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**Working Paper**

## Delegation in a multi-tier court system: are remands in the U.S. federal courts driven by moral hazard?

ILE Working Paper Series, No. 28

**Provided in Cooperation with:**

University of Hamburg, Institute of Law and Economics (ILE)

*Suggested Citation:* Sarel, Roee; Demirtas, Melanie (2019) : Delegation in a multi-tier court system: are remands in the U.S. federal courts driven by moral hazard?, ILE Working Paper Series, No. 28, University of Hamburg, Institute of Law and Economics (ILE), Hamburg

This Version is available at:

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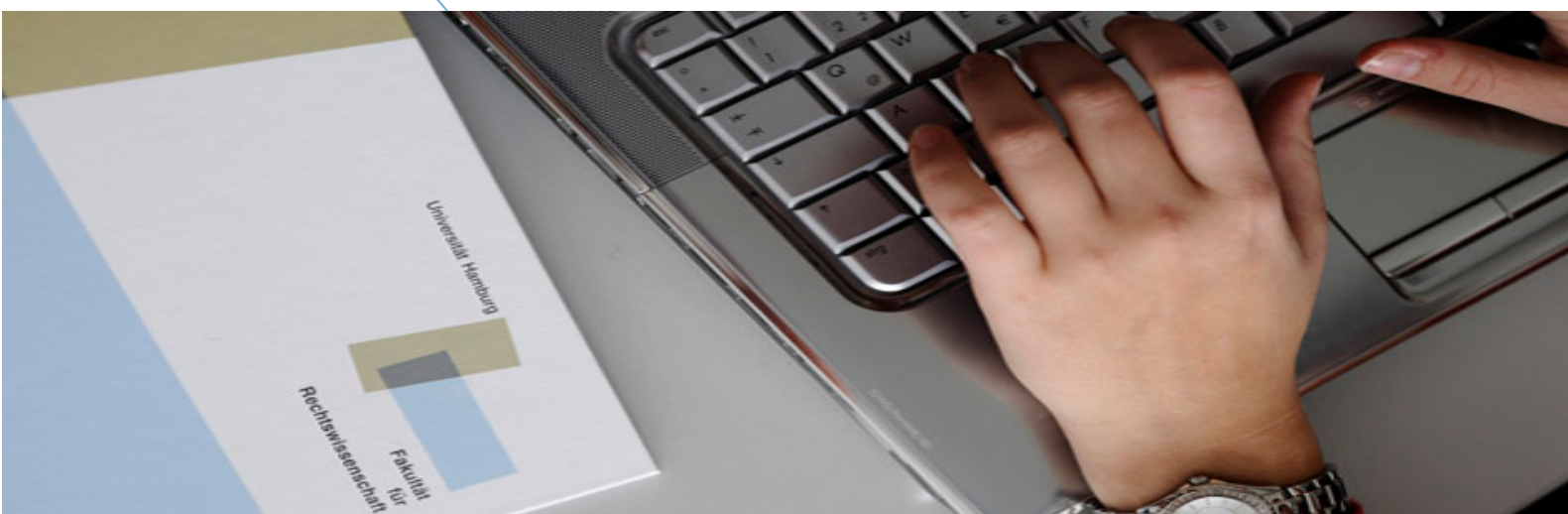
INSTITUTE OF LAW AND ECONOMICS  
WORKING PAPER SERIES

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Working Paper 2019 No. 28

October 2019



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# Delegation in a multi-tier court system: are remands in the U.S. federal courts driven by moral hazard?

Roe Sarel\* and Melanie Demirtas†

Version: October 28, 2019

## Abstract

We analyze the countervailing incentives that mid-level appellate judges face when deciding whether to remand a case back to the lower court. Although appellate courts' ability to remand cases can mitigate moral hazard problems, by restraining trial court judges, it may sometimes instead exacerbate such problems – by enabling the mid-level appellate judges to circumvent the top-level court's preferences through delegation. Our empirical assessment reveals a 'Subsequent Remand Effect': cases that are remanded by the Supreme Court to the appellate court are far more likely to be subsequently remanded again to the district court compared to other cases. We check whether this effect originates from legitimate case-relevant reasons or from moral hazard by exploiting variations in ideological distances between court levels and through a textual analysis. We find that the size of the effect varies with the composition of ideologies, which seems consistent with moral hazard.

JEL: K41, D02, P48

Keywords: remands, federal courts, appeals, judicial ideology, ideological distance

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†Georgetown University. Email: md1658@georgetown.edu. We are grateful to Eberhard Feess, Jens Frankenreiter, Yuliya Guseva, Alon Harel, Alessandro Melcarne, Shawn P. Miller, Fanny E. Schories, Sebastian Sternberg, Stefan Voigt, and Jörg R. Werner for useful comments. We also thank the participants of the following conferences: 4<sup>th</sup> International Workshop on Economic Analysis of Litigation (Paris-Nanterre, Jun. 2017); German Law and Economics Association (Marburg, Jul. 2017); European Law and Economics Association (London, Sep. 2017); American Economic Association (Philadelphia, Jan. 2018), Conference on Empirical Legal Studies in Europe (Leuven, 2018) and Jour Fixe of the ILE Hamburg (Sep. 2019). Previous versions were circulated under the title "Delegation at the U.S. Federal Appellate Courts: the Power to Remand as a Double-Edged Sword".

# 1. Introduction

In the U.S. federal court system, cases may move either up or down different court levels. Cases move up the hierarchy when litigants appeal decisions to a higher court and down the hierarchy when a (higher) court decides to “remand” the case back to a lower court. The two-way stream of cases gives rise to some institutional challenges whenever different courts hold opposing views or have different preferences for the outcomes of cases. Although the system is hierarchical, so that the top-level court sets binding policies, disparate views among the court levels provide fertile ground for principal-agent problems. The principal – i.e. the Supreme Court (hereinafter: “SC”) – must rely on decisions of lower level agents: the mid-level federal appellate court (hereinafter: “AC”) and the low-level federal district court (hereinafter: “DC”).<sup>1</sup> However, the SC cannot perfectly monitor all decisions, due to budget constraints and the overwhelming number of cases. Hence, lower courts may have an incentive to deviate from the SC’s policy and promote alternative agendas.

Deviations by the AC are then especially detrimental, as they create binding precedents for every subordinate DC. Hence, AC deviations may initiate a snowball of divergent policy. This problem is traditionally argued to be ameliorated by the threat of appellate review, as an appeal to the SC may result in two costly outcomes for the AC: a *reversal* and a *remand*. Reversals are costly in terms of reputation, which judges value due to intrinsic (e.g. prestige) or extrinsic (e.g. fear of reversals that hinder the prospect of promotion) motivation, but also in terms of preferences - as the reversal changes the case outcome (see Feess and Sarel, 2018). Remands are also costly, as they require judges to review the case for a second time, which entails additional effort and opportunity costs (Drahozal, 1998). The threat of remand may therefore restrain lower level judges, causing them to comply ex-ante rather than risk a future remand (see Haire et al., 2003; Boyd, 2015b).

The restraining effect of remands is, however, not unique to the relationship between

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<sup>1</sup>We restrict attention to the Supreme Court as the relevant principal (rather than e.g. the general public), in order to focus on the analysis of a three-tier structure with potential moral hazard.

the SC and the AC – it is also applicable for the relationship between the AC and the DC. Notably, the AC’s power to remand deters the DC from deviation, which may then indirectly also promote compliance to the SC’s policy. At the same time, the AC’s remand power may be a double-edged sword, as the higher deterrence of DC judges comes at a cost of lower deterrence of AC judges. Namely, when the SC remands a case to the AC, but the AC is free to simply remand the case further to the DC, the restraining effect is circumvented. In other words, the AC may use its delegation power to avoid the effort entailed in reconsidering cases on remand by transferring the costs to the DC. Furthermore, the AC may use remands strategically, whenever remands are more likely to lead to an ideologically preferred outcome.

In this paper, we assess empirically whether appellate courts strategically remand (to the DC) those cases that were received from the SC. Using a sample of approximately 21,500 cases, derived from the Appellate Courts Multi-User Databases (see Songer, 1997; Kuersten and Songer, 2014), we find that cases that are remanded from the SC to the AC are almost twice more likely to be further remanded to the DC compared to other cases. We refer to this finding as the ‘Subsequent Remand Effect’ (“SRE”).

While this effect is consistent with strategic behavior at the AC level, it is necessary to exclude alternative explanations, such as selection effects. For instance, if cases that the SC remanded (“SC-remanded cases”) are either factually or legally complex, it may lead the AC to (1) take advantage of the DC’s specialization in fact finding or (2) avoid an unnecessary binding precedent, in accordance with the maxim that “hard cases make bad law” (Judge Holmes in *Northern Securities Co. v. United States*, 193 U.S. 197 (1904)). We account for this concern in three ways. First, we control for various relevant case attributes in our regressions. Second, we conduct a textual analysis on a sub-set of our data in order to contrast the degree of “legalness” (and other features) between SC-remanded and other cases. We find no evidence that SC-remanded cases are ex-ante different in a relevant way, so that selection problems do not seem to drive our results. Third, we exploit variations in judicial ideologies, which are presumably independent of case complexity, in order to explore how

different views across court levels relate to delegation in general and subsequent remands in particular. Following the literature, we use the widely accepted ‘Judicial Common Space’ (“JCS”) Scores (Epstein et al., 2007) to measure ‘ideological distances’, i.e. the distance between ideological scores on a continuous scale between “liberal” and “conservative”. These distances capture how far apart the views of the different courts are. We find that the magnitude of the AC’s tendency to subsequently remand cases (the SRE) depends on the ideological distance between the AC and its adjacent courts (the subordinate DC and superordinate SC). We also find some evidence that the AC’s decision to remand is affected by the ideological distance between the judicial panel which reviews the case and the remaining judges of the court. The fact that the SRE varies with ideology then supports the conjecture that, at least to some degree, delegation decisions are driven by moral hazard.

The paper’s contribution is three-fold. First, we provide a framework for analyzing the complex effects of diverging views in a three-tier hierarchical structure, as a function of effort costs, preferences, and reputation. In particular, we highlight the importance of simultaneously considering the distance in preferences between all three tiers, rather than restricting attention to two adjacent tiers only. Our analysis focuses on court behavior, but many of our insights extend to other settings as well (e.g. employer-employee relationship). Second, we produce empirical evidence on the unexplored phenomenon of subsequent remands and propose a straightforward explanation, based on different channels of judicial concerns. We also discuss possible inefficiencies, where the benefits of multiple remands may be overshadowed by accumulating costs of litigation; court congestion; legal-coherence; and crime deterrence. Third, we contribute to the emerging literature on textual analysis of court decisions, which usually focuses on the Supreme Court and rarely on appellate courts.

The rest of the paper is organized as follows: Section 2 reviews related literature. Section 3 provides an institutional background. In Section 4 hypotheses are developed. Section 5 presents summary statistics, variables and methodology. Section 6 introduces our basic results. Section 7 includes robustness tests and the textual analysis. Section 8 concludes.

## 2. Related Literature

Our paper is closely related to the empirical literature on the effects of ideological preferences on lower court compliance. This stream of literature generally finds that an ideological distance between lower and upper courts influences strategic interactions. For example, ideological distances have been found to affect the decision to dissent (Hettinger et al., 2004), the speed of compliance to precedents (Masood and Kassow, 2012), the probability of review (Lindquist et al., 2007; Cameron et al., 2000) and reversal (Smith, 2014) by the SC, the tendency to suppress ideology in heterogeneous panels (Kastellec, 2011) and the probability of affirmance (Haire et al., 2003). Bonica and Sen (2017) find evidence that ideology also drives judicial selection in the U.S.

Empirical evidence relating specifically to remands are, however, scarce in general and for subsequent remands in particular. Boyd (2015b) analyzes remands from AC to DC in approximately 1000 civil cases during 2000-2004 and finds that the DC is more responsive to specific instructions, published opinions, cases where no panel judge dissents, and cases where the AC-DC ideological distance is small. Borochoff (2008) analyzes remands from the SC to the AC and finds several factors that are correlated with the decision to remand, such as unanimity of the previous decision and an ideological distance between the SC and the AC. Borochoff considers also remands from the AC to the DC, but explicitly excludes all subsequent remands (Borochoff, 2008, pp. 884).

Our paper differs from these two papers in several aspects. First, we include a much larger sample of approximately 21,500 cases from different courts and legal fields whereas the aforementioned papers utilize a relatively small and specific sample. Second, our paper fills the unexplored gap of subsequent remands, which is not included in either paper. Third, we simultaneously control for ideological distances in all three court levels, thus providing a full picture of the influence of ideology on the decision to remand.

Some empirical analyses on remands can be found in the legal literature on whether lower

courts attempt to evade SC policy (e.g. Weisberg, 1947; Harvard-Law-Review-Association, 1954; Beatty, 1971; Schneider, 1972; Pacelle Jr and Baum, 1992; Masood et al., 2019), or on other aspects of remand practices (e.g. Spriggs, 1997; Chemerinsky and Miltenberg, 2004; Bruhl, 2008, 2010). These papers focus mainly on state courts and the identity of winning party post-remand rather than the determinants of remands and ideological distances (which are the focus of our paper).<sup>2</sup>

Our paper is also related to the literature on strategic behavior in the U.S. federal courts (e.g. Epstein et al., 2013; Knight and Epstein, 2017) and judicial concerns in an appellate system, including theoretical (e.g. Posner, 1993; Shavell, 1995; Drahozal, 1998; Shavell, 2006; Levy, 2005; Sarel, 2018), empirical (e.g. Scott, 2006; Randazzo, 2008; Berlemann and Christmann, 2016) and experimental papers (e.g. Lewisch et al., 2015; Feess and Sarel, 2018), which identify the different channels of judicial concerns discussed in this paper.

The paper is further related to the general literature on strategic delegation, which entails opposite approaches as to whether delegating to an agent with diverging preferences is desirable. Some argue that delegating to agents with different views can be beneficial, e.g. as a tool to increase credibility (Majone, 2001, pp. 103-122), bargaining power (e.g. Harstad, 2010; Bennedsen and Schultz, 2011; Christiansen, 2013), or protection against future temptations (Ludema and Olofsgård, 2008). Others claim that principals should only delegate to those with similar views (see Majone, 2001, pp. 1). Lowande (2018) models delegation given ideological differences between the congress, president and a delegatee, which somewhat resembles the three-tier court structure analyzed here. Our paper extends the discussion to strategic delegation in the federal courts and its impact on the outcome of appeals.

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<sup>2</sup>Pacelle Jr and Baum (1992) analyze remands from the SC during 1964-1975 with ideology at the SC as a control, but do not calculate ideological distances. Masood et al. (2019) analyze lower court responses to summary decisions, but include only an ideological score for the SC and do not directly control for ideological distances.

### 3. Institutional Background

The federal courts consist of three tiers: District Courts (DC), Appellate Circuit Courts (AC), and the Supreme Court (SC). There are 94 district courts, serving as a first instance in criminal, civil, bankruptcy, and administrative cases.<sup>3</sup> Cases at the DC are usually adjudicated by one judge. Unsatisfied litigants may appeal the DC’s decisions to one of 12 appellate federal courts.<sup>4</sup> When an appeal is filed, a panel of three AC judges is (randomly) assigned to the case (see e.g. Songer and Haire, 2017, pp. 158). As in other common law systems, the general rule is that only legal (and not factual) issues may be appealed.<sup>5</sup> If the AC finds errors, the decision of the DC may be reversed and additionally - or alternatively - remanded to the DC. The DC must then reconsider the case and issue a new decision - which may (or may not) have the same operational outcome as the initial decision. Then, a litigant who wishes to appeal the new ruling may again do so. Cases may thus go through several transitions between the AC and DC, until no further appeal is made. However, the decisions of the AC can also be challenged, in two ways. First, the litigants may seek an “en-banc” rehearing, in which the AC reconsiders the case in a full quorum (i.e. the panel is augmented to include the rest of the presiding judges in the court). Second, the litigants can file a ‘petition for certiorari’, in which they ask the SC to review their case. The SC, however, has discretion on which cases to review and generally uses it narrowly, such that only 1% of all cases are reviewed by the SC (Pablo and Bustos, 2019). If the SC grants certiorari, the case is reviewed by *all* the judges of the court (9 judges in total). The appeal may then still be rejected on the merits: either by dismissing the appeal or by affirming the AC’s appealed judgment. Conversely, if the SC is of the opinion that some error occurred, it may reverse or vacate the judgment and may also remand the case for further proceedings.

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<sup>3</sup>See 18 U.S. Code, §3231 for jurisdiction definitions. In some cases, the district courts sit as a court of second instance, reviewing decisions of state or tax courts, or administrative agencies.

<sup>4</sup>A 13th appellate court exists for the “federal circuit”, reviewing intellectual property cases.

<sup>5</sup>For example, in civil cases an exception is made when the district court’s fact-finding was “clearly erroneous” (see Rule Civ. Proc. 52(a)(6)).

Each court has discretion regarding whether to issue a final decision or remand back to a lower court (see 28 U.S. Code 2106), but this discretion is sometimes limited. For instance, 18 U.S. Code 3742(f) states explicitly that if a criminal sentence is in violation of law, then the appellate court should remand the case for resentencing. Other examples include the "ordinary remand rule", dictating that in administrative proceedings courts should remand errors to the administrative agency (see, e.g. Walker, 2013). Additionally, some appellate courts have developed inner guidelines as to how remands should be handled (see, e.g. Scheinfeld and Bagley, 2013). A court's refusal to remand may also constitute abuse of discretion (*Doddy v. Oxy USA, Inc.*, 101 F.3d 448 (5th Cir. 1996)).<sup>6</sup>

The formal rationale for remanding may take several forms (for overviews, see Hessick, 2012; Berch, 2004). First, some cases are remanded when a change has occurred in the legal policy, e.g. because a new legal rule has been adopted by the SC. This may lead the SC to remand not only the case in which the new rule was established, but also other pending cases that raise similar questions.<sup>7</sup> Second, some cases are remanded for further proceedings that are necessary in light of the appeal's outcome. For example, if the appellate court ruled that a certain set of evidence was not considered, the case may be remanded so that the evidence is properly considered. The DC's official mandate is then, typically, to take actions that are "not inconsistent" with the AC's ruling (see e.g. Berch, 2004). However, the DC may implicitly - or sometimes explicitly - refuse to embrace the AC's instructions (see, e.g. the discussion of *City of Riversdale v. Rivera*, 477 U.S. 561 (1981) in Berch (2004, pp. 506-507)). Third, some cases are remanded as a formality - i.e. the lower court must only perform some administrative actions.

However, this list is not exhaustive and, as summarized by Berch (2004, pp. 508), "*the law governing remands is fluid*". In fact, it is far from straightforward to assume that any of these formal reasons fully drive remand decisions. Namely, the basic intuition

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<sup>6</sup>District courts are subject to some specific rules governing their own discretion to remand back to state courts and administrative agencies (see e.g. *Carnegie-Mellon Univ. v. Cohill*, 484 U.S. 343, 108 S. Ct. 614, 98 L. Ed. 2d 720 (1988)) but our analysis focuses on appellate courts.

<sup>7</sup>This practice is often referred to as a "Grant, Vacate, and Remand" or "GVR" for short.

behind most rationales is the assumption that the DC is somehow “institutionally superior” (Hessick, 2012) in issuing the final verdict, and, more importantly, that the AC’s goal is to exploit this feature. Both parts of this argument are questionable. Namely, one of the main justifications for the existence of an appellate court is the assumption that such a court is more accurate than its subordinate (see Feess and Sarel, 2018, for a review). Thus, it is unclear whether the DC is in fact ‘institutionally superior’. Second, the actual reasons for a remand may exceed the formally stated ones and stem from various judicial concerns. This paper thus assumes that remands may occur due to strategic considerations, notwithstanding the formal rationales.<sup>8</sup> In the next section, we develop hypotheses based on such potential considerations.

## 4. Hypotheses development

### 4.1. *Three channels of judicial concerns*

Our hypotheses rely on the insights of existing papers on rational judges (see section 2 above), which roughly identify three categories of judicial concerns:<sup>9</sup>

1. *Effort and opportunity costs* - judges want to minimize the effort required to decide a given case, such as time spent on court hearings, reviewing petitions, and drafting court decisions. Judges also prefer to decide cases as quickly as possible, in order to gain leisure time or more time for deciding the (relatively) scarce interesting cases.
2. *Reputation* - judges have career concerns and value their reputation, which is damaged when their decisions are reversed and declared as erroneous.
3. *Ideology* - judges have ideological preferences, which they insert into their rulings;

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<sup>8</sup>For anecdotal evidence, see Appendix D.

<sup>9</sup>In a recent review, Knight and Epstein (2017) use a slightly different division into five categories: job satisfaction, external satisfactions, leisure, salary and promotion.

especially in decisions that create a binding precedent for lower courts.<sup>10</sup>

Sometimes these concerns go hand-in-hand. For example, judges may want to avoid appellate review of their decision, as it can simultaneously lead to an infringement of reputation (when a reversal occurs) and to more future effort (when a remand occurs). In other instances, these concerns provide countervailing incentives. For example, a judge may want to rule in accordance with his own ideology but doing so is likely to lead to appellate review, as the higher court holds different preferences.

A rational judge will take these concerns and their respective comparative importance into account and then choose the option which maximizes his utility. In the context of appellate judges' decision on whether to delegate, the decision depends on whether the utility from remanding is higher than the utility from not remanding.

Formally, suppose that the judge cares about his effort  $e$ , his reputation  $r$ , and his ideological preference  $\iota$ . When the judge issues a decision  $D$ , the outcome of the decision reflects ideology  $o$ , so that the distance between the judge's actual preferences and the outcome of the case is  $\delta = |\iota - o|$ . The judge's utility function is then  $U(e, \delta, r)$ , which decreases in effort (i.e.  $\frac{\partial U}{\partial e} < 0$ ), increases in reputation (i.e.  $\frac{\partial U}{\partial r} > 0$ ), and decreases in the distance between the outcome and the judge's ideological preferences (i.e.  $\frac{\partial U}{\partial \delta} < 0$ ). An appellate judge will then remand if and only if:

$$E[U|D = \textit{Remand}] > E[U|D \neq \textit{Remand}] \quad (1)$$

where  $D$  is a binary decision of whether to remand, which impacts the relevant parameters  $e$ ,  $\delta$ , and  $r$ . The LHS of inequality (1) represents the benefit from remanding while the RHS reflects the opportunity cost, i.e. the benefit from keeping discretion. The impact of the decision on the judge's expected utility then depends on the expected  $e$ ,  $\delta$ , and  $r$  in each

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<sup>10</sup>Some papers assume instead that judicial preferences focus on reaching the correct outcome (e.g. Feess and Sarel, 2018). However, judges may simply view their preferred ideological outcome as the 'correct' one.

scenario. For brevity, we denote the incentive to remand by

$$\theta \equiv E[U|D = Remand] - E[U|D \neq Remand],$$

so that a higher  $\theta$  implies a stronger incentive to remand. Building on this framework, we proceed by deriving predictions for the probability that an AC judge remands to the DC.

#### 4.2. *Subsequent remands*

Suppose that a case has been remanded from the SC to the AC. The AC now faces the dilemma of whether to exert effort and issue a ruling, or to remand further to the DC. As deciding the case requires effort, the utility from remanding is always, *ceteris paribus*, larger than the utility from keeping discretion. This effect is then reinforced if the SC's goal was to 'punish' the AC for disobedient behavior, as a subsequent remand circumvents the punishment.<sup>11</sup> Moreover, the SC may specifically choose high-effort cases to remand, as these (1) serve as a more severe punishment and (2) would require the SC to exert the (high) effort otherwise. These additional effort costs are absent in other cases. Hence, *ceteris paribus*, the AC should be more likely to remand cases that have been received from the SC, compared to other cases. This can be formalized as  $e_{SCremanded=1} > e_{SCremanded=0}$ , where  $SCremanded \in \{0, 1\}$  captures whether the case was remanded from the SC (0) or not (1). *Ceteris paribus*, we then get that

$$\theta_{SCremanded=1}|\delta, r > \theta_{SCremanded=0}|\delta, r$$

Thus we hypothesize that:

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<sup>11</sup>Theoretically, the AC could try to hide its circumvention by remanding other cases to reduce its overall workload. However, litigants in these cases may realize directly that a remand in their case is out of place and will appeal the decision, leading the SC to reverse.

**Hypothesis 1 (*Subsequent Remand Effect*)** *The AC is more likely to remand cases that have been remanded from the SC in comparison to other cases, ceteris paribus.*

Note that this prediction is *ceteris paribus* and assumes that reputation and ideological distances are held constant. However, the magnitude of the effect may well depend on reputation and ideology. To see this, it is helpful to first consider how these affect the decision to remand in general (i.e. not necessarily in subsequent remands).

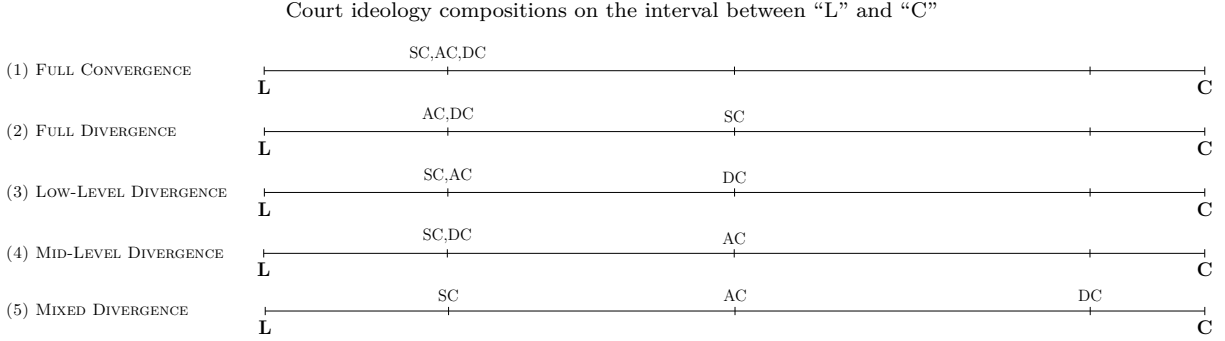
#### 4.3. *The impact of ideology and reputation on the decision to remand*

Albeit ideology and reputation are conceptually different, the prevalence of ideology in judicial utility functions (as is usually assumed in the literature on the federal courts) makes the probability of reversal by an upper court intertwined with ideological distances. Namely, when ideology largely determines the outcome of cases, lower level judges will anticipate that a higher court with different views will tend to reverse (and possibly remand) decisions which display a deviant ideology. Thus, ideological distances are related to reversals.

However, the AC must consider two different ideological distances in his ‘two hats’: one as a lower court, whose decisions are reviewed by the SC, and one as a higher court, which reviews the decisions of the DC. Under the first ‘hat’, having a different ideology than the SC implies a risk of reversal, i.e. of reputation loss, and of remand, i.e. of additional effort. Under the second ‘hat’, having a different ideology than the DC implies a risk of deviation, i.e. of an ideological preference loss when the DC deviates. To illustrate the effects of ideological distances, we consider several benchmark scenarios, as depicted in Figure 1:

The figure follows the usual setup in the literature, in which ideology lies on a linear interval between “Liberal” and “Conservative”; denoted by “L” and “C” respectively. The three courts are then located along the interval. For example, in the first scenario, titled “full convergence”, all courts share the exact same ideology. Respectively, in the fifth scenario, titled “mixed divergence”, each court has a different view. Throughout our analysis, we

Figure 1: SCENARIOS



assume that each court can be assigned a representative score on this scale, which is derived from the *median* judge in the court. Namely, a court  $c \in \{DC, AC, SC\}$  with  $n$  judges can be assigned an ideology score  $\tilde{\iota} = \text{med}(\iota_1, \iota_2, \dots, \iota_{n-1}, \iota_n)$ . Then, the ideological distance between the views of two courts,  $c_1$  and  $c_2$  is

$$\Delta_{c_1-c_2} = |\tilde{\iota}_{c_1} - \tilde{\iota}_{c_2}|. \quad (2)$$

#### 4.3.1. The SC-AC distance

We first consider the effect of the SC-AC distance (i.e.  $\Delta_{SC-AC}$ ) on the decision to remand. Suppose first that this distance is zero, e.g. as in scenarios (1) and (3). As the SC and the AC share the same ideology in these scenarios, the AC can safely assume that deciding the case in line with its own ideology will not lead the ideologically-friendly SC to reverse. Then, the AC can make a decision which sets a binding precedent for the DC and ensures the implementation of the AC’s preferred ideology.<sup>12</sup> This means that keeping discretion is beneficial, so that the opportunity cost of remanding is high.

Now suppose instead that the SC-AC distance increases, as in scenarios (4) and (5). This reduces the opportunity cost of remanding, as the AC must essentially choose between two ‘evils’: either comply with the SC’s ideology or deviate and risk a reversal. However, the

<sup>12</sup>Note that this latter motivation is weaker in scenario (1), as the DC anyway will not deviate, but as the DC’s ideology may change in the future, binding precedents are preferable for the AC’s long term payoff.

AC has another alternative – to remand and allow the DC to decide. This option then not only saves the AC from having to choose between two bad options, but may allow the AC to actually reach its preferred outcome. This happens when the DC prefers to comply with the (deviant) AC, as appellate review by the AC is frequent while review by the SC is rare. Hence, the SC-AC distance increases the incentive to remand through the opportunity cost. Thus, we hypothesize that:

**Hypothesis 2 (*Impact of  $\Delta_{SC-AC}$* )** *The AC is more likely to remand when the SC-AC ideological distance increases, ceteris paribus.*

#### 4.3.2. The AC-DC distance

Next, consider the AC-DC distance (i.e.  $\Delta_{AC-DC}$ ). When this distance is zero, as in scenarios (1) and (2), the AC can safely delegate, as the DC is unlikely to deviate from the AC's views.<sup>13</sup> When the AC-DC distance increases, the straightforward consequence is a stronger fear of deviation by the DC, which discourages the AC from remanding. Thus, we hypothesize that:

**Hypothesis 3 (*Impact of  $\Delta_{AC-DC}$* )** *The AC is less likely to remand when the AC-DC ideological distance increases, ceteris paribus.*

Note, however, that as this effect depends on the AC's *expected* benefit from remanding, two sub-components must be considered: the *probability* that the DC deviates and the *consequence* of a deviation. A larger AC-DC distance increases the probability of deviation, but the consequence of deviation may vary with other variables, namely with the SC-AC distance. Specifically, if the AC can reasonably expect that its decisions would set a long-term binding policy, then deviation from that policy is problematic. However, if an attempt to set such a policy is anyway unlikely to breed long-term profit, then a deviation by the DC is *less detrimental*. This intuition then carries over to the different constellations of

<sup>13</sup>As mentioned, even if the SC holds a different view, as in scenario (2), the probability of SC review may be too low for the DC to care.

ideologies between courts: compare, for example, scenarios (3) and (4). In scenario (3), the AC can reasonably expect its policy to last, as the SC agrees with the outcome and will neither reverse nor set a different policy in other cases. Conversely, in scenario (4), the SC disagrees with the AC and is likely to eventually set a different policy. Then, deviations by the DC do not matter much anyway. As a result, the effect of the AC-DC distance is *moderated* by the SC-AC distance.

A moderation effect may occur for an additional reason: the AC's desire to please the SC. As the SC presumably cares about the ideological outcome even when the case is decided by the DC (see Masood et al., 2019), a rational AC will consider the SC's response to the AC's decision to remand per se. Specifically, the SC may either react positively or negatively to the AC's decision (not) to remand, depending on the ideological differences between the SC and the DC. If the SC and DC share similar ideologies (scenario (4)), the SC will approve of the AC's decision to remand and vice versa. The approval of the SC may be important for the AC for two reasons. First, the AC may fear that disapproval will lead to retribution in the form of future reversals. Second, AC judges may wish to be promoted to the SC in the future, and do not want to upset their future colleagues. Thus, whenever the SC-AC distance and AC-DC distance are such that the SC approves of remanding, a moderation effect is likely to be even stronger. Thus, we hypothesize that:

**Hypothesis 4 (*Interaction of  $\Delta_{SC-AC}$  and  $\Delta_{AC-DC}$* )** *The negative effect of the AC-DC ideological distance on the likelihood of AC remands will be moderated by the SC-AC distance.*

#### 4.4. *The impact of ideological distances on subsequent remands*

The line of argumentation above generally carries over from any remand to subsequent remands. However, subsequent remands are arguably a special case, in which some concerns are stronger than others.

**Reputation concerns in SC-remanded cases.** The fact that a case was reviewed by the SC (prior to being remanded to the AC) implies that the SC takes interest in the case, and thus may be willing to review the case for a second time. Furthermore, the SC’s attention may still be given to that particular case post-remand, such that the desire to please and impress the SC might be higher for such cases. Thus, reputation concerns are typically *higher* in SC-remanded cases.

**Ideology concerns in SC-remanded cases.** Cases selected by the SC for review presumably have important policy implications, so that the outcome raises strong ideological aspects. Thus, also ideological concerns are also typically *higher* in SC-remanded cases.

As both types of concerns may be stronger in SC-remanded cases, predictions will depend on which effect dominates:

**Possibility 1: reputation concerns dominate.** If reputation concerns dominate, this leads to three distinct effects of ideological distances. First, the AC’s expected payoff from issuing a decision that deviates from the SC’s policy will decrease when the SC-AC distance increases (as in Hypothesis 2), where this effect is presumably stronger than in “regular” cases given the stronger fear of reversal. Thus, the relative payoff from remanding becomes larger due to this first effect (i.e.  $\frac{\partial \theta}{\partial \Delta_{SC-AC}} > 0$ ). Second, the AC’s expected benefit from remanding to the DC will increase if the SC and DC hold similar views, in order to please the SC. Whenever an increase in the SC-AC distance corresponds to a lower SC-DC distance (i.e. the SC and DC hold similar views, but the AC holds different views - as in scenario (4) above), then the relative payoff from remanding will also increase because of this second effect (i.e.  $\frac{\partial \theta}{\partial \Delta_{SC-AC}} > 0 \Leftarrow \frac{\partial \Delta_{SC-DC}}{\partial \Delta_{SC-AC}} < 0$ ). The third effect concerns the DC and is countervailing: when the SC-AC distance increases, the DC may begin to fear an eventual reversal by the SC, as SC-review will no longer be so rare. Thus, the AC’s attempts to engage in a strategic delegation, hoping that the DC complies with the views of the AC instead of the SC, may fail.<sup>14</sup> This third effect then implies that the payoff from remanding decreases

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<sup>14</sup>The DC’s fear of reversal may be driven by the intervention of litigants: as informed advocates plausibly

(i.e.  $\frac{\partial \theta}{\partial \Delta_{SC-AC}} < 0$ ). Hence, if reputation concerns dominate, there are two effects which imply that the probability of a subsequent remand will increase in the SC-AC distance, but there is a third countervailing effect.

However, this countervailing effect might disappear under some ideological combinations. Namely, if the combination is similar to scenario (5) above, the DC's fear of reversal by the SC would reduce its tendency to deviate - as deviation from the AC's views implies an even stronger deviation from the SC's policy. Thus, if reputation concerns dominate, it seems plausible to assume that the AC's benefit from subsequently remanding will increase in the SC-AC distance. As for the AC-DC distance, the effect's direction (lower willingness to remand due to fear of deviation) should be similar to other, non-SC-remanded cases.

**Possibility 2: ideological preferences dominate.** Next, assume instead that ideology concerns dominate in SC-remanded cases - i.e. that the AC cares more about the outcome than potentially getting reversed. This implies that when the SC-AC distance increases, the AC will prefer to issue a deviant decision, such that the incentive to remand will decrease in the SC-AC distance (i.e.  $\frac{\partial \theta}{\partial \Delta_{SC-AC}} < 0$ ). The impact of the AC-DC distance will have a similar direction, given the enhanced fear of deviation by the DC.

Summing up, the impact of ideological distances on the probability of remand of SC-remanded cases is ambiguous and depends on the relative weight that AC judges place on ideology and reputation. Thus, our hypothesis on this impact considers both said possibili-

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know the ideological structure, they will anticipate the higher probability of SC-reversal and act by filing an appropriate appeal on their clients' behalf whenever any lower court deviates. In this sense, losing litigants serve as implicit agents of the SC (see Cross and Tiller (1997) for a similar argument regarding "whistle-blowing" of dissenting judges). Recall also that any subsequent remand originates from a previous litigation round at the SC. If the SC has remanded the case in order to 'educate' the AC, but the AC attempts to circumvent the cost by subsequently remanding, the losing litigant will have an incentive to 'report' the AC's 'misconduct', by filing an appropriate appeal. When the AC abstains from delegation and decides the case, there is a counter risk: the losing litigant may be more likely to directly seek review by the SC, in comparison to a scenario where the latest decision was made by the DC. This occurs since usually litigants can only appeal decisions of the DC to the AC (28 U.S. Code 1291), and cannot take a short-cut by directly appealing to the SC. Delegation in the form of subsequent remands can therefore delay the process - forcing unsatisfied litigants to appeal back to the AC.

ties. For our predictions on how the SRE will vary with ideological distances, we define:

$$SRE = \underbrace{Pr(D = Remand | SCremanded = 1)}_{P^1} - \underbrace{Pr(D = Remand | SCremanded = 0)}_{P^0}$$

where the first term  $P^1$  is the probability of subsequent remands and  $P^0$  is the probability of remand in other cases. The SRE is largest when  $P^1$  is high and  $P^0$  is low.

If reputation concerns in SC-remanded cases dominate, then we expect that:

- $\frac{\partial P^1}{\partial \Delta_{SC-AC}} > \frac{\partial P^0}{\partial \Delta_{SC-AC}} > 0$  (i.e. the SC-AC distance has a positive marginal effect on both  $P^0$  and  $P^1$ , and a stronger marginal effect on  $P^1$  than on  $P^0$ ).
- $\frac{\partial P^1}{\partial \Delta_{AC-DC}} < 0$  and  $\frac{\partial P^0}{\partial \Delta_{AC-DC}} < 0$  (i.e. both  $P^1$  and  $P^0$  decrease in the AC-DC distance).

The SRE is then largest when  $\Delta_{SC-AC}$  is high and  $\Delta_{AC-DC}$  is low.

Conversely, if ideology concerns dominate, then we expect that:

- $\frac{\partial P^1}{\partial \Delta_{SC-AC}} < 0$  and  $\frac{\partial P^0}{\partial \Delta_{SC-AC}} > 0$  (i.e. the SC-AC distance has a negative marginal effect on  $P^1$  and a positive marginal effect on  $P^0$ ).
- $\frac{\partial P^1}{\partial \Delta_{AC-DC}} < \frac{\partial P^0}{\partial \Delta_{AC-DC}} < 0$  (i.e. the AC-DC distance has a negative marginal effect on both  $P^0$  and  $P^1$ , and a stronger negative effect on  $P^1$  than on  $P^0$ ).

Then, SRE is largest when  $\Delta_{SC-AC}$  and  $\Delta_{AC-DC}$  are both low. Hence, we hypothesize that:

**Hypothesis 5 (*Impact of ideological distances on the size of the SRE*)**

- (i) *If reputation concerns at the AC dominate, the SRE would be largest when the SC-AC distance is high and the AC-DC distance is low.*
- (ii) *If ideological concerns at the AC dominate, the SRE would be largest when the SC-AC distance is low and the AC-DC distance is low.*

Note that we do not directly test whether reputation or ideology dominates, but our results can provide an indication, depending on whether they are consistent with part (i) or (ii) of Hypothesis 5.

## 5. Data description

### 5.1. *Data collection process*

We analyze a broad merged database, which includes case-level information on litigation in the appellate (mid-level) federal courts. We combine the following databases:

- Phase I of the “Songer database” - contains 18,195 published decisions spanning the year range 1925-1996. This database was constructed by randomly sampling a fixed number of cases from each appellate court and year (15 cases for 1925-1960; 30 cases for 1961-1996) (see Hurtwitz and Kuersten, 2012, for a detailed description).
- Phase II of the “Songer database” - entails 2,920 additional cases that were subsequently reviewed by the Supreme Court in the range 1952-1996.
- Update to the Songer Database - includes 2,160 additional cases for the year range 1997-2002 (see Kuersten and Haire, 2007).
- A “Shepardized” database,<sup>15</sup> compiled by Prof. Rorie Solberg, which includes additional variables for a subset of the same cases.

The Songer database and its complements have been widely used in previous papers (most papers cited in section 2 above. See also, for example, Moyer and Tankersley (2012); Moyer (2013)). We conducted a thorough cleaning of the data<sup>16</sup> and double-checked the

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<sup>15</sup>The verb “Shepardizing” refers to the process of consulting “Shepard’s Citations” which is a U.S. citator that allows to map the legal history of the case.

<sup>16</sup>This process included correcting a small number of conspicuous coding errors. While these corrections are somewhat arbitrary, in the sense that (1) we may have not have captured all errors and (2) we use data which now slightly diverges from the data used in previous papers, we felt that the correction is preferable to conducting an erroneous analysis knowingly.

classification of all SC-remanded cases.<sup>17</sup> To attain ideological distances, we merged the data with JCS scores using several sources (see Appendix A for details). Each AC judge is thus assigned a continuous score between -1 (very liberal) and +1 (very conservative) and then median scores for the relevant panel or court are calculated. For our controls, we extracted judicial attributes from the Federal Judicial Center’s database on the biography of judges and Multi-User Databases on the Attributes of U.S. Federal Judges.<sup>18</sup>

Table B1 in Appendix B summarizes the process of combining observations from the different databases.<sup>19</sup> Overall, this yields 21,500 observations (note that some observations drop out in our regressions due to missing values). Finally, we downloaded the full texts of 357 cases for our text analysis: all 157 classified as “SC-remanded” in the sample<sup>20</sup> and 200 randomly-chosen additional cases (also from within the Songer Database).

## 5.2. *Variables and model*

### 5.2.1. **Main variables of interest**

Our dependent variable - *Remand* - is a dummy variable assigning 1 if the case was remanded and 0 otherwise.<sup>21</sup> Our main independent variable of interest is a dummy variable - *SCremanded* - assigning 1 if the case has been remanded by the SC directly prior to the

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<sup>17</sup>We subsequently made a few additional corrections for these cases, whenever (1) the case was clearly incorrectly classified or (2) the case was not directly remanded from the SC to the AC. The latter involves a very small number of cases, where the SC remanded a case directly to the DC rather than the AC, but the case ended up at the AC later on.

<sup>18</sup>Merging with the Songer database required us to use “fuzzy matching” on the judge’s names, using Stata’s user-developed command “matchit” (Raffo, 2019). After the matching, we checked manually each match and corrected any mismatches that we identified.

<sup>19</sup>We excluded observations that are duplicates and observations where JCS scores were missing for two or more of the AC judges in the panel. An observation was classified as a duplicate if it was a case that was decided in the same court, on the same exact date and was published in the same volume and page.

<sup>20</sup>Overall, after cleaning the data, 160 cases were classified as “SC remands”. However, 3 cases are out of the sample range for which JCS scores were available.

<sup>21</sup>Classification of outcomes is derived from the variable *Treat*, by pooling all categories which indicate that a remand took place. We use the following categories of the *Treat* variable: (1) reversed and remanded (or just remanded), (2) vacated and remanded (also set aside & remanded; modified and remanded), (3) affirmed in part, reversed in part, and remanded; and (4) affirmed in part, vacated in part, and remanded.

current decision of the AC.<sup>22</sup> For the ideological distances, we follow Boyd (2015b) and define each distance as the absolute value of the difference in (median) JCS scores. We then include the following ideological distances as variables:

1.  $\Delta_{SC-AC}$  – the distance between the SC and the panel majority at the AC.<sup>23</sup>
2.  $\Delta_{AC-DC}$  – the distance between the panel majority at the AC and the DC judge who decided the case prior to the AC’s decision.

### 5.2.2. Control variables

In order to ensure that the coefficients of our variables of interests are unbiased, we include control variables which are potentially correlated with both the variables of interest and with unobservables that predict the probability that the AC remands the case. Specifically, we include several groups of controls:

**Additional ideological distances.** As judges at the AC and DC are randomly drawn from the pool of judges, some outliers may occur - where the (panel of) judges’ ideology diverges from the general ideology of the court. Thus, we control for the distance between: (1) the panel majority and the (full) AC (“Panel-Full AC”) and (2) the DC judge who decided the case prior to the AC’s decision and the full DC (“DC judge - Full DC”).

**Case-type dummies.** As the SC’s and AC’s decision to remand may both depend on case-type, we include dummies for the following categories: criminal, civil rights, first amendment, due process, privacy, labor relations, economic activity and regulation, and miscellaneous.

**Appealed-decision-type dummies.** The decision to remand may also depend on the type of procedure. For example, interlocutory appeals (of interim decisions) may be naturally

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<sup>22</sup>The Songer database includes two different variables indicating the same thing - the source of the case (*Source*), i.e. which court has directly reviewed the case before, and the type of decision (*Method*), which includes inter alia remands by the SC. Whenever these two classification departed, we checked the case itself to see which classification is correct.

<sup>23</sup>Recall that the SC always sits by full designation, where all 9 judges of the courts review the case, so that the score of the full SC is representative of the SC’s ‘panel’.

remanded in order for hearings to resume. Thus, we include dummies for the following categories: trial, interlocutory appeal, petition dismissal, guilty plea, post trial decision, post-settlement decision, mandamus appeal,<sup>24</sup> and unclassified.

**Threshold indices.** Cases in which a threshold issue has been identified, e.g. that the appellate court lacks jurisdiction, might affect the decision to remand by both the SC and AC.<sup>25</sup> To capture this, we constructed two indices for threshold issues: at the DC (*threshold\_index\_dc*) and at the AC itself (*threshold\_index\_ac*).<sup>26</sup>

**Origin.** To account for outlier cases that did not originate from a one-judge decision at the DC, we include dummies for the following alternative origins of the case: State court, bankruptcy court, federal magistrate, special court in the District of Columbia, federal administrative agency and a case of a 3-judges quorum at the district court.

**Proxies for case complexity.** As complex cases might be more likely to be remanded both by the SC and the AC, we add several proxies: the number of filed amicus curiae briefs, the share of dissenting votes out of all votes, and the opinion’s length.

**Attributes of AC and DC judges.** In order to capture additional unobservables, we include judicial attributes on race and gender of the AC panel (shares of judges who are male, black, Hispanic, Asian and Native-American) and gender of the DC judge.<sup>27</sup>

<sup>24</sup>Mandamus is a discretionary remedy, sometimes used for appealing interim decisions (see Berger, 1982).

<sup>25</sup>For example, an appeal court which lacks jurisdiction seems likely to dismiss rather than remand.

<sup>26</sup>The Songer database includes a series of variables on threshold issues with three categories: identified, not identified, and mixed. Including dummies separately for each category makes the model convoluted and does not qualitatively affect the results. We therefore simplified the model by replacing the many dummies by one index. The index is constructed as follows: each issue is given one dummy, indicating only whether the issue was identified or not (i.e. we pool mixed and unidentified together). Then, we calculate the average of issues found, such that a higher value means that more threshold issues were identified. Threshold issues for the DC index are: The original case was frivolous (FRIVOL); there was no appellate jurisdiction (JURIS); the plaintiff failed to state a claim (STATECL); a moot issue was raised (MOOTNESS); administrative remedies had not been exhausted or the issue was not ripe for judicial action (EXHAUST); litigants failed to comply with a procedural rule or that the statute of limitation has expired (TIMELY); the defendant had immunity (IMMUNITY); the case was a non-justifiable political action (POLQUEST); other threshold issue, e.g. estoppel (OTHTHRES). Threshold issues for the AC index are: the appeal was frivolous (FRIVAPP); the appeal was filed too late (LATE), and other issues (OTHAPPTH).

<sup>27</sup>We omit the DC judge’s race because it is collinear with whether the case was SC-remanded in our sample.

**Time dummies by SC Chief Justice.** Finally, we include time dummies for the term of each SC Chief Justice in our sample. These serve two purposes: controlling for (quasi) time fixed-effects, and capturing the impact of leadership policy.

These various controls mitigate the obvious concern that our coefficient for *SCremanded* might capture those cases in which remands are somehow mandatory. In other words, this ensures that the coefficient of *SCremanded* will only reflect its impact above and beyond the effect of the other variables.

### 5.3. *Descriptive statistics*

Table 1 compares the variables used in the analysis between SC-remanded and other cases. Albeit our sample includes only 157 SC-remanded cases, it is important to keep in mind that the Songer database provides only a random sample and does not contain the full universe of cases. Thus, the number of actual cases for which our analysis is applicable is *far larger*.<sup>28</sup> The second row (“Remand”) indicates that SC-remanded case are remanded by the AC to the DC almost twice as often as other cases, where the difference is significant at the 1% level. Ideological distances are not significantly different for these cases, which implies that SC-remanded cases are comparable in terms of ideology. Similarly, there is no significant difference in the court of origin, shares of Male and Black judges in the AC panel, or the procedure type (“Appeal From”). The latter is particular important, as it mitigates a potential concern that SC-remanded cases correspond to some procedural cases where remands are required for technical reasons. As there are nonetheless differences in some of the other variables, we control for these variables in our regressions (see below).

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<sup>28</sup>During our sample period, the federal courts adjudicated around 116,300 case on average, with some years amounting up to around 270,000 cases. Assuming that the ratio of SC-remanded to other cases is representative, this implies that on average 850 cases per year were remanded by the SC to the AC (and up to around 2000 cases in some years).

Table 1 DESCRIPTIVES

Factor	Level	Other cases	SCremanded	p-value	Test
N		21343	157		
Remand		5752 (27.0%)	79 (50.3%)	<0.001	Pearson's chi-squared
SC-AC distance, mean (SD)		0.240 (0.164)	0.248 (0.164)	0.58	Two sample t test
AC-DC distance, mean (SD)		0.278 (0.235)	0.263 (0.208)	0.57	Two sample t test
Panel- Full AC distance, mean (SD)		0.167 (0.160)	0.161 (0.147)	0.69	Two sample t test
DC judge-full AC distance, mean (SD)		0.205 (0.224)	0.230 (0.251)	0.35	Two sample t test
Case-type	Criminal	5807 (27.3%)	56 (37.3%)	<0.001	Pearson's chi-squared
	Civil Rights	2051 (9.6%)	28 (18.7%)		
	First Amendment	412 (1.9%)	8 (5.3%)		
	Due Process	265 (1.2%)	2 (1.3%)		
	Privacy	60 (0.3%)	0 (0.0%)		
	Labor	1641 (7.7%)	4 (2.7%)		
	Economic Activity and Regulation	10220 (48.0%)	44 (29.3%)		
	Misc.	645 (3.0%)	5 (3.3%)		
	Unclassified	195 (0.9%)	3 (2.0%)		
Appeal from	Trial	8065 (37.8%)	54 (34.4%)	0.16	Pearson's chi-squared
	Injunction	671 (3.1%)	4 (2.5%)		
	Summary judgement	2126 (10.0%)	12 (7.6%)		
	Guilty plea	342 (1.6%)	1 (0.6%)		
	Dismissal	3433 (16.1%)	30 (19.1%)		
	Post-judgement orders	471 (2.2%)	2 (1.3%)		
	Post-settlement orders	61 (0.3%)	0 (0.0%)		
	Interlocutory appeal	182 (0.9%)	0 (0.0%)		
	Mandamus	132 (0.6%)	0 (0.0%)		
	Other/Unclassified	3619 (17.0%)	27 (17.2%)		
	Mentions trial judge	112 (0.5%)	0 (0.0%)		
	Inapplicable	2127 (10.0%)	27 (17.2%)		
Threshold index DC, mean (SD)		0.013 (0.037)	0.011 (0.032)	0.56	Two sample t test
Threshold index AC, mean (SD)		0.010 (0.058)	0.022 (0.083)	0.013	Two sample t test
Amicus Curiae briefs, mean (SD)		0.109 (0.964)	0.446 (2.322)	<0.001	Two sample t test
Dissenting judges share, mean (SD)		0.039 (0.110)	0.058 (0.134)	0.031	Two sample t test
Male Gender: DC Judge		15341 (95.6%)	82 (93.2%)	0.26	Pearson's chi-squared
Origin	DC (single judge)	14455 (67.7%)	111 (70.7%)	0.15	Pearson's chi-squared
	DC (3 judges)	11 (0.1%)	0 (0.0%)		
	State court	2441 (11.4%)	23 (14.6%)		
	Bankruptcy court	529 (2.5%)	0 (0.0%)		
	Federal Magistrate	192 (0.9%)	1 (0.6%)		
	Federal Administrative Agency	2334 (10.9%)	14 (8.9%)		
	Special D.C. court	81 (0.4%)	0 (0.0%)		
	Other	969 (4.5%)	3 (1.9%)		
	Unclassified	331 (1.6%)	5 (3.2%)		
Panel majority: Male judges share, mean (SD)		0.954 (0.139)	0.944 (0.149)	0.38	Two sample t test
Panel majority: Black judges share, mean (SD)		0.035 (0.117)	0.042 (0.135)	0.45	Two sample t test
Panel majority: Hispanic judges share, mean (SD)		0.015 (0.079)	0.033 (0.131)	0.006	Two sample t test
Panel majority: Asian judges share, mean (SD)		0.001 (0.017)	0.007 (0.057)	<0.001	Two sample t test

NOTE.— This table compares the variables used in the analysis between cases that were remanded by the SC to the AC and other cases. For each variable, the test is specified alongside a p.value.

Figure 2 contrasts the mean rate of *Remand* in SC-remanded cases (i.e. subsequent remands) and in other cases, separated by AC.<sup>29</sup> As can be seen, subsequent remands are more frequent than other remands in all ACs, but the difference is more prominent in some courts. We account for this heterogeneity by clustering the standard errors by circuit in our regressions.

<sup>29</sup>Note that “D.C.” in the figure refers to the District of Columbia, and not the district court.

Figure 2: MEAN REMAND RATES

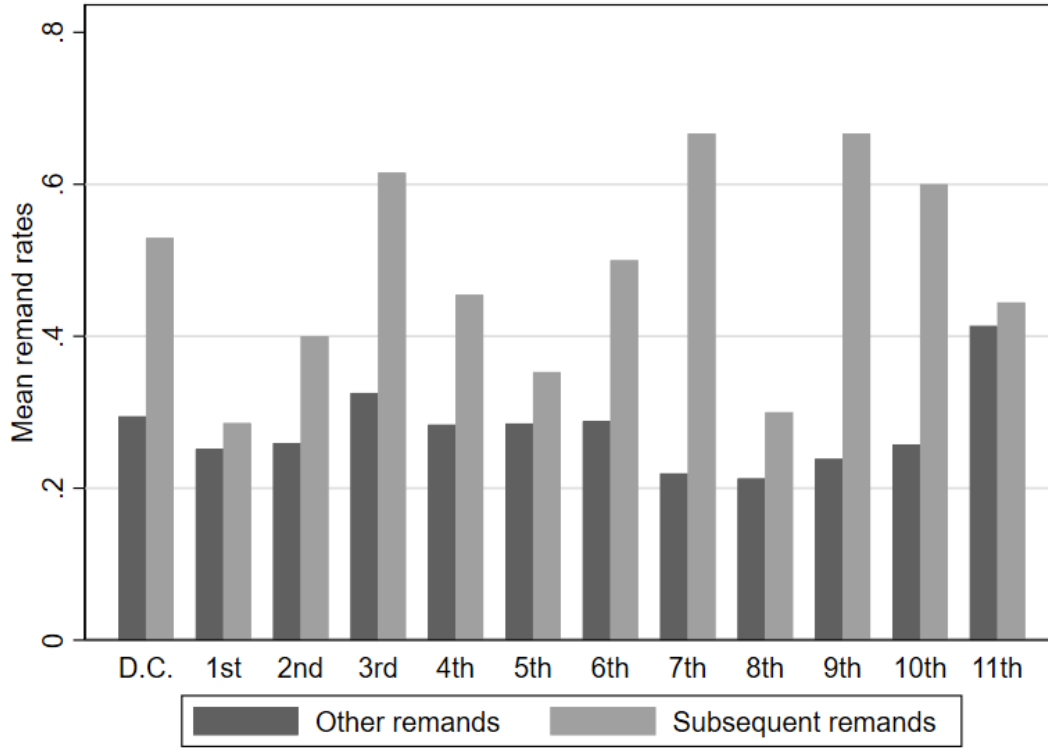
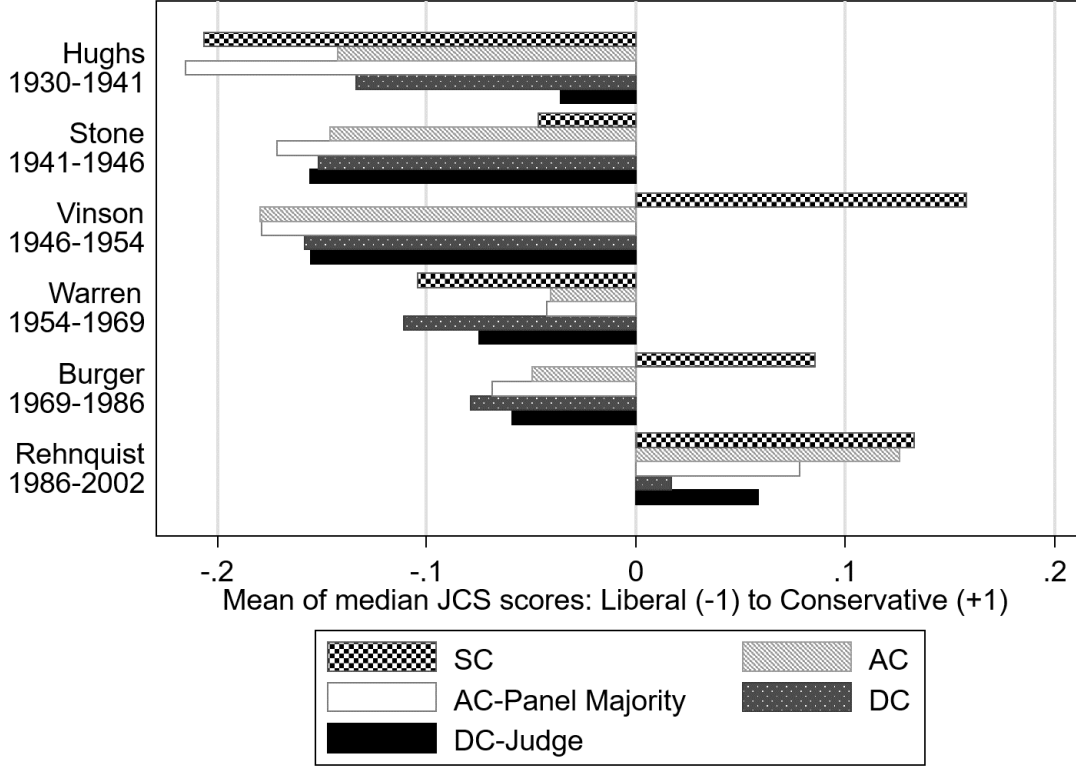


Figure 3 plots the (pooled) median JCS scores over time, separated by terms of the incumbent SC chief justice. The (absolute value) difference between two bars corresponds to the ideological distance between those two scores. Each period can roughly be paralleled to the scenario examples used above, where the Hughs court corresponds to “mixed divergence”; the Vinson, Burger, and Stone courts to “full divergence”; the Warren court to “mid-level divergence”; and the Rehnquist court to “low-level divergence”. We account for these effects by using the aforementioned SC Chief Justice dummies in our regression.

Figure 3: JCS SCORES OVER TIME



## 5.4. Methodology

### 5.4.1. Estimated model

Our regression analysis begins with testing the following probit model:

$$\begin{aligned}
 Pr(Remand = 1|x_j) = & \beta_0 + \beta_1 SCremanded + \beta_2 \Delta_{SC-AC} + \beta_3 \Delta_{AC-DC} \\
 & + \beta_4 (\Delta_{SC-AC} \times \Delta_{AC-DC}) + \beta_5 (SCremanded \times \Delta_{SC-AC}) + \beta_6 (SCremanded \times \Delta_{AC-DC}) \\
 & + \beta_7 (SCremanded \times \Delta_{SC-AC} \times \Delta_{AC-DC}) + \beta'_x X' + \varepsilon \quad (3)
 \end{aligned}$$

where:  $x_j$  are the variables on the RHS, and  $X'$  is a vector of (varying) control variables. Including the three-way interaction term allows us to contrast the SRE in different combinations of the two ideological distances.

## 6. Basic Results

As probit coefficients are difficult to interpret, Table 2 presents directly average marginal effects ("AME") (the original probit coefficients are presented in Table B2 in Appendix B). The table presents two sets of regressions: *unweighted* (columns 1-3) and *probability-weighted* (columns 4-6). The (potential) need for probability weights arises since a fixed number of cases was sampled from each court per year, but the overall number of cases varies between courts.<sup>30</sup> In each set of regressions, the first column (1 or 4) includes only the SCremanded dummy, the second column (2 or 5) adds ideological distances, and the third column (3 or 6) includes all controls. Our basic findings can be summarized as follows:

Table 2  
BASIC RESULTS:

	Unweighted			Weighted		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Main</i>						
SC remanded	0.234*** (0.043)	0.191*** (0.053)	0.180*** (0.049)	0.233*** (0.065)	0.208*** (0.036)	0.207*** (0.038)
SC-AC distance		0.048 (0.045)	0.081** (0.038)		0.067 (0.063)	0.096* (0.056)
AC-DC distance		0.021 (0.019)	-0.006 (0.018)		0.034* (0.019)	0.008 (0.019)
<i>Additional Ideological Distances</i>						
Panel- Full AC distance		-0.011 (0.039)	-0.100*** (0.038)		-0.052 (0.043)	-0.126*** (0.042)
DC judge-full AC distance		0.029 (0.024)	-0.007 (0.021)		0.032 (0.024)	-0.006 (0.021)
<i>Included Controls</i>						
Case-type	No	No	Yes	No	No	Yes
Appeal From	No	No	Yes	No	No	Yes
Threshold Indices	No	No	Yes	No	No	Yes
Proxies for Complexity	No	No	Yes	No	No	Yes
Origin	No	No	Yes	No	No	Yes
Attributes of Judges	No	No	Yes	No	No	Yes
Time dummies (By SC chief justice)	No	No	Yes	No	No	Yes
Number of observations	21500	12270	12153	21500	12270	12153

NOTE.— This table presents the average marginal effects of the probit regressions, with (columns 4-6) and without (columns 1-3) probability weights. Baseline categories are: "Criminal" for case-type, "Trial" for Appeal from, and "DC (single judge)" for Origin. Note that DC (3 judges) drops out in the basic results due to collinearity, but is presented in order to enable proper comparison with the robustness checks. Coefficients of Time dummies (by SC chief Justice) are not reported. Standard errors are clustered by circuit court. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

**Subsequent Remand Effect:** The coefficient of SCremanded is significantly positive ( $p.value < 0.01$ ) in all specifications, supporting Hypothesis 1. Cases that are remanded by the SC are therefore more likely to be remanded by the AC to the DC.

<sup>30</sup>Probability-weighting entails a trade-off with efficiency (Bollen et al., 2016) and may not always be appropriate, but as some papers have used probability weights when analyzing the Songer database we present also weighted results for robustness.

**The effects of ideological distances on remand probabilities:** As ideological distances are continuous, AMEs are only partially informative. Nonetheless, we first start with said table before proceeding to the main part of the analysis, which considers marginal effects at representative values (“MER”) and is more appropriate given our non-linear (probit) model and use of an interaction term (see Williams et al., 2012; Long and Mustillo, 2018).

The table shows that effect of the SC-AC distance is positively significant at the 5% (column 3) or 10% (column 6) level, once control variables are included. This supports Hypothesis 2. Conversely, the AME of the AC-DC distance has mixed signs and is mostly insignificant, so that it is important to check for representative values as we do below.

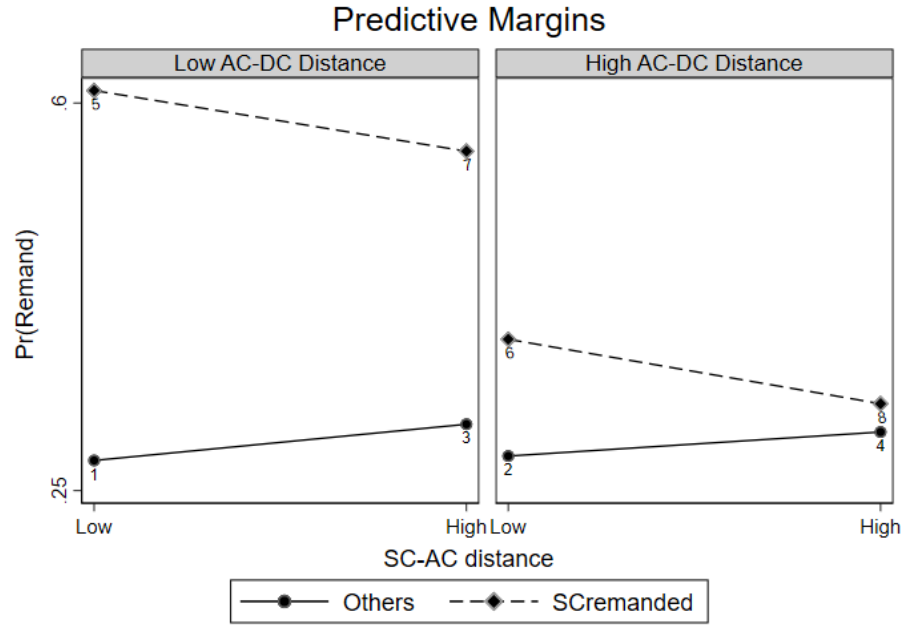
Note also that AME of the *Panel - Full AC* distance is negative, and significant once controls are included (columns 3 and 6). This has a straightforward explanation: much like the general dilemma of the AC when the SC holds different views, an appellate panel whose full AC court holds different views must choose between two bad options - deviate and risk reversal (through an en-banc rehearing) or delegate in the hope that the DC complies with the panel rather than the full AC. However, a strategic DC is unlikely to comply with the panel because the AC reviews all cases (and not only a small subset like the SC), so that the DC risks reversal. Hence, delegation is not a profitable option for the panel, leading to a lower probability of remanding.

Next, we proceed to the more informative part of the analysis, based on MER. We restrict attention to the coefficients of the regressions with full controls and compare the weighted and unweighted specifications for robustness. Our MER include two values for each distance: Low (minus one standard deviation) and High (plus one standard deviation). We then separate the effect by whether or not the case was SC-remanded.

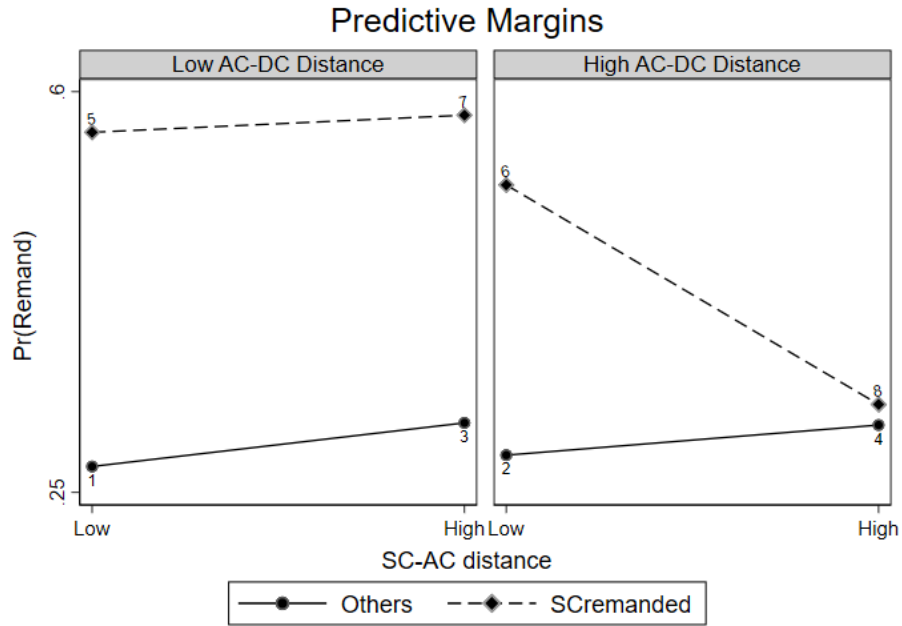
Figure 4 presents ‘predictive margins’, i.e. the probability that the AC remands in each combination. Part (a) presents the effects for the unweighted regression and Part (b) for the weighted regression. Each part consists of two sub-parts, one where the AC-DC distance is low (left side) and one it is high (right side).

Figure 4: Marginal effects

(a) Unweighted



(b) Weighted



Within each sub-part, the X-axis corresponds to the SC-AC distance, which is also either low (left edge) or high (right edge). The Y-axis is always the predicted probability that

the AC remands. The two lines inside the graphs correspond to whether the cases are ‘SC-remanded’ or ‘others’. The difference between the two lines is therefore the SRE. Each point is marked with a digit (1,2,...,8) for convenience and pairwise comparisons are used to check whether the points are different from one another. Contrasts and p.values are provided in Tables B3 and B4 in Appendix B. For brevity, we denote the p.values of the unweighted and weighted regressions by  $p_u$  and  $p_w$  respectively.

We first consider the non-SCremanded cases (i.e. the lower lines). These lines all have a positive slope, which implies that the probability of remand increases when moving along the x-axis from a low to a high SC-AC distance. This supports Hypothesis 2. The slopes are mostly significant (see the relevant pair-wise comparison between the two points at the edge of each line, i.e. point 1 vs. 3 and point 2 vs. 4) at the 5%-10% level. Next, still considering non-SCremanded cases (i.e. the lower lines), the pair-wise comparison reveals no significant effect of the AC-DC distance *ceteris paribus* (comparing point 1 vs. 2 and point 3 vs. 4).

We now proceed to SCremanded cases (i.e. the higher lines). The SC-AC distance seems to have no significant effect (compare points 7 vs. 5 and 8 vs. 6). Next, still considering SCremanded cases (i.e. the higher lines), the probability of remand is lower when the AC-DC distance is high, but the *ceteris paribus* difference (keeping the SC-AC distance constant) is statistically insignificant (compare points 5 vs. 6 and 7 vs. 8).

However, we do find a significant difference ( $p_u < 0.05, p_w < 0.1$ ) between the combinations “Low AC-DC, Low SC-AC” (point 5) and “High AC-DC, High SC-AC” (point 8). This is in line with an interaction effect, where increasing both distances at the same time yields a (negative) effect on the probability of remand. However, unlike Hypothesis 4 which assumes that the AC-DC has an independent effect, this suggest that a shift in both distances at once is required for an effect to take place.

**The impact of ideological distances on the SRE.** Figure 4 also enables us to contrast the SRE (i.e. the difference between the lower and upper lines) given different combinations

of ideology. The effect is largest and significant ( $p_u < 0.01, p_w < 0.1$ ) when both distances are low (comparing points 5 vs. 1). The effect then remains fairly large ( $p_u > 0.1, p_w < 0.1$ ) when the SC-AC distance increases (comparing points 7 vs. 3) but decreases when the AC-DC distance is High (comparing points 6 vs. 2 and 8 vs. 4). A Wald-test (for coefficients) which jointly contrasts the SREs in all combinations, yields a significant difference ( $p_u < 0.1, p_w < 0.01$ ).<sup>31</sup> The difference also holds when restricting the comparison to “Low, Low” vs. “High, High”.<sup>32</sup> This implies that the size of the SRE depends on the ideological combination, such that the effect is largest when both distances are low. This support Hypothesis 5(ii) and indicates that ideological concerns dominate reputation concerns in SC-remanded cases.

## 7. Robustness tests

### 7.1. Accounting for treatment assignment

In order to verify that the SRE is not a product of an endogenous treatment assignment (e.g. because some cases are somehow “remand-worthy” and therefore remanded by both the SC and AC), we implement an ‘endogenous treatment model’ (see Heckman (1976, 1978); Maddala (1986) and examples in Gutmann et al. (2017); Hartje and Hübler (2017); Malo et al. (2018)). This model applies a correction that accounts for the impact of variables that affect both treatment assignment and outcome. We estimate the model using Stata’s Extended Probit Regression Model (“EPRM”) framework and derive an Average Treatment Effect (“ATE”), i.e. the difference in the likelihood of remand between SC-remanded cases and others. This is done by simultaneously estimating two equations - a main equation and an auxiliary equation. The main equation is similar to the OLS:

$$Pr(Remand|x_j) = \beta_0 + \beta_1 SCremanded + \beta_{\Psi}' \Psi' + \varepsilon_1 \quad (4)$$

<sup>31</sup>We test jointly whether (5 vs. 1) = (7 vs. 3) = (6 vs. 2) = (8 vs. 4). The test yields  $\chi^2 = 6.85, p_u = 0.0769$  and  $\chi^2 = 12.14, p_w = 0.0069$ .

<sup>32</sup>Testing whether (5 vs. 1) = (8 vs. 4) yields  $\chi^2 = 4.33, p_u = 0.0375$  and  $\chi^2 = 3.28, p_w = 0.0702$ .

where  $\Psi'$  is a vector that includes the same ideological distances and controls as before, and  $\varepsilon_1$  is the error term.

The second equation models the assignment of the treatment “SCremanded”, which is assumed to be determined by a latent variable “ $SCremanded^*$ ”. The decision to assign the treatment (i.e. the SC’s decision to remand) is then:

$$SCremanded = \begin{cases} 1 & \text{if } SCremanded^* \equiv \gamma_0 + \gamma_Z'Z' + \epsilon_2 > 0 \\ 0 & \text{otherwise} \end{cases} \quad (5)$$

Where  $Z'$  is a vector of predictors which may (or may not) overlap with  $\Psi'$ ; and the error terms  $\epsilon_1$  and  $\epsilon_2$  are allowed to be correlated.<sup>33</sup>

The EPRM also enables us to test whether the *unobservables* (i.e. the two error terms) are correlated, which provides an additional insight: if the error terms are uncorrelated, then the results of OLS are more reliable than those of the EPRM; However, if the error terms are correlated, we get a prediction for the direction of any omitted variable bias. Namely, if the correlation is negative – then unobservables that increase the probability that the SC remands will decrease the probability that the AC subsequently remands. In our setting, the main concern is that our model omits unobservables that increase both treatment assignment and outcome, because some cases are somehow more “remandable”. This concern is mitigated if we observe a *negative* correlation, and vice versa.

Table 3 presents the ATE that is derived from our EPRM regressions (original probit coefficients are provided in Table B5 in Appendix B).<sup>34</sup> Each column corresponds to a different specification, where ideological distances and the other controls are either included in the main regression and the auxiliary regression, or excluded from one of these. The upper

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<sup>33</sup>Error terms are assumed to be bivariate normal with mean zero and covariance matrix:  $\begin{bmatrix} \sigma^2 & \rho\sigma \\ \rho\sigma & 1 \end{bmatrix}$ .

<sup>34</sup>To avoid convergence problems in model (4)-(6), we follow the suggestion specified in StataCorp (2017, intro 12, pp.5 (and see also intro 4)) and first simplify each model as follows: first, we run a regression using “eregress” without the endogenous treatment (“entreat”) option. Then, we save the coefficients and use them as the initial values in a full regression with the “entreat” option.

Table 3  
EPRM AVERAGE TREATMENT EFFECT

	(1)	(2)	(3)	(4)	(5)
ATE (SCremanded 1 vs. 0)	0.706***	0.706***	0.641***	0.639**	0.095
Standard Error	0.015	0.016	0.190	0.306	0.814
Z-statistic	46.05	45.028	3.374	2.091	0.116
P.value	<0.001	<0.001	0.001	0.037	0.907
Correlation ( $\varepsilon_1, \varepsilon_2$ )	-0.979*** (0.033)	-0.963*** (0.060)	-0.562 (0.537)	-0.589 (0.852)	0.090 (0.880)
Main Eq: Distances	No	Yes	No	Yes	Yes
Main Eq: Controls	No	No	Yes	Yes	Yes
Auxiliary Eq: Distances	Yes	Yes	Yes	Yes	Yes
Auxiliary Eq: Controls	No	No	No	No	Yes
Number of observations	12270	12270	12157	12157	12157

NOTE. – This table present the average treatment effect (ATE) and accompanying statistics, as derived from the probit coefficients in Table B5 in Appendix B. Standard errors are clustered by circuit court. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

part of the table shows the ATE and accompanying statistics (Standard Error, Z-statistic and P.value). The middle part shows the correlation between the error terms. The third part notes which variables are included in the main and in the auxiliary regressions.<sup>35</sup>

As can be seen, the ATE is positive across specifications and significant (at the 1% or 5% level) in all variants except for Column (6). However, in Columns (3)-(6) the correlation between the error terms is insignificant (which implies that EPRM is inferior to OLS). In contrast, in the two columns where a simultaneous estimation is helpful (columns (1) and (2)) the correlation is significantly negative, which mitigates said concern that unobservables positively drive remands both at the SC and AC.

## 7.2. Textual analysis

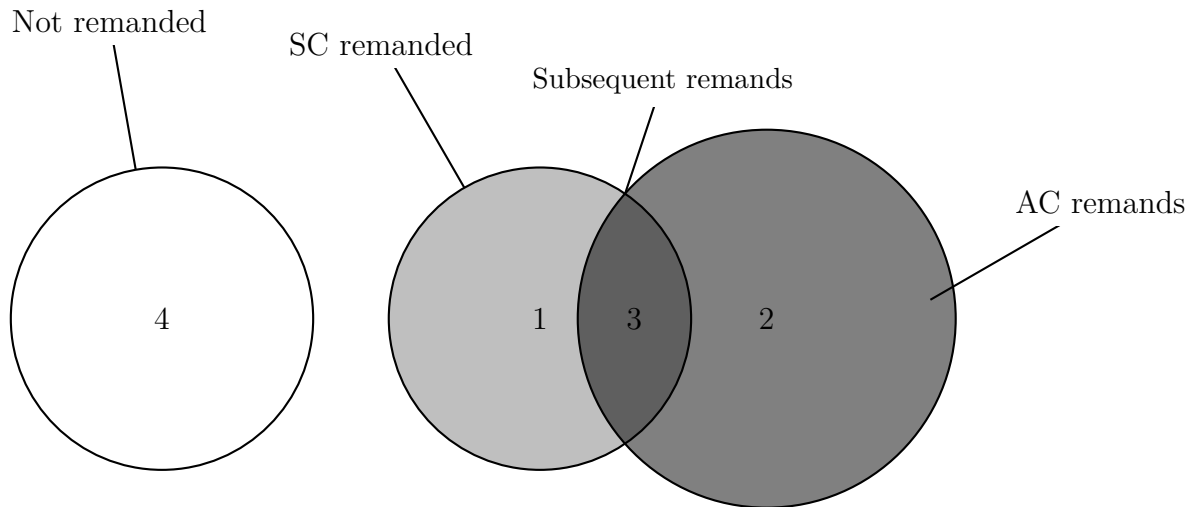
As a second robustness test, we use a textual analysis approach to rule out the concern that SCremanded and other cases are somehow systematically different. Relevant differences may arise on two points: First, the degree of “legalness” - whether the case raises more factual or legal questions. If the case raises many factual questions, then a remand all the way to

<sup>35</sup>We do not weigh the EPRM regressions, since using probability weights in the EPRM prevents conversion in some specifications and over-complicates the model without a clear benefit.

the DC may be required for non-strategic reasons. Second, the degree of legal complexity - whether the case raises difficult questions that both the SC and AC prefer not to resolve in order to avoid a binding precedent.

Note that our regression analysis above already exploits observable variables, such as case-type and complexity proxies, to control for this issue. However, a more detailed approach that directly analyzes the texts of the decision seems useful as a robustness test. Our approach consists of comparing four groups of cases, as depicted in Figure 5.

Figure 5: Universe of remanded cases



We analyze a sub-sample of decisions – all 157 AC decisions classified as “SCremanded” (areas 1+3 in the figure) and, additionally, 200 randomly drawn cases (from within the sample) that were either remanded by the AC, but not previously remanded from the SC (area 2 in the figure, 42 cases) or not remanded by either court (area 4, 158 cases).<sup>36</sup>

Our main textual analysis uses the algorithm “Wordscores” (Laver et al., 2003), which has also been used to analyze judicial decisions (see Dyevre, 2015) and other legal texts (e.g. Evans et al., 2007). Recent evidence further suggests that the Wordscores algorithm outperforms the alternatives for the classification of facts vs. legal values (Cao et al., 2018). In a nutshell, the Wordscores algorithm relies on two reference texts, each corresponding

<sup>36</sup>We chose to use 200 cases as a comparable sample size for the 157 cases. The choice of 42 and 158 cases from either categories were intended to keep the original sample ratio of remands to non-remands.

to a different point (usually the edges) along the dimension of interest. For the purpose of analyzing whether a case is more legal or factual, we use two dictionaries as reference texts: a well-known legal dictionary (“Black’s law dictionary”) and a general dictionary (“The Oxford Thesaurus: An A-Z Dictionary of Synonyms”).<sup>37</sup> Using two dictionaries allows to keep the degree of technicality fixed, leaving the variation to the degree of ‘legalness’. The algorithm creates the edges of the scale by assigning the values 1 to the legal dictionary and -1 to the other dictionary. Frequency of words from each dictionary is then counted for each judicial decision and a score, using weighted averages, is generated. Wordscores then produces two variants of the score - a “raw” and “transformed” score, both of which we compare for robustness. We restrict attention to “bigrams”, i.e. a sequence of two consecutive words, and measure the frequency of these bigrams.<sup>38</sup>

Table 4 compares the scores. Panel A compares SC-remanded cases to all other cases

Table 4  
TEXT ANALYSIS: COMPARISON OF WORDSCORES

<i>Panel A: All analyzed cases</i>			
Factor	SC didn’t remand	SC remanded	p-value
N	200	157	
Raw score (bigrams), mean (SD)	0.2100 (0.0696)	0.2101 (0.0708)	0.99
Transformed score (bigrams), mean (SD)	0.2035 (1.4093)	0.2050 (1.4348)	0.99
<i>Panel B: Only Cases remanded by the AC</i>			
Factor	SC didn’t remand	SC remanded	p-value
N	42	79	
Raw score (bigrams), mean (SD)	0.2000 (0.0577)	0.2269 (0.0728)	0.040
Transformed score (bigrams), mean (SD)	0.0015 (1.1686)	0.5472 (1.4747)	0.040

NOTE.— This table presents the results of the Wordscores analysis. Panel A includes all cases; Panel B included only cases remanded by the AC. for each score, a p-value for a T-test is presented.

<sup>37</sup>We make use not only of the words included in the dictionary, but also with the definitions themselves.

<sup>38</sup>We eliminate all bigrams that do not appear in any of the texts, as well as bigrams beginning with a digit or a symbol. This elimination does not qualitatively affect the results.

(areas 1+3 vs. 2+4). We do not find any significant differences, suggesting that SC-remanded cases are not ex-ante different. Panel B includes an ex-post comparison, i.e. of only cases that the AC decided to remand (i.e. comparing areas 3 vs. 2). Subsequent remands are then found to be significantly more legal, which simply indicates that the motivation for subsequently remanding SC-remanded cases may be different than in other cases and relates somehow to the degree of legalness. One straightforward explanation for this can be derived from our hypotheses: as it is the legal questions which create precedents and entail policy implications, the tendency to subsequently remand such cases may be stronger, precisely due to strategic consideration.

As a third robustness check, we also use an alternative approach which utilizes another legal dictionary (“Nolo’s Free Dictionary of Law Terms and Legal Definitions”) and another algorithm (“Diction”). This details of this analysis can be found in Appendix C. This additional analysis also yields no significant differences in the ex-ante level of legalness between SCremanded and other cases.

Summing up, we find that SC-remanded cases are (ex-ante) neither more “factual” nor more “legal”, which mitigates the concern that SCremanded are systematically different.

## 8. Conclusion

Our empirical analysis of delegation practices in the federal courts reveals that appellate courts are approximately twice as likely to remand to the district courts cases that were received from the Supreme Court. We find clear evidence in favor of such a Subsequent Remand Effect on average (Hypothesis 1) and when the AC-DC and SC-AC ideological distances are low (Hypothesis 5(ii)). We also find clear evidence for a positive effect of the SC-AC distance on the probability of remand (Hypothesis 2) for non-SCremanded cases and some evidence of an interaction effect (Hypothesis 4) between the AC-DC and SC-AC distance for SC-remanded cases, where increasing both distances at the same time yields a

lower probability of remand.

Our findings are overall in line with the literature, but partially differ from those of the existing papers on remands, as we do not find a significant independent effect of the AC-DC distance (Hypothesis 3). One reason for this departure may be that our larger sample allows us to control for case-type, which was not possible in previous studies. We also tested this by limiting the sample to private-civil cases only as in Boyd (2015b) (thereby reducing sample size substantially), and were then indeed able to replicate a negative coefficient for the AC-DC distance as well, suggesting that our enlarged sample provides added value.<sup>39</sup>

Our results provide support for the conjecture that delegation is, at least partially, driven by moral hazard. In Appendix D, we discuss some anecdotal evidence from selected legal cases which further support our conjecture. Although we cannot fully rule out non-strategic reasons for the SRE, our finding that the effect size varies with ideological distances seems to have no clear explanation other than strategic considerations.

The SRE may have some welfare implications. Remands are costly not only due to the effort and opportunity costs of lower-court judges, but also due to litigation costs; congestion costs from delaying reviews in other cases; legal-coherence costs when the top-level and mid-level courts reach opposite conclusions (Hessick, 2012); and deterrence costs in criminal cases (Sarel, 2018). The costs that emerge in any remand are then exacerbated by subsequent remands, as cases move up and down the court system.

If multiple remands were always costly and inefficient, one could simply abolish the authority to subsequently remand. However, multiple remands may bear some benefits that are not directly related to judicial restraints. As mentioned above, remands allow to utilize the relative advantage of each court (so-called “institutional superiority”) and to avoid binding precedents in hard cases. The problem is then that the SC cannot always distinguish between ‘beneficial’ and ‘detrimental’ subsequent remands.

As forbidding subsequent remands seems impractical, the question is whether there ex-

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<sup>39</sup>The results of this check are not reported for the sake of brevity but are available upon request.

ists some softer solution that improves the monitoring process of ACs' remand practices. One option may be to require the AC to provide explicit justifications for all subsequent remands, and ensure that any such decision is brought to the attention of the SC. While this may already exist in some form (e.g. electronic systems alerting the court secretaries on developments), the said solution is more transparent and direct. Alternatively, the DC could be endowed with the role of reporting. As the DC should be averse to expendable remands, the incentive to monitor its superior AC already exists. However, fear of 'revenge' by the AC could then discourage the DC from whistle-blowing. A different approach could be taken by requiring the SC to specify in each remand whether the case should or should not be remanded further (or a list of conditions for a subsequent remand). Such a rule would seem to impose but a small effort cost on the SC, while effectively constraining the AC.

Our analysis is subject to several limitations. First, data constraints prevent us from fully observing the facts in each case. As a result, our analysis may miss some nuances. Second, the EPRM may have limited power due to the relatively small size of the treatment group. We therefore also tested whether a distance matching algorithm produces different results and found that the subsequent effect remains positive and significant.<sup>40</sup> Third, the text analysis cannot differentiate between the facts of the case and their framing by the judges. If judges choose a certain textual approach when deciding to remand (e.g. framing decisions as complex to avoid criticism for remanding), then the text analysis will disregard this. As the text analysis is only a robustness check for one question - whether SC-remanded cases differ systematically from other cases - this limitation does not seem detrimental for our results. Fourth, our Diction analysis is (somewhat) exploratory. However, this seems appropriate for capturing the various parameters on which SC-remanded cases might differ.

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<sup>40</sup>Matching was implemented using Stata's `kmatch` command. The size of the SRE was between 0.17-0.2 and significant at the 1% level. These results are omitted for brevity but are available upon request.

# References

- Arslan-Ayaydin, Ö., Boudt, K., and Thewissen, J. (2016). Managers set the tone: Equity incentives and the tone of earnings press releases. *Journal of Banking & Finance*, 72:S132–S147.
- Beatty, J. K. (1971). State court evasion of United States Supreme Court mandates during the last decade of the warren court. *Valparaiso University Law Review*, 6:260.
- Bennedsen, M. and Schultz, C. (2011). Arm’s length delegation of public services. *Journal of Public Economics*, 95(7-8):543–552.
- Berch, M. A. (2004). We’ve only just begun: The impact of remand orders from higher to lower courts on American jurisprudence. *Arizona State Law Journal*, 36:493.
- Berger, R. S. (1982). Mandamus power of the United States courts of appeals: A complex and confused means of appellate control, the. *Buffalo Law Review*, 31:37.
- Berlemann, M. and Christmann, R. (2016). Do judges react to the probability of appellate review? empirical evidence from trial court procedures. *Applied Economics Letters*, 23(3):202–205.
- Bollen, K. A., Biemer, P. P., Karr, A. F., Tueller, S., and Berzofsky, M. E. (2016). Are survey weights needed? a review of diagnostic tests in regression analysis. *Annual Review of Statistics and Its Application*, 3:375–392.
- Bonica, A. and Sen, M. (2017). The politics of selecting the bench from the bar: The legal profession and partisan incentives to introduce ideology into judicial selection. *The Journal of Law and Economics*, 60(4):559–595.
- Borochoff, E. (2008). Lower court compliance with Supreme Court remands. *Touro Law Review*, 24:849–906.
- Boyd, C. (2015a). Federal district court judge ideology data. Available at: <http://cLboyd.net/ideology.htm>.
- Boyd, C. L. (2015b). The hierarchical influence of courts of appeals on district courts. *The Journal of Legal Studies*, 44(1):113–141.
- Bruhl, A.-A. P. (2008). The Supreme Court’s controversial GVRs-and an alternative. *Michigan Law Review*, 107:711.
- Bruhl, A.-A. P. (2010). Deciding when to decide: How appellate procedure distributes the costs of legal change. *Cornell Law Review*, 96:203.
- Cameron, C. M., Segal, J. A., and Songer, D. (2000). Strategic auditing in a political hierarchy: An informational model of the supreme court’s certiorari decisions. *American Political Science Review*, 94(01):101–116.
- Cao, Y., Ash, E., and Chen, D. L. (2018). Automated fact-value distinction in court opinions. Working Paper. Rutgers, ETH Zurich, and Toulouse School of Economics. URL: <https://ssrn.com/abstract=3202438>.
- Chemersinsky, E. and Miltenberg, N. (2004). The need to clarify the meaning of US Supreme Court remands: The lessons of punitive damages’ cases. *Arizona State Law Journal*, 36:513.
- Cho, C. H., Roberts, R. W., and Patten, D. M. (2010). The language of us corporate environmental disclosure. *Accounting, Organizations and Society*, 35(4):431–443.
- Christiansen, N. (2013). Strategic delegation in a legislative bargaining model with pork and public goods. *Journal of Public Economics*, 97:217–229.
- Cross, F. B. and Tiller, E. H. (1997). Judicial partisanship and obedience to legal doctrine: Whistleblowing on the federal courts of appeals. *Yale Law Journal*, 107:2155.
- Drahozal, C. R. (1998). Judicial incentives and the appeals process. *SMU Law Review*, 51:469–504.
- Dyevre, A. (2015). The promise and pitfalls of automated text-scaling techniques for the analysis of judicial opinions.
- Epstein, L., Landes, W. M., and Posner, R. A. (2013). *The behavior of federal judges: a theoretical and empirical study of rational choice*. Harvard University Press, Cambridge, MA.
- Epstein, L., Martin, A. D., Segal, J. A., and Westerland, C. (2007). The judicial common space. *Journal of Law, Economics, and Organization*, 23(2):303–325.
- Evans, M., McIntosh, W., Lin, J., and Cates, C. (2007). Recounting the courts? applying automated content analysis to enhance empirical legal research. *Journal of Empirical Legal Studies*, 4(4):1007–1039.
- Feess, E. and Sarel, R. (2018). Judicial effort and the appeal system: Theory and experiment. *The Journal of Legal Studies*, 47(2):269–294.
- Gryski, G. S. and Zuk, G. (2008). A multi-user data base on the attributes of us appeals court judges,

- 1801-2000. *National Science Foundation Grant: SBR-93-11999*.
- Gryski, G. S., Zuk, G., and Goldman, S. (2008). A multi-user data base on the attributes of us district court judges, 1789-2000. *National Science Foundation Grant: SBR-9810564*.
- Gutmann, J., Pfaff, K., and Voigt, S. (2017). Banking crises and human rights. *Applied Economics Letters*, 24(19):1374–1377.
- Haire, S. B., Lindquist, S. A., and Songer, D. R. (2003). Appellate court supervision in the federal judiciary: A hierarchical perspective. *Law & Society Review*, 37(1):143–168.
- Harstad, B. (2010). Strategic delegation and voting rules. *Journal of Public Economics*, 94(1-2):102–113.
- Hart, R. and Carroll, C. (2015). *Diction 7.1 Help Manual: The Text Analysis Program; Digitext*. Digitext, Inc., Austin, TX, USA.
- Hart, R. P. and Childers, J. P. (2005). The evolution of candidate bush: A rhetorical analysis. *American Behavioral Scientist*, 49(2):180–197.
- Hartje, R. and Hübler, M. (2017). Smartphones support smart labour. *Applied Economics Letters*, 24(7):467–471.
- Harvard-Law-Review-Association (1954). Note, evasion of Supreme Court mandates in cases remanded to state courts since 1941. *Harvard Law Review*, 67(7):1251–1259.
- Heckman, J. J. (1976). The common structure of statistical models of truncation, sample selection and limited dependent variables and a simple estimator for such models. In *Annals of Economic and Social Measurement, Volume 5, number 4*, pages 475–492. NBER.
- Heckman, J. J. (1978). Dummy endogenous variables in a simultaneous equation system. *Econometrica*, 46:931–959.
- Hessick, F. A. (2012). The cost of remands. *Arizona State Law Journal*, 44:1025–1036.
- Hettinger, V. A., Lindquist, S. A., and Martinek, W. L. (2004). Comparing attitudinal and strategic accounts of dissenting behavior on the US courts of appeals. *American Journal of Political Science*, 48(1):123–137.
- Hurtwitz, M. S. and Kuersten, A. (2012). Changes in the circuits: Exploring the courts of appeals databases and the federal appellate courts. *Judicature*, 96:23.
- Jackson, S., Vanteeva, N., and Fearon, C. (2019). An investigation of the impact of data breach severity on the readability of mandatory data breach notification letters: Evidence from us firms. *Journal of the Association for Information Science and Technology*.
- Kastellec, J. P. (2011). Hierarchical and collegial politics on the US courts of appeals. *The Journal of Politics*, 73(02):345–361.
- Knight, J. and Epstein, L. (2017). Strategic accounts of judging. In *Routledge Handbook of Judicial Behavior*, pages 48–61. Routledge.
- Kuersten, A. and Songer, D. (2014). *Decisions on the US Courts of Appeals*. Routledge, New York, NY.
- Kuersten, A. K. and Haire, S. B. (2007). Update to the appeals court data base (1997-2002). *Judicial Research Initiative*, <http://www.cas.sc.edu/poli/juri/appctdata.htm>.
- Laver, M., Benoit, K., and Garry, J. (2003). Extracting policy positions from political texts using words as data. *American Political Science Review*, 97(02):311–331.
- Levy, G. (2005). Careerist judges and the appeals process. *RAND Journal of Economics*, 36(2):275–297.
- Lewisch, P., Ottone, S., and Ponzano, F. (2015). Third-party punishment under judicial review: An economic experiment on the effects of a two-tier punishment system. *Review of Law & Economics*, 11(2):209–230.
- Lindquist, S. A., Haire, S. B., and Songer, D. R. (2007). Supreme court auditing of the US courts of appeals: An organizational perspective. *Journal of Public Administration Research and Theory*, 17(4):607–624.
- Long, J. S. and Mustillo, S. A. (2018). Using predictions to compare groups in regression models for binary outcomes. Working Paper, Indiana University, Bloomington, IN. URL: [http://www.indiana.edu/~jlsoc/files\\_research/groupdif/long-mustillo-comparing-groups-brm-2018-03-05.pdf](http://www.indiana.edu/~jlsoc/files_research/groupdif/long-mustillo-comparing-groups-brm-2018-03-05.pdf).
- Lowande, K. (2018). Delegation or unilateral action? *The Journal of Law, Economics, and Organization*, 34(1):54–78.
- Ludema, R. D. and Olofsgård, A. (2008). Delegation versus communication in the organization of government. *Journal of Public Economics*, 92(1-2):213–235.
- Maddala, G. S. (1986). *Limited-dependent and qualitative variables in econometrics*. Cambridge university press.
- Majone, G. (2001). Two logics of delegation: agency and fiduciary relations in EU governance. *European Union Politics*, 2(1):103–122.

- Malo, M. Á., Martín-Román, Á., and Moral, A. (2018). “peer effects” or “quasi-peer effects” in Spanish labour court rulings. *European Journal of Law and Economics*, 45(3):497–525.
- Martin, A. D. and Quinn, K. M. (2002). Dynamic ideal point estimation via Markov chain Monte Carlo for the US Supreme Court, 1953–1999. *Political Analysis*, 10(2):134–153.
- Masood, A. and Kassow, B. (2012). Uncertain compliance, salient decisions: Compliance with us supreme court decisions. In *APSA 2012 Annual Meeting Paper*.
- Masood, A. S., Kassow, B. J., and Songer, D. R. (2019). The aggregate dynamics of lower court responses to the US Supreme Court. *Journal of Law and Courts*, 7(2):159–186.
- Moyer, L. (2013). Rethinking critical mass in the federal appellate courts. *Journal of Women, Politics & Policy*, 34(1):49–71.
- Moyer, L. P. and Tankersley, H. (2012). Judicial innovation and sexual harassment doctrine in the US courts of appeals. *Political Research Quarterly*, 65(4):784–798.
- Pablo, B.-H. and Bustos, Á. (2019). Explaining difference in the quantity of cases heard by courts of last resort. *American Law and Economics Review*.
- Pacelle Jr, R. L. and Baum, L. (1992). Supreme court authority in the judiciary: A study of remands. *American Politics Quarterly*, 20(2):169–191.
- Patelli, L. and Pedrini, M. (2014). Is the optimism in CEO’s letters to shareholders sincere? impression management versus communicative action during the economic crisis. *Journal of Business Ethics*, 124(1):19–34.
- Posner, R. A. (1993). What do judges and justices maximize? (the same thing everybody else does). *Supreme Court Economic Review*, 3:1–41.
- Raffo, J. (2019). Matchit: Stata module to match two datasets based on similar text patterns. *Statistical Software Components*.
- Randazzo, K. A. (2008). Strategic anticipation and the hierarchy of justice in us district courts. *American Politics Research*, 36(5):669–693.
- Sarel, R. (2018). Judicial errors, crime deterrence and appeals: Evidence from us federal courts. Working Paper. Institute of Law & Economics, University of Hamburg, URL: <https://ssrn.com/abstract=2739674>.
- Scheinfeld, R. C. and Bagley, P. H. (2013). Reassignment to a new judge after remand from the federal circuit. *The New York Law Journal*, 249(98).
- Schneider, R. (1972). State court evasion of United States Supreme Court mandates: A reconsideration of the evidence. *Valparaiso University Law Review*, 7:191.
- Scott, K. M. (2006). Understanding judicial hierarchy: Reversals and the behavior of intermediate appellate judges. *Law & Society Review*, 40(1):163–192.
- Shavell, S. (1995). The appeals process as a means of error correction. *The Journal of Legal Studies*, 24(2):379–426.
- Shavell, S. (2006). The appeals process and adjudicator incentives. *The Journal of Legal Studies*, 35(1):1–29.
- Smith, A. H. (2014). The effect of ideology and proportionality of the US courts of appeals on the likelihood of supreme court reversal. Working Paper. University of Tennessee, Knoxville, TE. URL: <https://ssrn.com/abstract=2475631>.
- Songer, D. R. (1997). Multi-user database on the US courts of appeals, 1925–1996. *Ann Arbor, Michigan: Inter-university Consortium for Political and Social Research*.
- Songer, D. R. and Haire, S. B. (2017). Access to intermediate appellate courts. *The Oxford Handbook of US Judicial Behavior*, page 149.
- Spriggs, J. F. (1997). Explaining federal bureaucratic compliance with Supreme Court opinions. *Political Research Quarterly*, 50(3):567–593.
- StataCorp (2017). *Structural Equation Modeling Reference Manual*. College Station, TX.
- Sydserrf, R. and Weetman, P. (2002). Developments in content analysis: a transitivity index and diction scores. *Accounting, Auditing & Accountability Journal*, 15(4):523–545.
- Walker, C. J. (2013). The ordinary remand rule and the judicial toolbox for agency dialogue. *Geo. Wash. L. Rev.*, 82:1553.
- Weisberg, M. L. (1947). Supreme court review of state court decisions involving multiple questions. *University of Pennsylvania Law Review*, 95(6):764–781.
- Williams, R. et al. (2012). Using the margins command to estimate and interpret adjusted predictions and marginal effects. *Stata Journal*, 12(2):308–331.

## A. Appendix A: Data sources

The sources used to derive the JCS scores are as follows:

- Individual scores for AC judges and SC judges, downloaded from the website of Prof. Lee Epstein.<sup>41</sup>
- Individual scores for DC judges, downloaded from the website of Prof. Christina Boyd (Boyd, 2015a).<sup>42</sup>
- Median JCS scores of the SC, AC and DC, by court and year. To derive these scores, we used different databases specifying the years of incumbency for each judge. Data for the SC was derived from Prof Epstein’s database. Data for district and appellate judges was taken from the Federal Judicial Center’s database on the biography of judges<sup>43</sup> and complemented by the Multi-User Databases on the Attributes of U.S. Federal Judges (Gryski and Zuk, 2008; Gryski et al., 2008).

These databases are now also available on <http://www.songerproject.org/data.html>.

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<sup>41</sup><http://epstein.wustl.edu/>. Scores for SC judges are based on a transformation of Martin-Quinn scores (Martin and Quinn, 2002).

<sup>42</sup><http://clboyd.net/ideology.html>.

<sup>43</sup>Biographical Directory of Article III Federal Judges: Export. URL: <https://www.fjc.gov/history/judges/biographical-directory-article-iii-federal-judges-export>

## B. Appendix B: Additional tables

Table B1  
SAMPLE SELECTION PROCESS

Database/Source	N	Cumulative observations	Years range
Songer Database	18,195	18,133	1925-1996
KH update	2160	20,355	1997-2002
Songer Phase II	2920	23,275	1952-1996
<b>Total (Songer + updates)</b>		23,275	
Shepardized (same observations, additional variables)	20,354 (overlap: 20,352)	23,275	1925-2002
<i>Missing/Duplicates</i>			
Duplicates	-145	23,130	1943-1987
Missing JCS scores for 2 or more AC judges	-1,615	21,515	1943-1987
Missing values (SC-remanded)	-15	21,500	
Missing values (variables in original databases)	-70	21,430	
Missing value (other JCS scores)	-9,179	12,251	1939-2002
Missing value (Race and Gender of judges)	-95	12,156	
<b>Total</b>		12,156	1939-2002

Note.— This table presents the origins of the observations used in the regressions, where some observations drop due to being duplicates or missing values.

Table B2  
PROBIT COEFFICIENTS:

	Unweighted			Weighted		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Main</i>						
SCremanded	0.622*** (0.110)	0.898* (0.513)	1.040* (0.534)	0.619*** (0.166)	0.770 (0.677)	0.832 (0.708)
SC-AC distance		0.246** (0.105)	0.316** (0.156)		0.303* (0.173)	0.369* (0.189)
AC-DC distance		0.157** (0.072)	0.044 (0.089)		0.189*** (0.063)	0.085 (0.078)
SC-AC distance × AC-DC distance		-0.372 (0.228)	-0.219 (0.281)		-0.374 (0.274)	-0.239 (0.262)
SC remanded × SC-AC distance		-0.435 (2.076)	-0.766 (2.271)		-0.036 (2.357)	-0.086 (2.535)
SC remanded × AC-DC distance		-1.322 (1.988)	-1.324 (2.011)		-0.382 (2.467)	-0.066 (2.580)
SC remanded × SC-AC distance × AC-DC distance		1.064 (6.073)	0.114 (6.313)		-1.653 (7.831)	-3.429 (8.087)
<i>Additional Distances</i>						
Panel- Full AC distance		-0.031 (0.112)	-0.307*** (0.116)		-0.150 (0.126)	-0.389*** (0.132)
DC judge-full AC distance		0.085 (0.072)	-0.022 (0.064)		0.094 (0.070)	-0.017 (0.066)
<i>Case-type</i>						
Civil Rights			0.413*** (0.036)			0.424*** (0.038)
First Amendment			0.059 (0.069)			0.062 (0.087)
Due Process			0.213** (0.085)			0.306*** (0.118)
Privacy			0.264 (0.201)			0.245 (0.205)
Labor			0.243*** (0.087)			0.322*** (0.084)
Economic Activity and Regulation			0.318*** (0.032)			0.345*** (0.036)
Misc.			0.218*** (0.078)			0.255*** (0.068)
Unclassified			-0.183 (0.264)			0.111 (0.319)
<i>Appeal From</i>						
Injunction			0.074 (0.079)			0.057 (0.073)
Summary judgement			0.066 (0.055)			0.007 (0.064)
Guilty plea			0.305*** (0.073)			0.278*** (0.097)
Dismissal			0.219*** (0.047)			0.230*** (0.056)
Post-judgement orders			0.191*** (0.073)			0.115 (0.075)
Post-settlement orders			-0.051 (0.274)			-0.049 (0.328)
Interlocutory appeal			0.144 (0.099)			0.187 (0.124)
Mandamus			-1.123*** (0.350)			-1.166*** (0.364)
Other/Unclassified			0.103*** (0.036)			0.074 (0.055)
Mentions trial judge			-0.104 (0.181)			-0.343* (0.183)
Inapplicable			-0.144 (0.358)			0.206 (0.336)
<i>Threshold Indices</i>						
Threshold index DC			-1.134*** (0.378)			-1.297*** (0.329)
Threshold index AC			-1.615*** (0.291)			-1.529*** (0.335)
<i>Proxies for Complexity</i>						
Amicus Curiae briefs			-0.013 (0.020)			-0.026 (0.029)
Dissenting judges share			0.086 (0.131)			0.014 (0.195)
Length			0.031*** (0.004)			0.034*** (0.004)
<i>Origin</i>						
DC (3 judges)			0.000 (.)			0.000 (.)
State court			-0.042 (0.050)			-0.008 (0.040)
Bankruptcy court			-0.128 (0.092)			-0.142 (0.099)
Federal Magistrate			-0.034 (0.110)			-0.052 (0.087)
Federal Administrative Agency			0.030 (0.100)			0.026 (0.092)
Special D.C. court			-0.339*** (0.061)			-0.324*** (0.057)
Other			0.299*** (0.094)			0.263** (0.131)
Unclassified			-0.498** (0.250)			-0.564*** (0.209)
<i>Attributes of Judges</i>						
Panel majority: Male judges share			-0.039 (0.145)			-0.039 (0.126)
Panel majority: Black judges share			0.427*** (0.117)			0.352*** (0.129)
Panel majority: Hispanic judges share			-0.117 (0.111)			-0.090 (0.118)
Panel majority: Asian judges share			1.299*** (0.130)			1.303*** (0.135)
Male Gender: DC Judge			-0.008 (0.052)			-0.008 (0.050)
Number of observations	21500	12270	12153	21500.000	122700	12153
Time dummies (By SC chief justice)	No	No	Yes	No	No	Yes

NOTE.— This table presents the coefficients of the probit regressions, with (columns 4-6) and without (columns 1-3) probability weights. Baseline categories are: “Criminal” for case-type, “Trial” for Appeal from, and DC (1 judge) for Origin. Coefficients for the time dummies and the constant are not reported. Standard errors are clustered by circuit court. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

Table B3 PAIRWISE COMPARISON: UNWEIGHTED REGRESSION

	at_	Contrast	Std. Err.	z	P>  z	[95% Conf. Interval]		
2	vs	1	0.0040	0.011	0.36	0.719	−0.018	0.026
3	vs	1	0.033	0.016	2.03	0.042	0.0012	0.064
4	vs	1	0.026	0.016	1.64	0.101	−0.0050	0.056
5	vs	1	0.33	0.12	2.82	0.005	0.10	0.57
6	vs	1	0.11	0.17	0.66	0.509	−0.22	0.43
7	vs	1	0.28	0.17	1.6	0.11	−0.064	0.62
8	vs	1	0.051	0.096	0.53	0.594	−0.14	0.24
3	vs	2	0.029	0.016	1.83	0.067	−0.0020	0.059
4	vs	2	0.022	0.013	1.66	0.097	−0.0039	0.047
5	vs	2	0.33	0.12	2.85	0.004	0.10	0.56
6	vs	2	0.11	0.17	0.62	0.535	−0.23	0.44
7	vs	2	0.28	0.17	1.58	0.114	−0.066	0.62
8	vs	2	0.047	0.097	0.49	0.626	−0.14	0.24
4	vs	3	−0.0070	0.012	−0.6	0.55	−0.030	0.016
5	vs	3	0.30	0.11	2.68	0.007	0.081	0.52
6	vs	3	0.077	0.17	0.46	0.647	−0.25	0.40
7	vs	3	0.25	0.18	1.38	0.168	−0.10	0.60
8	vs	3	0.019	0.093	0.2	0.843	−0.16	0.20
5	vs	4	0.31	0.11	2.85	0.004	0.096	0.52
6	vs	4	0.084	0.17	0.49	0.626	−0.25	0.42
7	vs	4	0.25	0.18	1.41	0.159	−0.099	0.61
8	vs	4	0.026	0.091	0.28	0.78	−0.15	0.20
6	vs	5	−0.22	0.26	−0.86	0.392	−0.74	0.29
7	vs	5	−0.055	0.24	−0.23	0.819	−0.52	0.41
8	vs	5	−0.28	0.14	−1.99	0.047	−0.56	−0.0041
7	vs	6	0.17	0.23	0.74	0.459	−0.28	0.62
8	vs	6	−0.058	0.20	−0.29	0.772	−0.45	0.34
8	vs	7	−0.23	0.18	−1.27	0.205	−0.58	0.12

NOTE.— This table presents a pairwise comparison of the predictive margins ( $Pr(Remand|x_i)$ ) at representative values ("MER"). Numbers correspond to the points plotted in Figure 4a.

Table B4 PAIRWISE COMPARISON: WEIGHTED REGRESSION

	at_	Contrast	Std. Err.	z	P>  z	[95% Conf. Interval]
2	vs 1	0.0099	0.0100	0.99	0.322	-0.0097 0.029
3	vs 1	0.038	0.020	1.95	0.051	-0.000 0.076
4	vs 1	0.036	0.024	1.52	0.13	-0.011 0.083
5	vs 1	0.29	0.16	1.78	0.075	-0.029 0.61
6	vs 1	0.25	0.19	1.27	0.203	-0.13 0.62
7	vs 1	0.31	0.13	2.28	0.023	0.043 0.57
8	vs 1	0.054	0.085	0.63	0.526	-0.11 0.22
3	vs 2	0.028	0.018	1.57	0.117	-0.0071 0.063
4	vs 2	0.026	0.020	1.29	0.198	-0.014 0.066
5	vs 2	0.28	0.16	1.76	0.078	-0.032 0.60
6	vs 2	0.24	0.20	1.19	0.236	-0.15 0.63
7	vs 2	0.30	0.13	2.22	0.026	0.035 0.56
8	vs 2	0.044	0.082	0.54	0.587	-0.12 0.20
4	vs 3	-0.0019	0.013	-0.14	0.887	-0.028 0.024
5	vs 3	0.25	0.15	1.7	0.089	-0.039 0.55
6	vs 3	0.21	0.20	1.01	0.311	-0.19 0.61
7	vs 3	0.27	0.14	1.86	0.062	-0.014 0.55
8	vs 3	0.016	0.074	0.22	0.828	-0.13 0.16
5	vs 4	0.26	0.15	1.75	0.08	-0.030 0.54
6	vs 4	0.21	0.21	0.99	0.32	-0.20 0.62
7	vs 4	0.27	0.15	1.86	0.063	-0.015 0.56
8	vs 4	0.018	0.069	0.26	0.795	-0.12 0.15
6	vs 5	-0.046	0.34	-0.13	0.893	-0.72 0.62
7	vs 5	0.015	0.25	0.06	0.953	-0.48 0.51
8	vs 5	-0.24	0.14	-1.71	0.087	-0.51 0.035
7	vs 6	0.061	0.20	0.31	0.755	-0.32 0.44
8	vs 6	-0.19	0.25	-0.76	0.446	-0.68 0.30
8	vs 7	-0.25	0.16	-1.54	0.124	-0.57 0.069

NOTE- This table presents a pairwise comparison of the predictive margins ( $Pr(Remand|x_i)$ ) at representative values ("MER"). Numbers correspond to the points plotted in Figure 4b.

Table B5  
EPRM COEFFICIENTS

	(1)	(2)	(3)	(4)	(5)
<i>Main regression (Dependent variable: Remand)</i>					
SCremanded	3.278*** (0.102)	3.350*** (0.184)	2.156 (1.522)	2.629 (2.288)	0.815 (2.287)
SC-AC distance		0.248** (0.107)		0.320** (0.158)	0.316** (0.159)
AC-DC distance		0.162** (0.072)		0.048 (0.089)	0.042 (0.090)
SC-AC distance × AC-DC distance		-0.383* (0.222)		-0.227 (0.277)	-0.217 (0.286)
SC remanded × SC-AC distance		-0.123 (0.786)		-0.563 (1.836)	-0.806 (2.265)
SC remanded × AC-DC distance		-0.483 (0.843)		-1.081 (1.694)	-1.335 (2.040)
SC remanded × SC-AC distance × AC-DC distance		0.780 (1.874)		-0.010 (5.001)	0.074 (6.319)
<i>Additional Distances</i>					
Panel- Full AC distance		-0.021 (0.111)		-0.300*** (0.116)	-0.309*** (0.113)
DC judge-full AC distance		0.078 (0.065)		-0.026 (0.062)	-0.022 (0.065)
<i>Case-type</i>					
Civil Rights			0.411*** (0.036)	0.412*** (0.036)	0.413*** (0.035)
First Amendment			0.063 (0.065)	0.060 (0.069)	0.060 (0.075)
Due Process			0.214** (0.083)	0.214** (0.085)	0.213** (0.084)
Privacy			0.272 (0.199)	0.265 (0.198)	0.262 (0.201)
Labor			0.241*** (0.086)	0.244*** (0.087)	0.243*** (0.088)
Economic Activity and Regulation			0.316*** (0.032)	0.318*** (0.033)	0.318*** (0.032)
Misc.			0.213*** (0.076)	0.216*** (0.076)	0.218*** (0.077)
Unclassified			-0.185 (0.260)	-0.184 (0.263)	-0.184 (0.263)
<i>Appeal From</i>					
Injunction			0.077 (0.077)	0.073 (0.079)	0.074 (0.081)
Summary judgement			0.065 (0.055)	0.065 (0.056)	0.065 (0.061)
Guilty plea			0.298*** (0.071)	0.305*** (0.073)	0.303*** (0.088)
Dismissal			0.219*** (0.047)	0.218*** (0.047)	0.220*** (0.047)
Post-judgement orders			0.189** (0.074)	0.189** (0.074)	0.189*** (0.071)
Post-settlement orders			-0.058 (0.275)	-0.051 (0.273)	-0.053 (0.282)
Interlocutory appeal			0.138 (0.098)	0.144 (0.099)	0.142 (0.110)
Mandamus			-1.124*** (0.346)	-1.121*** (0.349)	-1.126*** (0.354)
Other/Unclassified			0.103*** (0.037)	0.102*** (0.036)	0.102** (0.042)
Mentions trial judge			-0.103 (0.178)	-0.104 (0.181)	-0.106 (0.182)
Inapplicable			-0.079 (0.404)	-0.118 (0.412)	-0.131 (0.354)
<i>Threshold Indices</i>					
Threshold index DC			-1.152*** (0.371)	-1.131*** (0.377)	-1.140*** (0.377)
Threshold index AC			-1.592*** (0.287)	-1.606*** (0.299)	-1.605*** (0.334)
<i>Proxies for Complexity</i>					
Amicus Curiae briefs			-0.013 (0.020)	-0.013 (0.021)	-0.012 (0.021)
Dissenting judges share			0.079 (0.134)	0.088 (0.130)	0.091 (0.142)
Length			0.031*** (0.004)	0.031*** (0.004)	0.031*** (0.004)
<i>Origin</i>					
DC (3 judges)			-6.173*** (0.210)	-39.729 (.)	-7.347*** (0.201)
State court			-0.039 (0.050)	-0.042 (0.051)	-0.040 (0.049)
Bankruptcy court			-0.128 (0.094)	-0.128 (0.091)	-0.129 (0.093)
Federal Magistrate			-0.039 (0.107)	-0.034 (0.110)	-0.034 (0.110)
Federal Administrative Agency			0.031 (0.100)	0.029 (0.099)	0.028 (0.099)
Special D.C. court			-0.290*** (0.055)	-0.336*** (0.061)	-0.340*** (0.063)
Other			0.304*** (0.092)	0.298*** (0.095)	0.298*** (0.093)
Unclassified			-0.509** (0.246)	-0.497** (0.249)	-0.498** (0.250)
<i>Auxiliary Regression (Dependent Variable: SCremanded)</i>					
SC-AC distance	-0.256 (0.477)	-0.342 (0.419)	-0.272 (0.479)	-0.291 (0.449)	-0.212 (0.492)
AC-DC distance	-0.426 (0.431)	-0.340 (0.406)	-0.348 (0.483)	-0.290 (0.406)	-0.441 (0.464)
SC-AC distance × AC-DC distance	0.659 (1.316)	0.567 (1.080)	0.500 (1.219)	0.481 (1.097)	0.719 (1.151)
<i>Additional Distances</i>					
Panel- Full AC distance	-0.220 (0.257)	-0.230 (0.232)	-0.328 (0.217)	-0.264 (0.237)	-0.450* (0.241)
DC judge-full AC distance	0.267 (0.225)	0.248 (0.231)	0.231 (0.283)	0.233 (0.287)	0.045 (0.257)
<i>Case-type</i>					
Civil Rights					0.058 (0.118)
First Amendment					0.313 (0.265)
Due Process					0.080 (0.372)
Privacy					-3.449*** (0.100)
Labor					-0.051 (0.277)
Economic Activity and Regulation					-0.055 (0.082)
Misc.					0.198 (0.237)
Unclassified					-3.465*** (0.245)
<i>Appeal From</i>					
Injunction					-0.177 (0.296)
Summary judgement					-0.397*** (0.125)
Guilty plea					-0.489 (0.342)
Dismissal					0.030 (0.081)
Post-judgement orders					-0.560* (0.339)
Post-settlement orders					-3.544*** (0.330)
Interlocutory appeal					-4.651*** (1.050)
Mandamus					-3.640*** (0.253)
Other/Unclassified					-0.271** (0.109)
Mentions trial judge					-3.621*** (0.211)
Inapplicable					1.005 (0.615)
<i>Threshold Indices</i>					
Threshold index DC					-1.900 (1.382)
Threshold index AC					1.498*** (0.372)
<i>Proxies for Complexity</i>					
Amicus Curiae briefs					0.117*** (0.034)
Dissenting judges share					0.978*** (0.330)
Length					-0.027** (0.014)
<i>Origin</i>					
DC (3 judges)					-3.234*** (0.433)
State court					0.255*** (0.087)
Bankruptcy court					-3.972*** (0.733)
Federal Magistrate					0.046 (0.451)
Federal Administrative Agency					-4.547*** (0.752)
Special D.C. court					-4.230*** (0.566)
Other					-3.433*** (0.151)
Unclassified					-3.453*** (0.231)
Main eq: Attributes of judges	No	No	No	No	Yes
Main eq: Time dummies for SC chief justice	No	No	No	No	Yes
Aux. eq: Attributes of judges	No	No	No	No	Yes
Aux. eq: Time dummies for SC chief justice	No	No	No	No	Yes

NOTE. – This table presents the coefficients of the ERM model (Stata's eprobit command). The upper part presents the coefficients of the main regression and the second part presents the coefficient in the auxiliary regression. Standard errors are clustered by circuit. The constant and coefficients of the attributes of judges and time dummies for SC chief justice are not reported. Standard errors are clustered by circuit court. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

## Appendix C: Textual analysis using Diction 7.1

Our second part of the textual analysis uses the software “Diction” (Hart and Carroll, 2015). Diction allows to measure different features of a text, using predefined dictionaries that are retrieved from a built-in database of 50,000 existing texts, some of which are legal briefs.<sup>44</sup> Diction has already been used in the literature to analyze texts from different fields, such as accounting (Arslan-Ayaydin et al., 2016; Cho et al., 2010), management (Sydsærf and Weetman, 2002), political science (e.g. Hart and Childers, 2005), and – more recently – also legal disclosures (Jackson et al., 2019). As a recognized rigorous empirical method (for a review, see Patelli and Pedrini, 2014), it seems appropriate also for analyzing judicial decisions. The software provides standardized scores, character counts, and raw totals. Additionally, the software enables to set up customized dictionaries, where each dictionary can be comprised of up to 745 words. The dictionaries are then used as a reference to search for exact matches of words (the search for phrases is not supported).

Diction provides five main variables – Activity, Optimism, Certainty, Realism and Commonality (see footnote 45 for definitions) – which are generated by converting all sub-variables to standardized z-scores.<sup>45</sup> In addition to Diction’s built-in variables, we create also a score of Legalness, using the definitions of “Nolo’s Free Dictionary of Law Terms and Legal Definitions”.<sup>46</sup> When using customized dictionaries, Diction divides the text into sections of 500 words, which are then each given a score. The score of the entire text is determined by the average score based on the section scores. Table B6 below compares the Diction scores and yields the following insights:

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<sup>44</sup>The corpus includes 79 legal documents: argument summaries extracted from county, appellate, and Supreme-Court briefs (see Hart and Carroll, 2015, pp. 46).

<sup>45</sup>The help manual for DICTION 7.1 defines these as follows: *1.Activity* - Language indicating resoluteness, inflexibility, and completeness and a tendency to speak ex cathedra. *2.Optimism* - Language endorsing some person, group, concept or event or highlighting their positive entailments. *3.Certainty* - Language featuring movement, change, the implementation of ideas and the avoidance of inertia. *4.Realism* - Language describing tangible, immediate, recognizable matters that affect people’s everyday lives. *5.Commonality* - Language highlighting the agreed-upon values of a group and rejecting idiosyncratic modes of engagement.

<sup>46</sup>Black’s law dictionary cannot be used in Diction, due to the limited number of words in the dictionary.

**Legalness and Realism.** The Diction analysis reaffirms the finding of no significant difference in “legalness”, but also yields no significant difference when restricting the sample to AC-remanded cases. We also find no significant difference in “Realism”, which may roughly capture whether the judicial decision has tangible and immediate consequences. As factual questions are perhaps more likely to have immediate impacts (e.g. an injunction preventing a specific activity) and legal questions have broader impacts, this further supports the conclusion of no difference in legalness.

Table B6  
TEXT ANALYSIS: COMPARISON OF DICTION SCORES

<i>Panel A: All analyzed cases</i>			
Factor	SC didn't remand	SC remanded	p-value (T-test)
N	200	157	
Activity (Diction score), mean (SD)	50.35 (2.23)	49.46 (2.88)	0.001
Optimism (Diction score), mean (SD)	49.18 (1.68)	49.89 (1.82)	<0.001
Certainty (Diction score), mean (SD)	45.79 (2.94)	45.07 (2.54)	0.016
Realism (Diction score), mean (SD)	51.39 (1.77)	51.25 (1.59)	0.43
Commonality (Diction score), mean (SD)	50.43 (1.32)	50.05 (1.47)	0.012
Legalness (Diction score), mean (SD)	268.51 (21.91)	267.34 (21.22)	0.61
<i>Panel B: Only Cases remanded by the AC</i>			
Factor	SC didn't remand	SC remanded	p-value (T-test)
N	42	79	
Activity (Diction score), mean (SD)	50.82 (1.74)	49.39 (2.08)	<0.001
Optimism (Diction score), mean (SD)	49.23 (1.76)	49.67 (1.62)	0.16
Certainty (Diction score), mean (SD)	46.35 (1.71)	45.41 (1.93)	0.009
Realism (Diction score), mean (SD)	51.62 (1.74)	51.19 (1.65)	0.19
Commonality (Diction score), mean (SD)	50.62 (1.12)	49.89 (1.15)	<0.001
Legalness (Diction score), mean (SD)	271.11 (16.96)	267.96 (22.76)	0.43

Note. – This table compares the Diction scores. Panel A includes all cases; Panel B included only cases remanded by the AC. For each score, a p-value for a t-test is presented.

**Activity and Certainty.** SC-remanded cases display lower levels of both Activity (which captures the resoluteness of the decision) and Certainty (which captures movement and change). Thus, in cases that were received from the SC, AC judges seem to be more hesitant and use a language which is more conservative. Such behavior may be consistent with the

fear of reversal: as AC judges learn that their previous decision was somehow incorrect, yielding a remand from the SC, they become less sure of their position.

**Commonality and Optimism.** SC-remanded cases display higher levels of Commonality (which captures the tendency to highlight agreed-upon values) and Optimism (which captures the endorsement of a person, group or concept). Thus, in SC-remanded cases, consensus and positivity are highlighted, which is again consistent with the fear of reversal: as AC judges do not want to appear deviant, they may emphasize how the decision is congruent with the legal consensus.

Summing up, the Diction analysis also suggests that selection effects do not drive our findings.

## Appendix D: Anecdotal Evidence

In this appendix, we briefly discuss several examples which demonstrate different aspects of our main argument – that remands may be driven by strategic considerations, above and beyond a case-relevant justification.

**Example 1: Remands in social security cases.** As a first example, we consider an out-of-sample issue in which strategic remands have been argued to be prevalent: applications for social security payments. When people apply for such payments, the applications are examined by a Commissioner whose decisions can be later appealed to the federal DC. In the late 1970’s, U.S. Congress was concerned that judges are strategically remanding cases because they ”disagree with the outcome”:

“[U]nder existing law the court itself, on its own motion or on motion of the claimant, has discretionary authority ‘for good cause’ to remand the case back to the ALJ. It would appear that, although many of these court remands are justified, some remands are undertaken because the judge disagrees with the outcome of the case even though he would have to sustain it under the ‘substantial evidence rule.’ Moreover, the number of these court remands seems to be increasing...” [*A Senate report, as cited in Melkonyan v. Sullivan, 501 US 89 (1991), pp. 100-101 (hereinafter: "Melkonyan")*].

Or, as expressed by the SC in its decision:

“it is evident [...] that Congress believed courts were often remanding Social Security cases without good reason.” [*ibid.*]

In response to Congress’ concerns, the law governing remands in such social security cases was amended so that only two types of remands were allowed (see *Sullivan v. Finkelstein*, 496 US 617 (1990)): First, the court may use a post-judgement remand, whenever the decision was affirmed, modified or reversed. Second, the court may use a pre-judgment remand, when new evidence were discovered that might have affected the outcome had they been known at the time of the initial decision. In *Melkonyan*, the DC remanded but did not clearly clarify which (if any) of these two types of circumstances apply. As a result, it became unclear

whether the judgement is final or not, which affected the issue of attorney fees. The case eventually was appealed to the AC and thereafter to the SC. The SC decided to remand the case to the AC with instructions to remand further to the DC. This case demonstrates several key points of our analysis. First, legislators are indeed sometimes concerned with the fear that judges remand for strategic reasons. Second, the law which governs remands is often convoluted, so that it is not always clear when a remand is appropriate. Third, when the SC wishes for a case to be remanded to the DC, it sometimes declares so explicitly. Hence, one may assume that when the SC remands without explicitly asking for a subsequent remand (as in most, if not all, the cases in our sample), such a remand is more likely to emerge due to strategic reasons.

**Example 2: Cases where remands seem redundant.** As a second example, we consider two in-sample anecdotes, in which it is not obvious that remands yield case-relevant benefits. Consider the case of *In the Matter of Slodov*, 579 F. 2d 400 (6th Cir. 1978), where the AC reversed a part of the DC’s decision and the SC granted certiorari. The SC then reversed the AC’s decision and the case was sent back to the AC. The AC decided to remand to the DC so that the latter will ‘reinstate that portion of its previous judgment’ that was initially reversed. Prima Facie, there does not seem to be a real need for remanding in this case, as the AC could have simply affirmed the original decision. Still, the AC instead chooses to remand and let the DC “finish up” the review.

Next, consider instead the case of *Reliable Transfer Co. Inc v. United States*, 522 F.2d 1381 (2d Cir. 1975) (hereinafter: “*Reliable Transfer* case”) which revolved around the question of whether proportional liability should be applied. The AC followed the existing precedent, but the SC overruled the precedent and applied proportional liability. Then, the SC remanded the case to the AC, stating:

“The judgement before us is vacated and the case is remanded for further proceedings consistent with this opinion.” [*United States v. Reliable Transfer Co., Inc*, 421 U.S. 397, 411 (1975).]

On remand, the AC emphasized that the SC's ruling applies to only one specific issue, but strangely decided to remand to the DC with *very* specific instructions:

"Pursuant to the Supreme Court's remand, we [...] vacated out judgement [...]. We now remand the case to the district court with instructions to modify its judgment by providing that plaintiff vessel owner shall recover 25% of the damages it sustained. No costs in this Court." [*Reliable Transfer case*, pp. 522.]

In this instance, it is clear that (1) the SC did not explicitly order that the case should be remanded to the DC nor that such a remand is required and (2) that the bottom line seems very clear, so that there is little practical need for a remand.

**Example 3: Cases where the SC explicitly requests that the AC, and not the DC, will decide on the outcome.** For our final (in-sample) anecdotes, consider the question of how the SC frames the remand to the AC: While the SC rarely expresses a clear preference for the fate of the case post-remand, there are instances where such a preference is stated, but later overlooked by the AC. For instance, in the case of *United States Cartridge Co v. Powell*, 185 F.2d 67 (8th Cir. 1950) (hereinafter: "*Cartridge case*") an action brought by 59 plaintiffs who were employed at a plant during World War II ended up in the SC. The case was then merged with other related cases. Interestingly, the SC remanded in all of merged cases but made an explicit distinction between the *Cartridge* case and the rest:

"in [The Cartridge case], the judgement of the Court of Appeals is reversed and the cause is remanded to that court for further consideration of the errors asserted on appeal but not reviewed by that court. In [the other cases], the judgements of the respective Courts of Appeals are reversed and the causes are remanded to the respective District Courts for further proceedings in conformity with this opinion" [*Powell v. United States Cartridge Co.*, 339 U.S. 497, 522 (1950).]

Note that the SC emphasized that the remand in the *Cartridge* case is made to the AC ("that court") and implies that the grounds are an error which the AC must correct. Yet, on remand, the AC then decided to (reverse and) remand the case further to the DC. Albeit the AC provides a formal justification for the remand (stating that a remand is required

because some issues in dispute were not addressed in the affidavits at trial), the SC’s prior explicit decision casts doubt on whether, in fact, the remand is non-strategic.

Next, consider the case of *United States v. Padilla*, 993 F.2d 721 (9th Cir. 1993) (hereinafter: *Padilla* case), where the SC remanded and clearly defined the question to be resolved:

”We therefore reverse the judgement of the Court of Appeals. The case is remanded so that the court may consider whether each respondent had either a property interest protected by the Fourth Amendment that was interfered with by the stop of the automobile driven by Arciniega, or a reasonable expectation of privacy that was invaded by the search thereof.” [*United States vs. Padilla*, 508 U.S. 77, 82 (1993)].

In this case, the SC uses the term ”the court”, most likely referring to the AC (not the DC). Yet, the AC issued a very brief decision and remanded, stating that

”The order of the district court suppressing the evidence is vacated, and the case is remanded to the district court for further proceedings consistent with the decision of the Supreme Court of the United States in *United States v. Padilla*.”

Thus, in this case it is again unclear whether the AC’s decision to remand is appropriate. We fully acknowledge that these anecdotes are challenging to analyze, as it is often less than clear what is the actual motivation in play and whether said motivation coincides with the written text. Precisely for this reason, we opted for a large-scale statistical analysis which does not entail speculation based on anecdotes, but rather quantitative conclusions.