circuit							0.1005**
							(2.54)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed Effects	MSA + Industry×Year	MSA + Industry + Year	Firm + Industry×Year	MSA + Industry×Year	–	MSA + Industry×Year	MSA + Industry×Year
N	48,809	43,650	42,348	43,650	43,650	43,650	43,650
Adjusted R^2s	0.14	0.11	0.31	0.10	0.09	0.77	0.12

IA.6: Judge Ideology and Tax Planning – Placebo (Permutation) Test

We conduct a placebo test by randomly assigning judge ideology to circuits using a permutation test. Specifically, in each permutation, we randomly reassign the value of *Liberal Circuit* within each circuit across the sample years and then re-estimate Equation (1) to obtain a (counterfactual) estimate of the coefficient on *Liberal Circuit*. We repeat this procedure 3,000 times. Out of these 3,000 randomized draws, only one resulted in an estimated treatment effect larger than our baseline result, i.e., a Fisher *p*-value of 0.0003, indicating that our results are unlikely to be due to randomness. Figure IA.6 displays the distribution of these counterfactual estimates of β, with the red vertical line indicating our baseline estimate of β (0.0358, Table 3, Column (1)).

Figure IA.6

Distribution of Counterfactual Estimates of β

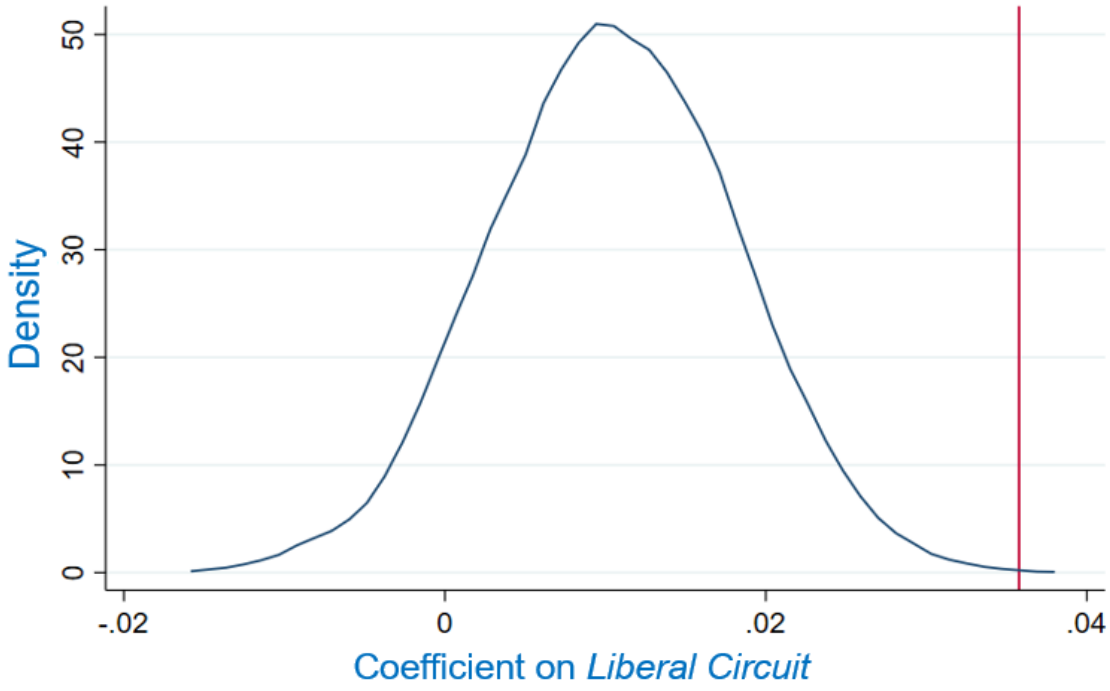

Table IA.7: Judge Ideology and Tax Planning – CEO, Director, and County Ideology

This table reports the results for the relation between judge ideology and tax planning, conditioned on the partisanship of the firm's CEO, directors, or the county where the firm is headquartered. We include the same set of control variables as in Table 3 of the main paper, but do not tabulate them for brevity. Intercepts are included but not tabulated. The sample period is from 1996 to 2016. We cluster the standard errors by state and year and report the *t*-statistics in parentheses below the coefficients. *, **, and *** indicate significance at the two-tailed 0.1, 0.05, and 0.01 levels, respectively. Appendix A of the main paper and Table IA.8 provide the variable definitions.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent Variable				*Fed ETR Dom*			
Liberal Circuit × Dem CEO	-0.0448		-0.0441				
	(-1.21)		(-1.19)				
Liberal Circuit × Rep CEO		0.0171	0.0159				
		(0.70)	(0.65)				
Liberal Circuit × CEO Donation Dem				-0.0240			
				(-0.81)			
Liberal Circuit × Ratio Dem Directors					-0.0389		
					(-1.26)		
Liberal Circuit × Director Donation Dem						-0.0155	
						(-0.56)	
Liberal Circuit × Dem County							0.0153
							(1.22)
Liberal Circuit	0.0371***	0.0353***	0.0367***	0.0368***	0.0374***	0.0366***	0.0237**
	(3.45)	(3.32)	(3.32)	(3.45)	(3.57)	(3.42)	(2.05)
Dem CEO	0.0173		0.0177				
	(1.08)		(1.11)				
Rep CEO		0.0014	0.0018				
		(0.15)	(0.19)				
CEO Donation Dem				0.0124			
				(1.32)			
Ratio Dem Directors					0.0161		
					(1.34)		
Director Donation Dem						0.0064	
						(0.75)	
Dem County							-0.0061

							(-1.06)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed Effects				MSA + Industry×Year			
N	43,650	43,650	43,650	43,650	43,650	43,650	43,650
Adjusted R^2s	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Table IA.8: Definition of Variables Used Only in the Internet Appendix

Variables	Definitions
IRS Favored Appeal Outcome	An indicator variable that equals one if a Circuit Court ruling favors the IRS (i.e., the Circuit Court reverses [affirms] the lower court rulings for cases that the IRS [the firm] appealed), and zero otherwise.
Liberal Panel	An indicator variable that equals one if the three-judge panel overseeing the case has at least two Democratic circuit judges, and zero otherwise.
District Court Appeal	An indicator variable that equals one if the appeal is made from a District Court, and zero otherwise.
Senior Judge Count	The number of senior judges on the panel.
Judge Panel ABA Rating	The average American Bar Association (ABA) nominee rating of the panel judges. We code the judicial nominee ratings "Exceptionally Well Qualified," "Well Qualified," "Qualified," and "Not Qualified" as 3, 2, 1, and 0, respectively, before calculating the average rating of the panel.
Female Judge Count	The number of female judges on the panel.
JLR	An expected return proxy from Lewellen (2015), based on three firm characteristics: the log of market capitalization, the log of book-to-market, and cumulative stock returns from twelve months to two months prior to the forecast date (i.e., momentum). The data is obtained from https://leesowang2021.github.io/data/.
LPV	An expected return proxy from Lyle and Wang (2015) and Chattopadhyay et al. (2022), based on three firm characteristics: the log of market capitalization, the log of book-to-market, the log of gross return on equity, and the mean of prior-month daily squared returns. The data is obtained from https://leesowang2021.github.io/data/.
CER	A composite that takes the equal-weighted average of *JLR* and *LPV* (Lee, So, and Wang 2021).
Dem CEO (*Rep CEO*)	An indicator variable that equals one if the CEO's cumulative contributions to the Democratic (Republican) Party exceed contributions to the Republican (Democratic) Party by at least USD $2,000 over the entire sample period (Hong and Kostovetsky 2012), and zero otherwise.
CEO Donation Dem	The proportion of the CEO's total donations in a firm-year that were directed to the Democratic Party.
Ratio Dem Directors	The proportion of democratic directors to all directors in a firm-year. A director is classified as a Democrat if the director's cumulative contributions to the Democratic Party exceed contributions to the Republican Party by at least USD $2,000 over the entire sample period.
Director Donation Dem	The proportion of the donations made by all directors in a firm-year that were directed to the Democratic Party.
Dem County	An indicator variable that equals one if the county's most recent presidential vote was more than 50% for the Democratic Party, and zero otherwise.