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The company they keep: When and why Chinese judges engage in collegiality

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Abstract

Scholars of law, economics, and political science argue that collegiality matters. Considerable panel effects exist across jurisdictions, and judges compose panels strategically. In China, millions of cases are decided by collegial panels every year; however, little attention has been paid to the issue of collegiality. We offer one of the first empirical inquiries into collegial panels in China. Specifically, when and why do judges engage in collegiality? How does the presiding judge compose a judicial panel? What is the panel effect? Based on 23,564 cases decided by a local court in Beijing, China, from 2015 to 2017, we build a network of judges' collegial behaviors and examine the judges' strategy for panel composition and its potential impact. We argue for an external mechanism of panel effects and provide a strategic account of coalition-building in a vulnerable environment. For mundane cases, Chinese judges tend to compose panels with junior judges. To some extent, such panels are their comfort zone. When facing complex cases, they tend to step out of their comfort zone and form panels with more capable judges. When doing so, they are also more inclined to make tough decisions, such as ruling against the government in administrative litigation cases and repeated players in civil cases, among others. The study sheds light on judicial politics in China and has the potential to expand our understanding of collective judicial decision-making in transitional societies.

KEYWORDS
China, collegiality, judicial panel, panel composition, panel effect

INTRODUCTION

When facing grave decisions, one tends to resort to collective decision-making. Human society features various collective forums, such as parliaments, congresses, committees, boards, and of course, judicial panels. The Condorcet jury theorem predicts that the probability that a team of decision-makers will collectively make the correct decision is higher than the probability that any single member of the team will make such a decision (de Condorcet, 1785). Modern studies extended this theorem to groups of different sizes, compositions, and decision-making rules (Austen-Smith & Banks, 1996; Nitzan & Paroush, 1982, 2017; Shapley & Grofman, 1984). Across the globe, judges decide major cases collectively with other professional judges or laymen to produce "truth and order" (Cardozo & Kaufman, 2010; Edwards, 2003). Students of judicial politics are particularly concerned with the composition and effects of collegial panels. When and why do judges engage in collegiality? Does panel composition matter? What is the panel effect?

Despite being a "warm and fuzzy" concept, jurists argue that collegiality invokes the highest ideals and aspirations of judging. Collegiality mitigates judges' ideological preferences and enables them to find common ground and reach better decisions (Edwards, 1998, 2003; Nash, 2022; Nelson et al., 2022). Empirical studies have found that collegiality matters. Panel judges' gender, race, or party affiliation have significant impacts on case outcomes (Boyd et al., 2010; Cross & Tiller, 1998; Farhang & Wawro, 2004; Peresie, 2004; Revesz, 1997; Sunstein et al., 2006). Notwithstanding the substantial evidence for panel effects, exploration of the mechanisms that produced such effects remains at best inconclusive. Hinkle et al. (2020) are among the first to delineate three competing mechanisms: acquiescence, deliberation, and strategic consideration. Either minority or majority judges may acquiesce and bow to the norm of consensus. Collegial deliberation mitigates partisan politics (Edwards, 2003; Nelson et al., 2022). Whistleblowers in judicial panels constrain a panel majority from disobeying legal doctrines by threatening to dissent (Cross & Tiller, 1998; Kastellec, 2007, 2011). Others argue that collegiality works as a form of groupthink that helps fend off intervening factors, such as future regret or loss of reputation (Arlen & Tontrup, 2015; Gershoni, 2021).

Either legalistic or empirical study of collegiality has developed in a system of rule of law. Mechanisms identified so far almost exclusively focus on and are most relevant to the American experience, such as dissent writing and certiorari review by the US Supreme Court (Boyd et al., 2010; Cross & Tiller, 1998; Farhang & Wawro, 2004; Peresie, 2004; Revesz, 1997; Sunstein et al., 2006; with exceptions, such as Engel, 2022; Swalve, 2022). What about collective judicial decisions in other jurisdictions? Does collegiality matter in a transitional society where there lacks a fully-fledged rule-of-law system? This study extends the discussion to China, where courts are deeply embedded in the political and social

environment despite the continuous legal reform of the last four decades (Ng & He, 2017). At the same time, decisions of panel composition are diffused. Chinese presiding judges enjoy rare discretionary power in deciding whom to cooperate with for a case. Therefore, we adopt a behavioral approach to conceptualize and measure collegiality in the Chinese context. Specifically, we are concerned with Chinese judges' collegial behaviors and the subsequent panel effects. When and why do Chinese judges opt for collegial decisions? Why do they choose to cooperate with some judges in some cases but not others?

Based on 23,564 cases from 2015 to 2017 decided by Court A, a local court in Beijing, China, and in-depth interviews with court former leaders and judges, we build a network of collegial behaviors of judges in Court A and examine their cooperation strategy and the impacts on case outcomes. Our study reveals the intriguing panel effects in Chinese courts: When judges cooperate with less familiar colleagues, they tend to make tough decisions, such as ruling against government agencies in administrative litigation cases, favoring one-shutters, or rendering extreme decisions in civil cases and relatively harsh punishments in criminal ones.

The intriguing panel effects indicate Chinese judges' strategic consideration when handling cases. When adjudicating mundane cases, the presiding judges tend to improvise judicial panels with their junior colleagues. These cases constitute their comfort zone, where they can easily steer the case deposition while "tutoring" young judges. However, when handling complex ones, the presiding judges tend to spare extra efforts to huddle with their capable colleagues, as measured by our original local data. In general, we argue for an external mechanism of panel effect: Chinese judges huddle together strategically to reach tough decisions.

This study contributes to the literature in the following ways. First, the paper challenges the long-standing dismissal of Chinese collegial panels as merely symbolic. Collegiality matters in China, and judges form strategic coalitions to reach tough decisions. This is coherent with the nascent strategic account of judicial politics in China. Second, a systematic examination of the China case complements the overall account of collegiality. Specifically, we offer further evidence substantiating an external mechanism of panel effects: strategic coalition-building in a vulnerable environment to reach tough decisions. It originates from the discretional authority of the presiding judge to decide panel composition. Finally, our behavioral understanding of collegiality and the measurement of "tough decisions" enable us to explore collective decision-making in jurisdictions beyond the common law system where voting tallies are not published and judges' political leanings are not available.

The rest of the paper proceeds as follows. The literature review section examines the definition, measurement, effects, and mechanism of collegiality. The second section details the vulnerable judicial environment in China and the discretionary power of presiding judges to decide on panel composition

in the trial procedure. The third section proposes an external mechanism of panel effects: collegiality as strategic coalition-building to make tough decisions and derives our hypotheses. The fourth section presents the case selection, data, and method. The empirical results and the mechanisms of panel effects are examined in the fifth section. Finally, we conclude with a brief discussion of the theoretical implications of our findings and prospects for future inquiries.

LITERATURE REVIEW

Scholars agree that collegiality matters but disagree on how to measure such an elusive and amorphous concept. Additionally, nascent literature begins to delineate and disentangle the competing mechanisms of panel effects. The present study echoes the rising behavioral account and proposes an external mechanism of panel effects.

Collegiality: Definition and measurement

To some extent, jurists' renewed interests in collegiality were inspired by the attitudinal or strategic account of judicial politics. Empirical scholars challenged the legalistic approach that judges decide cases solely based on law and case facts. Scholars argue that judicial decisions are affected by either judges' political leaning or their strategic consideration of other actors, such as the president, the US House of Representatives and Senate, or the hierarchical control of higher courts, especially the US Supreme Court (Epstein & Knight, 2013; Kastellec, 2007; Martin & Quinn, 2002; Segal & Cover, 1989; Songer et al., 1994). Jurists nonetheless maintain that empirical scholars underestimate the logic of collegiality, which invokes the highest ideals and aspirations of judging. Indeed, judges across the globe work collectively to "produce truth and order" when adjudicating significant cases. Collegiality mitigates judges' ideological preferences and enables them to find common ground to reach better decisions (Cardozo & Kaufman, 2010; Edwards, 2003).

Few scholars challenged the classic "Edwards/Coffin" concept where "collegiality" is commonly understood as warm interpersonal relationships, good-faith deliberation among open-minded panelists, and their wiliness to persuade and be persuaded (Coffin, 1994; Edwards, 1998, 2003). The common goal is "excellence in the court's decisions" (Coffin, 1994). Scholars, however, disagree on how to measure collegiality. The extant measurement can roughly be organized into three approaches: ideological, linguistic, and behavioral.

First, scholars of empirical legal study address the renewed interests in collegiality by exploring the impact of panel composition on case outcomes, that is, panel effects. The measurements of both panel composition and effects rest on

the personal characteristics or ideologies of judges, especially those of the minority judges or counter-judges (Cross & Tiller, 1998; Farhang & Wawro, 2004; Hinkle et al., 2020; Kastellec, 2011; Kim, 2009; Revesz, 1997; Sunstein et al., 2006).

Feeling that such a measurement fails to capture the essence of the "Edwards/Coffin" concept, legal scholars adopt a "linguistic" approach to evaluate the level of collegiality. Following Note (2011), Nash (2022) develops measures of "respectful dissent," calculating the number of dissenting opinions expressing respectful dissents, referring to the majority as the court or panel, or referring to the majority judges as colleagues, friends, or co-panelists.

Finally, a nascent, and perhaps more direct measurement of collegiality derives from studies of sociology and behavioral psychology. Scholars focus on interpersonal contact among panelists. Swalve (2022), for example, notes that judges' pairwise and group familiarity, as a necessary antecedent of collegiality, can improve deliberations among judges from the German Federal Court of Justice (see also Engel, 2022; Engel & Weinshall, 2020). Nelson et al. (2022) measure interpersonal contact by whether two judges have offices in the same court and find that such contact mitigates the effect of ideology. In a recent inquiry, Hinkle et al. (2022) further establishes that collegiality concerns, measured by judges' interpersonal contact, affect the expression of disagreement among federal appellate judges.

In sum, although scholars generally agree with the classic concept of collegiality, they disagree with how this "warm and fuzzy" concept can be operationalized and measured. In a way, the recent linguistic and behavioral accounts both challenge and address the problem that ideology, as an easily accessible consideration, only shifts to the forefront of the judicial calculus because there lack of other alternatives (Nelson et al., 2022). The present study follows the behavioral approach and examines the collegial behaviors of Chinese judges.

Panel effects

Notwithstanding the undecidedness on how to measure collegiality, scholars of judicial politics have since devoted considerable attention to the issue of panel effects, particularly that of US Courts of Appeals, where judges sit either on a three-judge panel or en banc. Formal theories and empirical inquiries generally have found that collegiality matters. Gender, race, and political leanings of judges, among other factors, significantly affect judicial decisions. Peresie (2004) notes that the presence of a female judge on a judicial panel significantly impacts rulings in cases on sex discrimination and sexual harassment. Similarly, when a female judge serves on the panel, male panelists tend to vote more liberally (Boyd et al., 2010; Farhang & Wawro, 2004). Race also bears a significant

influence on judicial rulings. Black judges tend to support affirmative action programs. The addition of a black judge significantly increases the probability of a black defendant getting relief in death penalty cases (Kastellec, 2013, 2021).

Ideologies matter, too. Decisions of appellate judges are influenced not only by their own ideologies but also by those of other panelists (Revesz, 1997). Cross and Tiller (1998) analyze administrative law decisions by the D.C. Circuit Court of Appeals and find that panels controlled by Republicans were more likely to defer to conservative agency decisions than those controlled by Democrats. Additionally, the presence of ideologically opposed judges moderates partisan influences. Consequently, legal doctrines are better followed (Cross & Tiller, 1998). Sunstein et al. (2006) reach similar findings in federal circuits. Kastellec (2011) further provides a systematic longitudinal account of panel composition and judicial behavior.

Mechanisms of panel effects

Despite the long-standing discussion of panel effects, it was only recently that "institutional mechanisms and interactive dynamics" that produced such effects were explored (Farhang & Wawro, 2004; Fischman, 2015; Hinkle et al., 2020; Kim, 2009; Swalve, 2022). Hinkle et al. (2020) classify three major mechanisms of panel effects: acquiesce, deliberation, and strategy.

First, both minority and majority judges may bow to the norm of consensus and remain acquiesce (Epstein et al., 2011, 2013; Kim, 2009; Posner, 2010). Avoiding a dissent can save the extra efforts required for opinion writing and maintain the air of collegiality (Cross & Tiller, 1998; Epstein et al., 2013; Kastellec, 2007; Posner, 2010). Farhang and Wawro (2004) note that the presence of a female judge on a panel will significantly affect panel decisions in discrimination cases; at the same time, there exists little evidence for similar effects if a black judge is included. They attribute this phenomenon to the institutional norm of unanimity on federal appellate panels, which fosters deliberation and compromise that allows numerical minorities on panels to influence case outcomes. Adams and Ferreira (2010) suggest that group moderation could be the result of the so-called "compromise effect" or "membership effect" because group members tend to average out the extreme ideas or even individuals who hold them. Similarly, Fischman (2015) explains the surprisingly large impact of panel composition on case outcomes in asylum appeals in federal circuit courts due to the norm of consensus.

Second, deliberation among judges can make a difference. Judge Edwards (2003) argues that collegiality is a process of dialogue, persuasion, and revision. Examined closely, deliberation leads to both mitigation and polarization. For one, deliberation mitigates judges' personal ideology through communication and deliberation and ultimately influences each judge in a constructive and

law-abiding manner. Such a mitigation effect, however, is only partially supported by formal models or empirical exploration. Through a formal theory of legal rules, Lax (2003) concludes that judges in collegial appellate courts can aggregate their preferences over legal rules and case dispositions. The resulting median collegial doctrine is reinforced by key institutions of the judicial hierarchy. A recent inquiry by Iaryczower et al. (2018), on the other hand, provides for a conditional mitigation effect of collegiality. They find that deliberation lowers the incidence of incorrect decisions when judges tend to disagree ex ante or share relatively imprecise private information. For another, Sunstein et al. (2006) argue that deliberation in judicial panels might induce group polarization. Through analysis of published cases in more than 20 areas of the law, they note that a group of like-minded people tends to move to relative extremes. For example, a Democratic appointee is more like to vote in a liberal fashion if the other two panelists were appointed by a president of the same political party. A recent study by Parameswaran et al. (2021), however, emphasizes the pivotal role of median judges over case outcomes. In a recent research, Nelson et al. (2022) use interpersonal contact instead of ideologies of panel judges to measure collegial behaviors and note that interpersonal contact mitigates the influence of ideology in appellate review. Overall, collegial behaviors moderate the ideological polarization.

Finally, the strategic account highlights the panel effects resulting from the whistleblowing of minority judges. Cross and Tiller (1998) note that a judge who is in the ideological minority of a three-judge circuit court panel can constrain the ideological majority by threatening, either explicitly or implicitly, to act as a "whistleblower" and signal a higher court to review that case. The threat of this signal, which comes in the form of dissent, may cause the majority to moderate its position or even vote against its preferred disposition (Cross & Tiller, 1998). Kastellec (2007, 2011) provides empirical evidence for the whistleblowing effect. He further demonstrates the asymmetric effect of adding a counter-judge to a panel and argues that the interaction of hierarchical and collegial politics increases the Supreme Court's control of the judicial hierarchy and helps promote the rule of law. In a similar vein, Beim et al. (2014, 2016) provide that the effect of a whistleblower's dissent on the likelihood of review is strongest when they are ideologically closest to the panel, whereas the effect of their silence is strongest when they are ideologically most distant from the panel.

It is worth noting that most of the existing discussion of panel effects adopts the "ideological" approach. It depends on the disclosure of the voting tallies and a well-insulated environment (with exceptions, see Nelson et al., 2022; Swalve, 2022). Indeed, many mechanisms identified are almost uniquely American, such as dissent writing and certiorari review by the Supreme Court. When scholars move beyond the American setting, however, another facet of collegial behaviors becomes prominent: one that perceives collegiality as a form

of groupthink that helps fend off intervening factors, such as future regret or loss of reputation. Arlen and Tontrup (2015) find that groups overcome the "endowment effect" because shared responsibility helps decrease concerns about future regret. In a similar vein, Gershoni (2021) exploits a unique regulatory change and an original dataset of arbitration awards. He finds that panels composed of three judges are more inclined to reach extreme "all-or-nothing" awards compared to individual judges. Groups can provide individual judges with a "shield of anonymity," which decreases their reputation concerns regarding making extreme decisions. We expect to find a greater role of the external mechanism of panel effects when we move beyond the American experience.

COLLEGIAL DECISIONS IN CHINESE COURTS

The case of China offers a rare opportunity to systematically reexamine the impact and mechanism of collegiality when most assumptions of the current literature are relaxed. Specifically, collegiality in China is characterized by the strategic composition of the presiding judge and the overall vulnerable environment. Under such circumstances, we expect to observe an external mechanism of panel effects: Chinese judges huddle together strategically to reach tough decisions.

In this section, we first review the literature on judicial politics in China. Chinese courts are deeply embedded institutions and consequently remain vulnerable to external interventions. A nascent strategic account of the Chinese judiciary and the recent sweeping reforms of the judicial system, however, justify a renewed look at the issue of collegiality in China. We then provide a brief introduction of the trial procedure and explore the discretionary nature of case assignment and panel composition in greater detail.

Judicial politics in China

It has been widely accepted that Chinese courts are largely embedded in the political and legal system. Often, they are dismissed as subordinates and instruments of the one-party state (Liebman, 2007; Lubman, 1999; Minzner, 2011; Ng & He, 2017; Peerenboom, 2002). In papers examining the four-decade trajectory of judicial reforms, Liebman (2007, 2014) maintains that "judicial reforms are more technical than fundamental." The "law-stability paradox" has hindered the reform and cast shadows over the prospect of a rule-of-law system. In a nutshell, the Chinese courts remain vulnerable when facing powerful party-state organs.

Nascent literature, however, has noted the "strategic nature" of judicial decisions in China. Some even argue for the expansion of judicial power.

Scholars maintain that the Supreme People's Court of China (SPC) has expanded its power considerably. Ahl (2014) argues that the SPC exercises significant influence over legal development by publishing "guiding cases." The improvement of consistency across jurisdictions and geographical boundaries will further strengthen judicial professionalism. Judicial interpretation serves as another effective tool for the SPC to expand its power. Through inventing and remodeling every conceivable area of the law system, the SPC continually widens its scope of power and resists bureaucratic and legislative interference (Hou & Keith, 2012; Ip, 2010; Yu, 2021; Zhang, 2012). The SPC also enhances its competence through the promotion of judicial efficiency and tightens its control over lower-level courts (Zhang, 2012). Some scholars extend the discussion to the local level (He, 2013; Stern, 2010; Yu, 2014). Yu (2014), for example, argues that the instrumental use of the courts to facilitate economic development and the courts' conscious engagement in administrative litigation cases (ALCs) contribute to the expansion of the local court's authority.

As a result, many commentators agree that judicial practice in China can best be characterized as a dual system, in which mundane cases are resolved in a law-binding fashion, whereas political and sensitive cases are still under the purview of the party (He, 2012a; Kinkel & Hurst, 2011; O'Brien & Li, 2004; Wang, 2018; Yu, 2021).

Collegial panels in China

Despite the great scholarly attention paid to China's judicial practice, the issue of collegiality, however, has been largely overlooked. Throughout the years, Chinese courts have introduced measures to expedite trial procedures to tackle their exploding dockets, including the summary procedure since 2003 and fast-track sentencing since 2011.[1] As a result, cases are increasingly placed under the purview of individual judges rather than collegial panels. Collegial panels are reserved for "complicated and difficult" cases. Till now, roughly 20% of cases are decided by a panel of three or more judges or lay assessors. Scholarly literature, however, generally dismisses collegiality as merely symbolic, involving no actual deliberation (Chen, 2007; Liao & Deng, 2009).[2]

To some extent, such scholarly dismissal is partly related to the underestimated role of Chinese judges. Previously defined as "state's soldiers,"

[1]Several Provisions of the Supreme People's Court on the Application of Summary Procedures in the Trial of Civil Cases, 2003: http://en.pkulaw.cn/display.aspx?cgid=5424f74ef65e75f1bdfb&lib=law
Notice of the Supreme People's Court on Issuing the Guiding Opinions on the Pilot Work of Implementing the Speedy Trial of Small Claims by Some Basic-Level People's Courts: http://en.pkulaw.cn/display.aspx?cgid=ae7cbe3981fe0bbcbdfb&lib=law

[2]The time limit on case closure is a distinctive feature of China's judicial practice and has been widely criticized by the literature for bringing unnecessary and unwanted pressure on judges. The maximum duration is prescribed by law and differs by case types and trial procedures. See Fu (2012).

Chinese judges were characterized as subordinates of the local party-state and had limited authority in deciding cases (Liebman, 2007; Lubman, 1999). The sweeping reforms since the fourth plenum of the 18th Party Congress, however, have introduced profound measures to shake up the Chinese bench and thereby justify a renewed look at their collective behaviors. First, the 2014 *yuan'ezhi* reform (员额制, the personnel reform) instructed every court to limit its personnel to a specified number. As a result, only about 60% of judges maintained their judgeship. The number of judges in China was cut from 210,000 to 120,000 by June 2017 (Yu, 2021). The positive impact of the reform is that judges are now significantly better compensated and equipped with a team of clerks.[3] Second, the 2014 reform also introduced a system of judicial responsibility, where judges are held responsible for a lifetime for their decisions. This is to "let the judge decide the case and hold the judge accountable for the case."[4] Moreover, the 2014 reform proceeded against the backdrop of rising legal education (Zhang & Ginsburg, 2019). In general, it is believed that judges in China have become better qualified, more capable, and increasingly professional. In other words, Chinese judges are becoming judges (Liebman, 2007; Liu, 2006; Minzner, 2011; Su, 2004; Zhang & Ginsburg, 2019). Therefore, it is reasonable to expect that judges, with their newly substantiated authority, will take judicial decisions seriously and make better use of existing legal institutions, including the collegial system.

Trial procedure in China

Figure 1 illustrates the typical processing of a case in Chinese courts. It can be roughly divided into four stages. First, litigants file their complaints with the Docketing Division, a unique department in Chinese courts that accepts and processes complaints (Ma, 2020). The division distributes cases to relevant court divisions,

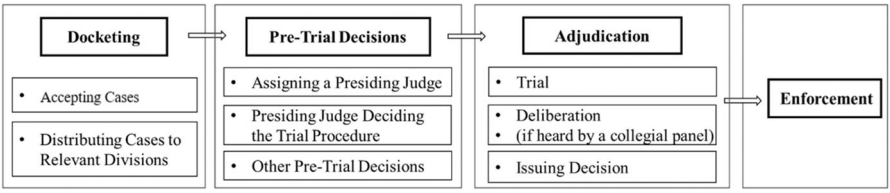

FIGURE 1 Trial procedure in China

[3]Interpretation and Application of Shanghai Court's "Guiding Opinions on Trial Team Building (Trial)": www.sohu.com/a/320504022_100017141

[4]Several Opinions of the Supreme People's Court on Further Strengthening the Administration of Trials by the People's Courts in a New Era, https://www.pkulaw.com/en_law/8b252716587dc6b8bdfb.html.

and the corresponding division heads are responsible for assigning a presiding judge to each case. Scholars have long criticized the lack of necessary supervision of this process (Jiang & Li, 2019; Lan et al., 2012). The 2014 reform instructed local courts to implement random assignment, yet the division head's power of case assignment has largely remained intact.[5] In Appendix 1, we examine case assignment using our data. There was little indication of random assignment. Cases' characteristics mattered, and complex cases were assigned to more competent judges.

Second, once the presiding judge is decided, he or she is responsible for moving the case along the "obstacle course," especially to close the case within limits specified by the procedural laws. Among all the pretrial decisions, the most important one is for the presiding judge to decide whether the case shall be tried by summary or ordinary procedure. For the latter, the presiding judge must reach out to other judges or lay assessors to form a collegial panel and pull through the case in 6 months.[6] According to our interviews, many factors affect the presiding judge's decision when composing a collegial panel, such as whether the judges are familiar with one another, whether they have relevant expertise or trial experience, and the extent of the judge's workload, etc. (Table A1 in Appendix 2).[7] In other words, Chinese presiding judges enjoy rare discretionary power in deciding panel composition.

In the adjudication stage, the presiding judge schedules court hearings. If the case is heard by a collegial panel, a deliberation conference occurs behind closed doors. Sometimes, complicated and difficult cases are referred to the Adjudication Committee, a judicial panel of the most senior judges in the court, including the court president (He, 1998; He, 2012b; Lubman, 1999). Once a final decision is reached, the decision is signed and made public.

Finally, should any issues arise in the enforcement of an effective decision, the litigants can file for court enforcement. It is a distinctive feature of Chinese courts to enforce their own decisions. Over the years, Chinese courts have jealously guarded these lucrative enforcement cases despite the longstanding criticism over their inability to enforce them (He, 2012c; Yu, 2021).

THEORETICAL FRAMEWORK

As discussed earlier, collegiality is generally understood as the "warm" relationship among independent and insulated judges when they sit together and decide cases collectively. What happens when courts function while deeply embedded

[5]The SPC instructed in its 4th five-year reform plan that when assigning cases, local courts should carry out random assignments first and designated assignments if necessary. See Opinions of the Supreme People's Court on Comprehensively Deepening Court Reform in China – The 4th Five-Year Outline of the Reform Program of People's Courts (2014–2018), https://www.pkulaw.com/en_law/96cc56877358c877bdfb.html.

[6]Civil Litigation Law, Article 149, 161. Other pretrial decisions include the service of process, pretrial conferences in criminal cases, property preservation and advance enforcement in civil cases, and mediation when possible.

[7]Confidential Interviews 20200851, 20200852. All the interview records are listed in Appendix 2.

in the local environment? Specifically to the China case, when and why do Chinese judges engage in collegial behaviors? Given the diffused fashion of panel composition, we propose that Chinese judges form collegial panels strategically to reach tough decisions.

Collegiality as strategic coalition-building

Few studies explore what happens when the presiding judge has the authority to choose panelists, except Givati and Rosenberg (2020). In their analysis of the Supreme Court of Israel, they provide systematic evidence of strategic panel composition. Without further analysis of case outcomes, however, the implications of nonrandom or strategic composition remain unclear (Chilton & Levy, 2015; Hasday, 2000; Levy, 2017; Meador, 1982; Tiller & Cross, 1999).

When the presiding judge enjoys the authority of organizing a judicial panel, his or her collegial behavior is a practice of coalition-building. In a vulnerable environment, when judges are subject to intervention or even repatriation, the presiding judges may adopt different strategies to build a coalition. For one, the presiding judge may choose "going-along" colleagues. In his famous utility function of judicial behavior, Posner (1993) notes that "judicial utility is a function mainly of income, leisure, and judicial voting." For cases "involving puzzles soluble with the technical tools of legal analysis," judges may simply cast their vote with the opinionated judge. Such practice can be categorized as "leisure serving" or deference to other colleagues. (see also, Hinkle et al., 2020) Chinese judges, especially those from lower courts, equally improvise judicial panels with their (often junior) colleagues when adjudicating simple cases. They can easily steer these cases toward a particular direction while fulfilling some tutoring functions to help junior judges. Going-along decisions tend to be ones that are legally "soluble" or ones that do not require significant investments of their cognitive resources, either ex ante or especially, ex post (Posner, 1995).

Presiding judges will step out of their comfort zone and form coalitions with more capable colleagues, such as the "star" judges (see section Data for measurement of "star" judges). "Star" judges or court leaders are generally more secured and have more political clout to withstand the backlash from either the government or the society.[8]

This is coherent with the "risky shift" effect identified by comparative literature (Kugler et al., 2012; Prates et al., 2017; Wallach et al., 1962; Zhang & Casari, 2012). Scholars of social psychology and behavioral economics have long observed that groups make riskier decisions than individuals. Experimental studies have proved that groups tend to diffuse or spread the individual level of responsibility because the decisions are made jointly with other members rather

[8]We thank one of the anonymous reviewers for the suggestion.

than alone (Bem et al., 1965; Wallach et al., 1962, 1964). This is because responsibility for a choice is inherently obscure in intergroup interactions and the interdependent decisional procedure creates a "shield of anonymity" for the group members (Gershoni, 2021; Kugler et al., 2012; Wildschut et al., 2001). As a result, groups hold a more risk-neutral attitude compared to individuals' high aversion to risk and henceforth, leading to more risky decisions (Prates et al., 2017; Zhang & Casari, 2012). Therefore, certain types of collegial panels in Chinese courts, particularly those "huddling-together" ones, may help strengthen the morale of the panel, reduce concerns about the potential risk, and fend off external interventions (He, 2012b; Zhu, 2016).

Strategies of "going-along" and "huddling-together" are largely coherent with our interviews and are also endorsed by judges from several provinces when we reported the early version of this paper at several academic seminars. A judge from the civil division told us, "We all have proper partners in mind when composing a judicial panel. For example, I cooperate with two kinds of judges. The first type is my 'tutor' in the court, who is a court leader, and I always turn to him for help when facing complicated cases. For other cases, I tend to find those with whom I maintain a good relationship. We know each other only too well."[9] A judge from the administrative division similarly commented: "Case characteristics matter. If it is an ordinary case, a young colleague will suffice. For a complicated one, I would look for an experienced partner." He further clarified: "Experience refers to a combination of seniority in the court and expertise in dealing with a specific type of cases. For example, if it is a case on work-related injury, I will invite a colleague who has adjudicated such cases."[10]

Measuring collegial behaviors

Panel composition is usually measured through dummy variables reflecting the diversity of the judicial panels, such as race, gender, and ideologies of judges (Farhang & Wawro, 2004; Kastellec, 2007; Sunstein et al., 2006). Such a common approach is hardly applicable in the China case, where little ideological divergence exists in terms of the political leanings of judges. Therefore, the present study takes a behavioral approach to measuring judges' collegial behaviors. We employ methods of social network analysis and build a cooperation network of Chinese judges. We are particularly concerned with the frequency of judges' cooperation with each other. A higher rate of cooperation between two judges may indicate they are more familiar and comfortable with each other, that is, a "going-along" type. A lower rate of cooperation, on the other hand, indicates some unusual circumstance that demands extra efforts in coalition-building, that

[9]Confidential Interview 20201133.
[10]Confidential Interview 20201234.

is, a "huddling-together" type. We henceforth measure judges' collegial behaviors through the frequency of their cooperation in judicial panels.

It is worth noting that measuring judges' collegial behavior through the frequency of their cooperation is similar to the aforementioned behavior approach to measure "familiarity" in German courts, albeit with one crucial difference. (Engel, 2022; Swalve, 2022) In German courts, judicial panels are composed randomly and judges have no authority in deciding panel composition. In China, presiding judges enjoy discretionary power to compose the panel. In this process, familiarity among judges provides necessary information for the presiding judges. In other words, in our analysis, familiarity serves as an antecedent to judges' cooperation.

Tough decisions as panel effects

What is then the impact of different coalition-building strategies? Traditional approaches for analyzing panel effects are generally based on panel judges' voting tallies and their political leanings (Cross & Tiller, 1998; Farhang & Wawro, 2004; Kastellec, 2011; Kim, 2009; Revesz, 1997; Sunstein et al., 2006). Those indices, however, are hardly available beyond the common law system. A nascent approach to measuring panel effects rests on how daring or laborious the decisions are. Swalve (2022), for example, measures panel effects by the probability of scheduling a more laborious process or the extensiveness of justification of judicial decisions. Similarly, Engel (2022) measures how "daring" the decisions are, that is, ruling in favor of the constitutional complainant.

We similarly propose that strategically strengthened collegial panels produce significant panel effects. When judges make extra efforts to sit together, they tend to deliver decisions that are more audacious and controversial, that is, tough decisions. We henceforth derive our baseline hypothesis.

> **Hypothesis 1.** Strategically composed judicial panels are more likely to reach tough decisions. That is, as the cooperation ratio between two judges decreases, it is more likely that the collegial panel will deliver tough decisions.

A tough decision is relatively difficult to operationalize and can be understood only in different types of cases. As previously discussed, students of judicial politics in China often distinguish mundane cases from cases with political significance (He, 2012a; Kinkel & Hurst, 2011; O'Brien & Li, 2004; Wang, 2018; Yu, 2021). The rarity of the latter to be accepted and adjudicated by courts, however, makes it unfit for systematic empirical inquiry. We, therefore, resort to the literature to operationalize "tough decisions" in different case types.

Administrative litigation cases

In ALCs, courts in vulnerable environments typically find it hard to rule against the government. Helmke (2002) provides a strategic account of judicial decision-making in contexts where judges face institutional insecurity. The lack of judicial independence motivates judges to "strategically defect" against weak outgoing governments. Rulings against governments in ALCs are equally difficult, if not more so, in China. Finder (1989) categorizes filing an ALC against Chinese governments as one "like throwing an egg against a stone." Even after the 2014 reform, ALC litigants fare no better, with a national winning rate for plaintiffs fluctuating around 10% (Tables A2-1 and A2-2 in Appendix 4, see also He, 2012; Pei, 1997). Therefore, we operationalize tough decisions in ALCs as rulings against the government.

> **Hypothesis 1a.** In ALCs, as the cooperation ratio between two judges decreases, it is more likely that the collegial panel rules against the government.

Civil cases

We employ two identification strategies in defining "tough decisions" in civil cases. First, we employ the seminal distinction of one-shotter and repeated player made by Galanter (1974). In his path-breaking paper, Galanter divides legal actors into claimants who have only occasional recourse to the courts (i.e., one-shotters) and repeated players that continuously engaged in similar litigations over time. Numerous studies have since proven that repeated players enjoy significant advantages in courts across different jurisdictions (Atkins, 1991; Chen et al., 2015; McCormick, 1993; Songer et al., 1999). He and Su (2013) are one of the first to extend such distinction to China. They find that institutional litigants fare better than individual ones in Chinese courts.

Therefore, in an unbalanced civil case, that is, one between a one-shotter and a repeated player, a ruling for the former is less common and we define it as a tough decision. In our analysis, one-shotters refer to ordinary citizens, such as urban residents, migrant workers, or farmers. Repeated players refer to institutions, ranging from state-owned enterprises, and private enterprises to public institutions.

> **Hypothesis 1b.** In unbalanced civil cases, as the cooperation ratio between two judges decreases, it is more likely that the collegial panel rules for one-shotters.

Additionally, weaker institutions, even some Constitutional Courts, tend to produce partial wins rather than rendering extreme decisions. (Ginsburg, 2003;

Sweet, 2000) In his analysis of arbitration cases in the United States, Gershoni (2021) also finds that panels of three arbitrators are likely to render more extreme "all or nothing awards" compared to sole arbitrators. This is because arbitration institutions are particularly susceptible to reputation damages. Likewise, extreme decisions could be problematic in the Chinese context. Judges are under pressure to maintain social stability and strike a balance between "legal effects" and "social effects" (Fu & Peerenboom, 2009). The current round of judicial reforms has introduced even greater populism concerns (Liebman, 2014; Yu, 2021; Yu & Wang, 2022). It is, therefore, reasonable to expect that a strategically strengthened collegial panel helps relieve such concerns and henceforth renders more extreme decisions.

> **Hypothesis 1c.** In civil cases, as the cooperation ratio between two judges decreases, it is more likely that the collegial panel renders extreme decisions.

Criminal cases

Finally, scholars have noted a "lenient turn" in China's criminal justice. Since the 2000s, the long-standing culture of punitive justice has gradually conceded to a new policy of "Balancing Leniency and Harshness" (Li, 2015; Trevaskes, 2010). Liebman (2015) offers one of the first empirical analyses of criminal judgments in Henan Province and testifies that local courts act leniently in routine criminal cases. In particular, this manifests in reduced sentences and the use of probation in minor criminal cases. In a similar vein, we expect to find a significant difference in terms of criminal judgments when judges switch from "going-along" to "huddling-together."

> **Hypothesis 1d.** In criminal cases, as the cooperation ratio between two judges decreases, it is more likely that the collegial panel renders harsher punishment.

DATA AND METHOD

Case selection

To understand how and why judges cooperate with each other, we carry out a field study from 2019 to 2021 in Court A, a basic court in Beijing, China. The choice of Court A is for its accessibility and representativeness. First, the geographic vicinity of Court A makes it easier for our fieldwork. We have visited Court A multiple times and interviewed more than a dozen judges. Getting to

know these judges well helps us understand and explore their daily interactions with each other.

Additionally, the choice of Court A strikes a balance between professionalism and political awareness. First, it is widely believed professionalism promotes independent judicial decisions. Beijing is among the most developed regions in China, and most judges from Court A are recruited from top law schools. It has won various honorary titles from the SPC and is nationally renowned for its vanguard role in developing novel legal doctrines. Second, as the capital city of China, Beijing is under direct oversight from the center. Judges in Beijing, like other local officials, are equipped with a high level of political awareness. The combination of rising professionalism and a high level of political awareness makes Court A a perfect example to observe judicial behavior in a vulnerable environment.

Data

In this study, we combine multiple sources of original data, including documents of adjudication decisions from China Judgments Online (CJO), semi-structured interviews with judges, and news and articles published on the official website of Court A since it was established.

DADs from CJO

CJO is an official website established by the SPC in 2013 to publish DADs online (Liebman et al., 2020; Ma et al., 2016). Since 2014, DADs should generally be published on CJO except in specific circumstances stipulated by law.[11] Applying computer-assisted sequential sentence classification and named entity recognition, we compile a database of 23,564 cases heard by Court A from March 2015 to March 2017[12] and extract cases' characteristics from DADs, including the litigation parties, names of the trial judges, cause of actions, etc. Basic information of DADs is shown in Table A3 in Appendix 5. According to our manual review of more than 5000 cases, the precision rate of our method is more than 99.8%, the recall rate reached 100%, and the F1 value exceeds 99.9%, reflecting a high recognition accuracy. To even out the possible intervention of the exogenously imposed personnel reform (see section Collegial panels in China), we analyze cases decided by Court A exactly one year before and after the time when the reform concluded in Court A, that is, March 21st, 2016.[13]

[11]Provisions of the Supreme People's Court on the Issuance of Judgments on the Internet by the People's Courts: https://www.pkulaw.com/en_law/b77d8d13324c3735bdfb.html
[12]See (Jiang et al., 2019).
[13]Confidential Interview 20201133.

As shown in Appendix 3, our data is balanced before and after the cut-point and the findings are robust after controlling for the reform in Appendix 12.

Empirical analysis using DADs from CJO has to deal with the issue of missingness. Previous assessments revealed that the publication rate varied significantly across time and place, ranging from 50% to 80% (Ahl et al., 2019; Liebman et al., 2020; Ma et al., 2016). Our choice to look at DADs from March 2015 to March 2017 makes it particularly difficult to evaluate the level of missingness because court statistics are calculated on a yearly basis. Through interviews, we learned that Court A handled approximately 67,000 cases in 2016, and our data included 13,424 cases heard in 2016, accounting for roughly 20% of the total sample.[14] We use three approaches to verify the reliability of our dataset. First, as summarized by Liebman et al. (2020), there are three credible explanations for what is missing from CJO: administrative censorship, incentive bias, and diligence bias. None is directly related to the identities of judges or trial procedures. Second, we look into our sample of ALCs, arguably the most sensitive type of cases (Adida et al., 2020; Finder, 1989; O'Brien & Li, 2004; Pei, 1997). The overall winning rate for the plaintiff was 11.9% in our data, which is in line with both the national rate (approximately 12.9%) and that of Beijing's (averaging around 11%, please refer to Appendix 4 for more details.) Such consistency suggests that our data are not seriously biased. Finally, we borrow wisdom from Liebman et al. (2020) to look into "local knowledge" when verifying the reliability of empirical findings. We invited three judges from the civil, administrative, and enforcement divisions to evaluate our preliminary results. They agreed that the cooperation network derived from the publicly available DADs was consistent with their experience in daily work.[15] We thus remain cautiously optimistic about the reliability of our analysis.

Database of judges

We also compile a database of judges in Court A. Obtaining the personal information of Chinese judges is difficult. Our familiarity with the court enables us to interview several former court leaders, and other judges and we ask them to recall relevant information of their colleagues.[16] Our database contains information on more than 300 judges, including their age, gender, education, and position in Court A (see Appendix 5 and 6 for the statistical description).

In addition, professional capability is a multifaceted term and could be understood in multiple ways. It can be a combination of both expertise and experience. Therefore, we develop a novel proxy of judges' capability--"exposure". During our

[14]Confidential Interview 20210613.
[15]Confidential Interviews 20201133, 20201234
[16]Confidential Interviews 20200811–20200842.

interviews, when asked which colleagues are highly professional and more capable, judges constantly talk about the "star" judges. According to them, "star" judges are often mentioned in the official news, either in the internal gazette, newsletter, or official website. Specifically, a judge categorized "those who can squeeze time among their heavy caseload and write academic articles analyzing their cases" as "well respected and highly competent."[17] We, therefore, pull all records from Court A's website and compute the number of times a judge's name appears in the official news and the number of articles written by the judge. The combined value is the "exposure" of a judge, and it serves as a proxy of their professional capability. As illustrated in Figure 2, a judge's exposure is positively related to their education and position, and the "star" judges in Court A are usually in middle age.

An immediate question that follows is who the presiding judges are and who the panel judges are. As illustrated in Appendix 6, Figure A3 the presiding judges are generally slightly older and less educated but hold higher positions and are more exposed online.

Independent variable: Collegial behaviors

To examine the judges' strategy for panel composition and the panel effect, we pull all relevant DADs from CJO and identify the names of judges who heard cases to construct a cooperation network of judges (see Figure 3). Constructing a social network usually involves sending questionnaires to individuals asking about their social relationships with others in the community. Cooperation among judges, however, is reflected faithfully in their decisions. Constructing the social network among judges through DADs not only enables us to identify the most cooperative judges (network centrality, Table 1) but also reveals enough nuances to discern less frequent cooperation among judges. We can then explore the effect of the frequency of judges' cooperation.

Figure 3 displays the cooperation network in Court A. Any two judges' joint presence in a judicial panel is marked as a connection. Every node in Figure 3 represents a judge, and every edge stands for the connection between a pair of judges (i.e., a presiding judge and a panel judge). The shade of the node represents divisions, and the size represents their degree of connection (i.e., the number of judges with whom a judge has worked). The thickness of the edges represents the connection of pairs. The thicker the line, the more frequent the cooperation.

Table 1 further presents the network indicators. Judges from the civil, criminal, and administrative divisions share a higher value of betweenness centrality and a lower closeness centrality, indicating that they lie in the center of the court's network and maintain a more cooperative relationship with their colleagues. It is noteworthy that enforcement judges constitute a dense network,

[17]Confidential Interview 20201133.

one that is relatively closed and with high connectivity inside the cluster but dispersed from the main network. Also, judges from administrative offices are less involved in deciding cases.[18] Their indegree, outdegree, and betweenness degrees are relatively lower, indicating their marginal position in the court.

To empirically examine the cooperation strategy of presiding judges, we calculate the probability of a presiding judge choosing others as their panelists, the "cooperation ratio." It reflects the number of times the presiding judge (i.e., judge_i) chose a specific judge (i.e., judge_j) as his or her panelist divided by the number of cases judge_i presided over in our dataset. A higher cooperation ratio represents a more frequent connection between judges. It serves as the independent variable of this study. If the panel consists of three judges (i.e., one presiding judge and two panel judges), the independent variable is given by the panel average. We calculate the cooperation ratio between 793 pairs of judges.

$$\text{Cooperation\_ratio}_{i,j} = \frac{\text{number of times judge}_\text{i}\text{ chose judge}_j\text{ as his/her panelist}}{\text{number of cases the judge}_i\text{ preside over in the dataset}} \quad (1)$$

Judge_i represents for the presiding judge in a given case, and judge_j represents for the panel judge.

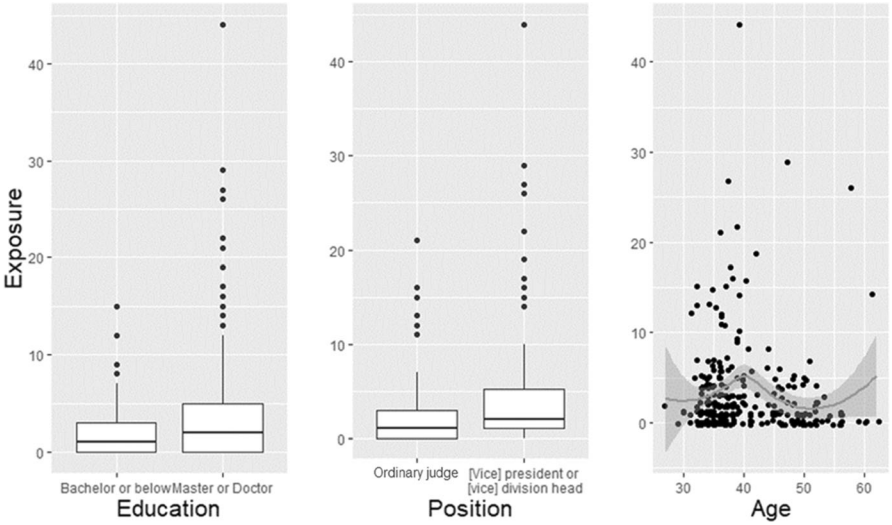

FIGURE 2 Personal characteristics of judges in Court A, China. The gray region represents 90% confidential intervals. Correlations of variables are listed in Appendix 6.

[18]Some judges who work in management positions or research offices are involved in case hearings, too.

Dependent variable: Tough decision

The dependent variable is "tough decision." As discussed above, we operationalize "tough decisions" in administrative, civil, and criminal cases separately.

First, our baseline analysis focuses on ALCs. Tough decisions in ALCs are understood as rulings against accused government agencies. Typically, a ruling in favor of the plaintiff in an ALC involves situations when the accused administrative acts are revoked, changed, required by courts to perform, or confirmed by courts as illegal.[19] As shown in Table A3 in Appendix 5, 291 of 1115 ALCs on file involved at least two judges (labeled as cooperative cases). In 269 of them, the court issued a judgment; others are interim *caidings* [裁定, ruling], such as a ruling on jurisdictional disputes. The outcome of an ALC is coded as 1 if the court decided in favor of the plaintiff and 0 otherwise.

We then extend the analysis to civil and criminal cases. First, we distinguish unbalanced cases in our dataset. In 1063 civil cases decided through the ordinary procedure by panels with at least two judges, 397 cases can be categorized as unbalanced. The outcome (claim) is coded as 1 if the court supported at least some of the claims made by the one-shotter and 0 if the court rejected all claims. For robustness analysis, we also adopt an alternative measurement of case outcomes in the unbalanced cases, measured by the proportion of litigation fee borne by the repeated player (He & Su, 2013). If the repeated player was responsible for all litigation fee, the case outcome (litigation fee) is coded 1; otherwise, it is coded 0.

Additionally, following the method of Gershoni (2021), we label a civil case as polarized if either party bears more than 60% of the litigation fee and as a moderate case otherwise. As shown in Table A3 in Appendix 5, 93% of cases are categorized as polarized. Because the selection of the threshold may affect our empirical results, in the appendix, we also choose other ratios of litigation fee as the coding threshold (see Appendix 10).

Finally, our dataset only includes 82 criminal cases that involved at least two judges, 79 of which issued a judgment involving 135 defendants. In these cases, 127 defendants were sentenced to fixed-term imprisonment and 32 were sentenced to probation. We use the length of the sentence (calculated in months), the relative harshness of penalty[20] (measured by the length of imprisonment as a proportion of the legally prescribed sentencing range[21]) and whether they were sentenced to probation to measure case outcomes in criminal cases.

[19]China's Administrative Litigation Law, Article 70. Also, see Kim et al. (2022).

[20]We thank one of the anonymous reviewers for the advice.

[21]For example, according to the Criminal Law, Article 264, the sentencing range for theft is 0–3 years. If the defendant is sentenced to 1 year in prison, the relative harshness of penalty takes the value of 1/(3–0) = 0.33.

Control variables

The present study controls both case characteristics and personal characteristics of judges. First, DADs are semi-structured legal texts that can be roughly divided into four parts, including the parties' information, fact list, holding list, and final decision. Scholars have noted that various case characteristics can be extracted from the text of DADs (Ahl et al., 2019; Liebman et al., 2020; Michelson, 2019). Through computer-assisted analysis of the published DADs, we derive variables related to the characteristics of cases, including the case type, trial procedure, etc.

Following Hurka and Haag (2020) and Qian and Zhao (2018), we measure each case's complexity using the logarithm of the number of words used in the holding list (case complexity). The section includes the legal reasoning of the judges and serves as the basis of the final decision (see Table A5 in Appendix 7 for two examples of holding lists). Additionally, we also control for the number of participants involved in the case (number of participants), the number of legal articles involved in the case (number of law), whether a lawyer was involved in the case (lawyer), and whether a case involved state-owned enterprises and public institutions or farmers (i.e., soe&pi and farmer). When analyzing the panel effects in ALCs, we further control whether the plaintiff or the defendant hired a lawyer (i.e., p_lawyer and d_lawyer), and whether a third party participated in the case (third party).[22] Specifically, because of the limited number of ALCs in our dataset, we reclassified the scopes of administrative management (admin scope) involved in the case into three types: land and urban planning, economy and market supervision, and government management.[23] When analyzing the panel effects in civil cases, we also identify the level-two causes of action (i.e., cause of action), including marriage and inheritance disputes; contract disputes; labor and personnel disputes; tort law; personal rights disputes; special procedure; property disputes; civil disputes related to companies, securities, insurance, bills, and intellectual property; and competition disputes.[24]

The present study also controls the characteristics of individual judges, including the administrative positions held by the judge in Court A (position, coded as 1 if the judge serves as court's [vice] president or [vice] division head

[22]Administrative Litigation Law, Article 29.

[23]The SPC uses the cause of action to classify different cases to facilitate adjudication management and has published dozens of documents regulating local courts' practice. Generally speaking, the practice of cause of action differs with respect to the type of cases—civil, criminal, or ALCs. As a legal term, the cause of action is primarily used in civil cases and ALCs. There are four levels of the cause of action in civil cases and three types in ALCs. The official classification is usually based on relevant laws, features of the cases, and practical experience of local courts. See, for example, "Notice of the Supreme People's Court on Regulating the Cause of Action of Administrative Cases" (2004), available at https://www.pkulaw.com/en_law/f90e7f5e3f88882abdfb.html. For ALCs, the notice classified it into 42 types of administrative scopes. Because we have 269 ALCs, we further collapse the case types into three aforementioned categories to make them executable for regression analysis.

[24]Ibid.

and 0 otherwise), the judge's educational background (education, coded 1 if the judge has a master or doctoral degree and 0 otherwise), the exposure of the judge as explained in section Data, and the judge's age. Table A3 in Appendix 5 provides the descriptive statistics of the aforementioned variables.

Empirical strategy

We use different models to analyze panel effects. If the dependent variable is a binary one, we employ the logistic regression model; the ordinary linear square model is used when the dependent variable is a continuous one.

Logistic regression when the dependent variable is a binary one

$$\text{logit}(p) = \ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 * \text{cooperation ratio} + \sum \beta_i * \text{Ctrl\_Var}_i + \varepsilon. \quad (2)$$

Ordinary least square regression when the dependent variable is a continuous one

$$\text{outcome} = \beta_0 + \beta_1 * \text{cooperation ratio} + \sum \beta_i * \text{Ctrl\_Var}_i + \varepsilon \quad (3)$$

The panel effects are measured by the coefficient of the independent variable, cooperation ratio (i.e., β_1). A significantly negative β_1 implies that judges are more likely to make tough decisions when composing panels with less familiar judges.

EMPIRICAL RESULTS

Panel effects in ALCs

We first examine the panel effects in ALCs. As shown in Model 1 of Table 2, the coefficient of cooperation ratio is significantly negative at the 1% level. That is, when judges composed panels with less familiar colleagues, the plaintiff's winning rates increased significantly. H1a is verified.

Given the considerable significance of case complexity in Model 1, we examine the moderation effect of case complexity in Model 2. As shown in Figure 4, the coefficient of the interaction term is not significant at the 10% level. However, the marginal effect of cooperation ratio is negatively significant when the value of case complexity is relatively larger, indicating that collegiality matters more when judges are dealing with more complex cases. Moreover, when case

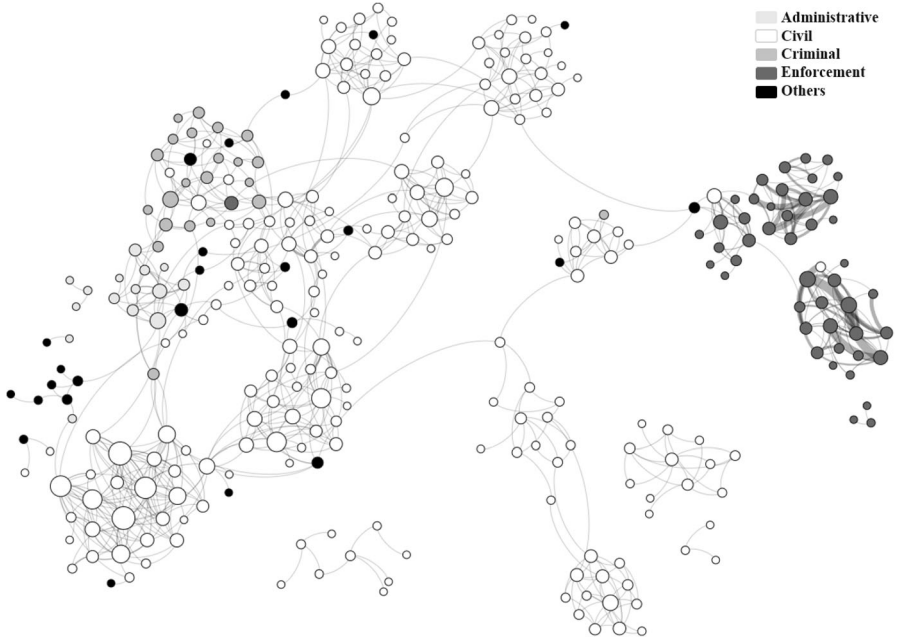

FIGURE 3 Cooperation network of judges in Court A, China. This figure is made by the authors in Gephi 0.9.2 and further edited to fit black-and-white setting.

TABLE 1 Statistical description of judges' cooperation network

	In-degree	Out-degree	Degree	Closeness centrality	Betweenness centrality
Administrative division	1.93	2.20	4.13	0.21	557.87
Civil division	2.82	2.76	5.57	0.28	148.94
Criminal division	2.36	3.64	5.00	0.24	297.89
Enforcement division	2.61	2.70	5.30	0.37	19.25
Other divisions	1.46	1.38	2.83	0.29	25.92

Note: The indicators in Table 1 are calculated in Gephi 0.9.2.

complexity takes on extreme values, the marginal effect of cooperation ratio is not significant. It may be due to the relatively small sample size in this interval. Overall, the panel effects are significant in most samples.

TABLE 2 Panel effects in administrative litigation cases

Dependent Variable	Outcome Model 1 Logistic	Outcome Model 2 Logistic
Cooperation ratio	−3.875***	−1.196
	(1.186)	(13.36)
Case complexity	11.566***	12.042***
	(2.816)	(3.696)
Cooperation ratio × case complexity		−1.041
		(5.177)
Number of participants	−0.693	−0.708
	(0.623)	(0.629)
Number of law	−1.456***	−1.480***
	(0.38)	(0.398)
P lawyer	−3.706**	−3.706**
	(1.707)	(1.708)
D lawyer	2.752***	2.737***
	(0.761)	(0.761)
Third party	5.206***	5.191***
	(1.901)	(1.904)
Admin scopes		
Economy and market supervision	6.023***	5.978***
	(1.669)	(1.691)
Government management	2.948**	2.917**
	(1.195)	(1.218)
Constant	−27.600***	−28.675***
	(6.707)	(8.632)
Observations	269	269
Log likelihood	−45.9	−45.88
AIC	111.8	113.76

Note: In Model 1, we regress the case outcome on cooperation ratio for 269 ALCs. The effect of cooperation ratio is negative and statistically significant at 1% level. In Model 2, we add the interaction term "cooperation ratio × case complexity" to Model 1. The coefficient of the interaction term is negative but is not significant at the 10% level. *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.
Abbreviation: AIC, Akaike information criterion.

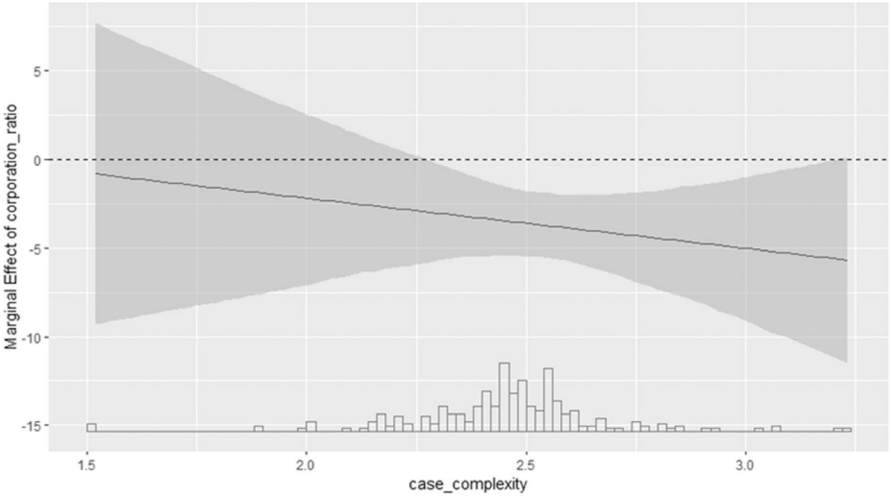

FIGURE 4 Moderation effect of case complexity on panel effect. Marginal effect is estimated based on Model 2. The gray region represents 90% confidential intervals.

Panel effects in civil cases

Table 3 presents the panel effects in civil cases, alternating measures of outcomes in different models. Models 3 and 4 examine the 397 unbalanced civil cases, measuring case outcomes by whether or not the court granted at least part of one-shotter's claims or the proportion of litigation fee borne by the repeated players, respectively. The cooperation ratio is negative and significant in both models (at the 10% and 1% levels, respectively), indicating that when the presiding judges compose panels with less familiar judges, the one-shotter's probability of winning the case increases significantly. This is coherent with H1b.

In model 5, we examine all 1063 civil cases involving collegial panels. The negative and significant coefficient (at the 10% level) of cooperation ratio shows that judges are more likely to render polarized decisions when adjudicating with less familiar colleagues. H1e is also verified.

Panel effects in criminal cases

Since only 82 criminal cases in our dataset involve collegial decisions, we use bivariate plots to illustrate the correlation between judges' cooperation strategy and case outcomes. As shown in the left panel of Figure 5, there exists no

TABLE 3 Panel effects in civil cases

Dependent Variable	Outcome (claim) Model 3 Logistic	Outcome (litigation fee) Model 4 OLS	Outcome (polarization) Model 5 Logistic
Cooperation ratio	−0.930*	−0.231***	−0.791*
	(0.483)	(0.073)	(0.446)
Party type			
Repeated player versus repeated player			−15.493
			(529.350)
One-shotter versus repeated player	3.147***	0.456***	−16.323
	(0.349)	(0.049)	(592.350)
One-shotter versus one-shotter			−15.379
			(592.350)
Case complexity	1.045**	0.059	−2.719***
	(0.504)	(0.077)	(0.529)
Lawyer	−0.208	−0.102**	−0.927**
	(0.334)	(0.051)	(0.462)
Number of participants	−0.335*	−0.065**	0.185
	(0.204)	(0.028)	(0.146)
Number of law	0.353***	0.052***	0.122*
	(0.086)	(0.011)	(0.064)
Cause of action			
Marriage and inheritance disputes			−1.984***
			(0.651)
Labor and personnel disputes	−0.238	−0.016	1.645**
	(0.335)	(0.053)	(0.674)
Tort law	1.432	−0.158	−1.194**
	(1.194)	(0.119)	(0.588)
Personality rights disputes	−0.267	−0.257	−1.937***
	(1.237)	(0.171)	(0.651)
Special procedure	17.845	1.020**	−0.553
	(882.744)	(0.411)	(6549.480)
Property disputes	1.732	0.127	−1.305*
	(1.087)	(0.184)	(0.791)
Civil disputes related to companies, securities, insurance, bills, etc.	−3.767**	−0.440**	0.246
	(1.588)	(0.184)	(1.136)

(Continues)

TABLE 3 (Continued)

Dependent Variable	Outcome (claim) Model 3 Logistic	Outcome (litigation fee) Model 4 OLS	Outcome (polarization) Model 5 Logistic
Intellectual property and competition disputes	0.122	−0.005	0.455
	(0.480)	(0.071)	(0.382)
Constant	−3.989***	0.305	10.609***
	(1.457)	(0.217)	(1.548)
Observations	397	397	1063
R^2		0.271	
Adjusted R^2		0.246	
Log likelihood	−184.503		−223.523
AIC	397.007		481.045
Residual standard error		0.399	
F statistic		10.964***	

Note: The reference group for the categorical variable party type is set as "repeated player versus one-shotter". In Model 3, we regress case outcome (measured by whether the court granted at least part of one-shotter's claims) on cooperation ratio for 397 unbalanced civil cases. In Model 4, we change the measurement of dependent variable to the litigation fee borne by the repeated players. In Model 5, we further change it to the polarization of case outcomes as mentioned in section Dependent variable: Tough decision. The effect of cooperation ratio is negative and statistically significant at 10%, 1%, and 10% level, respectively. *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.
Abbreviations: AIC, Akaike information criterion; OLS, ordinary least squares.

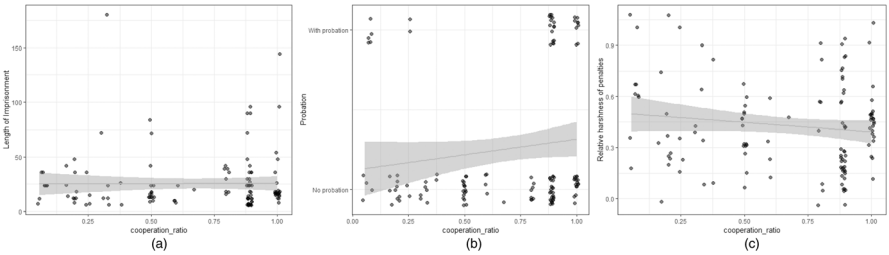

FIGURE 5 Panel effects analysis for criminal cases. The gray region represents 90% confidential intervals. (a) Correlation between cooperation ratio and length of imprisonment; (b) Correlation between cooperation ratio and probation application; (c) correlation between cooperation ratio and relative harshness of penalties

significant relationship between cooperation ratio and the length of the sentences. The middle panel of Figure 5, however, demonstrates a positive correlation between cooperation ratio and sentences of probation. When judges decide

cases with their less familiar colleagues, it seems the probability of the defendant being granted probation is lower. Put it another way, in these strategically formed panels, judges tend to render harsher punishments. In the right panel of Figure 5, we use the relative harshness of penalty as the proxy of tough decision. The results revealed a marginal negative significant correlation between cooperation ratio and harsher decisions ($p = 0.138$). Our H1d is thus only partially supported.

Robustness checks

We conduct several robustness checks to test if our results are robust and consistent. First, to identify the causal relationship between panel composition and case outcomes, we employ the generalized propensity score matching (GPSM) method (Hirano & Imbens, 2004; Imbens, 2000) for causal inference. As shown in Figure 6, when the presiding judge composes panels with less familiar judges, the probability that the plaintiffs' triumph in ALCs, one-shotters in civil cases, and the percentage of extreme decisions are significantly higher, respectively. These findings are in line with our previous analysis (see Appendix 8 for details).

Second, it is possible that the diversity of panel composition matters. The presiding judge might have different agenda when he or she invites the court leader to be a panelist. The scarcity of cases involving a court leader (the president, vice presidents, or division heads) in our dataset, however, prevents us from executing a mechanism analysis. In Appendix 9, we exclude cases involving court leaders, and our main findings remain robust.

Finally, we employ alternative empirical specifications and control for lurking variables. When examining the relationship between panel composition and extreme decisions, we use several alternative thresholds of litigation fee borne by each party as the measurement of a polarized outcome (see Appendix 10). Moreover, when examining the panel effects in civil cases, we further control for special litigants. For example, state-owned enterprises, universities, and other public institutions are generally believed to be more advantageous in lawsuits (Wang, 2018; Xu, 2020); whereas farmers are often deemed "biggest losers" (He & Su, 2013). Therefore, we introduce two dummy variables in our model (see Appendix 11). Besides, we introduce a dummy variable of personnel reform to further control for the impacts of the reform (see Appendix 12). Finally, we control the cooperation between two panel judges (using the logarithm of the number of times that two panel judges cooperate with each other) when analyzing the panel effects in three-judge panels (see Appendix 13).[25] In all these tests, our results generally remain consistent with those of the original models.

[25]We thank one of the anonymous reviewers for the advice.

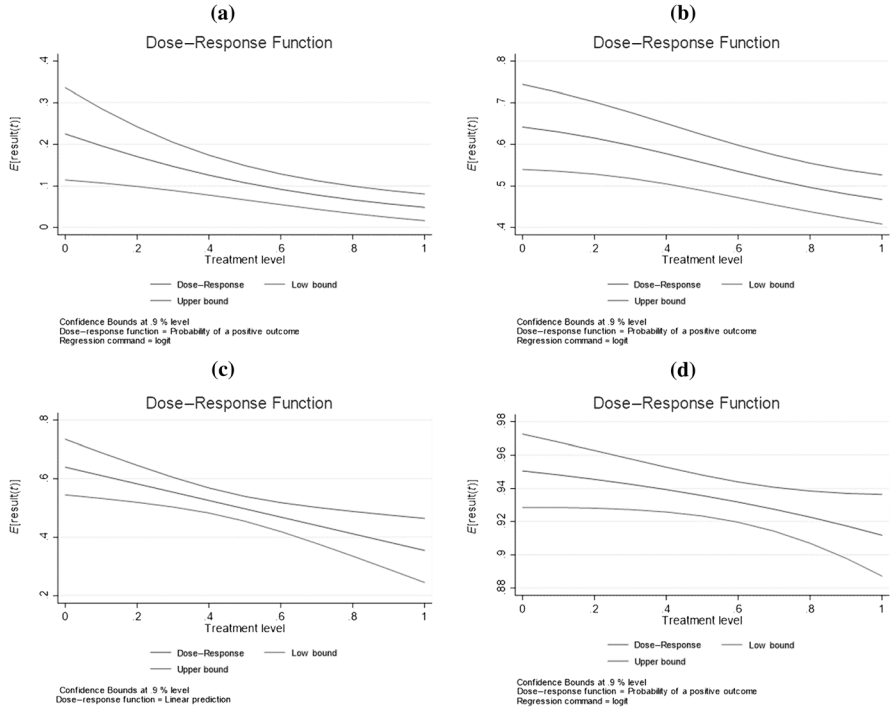

FIGURE 6 The dose–response function plot of the generalized propensity score matching model. (a) administrative litigation cases (ALCs); (b) unbalanced civil cases (claim); (c) unbalanced civil cases (litigation fee); (d) civil cases (polarized outcome). The "Treatment level" on the *x*-axis represents the independent variable: cooperation ratio, and the "*E*[result(*t*)]" on the *y*-axis represents the expected value of case outcomes in each setting. Specifically, for panel (a), the *y*-axis represents the probability of a panel decision favoring the plaintiffs against the government in ALCs; for panel (b), it represents the probability of panel decisions supporting one-shotters in unbalanced civil cases; for panel (c), it represents the estimated ratio of litigation fee borne by the repeated players in unbalanced civil cases; and for panel (d), it represents the probability of extreme decisions in civil cases. The two lines above and below the dose–response function line represent the upper and lower bounds of 90% confidential intervals, respectively.

Mechanism analysis

Judges' collegial behaviors matter in Chinese courts, but why? What are the mechanisms of the panel composition? In other words, when and why do the presiding judges choose between the strategies of "going-along" and "huddling-together?" We carry out three mechanism analyses in this section.

First, as shown in Figure 7, the presiding judges generally prefer working with their junior colleagues. Position and exposure are significantly but

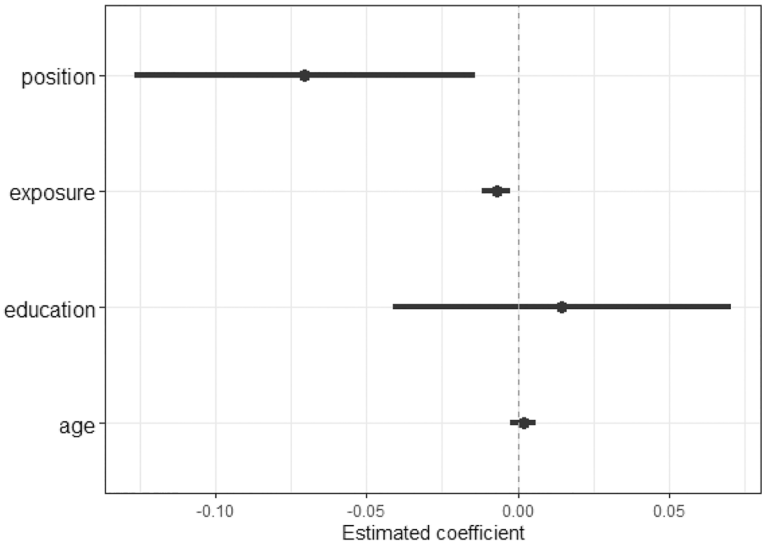

FIGURE 7 Influence of judge's ability on the panel composition. In this figure, we regress cooperation ratio on judges' personal information for 793 judge pairs. The line represents 90% confidential intervals. For detailed regression results, see Appendix 14.

negatively associated with collegial behaviors. To some extent, those going-along panels represent judges' comfort zone.

Second, when and why would judges venture out of their comfort zone? Figure 8 shows that the cooperation ratio declines when case complexity increases or when litigants lawyer up.[26] That is, presiding judges tend to step out of their comfort zone and form strategic coalitions with other colleagues to deal with complex or potentially more problematic cases.

Finally, when presiding judges venture out of their comfort zone, with whom they huddle. We regress the average position, exposure, and education of panel judge(s) on case complexity. Figure 9 indicates that as the case complexity increases, the presiding judges tend to huddle with colleagues with higher positions or those of high capability (exposure).

[26]According to Confidential Interview 20210135, there exist several fixed enforcement teams within the enforcement division of court A, and this enforcement team usually consists of 3 to 5 judges. Group members are jointly responsible for the handling of the case, and in most cases, they only compose collegial panels with the members of the group. The judge told us "The collegial panel of the enforcement division is basically composed in accordance with the requirements of the court and the law, which is merely a procedural operation. This kind of collegiate panel has no collegiality at all and is hardly the same as the collegial panel of civil, criminal, and other divisions." Based on this, we exclude the data of the enforcement division.

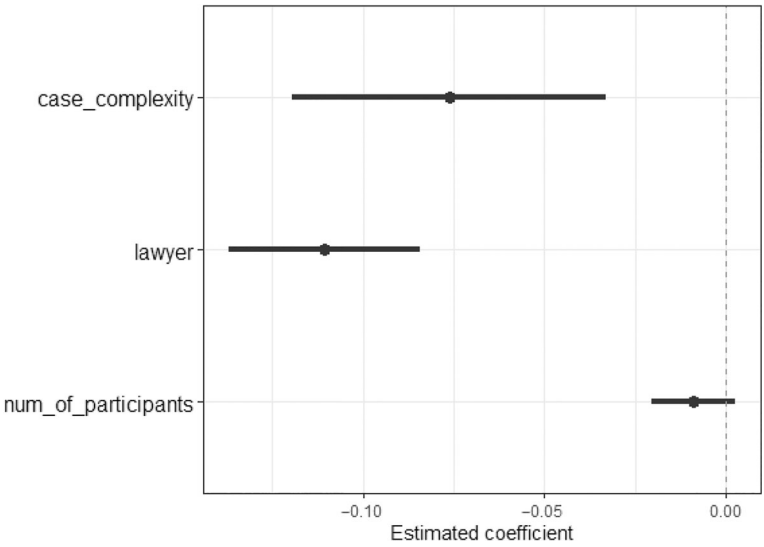

FIGURE 8 Influence of case characteristics on the panel composition. In this figure, we regress cooperation ratio on the characteristics of cooperative cases (except for those enforcement cases). The line represents 90% confidential intervals. For detailed regression results, see Appendix 15.

CONCLUDING REMARKS

Based on published DADs and fieldwork in a Beijing local court, this study examines when and how Chinese judges engage in collegiality. Specifically, we reveal the intriguing panel effects in Chinese courts: when judges venture out of their comfort zone—that is, when they compose panels with "star" judges or court leaders—they tend to reach tough decisions. For ALCs, as the cooperation ratio decreases, the panels are more likely to rule against the government. Similarly, in civil cases, strategically composed panels tend to favor one-shotters over repeated players or make more extreme decisions. In criminal cases, decreased cooperation ratios among panel judges lead to more severe and fewer suspended sentences.

The underlying mechanism behind such panel effects is Chinese judges' strategic consideration when facing complex cases. For ordinary cases, presiding judges are more inclined to improvise judicial panels with their junior colleagues. These cases constitute their comfort zone, where they can easily steer the case disposition while tutoring young judges. When handling complex cases, however, presiding judges tend to spare extra efforts to huddle with "star" judges or court leaders. To our best knowledge, this is one of the first empirical examinations of judges' collegial behaviors in China.

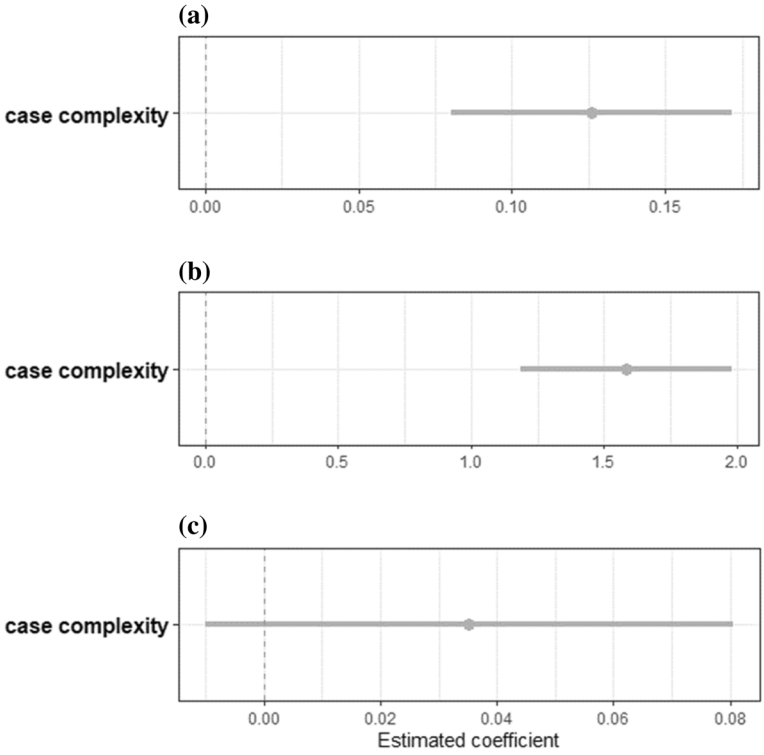

FIGURE 9 Cooperation strategy of the presiding judge. We regress the average position, exposure, and education of panel judge(s) on case complexity (except for those enforcement cases). The line represents 90% confidential intervals. For detailed regression results, see Appendix 15.

It is worth noting that our findings seem to be opposite to the findings in a comparative context. Engel (2022), for example, finds that judges who have worked with one another longer are more likely to render daring decisions, to declare statutes unconstitutional. Such difference is at least partially due to the non-random nature of panel composition in China. Chinese presiding judges enjoy rare discretionary power to decide with whom to hear a case. In other words, familiarity is the antecedent of Chinese judges' collegial behaviors and strategies. Everyday interpersonal contact enables the presiding judges to compose panels strategically and make extra efforts to huddle with capable colleagues to render tough decisions. It is in these strategically composed panels that the presiding judge forms a united front with his or her capable colleagues.[27]

[27]We thank one of the anonymous reviewers for the advice.

Our analysis produces several notable contributions. First, the present study sheds new light on Chinese judges' strategic collegial behaviors. Collegial panels are not a mere formality as many commentators use to believe but strategic utensils for mindful judges. Presiding judges seek collegial support when facing complex cases and strategically equip judicial panels with "star" judges or court leaders.

These strategically composed judicial panels further reflect the Chinese paradox of professional judges facing a vulnerable legal environment. For one, the rising professionalism of the Chinese bench has been well documented. The four-decade legal reform in China has introduced clearer standards and greater emphasis on legal professionalism. Chinese judges are generally younger, well educated, and better compensated, especially after the 2014 personnel reform. For another, existing scholarship emphasizes the overall vulnerability of Chinese judges and courts vis-à-vis the party and other stage organs (Liebman, 2007; Lubman, 1999; Minzner, 2011; Ng & He, 2017; Peerenboom, 2002). Ng and He (2017), in particular, detail the embedded nature of Chinese courts and how they face pressure from multiple sources, including societal ones. To some extent, such a paradox of rising professionalism amid a vulnerable environment gives rise to the strategic use of collegial panels documented by the present study.

Such an account is coherent with nascent scholarship arguing for the rise of Chinese judges (Yu, 2021; Zhang & Ginsburg, 2019). Chinese judges used to be dismissed as minimal subordinates of the one-party state. However, after a series of sweeping reforms in recent years, Chinese judges are becoming judges in a steady manner (Zhang & Ginsburg, 2019). The present study shows how judges in Beijing make strategic use of the existing institution of collegiality to consolidate their roles as judicial decision-makers. Such strategic behaviors are instrumental in the prospect of legal reforms in China.

Second, moving beyond the American context and adopting innovative measures of collegial behaviors and panel effects, the paper reveals an oftentimes overlooked but intrinsic facet of collegial decisions: it is first and foremost a kind of group decision-making. To some extent, the vast majority of the existing discussion of acquiesce, deliberation, and strategy focus on the internal strategic exchange among independent and well-insulated judges. The present study, on the other hand, provides a rare account where judges under a vulnerable environment, a common scenario in transitional societies, huddle together to reach tough decisions. This is coherent with comparative findings that groupthink provides a "shield of anonymity," and shared responsibility induces more risky decisions (Arlen & Tontrup, 2015; Gershoni, 2021; Zhang & Casari, 2012).

Additionally, understanding collegial decisions as groupthink introduces the importance of institutional constraints. Institutions matter, even those different from best-practice ones can still provide necessary momentum or some form of cover for mindful judges, thereby paving the way for further legal development. At the end of Givati and Rosenberg (2020)'s study, Israel's Justices on Duty were stripped of the

authority to choose panel members. Our findings, nevertheless, might suggest the desirability of non-random penal composition in transitional circumstances.

There are several avenues to build on this research. First, for scholars interested in Chinese judicial politics, the external validity of our findings can be further tested using national data. Regional variation defines China's reforms. Law and courts are no exception. It is reasonable to expect that judges behave differently in other local environments. As discussed earlier, the Beijing case examined in the study represents a scenario where there is a high level of legal professionalism and political awareness. How does the use of collegiality unfold with different levels of tension between professionalism and political embeddedness? This we leave for future exploration.

Second, other forms of groupthink and collective decision-making exist in the judicial system of China, such as the Adjudication Committee, Judges' Professional Council, or even class litigation. It would be interesting to investigate how collegiality affects both individual judicial decisions and the overall prospect of legal reforms.

Finally, for researchers interested in comparative law and politics, this study echoes the longstanding scholarly desire to test how the conceptual tool of collegiality can travel across different institutional settings. Additionally, collegiality as a form of groupthink may well travel "beyond courthouse walls." (Hinkle et al., 2020; Sartori, 1970) Homogeneity of panelists, higher level of expertise, more stringent institutional constraints, and a relatively higher level of insulation characterize most collegial decisions by courts. Whether or not these particular settings lead to better decisions or fewer errors (de Condorcet, 1785; Iaryczower et al., 2018)? We have yet to ponder over this question.

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APPENDIX 1: CASE ASSIGNMENT IN COURT A

Figure A1 shows that case complexity has a significant impact on the appointment of the presiding judge. The blue lines represent cases tried by the ordinary procedure, the red lines represent cases tried by the summary procedure, and the confidence interval is set to 0.90. In general, complex cases tend to be assigned to judges with higher education, higher exposure, and higher positions. These findings suggest that when assigning cases, the court does not adopt a completely random method but takes the characteristics of each judge into account.

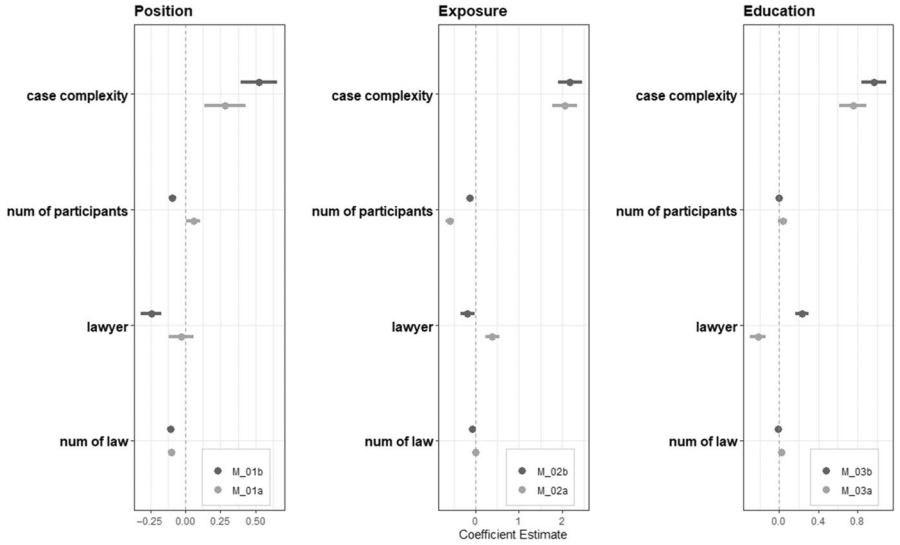

FIGURE A1 The impact of case characteristics on case assignment

APPENDIX 2: INTERVIEW RECORD

TABLE A1 Interview record

No.	Interviewee	Interview location
20200811	Court staff 1	Beijing
20200812	Court staff 2	Beijing
20200821	Retired judge 1	Beijing
20200822	Retired judge 2	Beijing
20200823	Retired judge 3	Beijing
20200824	Retired judge 4	Beijing
20200831	Judge 1	Beijing
20200832	Judge 2	Beijing
20200841	Former judge 1	Beijing
20200842	Former judge 2	Beijing
20200851	Former division head 1	Beijing
20200852	Former division head 2	Beijing
20201133	Judge 3	WeMeet (Online)
20201234	Judge 4	WeChat (Online)
20210135	Judge 5	WeMeet (Online)
20210613	Court staff 3	WeChat (Online)

APPENDIX 3: DISTRIBUTION OF CASES BEFORE AND AFTER THE PERSONNEL REFORM

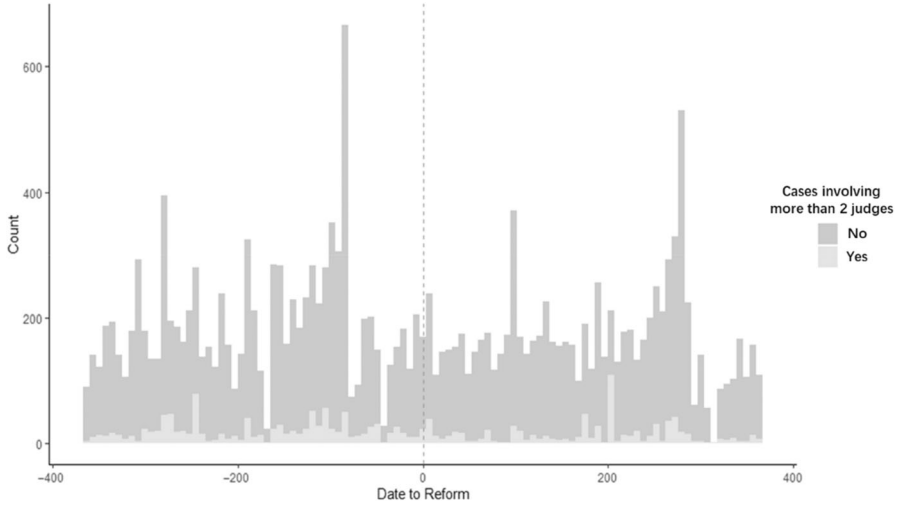

FIGURE A2 Case distribution before and after the personnel reform

Figure A2 displays the distribution of cases and the cooperation between judges before and after Court A's personnel reform (enforcement cases omitted). As it indicates, our data is balanced before and after the court's personnel reform.

APPENDIX 4: NUMBER OF ALCs AND THE PLAINTIFF'S WINNING RATE

TABLE A2-1 Number of administrative litigation case (ALCs) and the plaintiff's winning rate in China (1988–2020)

Year	Number of ALCs	Plaintiff's winning rate (%)
1988	10,697	16.7
1989	13,181	20.0
1990	15,903	20.0
1991	32,941	21.2
1992	36,303	23.1
1993	36,704	20.4

(Continues)

TABLE A2-1 (Continued)

Year	Number of ALCs	Plaintiff's winning rate (%)
1994	43,571	20.0
1995	62,418	15.8
1996	92,812	16.4
1997	103,410	14.7
1998	114,949	15.5
1999	119,832	15.4
2000	108,936	15.7
2001	121,008	13.5
2002	114,459	17.3
2003	114,896	16.0
2004	121,317	15.9
2005	126,663	17.3
2006	125,976	14.0
2007	132,682	11.5
2008	141,972	10.9
2009	154,916	9.0
2010	166,572	7.8
2011	171,320	7.9
2012	162,496	7.7
2013	156,538	8.4
2014	180,163	12.4
2015	272,882	12.9
2016	327,429	12.9
2017	337,100	–
2018	378,285	–
2019	425,282	–
2020	401,768	–

Note: Data are collected from the Law Yearbook of China, various years. Since 2017, the Law Yearbook of China no longer discloses information on case outcomes, so our statistics are as of 2016.

TABLE A2-2 Plaintiff's winning rate in administrative litigation case (ALCs) in Beijing

Year	Number of ALCs	Plaintiff's winning rate (%)
2015	13,893	12.1
2016	19,187	10.7
2017	69,738	10.9

Note: Data are collected from the 2015, 2016, and 2017 Work Report of the Beijing Higher People's Court.

APPENDIX 5: DESCRIPTIVE STATISTICS OF VARIABLES

TABLE A3 Descriptive statistics of variables

Variable	Min.	1st Quartile	Mean	3rd Quartile	Max.	Observation	NA
Judges' personal information (all judges)							
Exposure	0	0	2.99	4	44	301	0
Age	27	35	40.51	46	62	301	16
Position	0	0	0.25	1	1	301	0
Education	0	0	0.58	1	1	301	14
Administrative division							
Exposure	0	0	2.47	3.5	12	15	0
Age	27	35	38.57	43.25	48	15	1
Position	0	0	0.2	0	1	15	0
Education	0	0	0.71	1	1	15	1
Civil division							
Exposure	0	0	3.03	4	44	194	0
Age	30	35	39.48	44	59	194	12
Position	0	0	0.25	0	1	194	0
Education	0	0	0.60	1	1	194	10
Criminal division							
Exposure	0	0	1.64	2.5	6	22	0
Age	34	36	40.23	42.5	56	22	0
Position	0	0	0.32	1	1	22	0
Education	0	0	0.68	1	1	22	0
Enforcement division							
Exposure	0	0	2.37	2	22	46	0
Age	30	35.75	45.32	52	62	46	2
Position	0	0	0.20	0	0	46	0
Education	0	0	0.34	1	1	46	2
Other divisions							
Exposure	0	1	5.46	725	26	24	0
Age	29	35.5	40.96	47	61	24	1
Position	0	0	0.33	1	1	24	0
Education	0	0	0.65	1	1	24	1

(Continues)

TABLE A3 (Continued)

Variable	Min.	1st Quartile	Mean	3rd Quartile	Max.	Observation	NA
Case types (all cases)							
Summary procedure	0	0	0.39	1	1	23,564	0
Ordinary procedure	0	0	0.61	1	1	23,564	0
Cooperative cases	0	0	0.25	0	1	23,564	0
Administrative cases	0	0	0.05	0	1	23,564	0
Summary procedure	0	0	0.00	0	1	1115	0
Ordinary procedure	0	1	1.00	1	1	1115	0
Cooperative cases	0	0	0.26	1	1	1115	0
Civil cases	0	0	0.62	1	1	23,564	0
Summary procedure	0	0	0.49	1	1	14,582	0
Ordinary procedure	0	0	0.51	1	1	14,582	0
Cooperative cases	0	0	0.09	0	1	14,582	0
Criminal cases	0	0	0.14	0	1	23,564	0
Summary procedure	0	0	0.62	1	1	3284	0
Ordinary procedure	0	0	0.38	1	1	3284	0
Cooperative cases	0	0	0.03	0	1	3284	0
Enforcement cases	0	0	0.19	0	1	23,564	0
Summary procedure	0	0	0.03	0	1	4566	0
Ordinary procedure	0	1	0.97	1	1	4566	0
Cooperative cases	0	1	0.89	1	1	4566	0
State compensation cases	0	0	0.00	0	1	23,564	0
Summary procedure	0	0	0	0	1	17	0
Ordinary procedure	0	1	1	1	1	17	0
Cooperative cases	0	0	0.41	1	1	17	0
Case characteristics							
Trial procedure	0	0	0.61	1	1	23,564	0
Case complexity	1.28	2.22	2.51	2.80	4.19	23,564	0
Case type	Categorical variable					23,564	0
	2	3	3.34	4	22	23,564	0

(Continues)

TABLE A3 (Continued)

Variable	Min.	1st Quartile	Mean	3rd Quartile	Max.	Observation	NA
Number of participants							
Number of law	0	1	3.13	4	20	23,564	0
Lawyer	0	0	0.55	1	1	23,564	0
soe&pi	0	0	0.03	0	1	23,564	0
Farmer	0	0	0.00	0	1	23,564	0
For panel effects analysis in administrative litigation cases							
Outcome (admin)	0	0	0.12	0	1	269	0
p_lawyer	0	0	0.24	0	1	269	0
d_lawyer	0	0	0.36	1	1	269	0
Third party	0	0	0.08	0	1	269	0
Admin scope	Categorical variable					269	0
For Panel Effects analysis in unbalanced civil cases							
Outcome (civil claim)	0	0	0.60	1	1	397	0
Outcome (civil litigation fee)	0	0	0.55	1	1	397	0
For panel effects analysis in unbalanced civil cases							
Polarization (civil)	0	1	0.93	1	1	1063	0
Cause of action	Categorical variable					1063	0
For panel effects analysis in criminal cases							
Length of sentence (criminal)	6	12	25.44	28.50	180	127	0
Probation (criminal)	0	0	0.25	1	1	127	0
Relative harshness of penalty	0.04	0.19	0.43	0.65	1	127	0
For mechanism analysis							
Cooperation ratio	0.00	0.14	0.42	0.67	1	793	0

Note: Cases handled through the summary procedure are usually heard by one judge only. It is prescribed by law that ordinary procedure cases shall be heard by collegial panels with judges and/or lay assessors. Cases involving at least two judges are coded as cooperative cases.

APPENDIX 6: JUDGES PERSONAL CHARACTERISTICS

TABLE A4 Correlation matrix of variables related to the judge's personal information

	Exposure	Education	Position	Age
Exposure	1	0.207	0.275	−0.081
Education	0.207	1	−0.159	−0.662
Position	0.275	−0.159	1	0.255
Age	−0.081	−0.662	0.255	1

Table A4 lists the correlations between variables related to the judge's personal information. We find that a judge's exposure is positively related to their education and position. Besides, there is a negative correlation between judges' age and education. In fact, elder judges generally do not have a graduate degree.

Figure A3 displays the personal information of presiding judges and panel judges in cooperative cases (i.e., cases involving at least two judges). Each node in the figure represents a judge. As illustrated in Figure A3a, on average, the

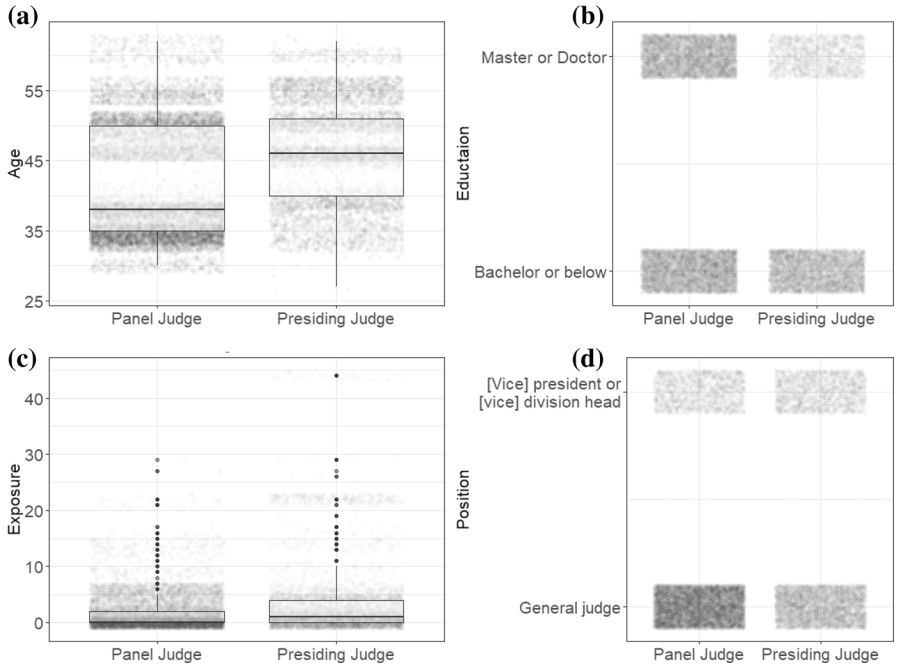

FIGURE A3 Descriptive statistics of personal information of presiding judges and panel judges

presiding judges are older than the panel judges. At the same time, fewer presiding judges have graduate degrees than the panel judges do (Figure A3b). Presiding judges in Court A also generally share a higher online exposure (Figure A3c) and are more likely to have administrative ranks (Figure A3d).

APPENDIX 7: TWO EXAMPLES OF CASE COMPLEXITY

TABLE A5 Two examples of case complexity

	Case 1	Case 2
本院认为 (Chinese)	本院经审查认为，起诉人提起行政诉讼，应当符合法律规定的起诉条件。OOO所提诉求，不属于人民法院行政诉讼受案范围，不符合法定起诉条件。对其起诉，应当不予立案。	本院认为，《中华人民共和国行政诉讼法》第二十五条第一款规定，行政行为的相对人以及其他与行政行为有利害关系的公民、法人或者其他组织，有权提起诉讼。据此，当事人提起行政诉讼，应当具备原告主体资格，符合法定起诉条件。本案中，XX 公司与XXX 签订《北京市商品房买卖合同》后办理了被诉房屋权属登记，涉案房屋由XX 公司转移登记至XXX 名下。因此，被诉房屋权属登记行为涉及的相对人为XX 公司与XXX，与 X 业委会不存在法律上的利害关系。因此，X 业委会提起本诉不符合上述法律规定，不具备诉讼主体资格，应当裁定驳回其起诉。
Holding list	After review, this court holds that to file an administrative litigation suit, the litigants should meet the requirements stipulated by law. The claim made by OOO does not fall within the scope of administrative litigation acceptable by the people's court and does not meet the statutory requirements for prosecution. The case should not be filed.	This court holds that according to Article 25-1 of the Administrative Litigation Law of the People's Republic of China, the object of an administrative act and other citizens, legal persons, or other organizations that have an interest in the administrative act have the right to file a lawsuit. Accordingly, the parties filing an administrative lawsuit should have the qualifications as plaintiffs, in line with the statutory requirements for prosecution. In this case, XX Company and XXX signed the "Beijing Commodity House Sales Contract" and then registered the ownership of the house in question.

(Continues)

TABLE A5 (Continued)

	Case 1	Case 2
		The house in question was subsequently transferred and registered by XX Company to XXX's name. Therefore, XX Company and XXX are the relative persons involved in the property rights registration of the house in question. There is no legal relationship of interest with X Homeland Industry Committee. Therefore, X Homeland Industry Committee has no proper standing to litigate and does not meet with the above-mentioned legal provisions in filing the lawsuit. The case should therefore be dismissed.
Word count (in Chinese)	78	258
Case complexity	1.89	2.41

Note: We randomly select the holding list sections of two documents of adjudication decisions from our dataset. The value of "case complexity" is calculated in Chinese and the paragraphs are translated into English.

APPENDIX 8: ROBUSTNESS ANALYSIS: APPLYING GENERALIZED PROPENSITY SCORE MATCHING TO REEXAMINE THE PANEL EFFECT

Figure A4a provides a robustness check for the results presented in Table 2, Model 1. We apply the generalized propensity score matching (GPSM) method to reexamine the panel effects in ALCs.

The treatment variable, cooperation ratio, is cut at 0.27, 0.5, and 0.93, which is the value of the 25% and 75% percentiles, respectively. The balancing covariates include case complexity, lawyer, number of litigants, number of law, and party types. The maximum power of the treatment variable and the estimated GPS in the polynomial function used to approximate the predictor for the conditional expectation of the outcome given the treatment and the GPS are both linear. The same set of control variables are added as Table 2. The bootstrap method is applied to derive standard errors and confidence intervals, 25 times of bootstraps are carried.

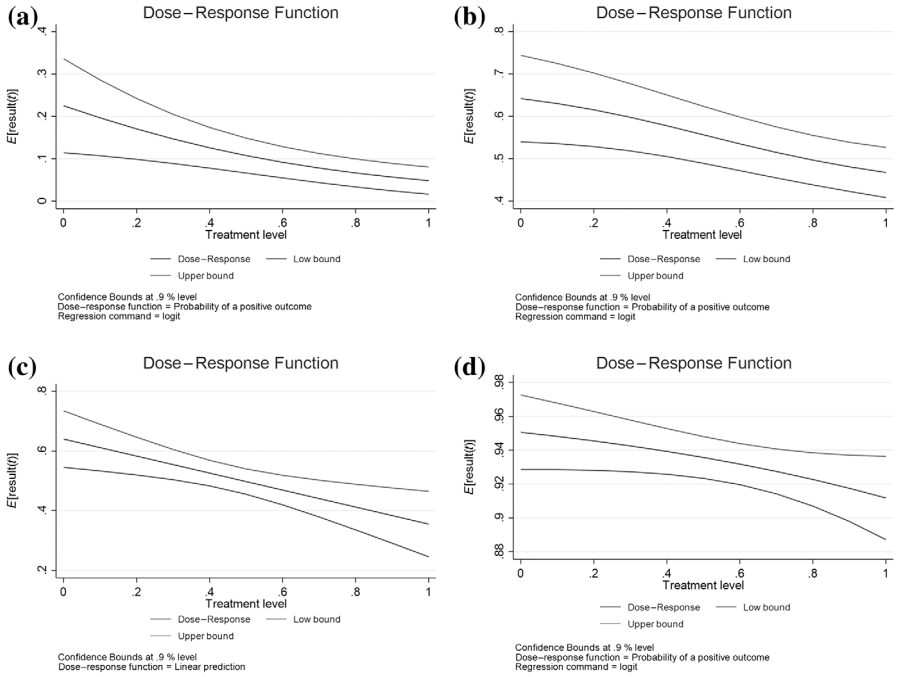

FIGURE A4 The dose–response function plot of the generalized propensity score matching model for (a) administrative litigation cases, (b) the unbalanced civil cases (claim), (c) the unbalanced civil cases (litigation fee), and (d) the civil cases (polarization outcomes)

The "Treatment level" on the *x*-axis represents the independent variable cooperation ratio, and the "*E*[result(*t*)]" on the *y*-axis represents the expected value of case outcomes in each setting. The green line and the red line represent the upper and low bound of 90% confidential intervals, respectively. The trend in Figure A4a shows that when the presiding judge composes panels with less familiar judges, the plaintiff's winning probability is significantly higher. Our findings in Table 2 remain robust.

Figure A4b provides a robustness check for the results presented in Table 3, Model 3. We apply the GPSM method to reexamine the panel effects in unbalanced civil cases.

The treatment variable, cooperation ratio, is cut at 0.27, 0.5, and 0.93, which is the value of the 25%, 50%, and 75% percentiles, respectively. The balancing covariates include case complexity, lawyer, number of litigants, number of law, and party types. The maximum power of the treatment variable and the estimated GPS in the polynomial function used to approximate the predictor for the conditional expectation of the outcome given the treatment and the GPS are

both linear. The same set of control variables are added as Table 3, Model 3. The bootstrap method is applied to derive standard errors and confidence intervals, 25 times of bootstraps are carried.

The "Treatment level" on the *x*-axis represents the independent variable cooperation ratio, and the "*E*[result(*t*)]" on the *y*-axis represents the expected value of case outcomes in each setting. The green line and the red line represent the upper and low bound of 90% confidential intervals, respectively. The trend in Figure A4b shows that when the presiding judge composes panels with less familiar judges, the OS's winning probability is significantly higher. Our findings in Table 3 remain robust.

Figure A4c provides a robustness check for the results presented in Table 3, Model 4. We apply the GPSM method to reexamine the panel effects in unbalanced civil cases.

The treatment variable, cooperation ratio, is cut at 0.27, 0.5, and 0.93, which is the value of the 25%, 50%, and 75% percentiles, respectively. The balancing covariates include case complexity, lawyer, number of litigants, number of law, and party types. The maximum power of the treatment variable and the estimated GPS in the polynomial function used to approximate the predictor for the conditional expectation of the outcome given the treatment and the GPS are both linear. The same set of control variables are added as Table 3, Model 4. The bootstrap method is applied to derive standard errors and confidence intervals, 25 times of bootstraps are carried.

The "Treatment level" on the *x*-axis represents the independent variable cooperation ratio, and the "*E*[result(*t*)]" on the *y*-axis represents the expected value of case outcomes in each setting. The green line and the red line represent the upper and low bound of 90% confidential intervals, respectively. The trend in Figure A4c shows that when the presiding judge composes panels with less familiar judges, the OS's winning probability is significantly higher. Our findings in Table 3 remain robust.

Figure A4d provides a robustness check for the results presented in Table 3, Model 5. We apply the GPSM method to reexamine the panel effects in civil cases.

The treatment variable, cooperation ratio, is cut at 0.27, 0.5, and 0.82, which is the value of the 25%, 50%, and 75% percentiles, respectively. The balancing covariates include case complexity, lawyer, number of litigants, number of law, and party types. The maximum power of the treatment variable and the estimated GPS in the polynomial function used to approximate the predictor for the conditional expectation of the outcome given the treatment and the GPS are both linear. The same set of control variables are added as Table 3, Model 5. The bootstrap method is applied to derive standard errors and confidence intervals, 25 times of bootstraps are carried.

The "Treatment level" on the *x*-axis represents the independent variable cooperation ratio, and the "*E*[result(*t*)]" on the *y*-axis represents the expected

value of case outcomes in each setting. The green line and the red line represent the upper and low bound of 90% confidential intervals, respectively. The trends in Figure A4d shows that when the presiding judge composes panels with less familiar judges, the panel will be more likely to render a polarized decision in the civil cases (ratios of litigation fee set as 60% as the coding threshold.). Our findings in Table 3 remain robust.

APPENDIX 9: ROBUSTNESS ANALYSIS: EXCLUDING CASES INVOLVING COURT LEADERS

Table A6 provides a robustness check for the results presented in Table 3. We exclude cases involving senior court leaders (i.e., the division heads, the president, and vice president of the court) due to concern about the possible impact of their participation. Because no such leaders participated in ALCs, the analysis is carried out on civil cases. The same set of control variables are added as Table 3. After excluding these cases, the effect of cooperation ratio is consistently negative (and statistically significant at 10% and 1% level in Model A6-1 and Model A6-2, respectively), but the coefficient of cooperation ratio in Model A6-3 is not significant at the 10% level ($p = 0.11$). In general, our main findings remain robust. The significance levels: $*p < 0.1$, $**p < 0.05$, $***p < 0.01$. AIC = Akaike Information Criterion.

TABLE A6 Panel effects in civil cases without court leaders

Dependent Variable	Outcome (claim) Model A6-1 Logistic	Outcome (litigation fee) Model A6-2 OLS	Outcome (polarization) Model A6-3 Logistic
Cooperation_ratio	−0.841*	−0.222***	−0.725
	(0.491)	(0.075)	(0.459)
Party types			
Repeated player versus repeated player			−15.510
			(603.062)
One-shotter versus repeated player	3.050***	0.456***	−16.204
	(0.349)	(0.050)	(603.062)
One-shotter versus one-shotter			−15.472
			(603.062)
Case complexity	1.049**	0.054	−2.866***
	(0.507)	(0.078)	(0.548)
Lawyer	−0.261	−0.104**	−0.839*
	(0.333)	(0.052)	(0.468)
Number of participants	−0.345*	−0.065**	0.205

(Continues)

TABLE A6 (Continued)

Dependent Variable	Outcome (claim) Model A6-1 Logistic	Outcome (litigation fee) Model A6-2 OLS	Outcome (polarization) Model A6-3 Logistic
	(0.206)	(0.029)	(0.151)
Number of law	0.349***	0.052***	0.106
	(0.087)	(0.012)	(0.065)
Cause of action			
Marriage and inheritance disputes			−1.884***
			(0.662)
Labor and personnel disputes	−0.222	−0.015	1.597**
	(0.339)	(0.054)	(0.683)
Tort law	1.340	−0.176	−1.072*
	(1.200)	(0.123)	(0.620)
Personality rights disputes	−0.189	−0.256	−1.955***
	(1.237)	(0.173)	(0.660)
Special procedure	17.868	1.026**	−0.627
	(882.744)	(0.413)	(6550.458)
Property disputes	2.350*	0.187	−1.505*
	(1.318)	(0.206)	(0.809)
Civil disputes related to companies, securities, insurance, bills, etc.	−3.335*	−0.402*	−0.377
	(1.739)	(0.206)	(1.163)
Intellectual property and competition disputes	0.189	−0.001	0.481
	(0.484)	(0.073)	(0.392)
Constant	−3.923***	0.313	10.850***
	(1.473)	(0.224)	(1.605)
Observations	385	385	1031
R^2		0.269	
Adjusted R^2		0.244	
Log likelihood	−180.896		−215.572
AIC	389.791		465.144
Residual SE		0.401	
F Statistic		10.513***	

Note: The reference group for the categorical variable party type is set as "repeated player versus one-shotter".
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.
Abbreviations: AIC, Akaike information criterion; OLS, ordinary least squares.

APPENDIX 10: ROBUSTNESS ANALYSIS: ALTERNATIVE THRESHOLD OF POLARIZED CASES

Table A7 provides a robustness check for the results presented in Table 3, Model 5. We choose alternative ratios of litigation fee as the coding threshold. We label a case as polarized if either party bears more than 75% of the litigation fee in Model A7-1 and change it to 90% in Model A7-2. The same set of control variables are added as Table 3, Model 5. The effect of cooperation ratio is consistently negative (and statistically significant at the 1% level). Our findings remain robust. The significance levels: $*p < 0.1$, $**p < 0.05$, $***p < 0.01$. AIC = Akaike Information Criterion.

TABLE A7 Alternative threshold of polarized cases

Dependent Variable	Outcome (polarization) (threshold 0.75) Model A7-1 Logistic	Outcome (polarization) (threshold 0.90) Model A7-2 Logistic
Cooperation_ratio	−1.926***	−1.086***
	(0.313)	(0.274)
Party types		
Repeated player versus repeated player	−2.583**	−1.087**
	(1.037)	(0.451)
One-shotter versus repeated player	−3.114***	−1.420***
	(1.031)	(0.443)
One-shotter versus one-shotter	−3.028	−0.959*
	(1.061)	(0.505)
Case complexity	−1.865***	−1.944***
	(0.372)	(0.332)
Lawyer	−1.799***	−1.305***
	(0.366)	(0.266)
Number of participants	−0.075	0.045
	(0.092)	(0.089)
Number of law	0.151***	0.079*
	(0.047)	(0.043)
Cause of action		
Marriage and inheritance disputes	−1.482***	−1.459***
	(0.493)	(0.467)

(Continues)

TABLE A7 (Continued)

Dependent Variable	Outcome (polarization) (threshold 0.75) Model A7-1 Logistic	Outcome (polarization) (threshold 0.90) Model A7-2 Logistic
Labor and personnel disputes	1.863***	2.513***
	(0.645)	(0.63)
Tort law	−1.282***	−2.514***
	(0.458)	(0.453)
Personality rights disputes	−1.631***	−1.628***
	(0.573)	(0.533)
Special procedure	8.653	10.647
	(535.412)	(535.411)
Property disputes	−0.431	−0.627
	(0.619)	(0.566)
Civil disputes related to companies, securities, insurance, bills, etc.	0.169	0.483
	(0.889)	(0.863)
Intellectual property and competition disputes	−0.920***	−0.646***
	(0.287)	(0.242)
Constant	9.678***	8.092***
	(1.115)	(0.953)
Observations	1063	1063
Log likelihood	−425.643	−503.336
AIC	885.285	1040.67

Note: The reference group for the categorical variable party type is set as "repeated player versus one-shotter".
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.
Abbreviations: AIC, Akaike information criterion; OLS: ordinary least squares.

APPENDIX 11: ROBUSTNESS ANALYSIS: FURTHER CONTROL OF LITIGANTS IDENTITIES

Table A8 provides a robustness check for the results presented in Table 3. We further control the identity of litigation participants. Due to their special economic status, state-owned enterprises and public institutions may be favored by Chinese judges. And the farmers involved in the lawsuit may also incur the judge's bias. We add two dummy variables to the regression model (i.e., soe&pi and farmer). Other control variables are added the same as Table 3. After controlling the identity of litigation participants, the effect of cooperation ratio is consistently negative (and statistically significant at 5% and 10% level in Model A8-2 and Model A8-3, respectively), but the coefficient of cooperation ratio in Model A8-1 is not significant at the 10% level ($p = 0.11$). In general, our main findings remain robust. The significance levels: $*p < 0.1$, $**p < 0.05$, $***p < 0.01$. AIC = Akaike Information Criterion.

TABLE A8 Robustness analysis (litigants identities)

Dependent Variable	Outcome (claim) Model A8-1 Logistic	Outcome (litigation fee) Model A8-2 OLS	Outcome (polarization) Model A8-3 Logistic
Cooperation_ratio	−0.368	−0.146**	−0.781*
	(0.508)	(0.072)	(0.447)
Party types			
Repeated player versus repeated player			−15.488
			(592.291)
One-shotter versus repeated player	3.215***	0.466***	−16.316
	(0.344)	(0.047)	(592.291)
One-shotter versus one-shotter			−15.394
			(592.291)
Case complexity	0.871*	0.036	−2.718***
	(0.501)	(0.074)	(0.529)
Lawyer	−0.565	−0.139***	−0.930**
	(0.356)	(0.050)	(0.462)
Number of participants	−0.157	−0.030	0.191
	(0.197)	(0.028)	(0.151)
Number of law	0.332***	0.049***	0.121*
	(0.082)	(0.011)	(0.064)

(Continues)

TABLE A8 (Continued)

Dependent Variable	Outcome (claim) Model A8-1 Logistic	Outcome (litigation fee) Model A8-2 OLS	Outcome (polarization) Model A8-3 Logistic
Cause of action			
Marriage and inheritance disputes			−1.968***
			(0.650)
Labor and personnel disputes	0.548	0.116**	1.673**
	(0.392)	(0.057)	(0.704)
Tort law	2.850**	−0.034	−1.179*
	(1.311)	(0.117)	(0.624)
Personality rights disputes	0.134	−0.167	−1.922***
	(1.193)	(0.166)	(0.652)
Special procedure	17.727	0.973**	−0.562
	(882.744)	(0.396)	(6549.475)
Property disputes	1.904*	0.133	−1.295
	(1.123)	(0.177)	(0.790)
Civil disputes related to companies, securities, insurance, bills, etc.	−3.587**	−0.431**	0.246
	(1.500)	(0.177)	(1.136)
Intellectual property and competition disputes	0.422	0.034	0.457
	(0.486)	(0.069)	(0.383)
soe&pi	−2.292***	−0.399***	−0.100
	(0.525)	(0.074)	(0.641)
Farmer			16.636
			(6522.639)
Constant	−4.205***	0.227	26.077
	(1.457)	(0.209)	(592.292)
Observations	397	397	1063
R^2		0.323	
Adjusted R^2		0.299	
Log likelihood	−174.210		−223.373
AIC	378.420		484.746
Residual SE		0.385	
F Statistic		13.047***	

Note: The reference group for the categorical variable party type is set as "repeated player versus one-shotter".
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.
Abbreviations: AIC, Akaike information criterion; OLS: ordinary least squares.

APPENDIX 12: ROBUSTNESS ANALYSIS: FURTHER CONTROL OF THE PERSONNEL REFORM

Table A9.1 provides a robustness check for the results presented in Table 2. We generate a dummy variable based on whether the reform occurred when the case was judged to control the potential impact of the reform. Other control variables are added the same as Table 2. After controlling the potential reform effect, the effect of cooperation ratio in A9.1-1 is consistently negative (and statistically significant at the 5% level). Our findings remain robust. The significance levels: $*p < 0.1$, $**p < 0.05$, $***p < 0.01$. AIC = Akaike Information Criterion.

Table A9.2 provides a robustness check for the results presented in Table 3. We generate a dummy variable based on whether the reform occurred when the case was judged to control the potential impact of the reform. Other control variables are added the same as Table 3. After controlling the potential reform effect, the effect of cooperation ratio is consistently negative (and statistically significant at 5%, 1%, and 10% level, respectively). Our findings remain robust. The significance levels: $*p < 0.1$, $**p < 0.05$, $***p < 0.01$. AIC = Akaike Information Criterion.

TABLE A9.1 Robustness analysis (reform): Administrative litigation cases

Dependent Variable	Outcome Model A9.1–1 Logistic	Outcome Model A9.1–2 Logistic
Cooperation_ratio	−3.118**	1.912
	(1.236)	(14.73)
Case complexity	12.423***	13.273***
	(2.896)	(3.838)
Corporation ratio × case complexity		−1.952
		(5.711)
Number of participants	−0.779	−0.809
	(0.684)	(0.693)
Number of law	−1.414***	−1.460***
	(0.38)	(0.403)
p_lawyer	−3.387**	−3.408**
	(1.551)	(1.562)
d_lawyer	2.668***	2.642***
	(0.773)	(0.769)

(Continues)

TABLE A9.1 (Continued)

Dependent Variable	Outcome Model A9.1–1 Logistic	Outcome Model A9.1–2 Logistic
Third party	5.314***	5.326***
	(1.735)	(1.747)
Admin scopes		
Economy and market supervision	6.054***	6.005***
	(1.761)	(1.787)
Government management	2.760**	2.718**
	(1.244)	(1.282)
Reform	1.597**	1.599**
	(0.725)	(0.719)
Constant	−31.055***	−32.975***
	(7.195)	(9.195)
Observations	269	269
Log likelihood	−43.1	−43.05
AIC	108.21	110.09

Note: *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.
Abbreviation: AIC, Akaike information criterion.

TABLE A9.2 Robustness analysis (reform): Civil cases

Dependent Variable	Outcome (claim) Model A9.2-1 Logistic	Outcome (litigation fee) Model A9.2-2 OLS	Outcome (polarization) Model A9.2-3 Logistic
Cooperation_ratio	−1.014**	−0.237***	−0.790*
	(0.492)	(0.074)	(0.446)
Party types			
Repeated player versus repeated player			−15.493
			(592.364)
One-shotter versus repeated player	3.143***	0.455***	−16.324
	(0.349)	(0.049)	(592.364)
One-shotter versus one-shotter			−15.380
			(592.364)
Case complexity	0.996**	0.057	−2.718***
	(0.505)	(0.077)	(0.530)
Lawyer	−0.168	−0.098*	−0.926**
	(0.337)	(0.052)	(0.462)
Number of participants	−0.347*	−0.066**	0.186
	(0.202)	(0.028)	(0.146)
Number of law	0.366***	0.053***	0.123*
	(0.087)	(0.011)	(0.066)
Cause of action			
Marriage and inheritance disputes			−1.987***
			(0.653)
Labor and personnel disputes	−0.228	−0.016	1.646**
	(0.335)	(0.053)	(0.674)
Tort law	1.414	−0.16	−1.195**
	(1.192	(0.119)	(0.588)
Personality rights disputes	−0.264	−0.254	−1.936***
	(1.223)	(0.171)	(0.651)
Special procedure	18.07	1.038**	−0.541
	(882.7)	(0.412)	(6549)
Property disputes	1.74	0.129	−1.307*
	(1.085)	(0.184)	(0.792)
Civil disputes related to companies, securities, insurance, bills, etc.	−3.897**	−0.451**	0.239
	(1.626)	(0.185)	(1.142)

(Continues)

TABLE A9.2 (Continued)

Dependent Variable	Outcome (claim) Model A9.2-1 Logistic	Outcome (litigation fee) Model A9.2-2 OLS	Outcome (polarization) Model A9.2-3 Logistic
Intellectual property and competition disputes	0.145	−0.004	0.457
	(0.477)	(0.071)	(0.383)
Reform	0.303	0.025	0.018
	(0.298)	(0.045)	(0.281)
Constant	−4.057***	0.294	10.588***
	(1.462)	(0.218)	(1.581)
Observations	397	397	1063
R^2		0.272	
Adjusted R^2		0.245	
Log likelihood	−184		−223.5
AIC	397.98		483.04
Residual SE		0.399	
F Statistic		10.186***	

Note: The reference group for the categorical variable party type is set as "repeated player versus one-shotter".
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.
Abbreviations: AIC, Akaike information criterion; OLS, ordinary least squares.

APPENDIX 13: ROBUSTNESS ANALYSIS: FURTHER CONTROL OF COOPERATION BETWEEN PANEL JUDGES

Table A10 provides a robustness check for the results presented in Table 3. We generate a variable, panel judge appearance, based on the logarithm of the number of times that two panel judges cooperate with each other. The regressions are carried out in three-judge panels. Other control variables are the same as Table 3. After controlling the cooperation between two panel judges, the effect of cooperation ratio is consistently negative in Model A10-1 and A10-2 (and statistically significant at 10% and 5% level, respectively), but the coefficient of cooperation ratio in Model A10-3 is not significant at the 10% level. In general, our main findings remain robust. The significance levels: $*p < 0.1$, $**p < 0.05$, $***p < 0.01$. AIC = Akaike information criterion.

TABLE A10 Robustness analysis (cooperation between panel judges)

Dependent Variable	Outcome (claim) Model A10-1 Logistic	Outcome (litigation fee) Model A10-2 OLS	Outcome (polarization) Model A10-3 Logistic
Cooperation_ratio	−1.270*	−0.266**	0.105
	(0.756)	(0.122)	(0.754)
Panel judge appearance	−0.271	−0.047*	0.095
	(0.176)	(0.028)	(0.175)
Party types			
Repeated player versus repeated player			−16.274
			(700.647)
One-shotter versus repeated player	2.715***	0.381***	−16.357
	(0.428)	(0.065)	(700.647)
One-shotter versus one-shotter			−14.484
			(700.647)
Case complexity	2.001***	0.234**	−2.390***
	(0.646)	(0.097)	(0.743)
Lawyer	−0.084	−0.022	−0.489
	(0.453)	(0.073)	(0.580)
Number of participants	−0.073	−0.057	0.070
	(0.233)	(0.037)	(0.145)
Number of law	0.071	0.014	0.001
	(0.113)	(0.016)	(0.086)
Cause of action			

(Continues)

TABLE A10 (Continued)

Dependent Variable	Outcome (claim) Model A10-1 Logistic	Outcome (litigation fee) Model A10-2 OLS	Outcome (polarization) Model A10-3 Logistic
Marriage and inheritance disputes			−3.759***
			(1.116)
Labor and personnel disputes	0.516	0.076	0.582
	(0.415)	(0.069)	(0.832)
Tort law	0.990	−0.116	−2.218**
	(1.215)	(0.199)	(1.049)
Personality rights disputes	15.639	−0.095	−2.402**
	(1308.926)	(0.259)	(1.055)
Special procedure	18.294	0.841*	−0.948
	(2399.545)	(0.434)	(6560.162)
Property disputes	2.464*	0.194	−4.076***
	(1.380)	(0.218)	(1.199)
Civil disputes related to companies, securities, insurance, bills, etc.	−18.489	−0.590*	−1.694
	(1570.144)	(0.302)	(1.376)
Intellectual property and competition disputes	1.142*	0.108	−0.129
	(0.619)	(0.095)	(0.598)
Reform	−6.118***	−0.028	9.502***
	(1.993)	(0.298)	(2.187)
Constant	0.516	0.076	0.582
	(0.415)	(0.069)	(0.832)
Observations	240	240	689
R^2		0.263	
Adjusted R^2		0.217	
Log likelihood	−112.17		−140.42
AIC	254.33		316.842
Residual SE		0.413	
F Statistic		5.724***	

Note: The reference group for the categorical variable party type is set as "repeated player versus one-shotter".
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.
Abbreviations: AIC, Akaike information criterion; OLS, ordinary least squares.

APPENDIX 14: MECHANISM ANALYSIS: REGRESSION RESULTS FOR FIGURE 7

Table A11 displays the regression results for Figure 7 in the main text.

TABLE A11 Regression results for Figure 7

Dependent Variable	Cooperation ratio Model A10 Ordinary least squares
Panel judges' personal characteristics	
Position	−0.070**
	(0.034)
Exposure	−0.007**
	(0.003)
Education	0.015
	(0.034)
Age	0.002
	(0.003)
Presiding judges' division	
Other division	0.263***
	(0.061)
Criminal division	−0.024
	(0.042)
Administrative division	−0.104*
	(0.061)
Enforcement division	0.095***
	(0.036)
Constant	0.345***
	(0.115)
Observations	793–24 (missing value = 24)
R^2	0.056
Adjusted R^2	0.046
Residual SE	0.329
F Statistic	5.662***

Note: *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.

APPENDIX 15: MECHANISM ANALYSIS: REGRESSION RESULTS FOR FIGURE 8

Table A12 displays the regression results for Figure 8 in the main text.

TABLE A12 Regression results for Figure 8

Dependent Variable	Cooperation ratio Model A11 Ordinary least squares
Case complexity	−0.076***
	(0.026)
Lawyer	−0.111***
	(0.016)
Number of participants	−0.009
	(0.007)
Number of law	0.018***
	(0.004)
State compensation cases	−0.000
	(0.116)
Criminal cases	−0.011
	(0.036)
Administrative cases	−0.015
	(0.021)
Constant	0.854***
	(0.068)
Observations	1739
R^2	0.052
Adjusted R^2	0.048
Residual SE	0.304
F Statistic	13.464***

Note: *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.

APPENDIX 16: MECHANISM ANALYSIS: REGRESSION RESULTS FOR FIGURE 9

Table A13 displays the regression results for Figure 9 in the main text.

TABLE A13 Regression results for Figure 9

Dependent Variable	Position Model A13-1	Exposure Model A13-2	Education Model A13-3
Case complexity	0.126***	1.583***	0.035
	(0.028)	(0.241)	(0.028)
Lawyer	−0.045***	−0.405***	−0.087***
	(0.017)	(0.147)	(0.017)
Number of participants	−0.009	−0.145**	0.009
	(0.007)	(0.065)	(0.007)
Number of law	0.041***	0.199***	0.0003
	(0.004)	(0.038)	(0.004)
State compensation cases	0.033	3.851***	0.143
	(0.123)	(1.068)	(0.121)
Criminal cases	−0.079**	0.001	0.127***
	(0.039)	(0.335)	(0.038)
Administrative cases	0.129***	2.715***	0.152***
	(0.000)	(0.000)	(0.000)
Number of judges	0.173***	1.702***	−0.086***
	(0.018)	(0.16)	(0.018)
Constant	−0.685***	−6.197***	0.933***
	(0.088)	(0.765)	(0.087)
Observations	1735	1735	1727
R^2	0.149	0.142	0.092
Adjusted R^2	0.145	0.138	0.088
F statistic	37.729***	35.635***	21.878***

Note: If the panel consists of three judges (i.e., one presiding judge and two panel judges), the independent variables is given by the average value. *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.