RESEARCH ARTICLE

Time After Time: The Effects of Small Group Forces and Institutional Features on the Pace of Adjudication

Mintao Nie[*], Gunnar Grendstad[†], William R. Shaffer[‡], and Eric N. Waltenburg[§]

Abstract

In this paper we examine the impact of small group forces on case processing time on a high court. Extending previous research that treats case processing time as an indicator of the extent of bargaining and compromise among justices, we adopt a comparative perspective and analyze the disparities in the amount of time reserved to argue a case and the amount of time a merits panel takes to decide it. We expect that these disparities are influenced by a host of small group forces, including leadership styles, reference group identities, and professional backgrounds present in the group, levels of experience with the deliberative process, and heterogeneity in the justices' opinions. To test our expectations, we estimate an ordinary least squares model on all cases decided on the merits by five-justice panels on the Norwegian Supreme Court from 2008 to 2023. Our findings largely lend support to our hypotheses. Moreover, we find that the relative speed of case processing on the Norwegian Supreme Court is influenced by a number of case attributes and institutional factors, of which the Court's workload exerts the largest effect in magnitude.

1   Introduction

The merits deliberations on collegial courts and the majority opinions that result from them are exercises in group behavior. Consequently, leadership styles, attitudinal differences among the judges, prior professional experiences, and other intra-group forces leave their marks on them. One way to gauge the impact of these forces on a collegial court's operation is to examine the relationship between the forces and the amount of time it takes the court to deliberate the merits of a case and render a final opinion. Indeed, an important body of

[*] School of Political Science and Public Administration, China University of Political Science and Law, Beijing, China, niemintao@cupl.edu.cn,- https://orcid.org/0000-0002-1093-4777.

[†] Department of Comparative Politics, University of Bergen, Norway, gunnar.grendstad@uib.no, https://orcid.org/0000-0002-2914-8856.

[‡] Department of Political Science, Purdue University, West Lafayette, IN, USA., wshaffer@purdue.edu.

[§] Department of Political Science, Purdue University, West Lafayette, IN, USA., ewaltenb@purdue.edu, https://orcid.org/0000-0003-3901-2503.

research has used case processing time as an indicator of the extent of bargaining and compromise among justices on the high bench when they rule on cases (Maltzman et al. 2001; Nie et al. 2019; Palmer and Brenner 1990; Rathjen 1980). All else being equal, a merits panel with characteristics that contribute to its efficiencies should decide cases more quickly than one with characteristics that cause inefficiencies. But all things are rarely equal. For instance, a case's complexity should affect the time a merits panel needs to deliberate and render its decision. Even the least efficient court should be able to adjudicate a simple case more quickly than it can a more complex one.

When evaluating the impact of panel characteristics, we invoke two different types of group constructs that may form the basis for understanding the role of small group forces in Supreme Court panels. First, groups may include broad social categories (e.g., women, political party, etc.) that may shape the attitudes and behavior of those identifying with such groups (Escobar-Lemmon et al. 2021). Importantly, in the small group setting, it is not the direct interaction of the individuals in these groups that affects behavior and policy outcomes. Rather, these identifiable groups serve as "reference groups," and it is the set of lived experiences that their members bring to the decisional process that may leaven a group's outputs. For example, including women in legislative bodies and courts is often justified in terms of "descriptive representation," implying that women's interests will be brought to bear on governmental actions and policies.[1] A similar dynamic may be at work for law school professors.

Second, small group forces also may be tapped by behavior of the individuals participating in the small group, or in our case, a small number of justices serving on a specific decisional panel. In this instance, we move from relying on a justice's reference group identification to direct interaction with other justices on a panel. For example, when a panel has a set of differing opinions on a case, any resulting diversity may slow down the decision-making process (Epstein and Knight 2022). Likewise, a panel of seasoned justices may cut to the chase, thereby speeding up the process. Thus, our analysis incorporates small group forces as (1) broad reference points and (2) attitudes and behavior that may result from direct interaction among a panel's justices.

In this paper we systematically examine the effect of small group forces on an apex court's pace of adjudication, juxtaposing and explicitly comparing the amount of time the court takes for oral argument with the time it takes the court to deliberate the merits of a case and render a final opinion. This allows us to measure whether a case sped up or slowed down through the adjudicative process and then estimate whether and how attributes of the judicial panel, the case, and the decisional context affected this pace. Overall, our findings confirm that small group factors matter. But the broader decisional context, particularly the court's workload, exerts an even greater impact on the speed of adjudication.

Our research makes three major contributions. First, our paper contributes to a long line of research about group dynamics on the high bench (see, Ostberg and Wetstein 2024). We use case processing time as an indicator of the extent of bargaining among justices and evaluate how small group forces as well as factors at the case and institutional levels bear on such bargaining. Second, we generate a new metric to evaluate a court's relative speed of adjudicating cases that proceed from the oral argument stage to the merits decision stage. Previous research mainly focuses on the oral argument or the decision-making phase. Our analysis of the relative adjudicatory speed reveals a more nuanced understanding of how a court's operations change across different stages. Third, much of the research on judicial

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[1] For a review of descriptive representation in international courts, see Holst and Langvatn 2021.

politics focuses on the U.S. Supreme Court. Findings from this body of work have provided important insights, but their generalizability remains contested. Our paper joins a growing body of work that analyzes Supreme Courts in countries beyond the U.S. context (Epstein et al. 2024), and more specifically, broadens the scope wherein small group forces are at play.

Our paper is organized as follows. In the next section we discuss two critical stages in the adjudication of cases before collegial appellate courts — oral argument and justices' deliberations. The former stage is primarily oriented toward information gathering, whereas the latter principally concerns information processing and arriving at a collective decision. We also discuss the discrepancies of processing times of cases at these two stages and how combining these discrepancies provide an excellent opportunity to examine the impact of small group forces on adjudicative speed. In section three we make the case for the use of the Norwegian Supreme Court to test our explanation of the variation in a case's processing time across its adjudicative lifespan. In section four we identify and discuss the forces that we expect to influence the relative speed of a case's adjudication. We then present our data and measurements. We discuss our model specification and statistical results in section six. We conclude by taking stock of our findings.

2   Disparities in the Amount of Time Devoted to Two Stages of Decision Making

Following a court granting review to an appeal are two key stages of judicial decision making on the merits: oral argument where the justices gather in the courtroom to hear the parties' lawyers arguing for their cases, and conference deliberations where the justices meet to deliberate and decide the case on its merits. Each of these temporal stages has its own institutional rules and decisional dynamics, but they are linked by the case that travels through them. Explicitly comparing these two stages permits us to assess the relative speed of decision-making and addresses an important question for a court: delivering justice in a timely manner. This strategy includes a measure of court efficiency in that it also assesses "the performance of given units" (Świtała 2024:179). The comparison also provides a unique opportunity to examine the impact of small group forces on adjudicative speed, which is crucial for understanding the interaction among justices.

2.1   Oral Argument

Oral argument is the institutional setting where the court has allocated time for the parties' lawyers to present the essential information needed for the justices to rule on the case. One feature of oral argument is the lawyers' presentation of facts, information, and arguments (Johnson and Pryor 2018). Another feature is the amount of interaction that the justices initiate with the lawyers to probe deeper into the case, ask for clarifications, and even push the lawyers to check the robustness of their arguments (Jacobi et al. 2024; Sorenson 2023). Krehbiel (2024) argues that courts hold oral argument to gather information, to cloak the decision making in legitimacy by demonstrating that both parties have been heard, and to raise the public's awareness of the role and importance of the courts. In turn, these factors can improve the likelihood of successful implementation of and compliance with the court's decision among stakeholders (Hillebrecht 2024).

Not all courts hold oral argument, and some only allow them for selected cases. For courts that hold oral argument, some set a fixed time for oral argument, while others adjust the duration based on various criteria, often related to the complexity of the case. Carefully calibrating the time for oral argument to the case's complexity is known as the "accordion

model," while allocating a fixed time for oral argument is referred to as the "procrustean model" (Bentsen et al. 2021). The theory of the accordion model suggests that cases with numerous legal provisions and facts demand more time for oral argument due to the need for thorough consideration by justices. In essence, "[c]omplex legal cases have complicated information environments" (Goelzhauser et al. 2022, 93).

Research on European courts of last resort has shown that the time allocated for oral argument is a valid indicator of the complexity of the case (Arnesen et al. 2018; Bentsen et al. 2021), and time allocated (i.e., case complexity) was significantly linked to several *ex ante* forces. These include, first, international law — e.g., European Economic Area/European Union (EEA/EU) law (Müller-Graff and Mestad 2014; Wiklund 2008) and European Convention of Human Rights (ECHR) law (Hirschl 2011; Phildes 2017; Qvigstad and Schei 2018); second, the presence of multiple legal players affording legal assistance in the case and/or any third party involvement (Øie 2018; Backer 2014); third, whether there were multiple appeals made or if the lower court decision being appealed was a nonunanimous judgment (Hettinger et al. 2006; Moyer 2012; Lindquist et al. 2007); and, finally, whether the appeal concerned a civil rather than a criminal case since the former type of case often entails broader judicial discretion to resolve conflicts within the legal system (Øyen 2019; Backer 2016).

We argue that the time allocated for oral argument is based upon and limited to the legal and empirical facts of the case that were considered during the court's gate-keeping stage.[2] In other words, when determining the time for oral argument, only information relevant to the appeal would be considered. In institutional settings where the subsequent decisions on the merits are organized by rotating subpanels of justices, the composition of the merits panel remains unknown at this point.

2.2 Deliberations and Opinion Composition

Following oral argument, justices meet in conference to discuss the case and how it shall be resolved. Procedures take different forms, but they are chaired by the presiding justice, or chief justice if present, who will first give an oral presentation on how he or she recommends the case should be decided. Then, after one or several rounds of discussion among the justices, the presiding justice will take stock of the deliberations, summarizing who the winner of the case will be, and which legal arguments will support the outcome. At this stage of deliberations, dissents or concurrences by one or more justices may have been flagged (Corley and Ward 2018; Corley 2017; Kelemen 2024). A tentative timeline for this stage of decision making may be set, taking into account the time needed to draft the court's opinion, the circulation of the court's opinion among the justices, or the need for additional deliberations.

Either by the discretionary power of the presiding justice or following a prescribed division of task among the justices, the author of the court's opinion will be identified. As the draft opinion is being composed, revisions to it can be suggested and made. Meanwhile, dissents and/or concurrences may be filed and circulated among the justices. This "bargaining" by way of opinions may result in the loss of the original majority with a new majority forming around an alternative framing of the decision (Maltzman et al. 2001; Nie et al. 2019). Although generally infrequent, the majority opinion author may change prior to the announcement of the court's merits decision.

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[2] Here we do not consider nor try to conceptualize forces that may impact time for oral argument and take place *prior* to gatekeeping – e.g., the degree of public attention to a case.

The deliberation and opinion writing processes reflect collective action problems within unscripted institutional settings. The basic features here are the composition of the panel, panel leadership, the interaction between the justices, the task of authoring the court's decision on the case, and any negotiations among justices to either render a unanimous decision or make room for one or more dissenting and concurring opinions.

2.3   The Relative Speed of Decision Making

As noted above, we begin with the assumptions that case-level information is the main ingredient used to allocate the time for oral argument and that oral argument is primarily for information gathering. Additionally, we assume that both case-level and panel-level forces affect the time needed for the justices to render the court's final decision on the merits. This second stage is primarily geared towards information processing. Finally, we assume that the time allotted for oral argument is related to the time the justices used to render their merits decision by way of the complexity of the case that travels through both stages of adjudication. To put it simply, a complex case should require more time for both information gathering and information processing.

It is this temporal correlation that our analysis addresses. Specifically, we attempt to systematically explain those instances where a case's processing time is out of synch across the two stages of its adjudication. Our point of departure is the time allocated for oral argument. As noted above, this has been shown to be a valid proxy for a case's complexity (see, Bentsen et al. 2021) and is based on the known legal and empirical aspects of the case at the time it is accepted for review. In our analysis, we compare this time to the actual time the court used to render its decision. If the time set for oral argument was correctly calibrated to a case's complexity and the time to render the court's decision on the merits proceeded without any fits and starts resulting, say, from the small group setting in which the majority opinion is being composed, one should be able to predict with a certain level of accuracy the elapsed time the Court required to render its decision.

Simply put, relatively short and long times for oral argument should correlate positively with relatively short and long times for rendering the court's decision on the merits; that is, the two stages should be temporally balanced. Yet this may not always be the case. Even if the time given to the oral argument stage is a correct assessment of a case's complexity, the court could either use relatively less or more time to render its final decision. In other words, a case's adjudication could speed up or slow down during the stage of the court's deliberations and composition of the majority opinion.

Table 1 illustrates this point. If we dichotomize the time set for oral argument and time needed to render the final merits decision, we observe that there are minimal disparities if *both* the oral argument and time to render the merits decision are either relatively shorter or relatively longer. This indicates that the amount of time at both stages of the decision-making process is nearly the same. In other words, the amount of time the court gave itself for the information gathering process at oral argument corresponded closely with the time the court needed for information processing and completing the decision making on the merits.

Table 1. Disparities in the Amount of Time Devoted Across a Case's Adjudication

		Oral argument	
		Shorter < 0	Longer 0 <
Decision-rendering days	Longer 0 <	Decision making slows down	Balanced
	Shorter < 0	Balanced	Decision making speeds up

Note: Oral argument and Decision rendering days are simplified and illustrated as z-scores.

This clean trajectory, however, does not capture all the contingencies. Indeed, there are two additional outcomes of interest. First, if the time required to render the decision is relatively *longer* than the time for oral argument, decision making has slowed down. Second, if the time to render the decision is relatively *shorter* than the time for oral argument, decision making has sped up. In the data we present below, empirically these changes in speed occur. Our task is to offer a systematic explanation for them. In the next section we leverage four important features of the Norwegian Supreme Court's merits review process to facilitate our analyses.

3   Leveraging Institutional Features of Randomness and Time Constraints

The Norwegian Constitution of 1814 established the Supreme Court as a court of last resort, consisting today of a chief justice and 19 (associate) justices. Between 1996 and 2008, the Norwegian Supreme Court was transformed from a passive court of appeals resolving individual cases into a proactive court of precedent with the goal of resolving principled cases with a broader reach (Grendstad et al. 2015; Sunde 2015). Essential to this transformation was the appreciable expansion of the Court's discretionary jurisdiction, which is administered by its Appeals Selection Committee (ASC). This rotating, three-justice body acts as the Court's gatekeeper. Law clerks aid in this gatekeeping effort by composing memos that summarize the appeal, specify all pertinent legal questions, issues, and sources, and provide recommendations on whether the appeal should be granted or denied (Grendstad et al. 2020; Sunde 2017). The ASC screens all appeals. Its default decision is to deny review, granting an appeal if any one of its three members accepts it (Skoghøy 2016; Bårdsen 2014). For a court of precedent, an appeal granted review is the vehicle that carries the legal question(s) of interest. Thus, the ability of the ASC to ensure that the appeals it forwards for full merits review have the greatest potential for developing and clarifying the law is crucial (Skiple et al. 2021).

Four institutional features of the Norwegian Supreme Court make it an appropriate setting for examining the effect of small group forces on merits deliberations. First, the Court employs the "accordion model" (Bentsen et al. 2021) and sets the time for oral argument based on the expected complexity of cases it hears. Once an appeal is selected for review on its merits, the justice who reads the appeal first oversees moving the case forward to oral argument. This preparatory justice holds a meeting with the lawyers instructing them on the legal question(s) that the ASC has decided must be addressed. Although the litigants during

the appeal process had the opportunity to provide an estimate of the time required for oral argument, it is solely the preparatory justice who evaluates the case's complexity and determines the requisite time allocation for oral argument in court. Moreover, the preparatory justice sets this requisite time far in advance of the Court's panel composition. Thus, the justice is prevented from calibrating the time based on the composition of either of the two merits panels.[3]

The second feature is the quasi-random process by which the Court composes the two parallel deliberation panels. Expressively labelled "the seniority and zipper principle" (Matningsdal 2013, 439), the ten justices available for the two panels for a given week are sorted in descending order of seniority and allocated in an alternate fashion to the two merits panels. Regardless of seniority, the chief justice, if present, is always ranked first in this sorting and allocation process (Grendstad and Skiple 2021). The most senior justice on each panel becomes the presiding justice and is responsible for the administration of the case during both the oral argument and merits deliberation stages.

The third feature is that the appeals that are granted review are randomly assigned for oral argument to one of the two parallel merits panels (Bentsen et al. 2025). Typically, any given panel hears only one or two cases per week (Nie et al. 2022).[4]

Fourth, in addition to a court having discretionary jurisdiction, another relevant dimension is the degree to which a court's decision making on the merits is subject to timing control mechanisms (Arguelhes and Hartmann 2024). Here the Norwegian Supreme Court is subject to three controls. First, the Court is required by the Dispute Act to "prepare a plan for hearing the case and following up on it in order to bring the case to a conclusion in an efficient and sound manner."[5] Second, the Court has decided to follow the statutory requirements of lower courts to hand down a decision in a criminal case within three months and in a civil case within six months of the case being filed at the Court.[6] Third, it is also an established goal of the Court to hand down the final decision on the merits of a case within the spring or fall term that the oral arguments for that case were held.[7]

4   Explaining the Relative Speed of Decision Making

To assess the relative speed of decision making, we need two key pieces of information: the duration of oral argument as allocated by the Court and the time gap between the completion of oral argument and the issuance of the Court's decisions. Now, if the preparatory justice has correctly calibrated the amount of time set aside for oral argument based upon a case's complexity and the justices' deliberations proceed without any fits and starts, then the *standardized* amounts of time at both oral argument and the number of days required to render a decision should be nearly the same. But the judicial world is not linear. Across a

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[3] The identity of the preparatory justice is not known to the public. Once oral argument is underway, the presiding justice of the case has the authority to adjust the original time schedule. Information on any such adjustments rarely, if ever, reaches the public.

[4] We note the caution in the literature that random case assignment systems still include non-random components (Eisenberg et al. 2013).

[5] The Dispute Act, § 11-6.

[6] Bills before the Storting (Norwegian Parliament), various years, e.g., St.prp.nr.1 (2007-2008), page 22. Also see the Criminal Procedure Act, § 328 and the Dispute Act, § 9-4.

[7] As defined in the Court Act § 140, the Spring Term starts January 3 and ends July 1; the Fall Term starts August 15 and ends December 24. The Court is in recess between July 1 and August 15, from December 24 to January 3, and from Palm Sunday to the second day of Easter.

number of cases in the data we study, there is a gap between the standardized measures of time for oral argument and merits decision. It is the empirical examination of this disparity in the amount of time devoted across a case's adjudication to which we now turn.

Because we expect that the complexity of a case has a consistent impact on both oral argument and the number of days required to render a decision, the model we specify below attempts to systematically test the effects of small group forces on the pace of a case's adjudication at the merits deliberation stage. Of course, to measure these effects fully and fairly, we must account for other forces that might also bear upon the pace at which a collegial court renders a decision. These include the decisional environment in which the small group is operating and the nature of the case over which the small group is deliberating.

4.1 Panel Characteristics

Panel characteristics, such as reference groups, as well as interactions among the justices, affected by their degree of familiarity and collegiality, matter (Swalve 2022; Engel 2022). First, effective group decision-making requires both "task" and "social" leadership. While task leaders focus on achieving the group's objectives, social leaders are more concerned about the emotional and interpersonal needs of their colleagues (Danelski 2002; Bentsen and Skiple 2024). Research has shown that compared to men, women tend to display a more participatory leadership style, emphasizing inclusivity and collaboration (Eagly and Carli 2003; Bentsen et al. 2025). In legislative committees, for instance, women have brought "different (...) experiences" and demonstrated "more collaborative styles of leadership" (Rosenthal 1998). Gender dynamics within judicial panels also influence the decision-making process. There is evidence that when the presiding justice is a woman, more time is devoted to rendering the final merits decision (Nie et al. 2022). Extended to the gender composition on a panel, this observation suggests that the number of female justices may also influence the speed of deliberations.

Second, legal experience and the professional background present on a panel could affect its pace of deliberations. Presumably, a more experienced set of justices would better understand the judicial procedures to streamline decision-making and thus navigate case deliberations more efficiently. Indeed, experienced panels "can handle more work" (Engel 2022:1181). Recent empirical evidence supports this assertion, demonstrating that experienced panels are more adept at managing their caseload (Nie et al. 2022). Moreover, a larger presence of law professors on the panel might militate toward a particular tone of deliberations, thereby affecting their pace. Law professors engage more easily in disputatious discussions (Bentsen 2018; Corley et al. 2013) and display tendencies toward judicial activism (Kinander 2002; Robberstad 2016), both of which can lengthen decisional time. Law professors may also consider factors deemed "irrelevant" by practitioners, further contributing to delays (Arold 2010).

Third, the diversity of the opinions among a panel's members could affect the speed at which it renders collegial decisions (Epstein and Knight 2022). Panels characterized by a high degree of opinion heterogeneity require extended deliberations to reconcile competing perspectives. In such a case, the more efforts expended on achieving consensus means that articulating a collective outcome — i.e., the majority opinion — would be more time-consuming (Maltzman et al. 2001; Nie et al. 2019; Nie et al. 2022).

4.2 The Decisional Environment

We consider four characteristics of the Court's decisional environment. The first of these characteristics is simply the number of decisions the Court must process throughout a case's progression in the Court system. Contrary to the blunt measure of the Court's annual workload, which is an unknown figure to the justices earlier in a year, a local measure of workload reflects the immediate demands placed on the Court's legal resources and staffing. However, its impact on the pace of the Court's operations is uncertain. On the one hand, a heavier workload might lead to an effort to dispose of the cases at a faster pace in order to clear the immediate overhang of cases. On the other hand, an increased number of cases might strain the Court's finite resources and result in the pace of adjudication slowing down. Metaphorically, in this situation, the Court has too many balls in the air and only so many hands to keep them aloft.

The second characteristic of the decisional environment in which the collective behavior takes place is the amount of time remaining in the term for a panel to render its decision. The more distant the deadline, the less urgency with which the justices will bend to the task of rendering a final decision. In contrast, as the end of the term looms, we hypothesize — as piercingly quipped by Samuel Johnson, that "when a man knows he is to be hanged in a fortnight, it concentrates his mind wonderfully" — that the panel must pursue greater efficiencies to decide the case before the end of the court term.

The third characteristic of the decision-making environment is unique to the age of COVID-19. During the pandemic, humming courts were turned into desolate courthouses where home-secluded justices heard oral argument and engaged in merits deliberations remotely (Ringsmuth et al. 2023). It is unclear what effect this truly novel decisional environment might have had on the pace of merits deliberations, but it needs to be accounted for in the model.

The final characteristic of the decisional environment are events that intervene throughout the year and that affect the schedules of the five-justice panels. One is the predictable Easter recess that interjects an additional week for affected panels.[8] Another is the few times during the year when the Court reorganizes itself into either semi-plenary grand chamber panels or full *en banc* panels to decide more salient cases. Rescheduling the Court's calendar to accommodate oral arguments in grand chamber or *en banc* is a major disruption to the Court's normal activities.[9]

4.3 Case Characteristics

Although the amount of time allocated to oral argument is a valid function of the estimated complexity of the case (see, Bentsen et al. 2021), the characteristics of the case that enter that estimation should be included in our model to avoid omitted variable bias. After all, it is possible that complexity affects information processing differently than it does information gathering but also that complexity may interact with justices' social deliberation process. Note that the dependent variable we probe here is different from the sheer passage of time that can be measured across the two sequential decision-making stages.

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[8] As defined in the Court Act § 140, the Court is in recess between Palm Sunday to the second day of Easter.

[9] Grand chamber (including the chief justice and 10 randomly drawn justices) and *en banc* hearings occur when an appeal is "deemed of special importance" or concerns an "extraordinary case," respectively (The Court Act, § 5). A senior member of the Court once referred to the major disruptions of the regular five-justice panel cycle that followed the reorganization of the Court into plenary mode simply as "hell" (Grendstad et al. 2020, 32 and 96).

The question now is whether specific aspects of case complexity contribute to speeding up or slowing down the pace of the information processing and opinion writing stage relative to the information gathering stage of oral argument. One of our assumptions was that the court-calibrated time for the information gathering during oral argument was correctly based on the complexity of the case. If this assumption holds, it follows that the same calibration, *ceteris paribus*, should also hold for the elapsed time of the final decision-making stage. When we analyze the relative speed of decision making, any significant effects of the case complexity variables would indicate that the Court's initial calibration was off target. We are uncommitted as to which of the six case-complexity variables was off target.

As noted earlier in this paper and also acknowledged by Norway's Supreme Court justices (Bårdsen 2014; Schei 2015; Øie 2018), high levels of complexity characterize cases involving international law — specifically European Economic Area/European Union (EEA/EU) law and European Convention of Human Rights (ECHR) law. There is a useful legal distinction between civil and criminal cases, with the Court considering the latter less complex (Øyen 2019). Another set of case-complexity variables tap into a diversity of information sources and interests. For example, if legal aid is provided or a third party is present in the case, additional information and/or interests not considered in the estimate of the appeal's complexity may result in the panel processing information effectively omitted in the original calibration, thereby increasing the relative amount of time taken to render an opinion. Finally, because of the nature of the cases on appeal from the Borgarting Court of Appeals — i.e., the court of venue for cases involving the government — they are allocated greater amounts of time for oral argument (Bentsen et al. 2021).

5   Data and Measurements

5.1   Data

The data for our analysis are compiled from two sources. First, we rely on the Norwegian Supreme Court website (domstol.no/hoyesterett/) on the scheduling of cases and descriptive information on the justices, and on the assistance from the Court staff to collect archived data on the amount of time allocated for oral argument. Second, for all the Supreme Court decisions we analyze, metadata are drawn from the large *Lovdata* legal database (lovdata.no/).

Absent grand chamber and *en banc* decisions, the Court hands down merits decisions in five-justice panels. Our initial datafile consisted of 9,495 (justice-case) observations, with five justices for each of the 1,899 cases. We generated relevant panel-level variables before collapsing the datafile to 1,899 (panel-case) observations for our analysis.

5.2   The Dependent Variable – A New Metric: The Relative Speed of Decision Making

Our dependent variable is the relative speed of decision making, operationalized as the difference between the time allocated for oral argument and the time expended on the merits deliberation and decision. Before oral arguments, the Norwegian Supreme Court briefly publishes the allocated time slots for the arguments on its website. This information is reported as hours or days. To ensure consistency, we use hours as the standard unit for measuring the duration of oral argument. We adopt the Court's rule that one full day of oral argument is equivalent to 5.5 hours and recode oral argument time published in days into hours. As to the time to render decisions, we compute it by subtracting the date when the decision was

handed down from the (first) day of oral argument. Accordingly, the duration of merits deliberation is measured in days.

Figure 1 plots trends in the two components of decision-making time across the 16 years in our data: the annual average hours for oral argument (the thin blue line mapped on the left y-axis) and the annual average days for decision making (the thick red line on the right y-axis). Overall, while the time for oral argument has increased steadily during the period of our study, the trend for decision-making days is more dramatic. Not only has the number of days taken to render a decision increased but the rate of the increase has risen over the most recent years.

To generate our dependent variable, the relative speed of decision making, we standardize and combine the two different measures of time into a new metric. As we noted above, for each case time for oral argument is measured in hours, while time for rendering merits decisions is measured in days. First, we standardize these two variables by computing their z-scores. Then we subtract the standardized scores for oral argument from the standardized scores of merits decisions and multiply that difference by -1. The resulting metric, our dependent variable, has *positive scores* when the time for rendering the final decision on the merits is relatively *faster* than the time allocated for oral argument, and *negative scores* when the time to render the decision is relatively *slower* than the time allocated for oral argument. In other words, positive (negative) scores indicate that the Court's decision making speeds up (slows down) during merits deliberations, relative to the time for oral argument.[10]
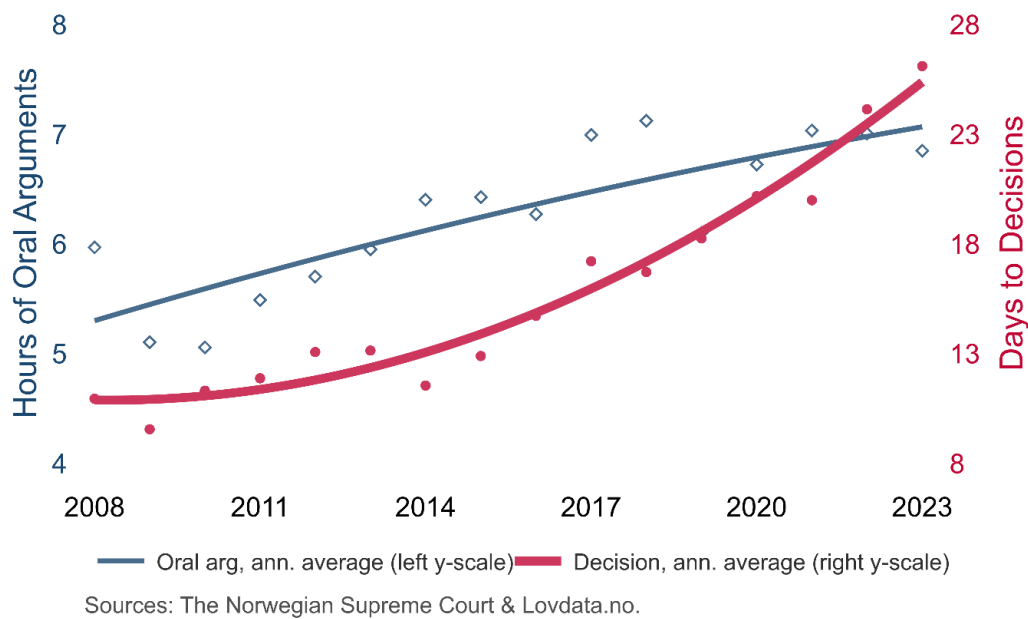
Figure 1. Decision making takes ever more time. The Norwegian Supreme Court 2008–2023.

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[10] We are grateful to Jon Kåre Skiple who suggested this neat variable construction.
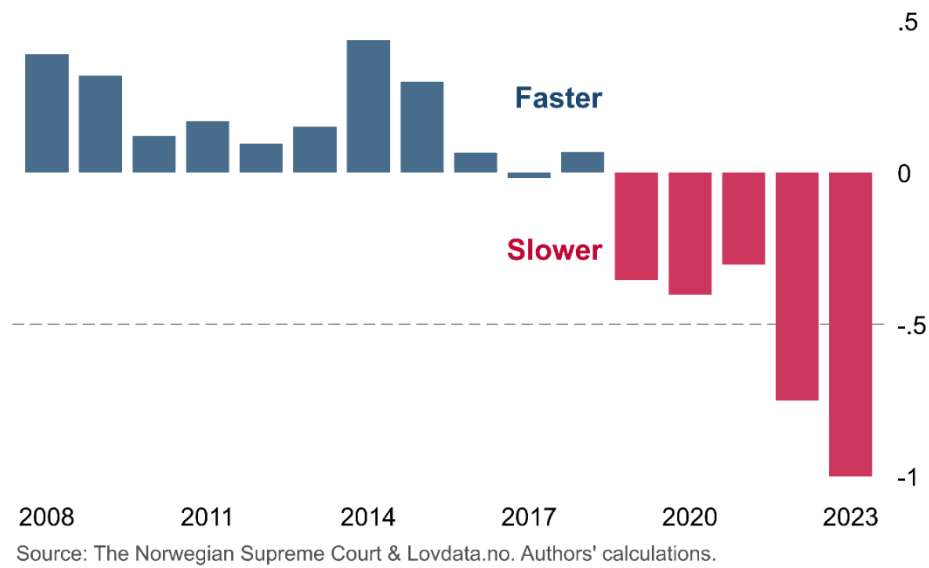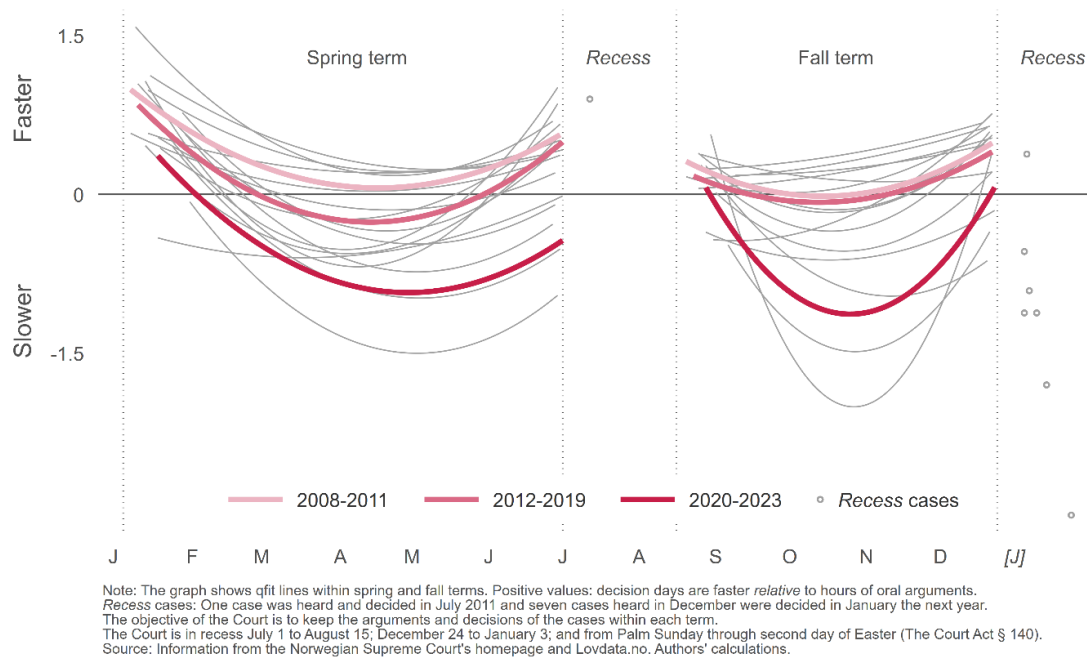
Figure 2. The Relative Speed of Decision Making Slows Down After 2014. The Norwegian Supreme Court 2008–2023.

Figure 2 plots yearly averages of the relative speed of merits deliberations over the 16 years in our data. It shows that the speed of decision making was relatively faster over the first eight to nine years but was increasingly slower during the last five years. The relative speed of decision making was fastest in 2014. From that year on, the trend follows a nearly mono-tonic path toward relatively slower decisions.

Figure 3 displays our new metric of the relative speed of decision making on the Court's 16 spring and fall terms. The main pattern of the data is shown by the six solid red bands on top of 32 semi-annual grey trendlines. All bands and lines are drawn using quadratic fit.[11] Underscoring the trend over time, the years are grouped in three clusters, starting with 2008–2012, to 2013–2019, and ending 2020–2023. The clusters have solid bands and increasing hue and highlight three trends. First, each term begins with the speed of decision making being above average, slowing down during mid-term, and then picking up speed again as the term draws to an end. This pattern is captured in the parabolic shape of all six solid bands. Second, the overall decision making slows down over the 16 years we study. In short, decisional speed slows down most markedly from the two first groups of year to the third group of year. Third, the parabolic pattern and the recent slowing down of decision making is most pronounced for the fall term.

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[11] Note that eight recess decisions are marked separately in Figure 3 but are included in the statistical analysis.

Note: The graph shows qfit lines within spring and fall terms. Positive values: decision days are faster *relative* to hours of oral arguments.
Recess cases: One case was heard and decided in July 2011 and seven cases heard in December were decided in January the next year.
The objective of the Court is to keep the arguments and decisions of the cases within each term.
The Court is in recess July 1 to August 15; December 24 to January 3; and from Palm Sunday through second day of Easter (The Court Act § 140).
Source: Information from the Norwegian Supreme Court's homepage and Lovdata.no. Authors' calculations.

Figure 3. Decision making speeds up at the end of the term and slows down over the years. The Norwegian Supreme Court 2008–2023.

5.3 Independent Variables

We include 16 independent variables in our analysis.[12] Theoretically, as instances of collective behavior, we expect that small group forces will affect the pace of merits deliberations and the production of a majority opinion. Accordingly, we include five small group covariates in our model. First, we account for the *sex of the presiding justice* of the merits panel (1 = woman, 0 = male).[13] To measure both the *number of women* and the number of *former law professors* on a panel, we simply use the count of each. To measure the *experience* of a merits panel, we computed the mean number of years on the Court for the justices composing that panel. Finally, a direct measure of *opinion heterogeneity* is the total number of voices on a panel (see, Nie et al. 2022). Accordingly, we counted the number of justices who wrote dissents and concurrences in a case and added the count to the justice who wrote the court's majority opinion. Although nonunanimous decisions are not know to the public until the case is publicized, a Court norm strongly militates against the justices discussing the case with one another before they meet for post-oral deliberations.[14] Hence, we strongly expect that any disagreement among the justices materializes during deliberations and has a constant effect on decision making until the case is publicized.

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[12] Table A1 in the appendix presents descriptive statistics of the variables.

[13] We identify the sex of the justices based on their names and the Supreme Court's official biographical information.

[14] Disagreements or coalition formation may initiate during oral argument by the ways in which the justices ask lawyers questions (Black et al. 2012), but given the Norwegian Supreme Court justices' disinclination to engage with the lawyers during oral argument (Meland et al. 2022) and its "norm of consensus" (Bentsen 2018), we ignore this possibility here.

The decisional environment in which the collegial behavior is taking place will have its own effect. We include five such measures. First, the workload of a court can shape the pace of its adjudication. We operationalize *workload* as the maximum volume of cases under deliberation on any given day during a case's progression through the Court system.[15] This approach seeks to capture the peak legal strain experienced by the Court at the level of individual cases. Second, that the Court aims to decide every case within the term it was heard creates a self-imposed deadline under which the Court toils. To measure the effect of this deadline, we have constructed a variable, *remaining days*, that counts the number of days until either the Spring or Fall Term ends.[16] Third, we use a dummy variable to account for the 116 COVID-19-era cases that the Court heard and deliberated remotely. Thus, if a case was adjudicated when the Court went to remote operations, *digital session* equals 1, 0 otherwise.[17]

While five-justice panels are the dominant mode of decision making for the Norwegian Supreme Court, there are two court-level interventions that can impact the panels' operations: whether Easter recess falls during a case's deliberations and those instances where grand chamber and/or *en banc* proceedings are convened during a case's deliberations. We code as 1 the 70 panels where the Easter break falls during a case's deliberations and the 94 panels where oral argument of the grand chamber and *en banc* panels are convened during a five-justice panel's deliberations; all remaining panels are coded 0.

Finally, we include a set of dummy variables to control for the various case attributes. Thus, international law cases, those involving *EEA/EU* or *ECHR* matters are coded as 1, 0 otherwise. To measure the civil/criminal legal issue dichotomy, we coded *civil* cases as 1 and criminal cases as 0. Cases with *legal assistance*, the presence of *third parties*, or cases that arrived at the Court from the *Borgarting Court of Appeals* are coded 1, 0 otherwise.

6 Estimation and Results

Because the outcome of our interest — the relative speed of decision making — is a continuous variable without an intuitive unit of measurement, we use the ordinary least squares model. We account for case-invariant heterogeneity due to time by including year fixed effects in our regression model. We also adjust the standard errors for clustering at the year level. To aid in comparing the relative effect sizes of our independent variables on the same scale, we standardize each independent variable by subtracting its mean and dividing by its standard deviation and re-run our regression model.

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[15] We use the following three-step strategy to measure the Court's workload. First, for each day the Court is in session, we compute the total number of cases that has had oral argument but not yet received a final merits opinion. Second, for each individual case, we track the number of cases currently under deliberation on a daily basis as the case moves through the judicial process. Third, to quantify the Court's workload at the case level, we take the maximum of these daily counts. The maximum value represents the peak workload associated with a given case. As a robustness check, we also tested the average daily count as a measure of workload, for which our regression analysis yielded substantively similar results.

[16] The Spring Term ends on July 1; the Fall Term, December 24. Eight cases were decided in "injury time," that is, after the Spring and Fall terms had come to an end, and have negative values on the *remaining days* variable. These cases are identified by separate markers in the recess periods in Figure 3, but they are included in the regression models.

[17] Between March 12, 2020, when the country closed down, and March 10, 2022, when the last COVID-19-era case was decided, due to the on-and-off national lock-down, stay-at-home, and social distancing orders, the Court heard and decided 177 cases of which 116 were by digital sessions. (Source: email correspondence with the Supreme Court October 10, 2022.)
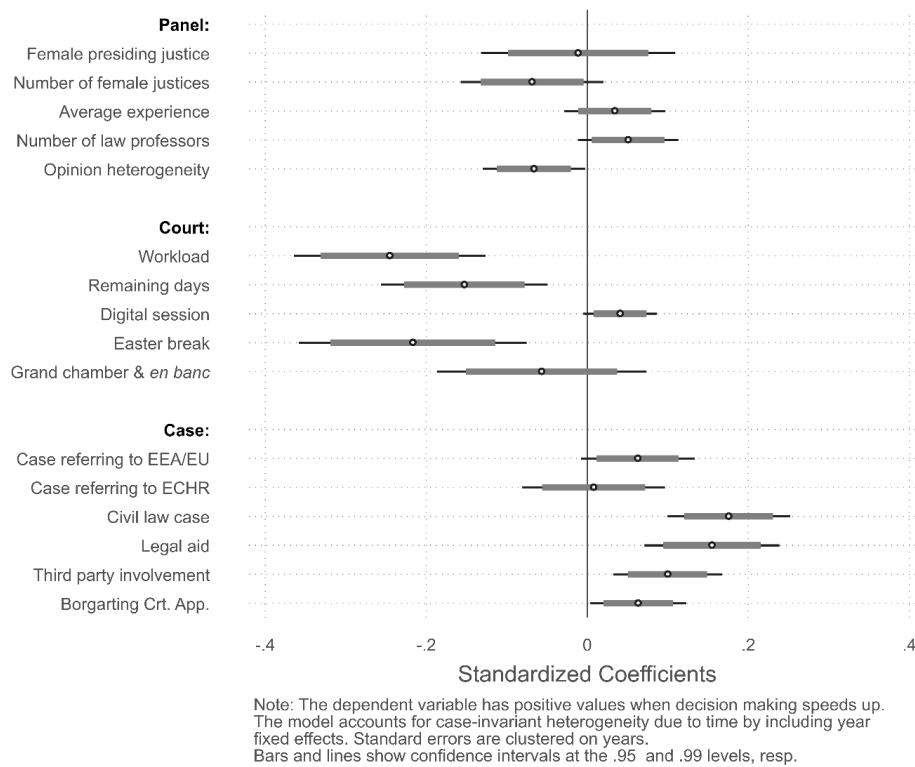
Figure 4. The impact of panel, court, and case variables on the relative speed of decision making. The Norwegian Supreme Court 2008–2023.

Figure 4 plots the standardized coefficients estimated on our independent variables with their associated confidence intervals at the 99 and 95 percent significance thresholds.[18] Our discussion will use the 95 percent threshold. Recall that larger values of our dependent variable indicate shorter decisional time relative to time set for oral argument. Thus, except for and due to the coding of the *remaining days* variable, a positive coefficient of an independent variable demonstrates a speeding-up effect on decisional time, whereas a negative coefficient indicates a slowing-down effect.

6.1 Panel Effects

Consistent with our expectation that small group forces impact the pace of merits deliberations, most of the panel variables attain statistical significance at the conventional level. The coefficient for the number of female justices on a panel is negative and statistically significant, indicating that as more female justices sit on the panel, it takes more time to render a final decision than to conclude an oral argument. Specifically, holding all other variables constant, a one standard deviation increase in the number of female justices on a panel is associated with .07 standard deviation increase in the time taken for merits decisions relative to the time for oral argument. This finding suggests that more female justices bring about

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[18] See Table A2 in the Appendix for the raw and standardized estimated coefficients of our independent variables on the relative speed of decision making.

greater deliberative engagement and collaboration during the merits decision phase and thus contribute to longer decision-making time.

The number of justices with prior legal academic background exerts a positive and statistically significant effect on the relative decisional speed. A one standard deviation increase in the number of justices with experience as law professors leads to a .05 standard deviation decrease in the time spent for merits decisions compared with the time allocated for oral argument. This result provides cautious counterevidence to concerns that academically oriented justices might prolong decisional time due to extensive legal ruminations at the merits stage. Instead, it suggests that their familiarity with legal reasoning and synthesis facilitate a more expedient resolution of cases.

In line with the slowing-down effect observed for the number of female justices, opinion heterogeneity is also negatively associated with our dependent variable. As dissent and concurrences increase among the justices, the pace of deliberations at the merits stage slows down compared to that at the oral argument stage. A one standard deviation increase in opinion heterogeneity reduces the relative processing speed of cases by .07 standard deviation. This result highlights that more extensive deliberations and thus time are required to reconcile greater interpretative disagreements.

Contrary to our expectations, neither the presence of a female presiding justice nor the average experience among the justices on a panel appears to significantly influence the amount of time required to deliver a final decision relative to conclude an oral argument. Future research could investigate these dynamics further in alternative institutional settings.

6.2   Forces of the Decisional Environment

Turning our attention to factors that tap into the Court's decisional environment, we find that they heavily influence the Court's relative decisional speed. As indicated above, we suggested that workload may have one of two effects. First, as the caseload increases, the justices may be under pressure to expedite the decisional process. Second, a mushrooming caseload may be so demanding of the justices' time that the process actually slows down. Our findings indicate clearly that it is the latter interpretation that is supported by our regression analysis. Indeed, a heavier workload leads to more time expended in producing a merits decision, as indicated by a negative, statistically significant coefficient associated with the Court's workload. A one standard deviation increase in the Court's workload leads to a .25 standard deviation decrease in the relative speed of merits decisions, a magnitude that is substantially larger than that of the number of female justices, the number of law professors and opinion heterogeneity at the panel level.

Second, when there are fewer days left at the end of the term, the justices' decision making speeds up, as demonstrated by the negative, statistically significant coefficient on the number of remaining days. Recall that the remaining days variable has high values (days) when there are plenty of days left in the term and low values when, so to speak, the last grains of days of the term trickle through the hourglass. Hence, the negative coefficient of remaining days suggests that when there are fewer days left in the term, the decision making speeds up. Deadlines matter but workload matters more. The effect size of the number of remaining days is smaller than that of workload: a one standard deviation decrease in it produces a .15 standard deviation increase in the relative speed of merits decisions.

Third, not surprisingly, when it comes to processing time, cases heard remotely during the COVID-19-era are very different from those decided in traditional format. The results show that cases argued and deliberated in digital sessions are decided faster, as indicated by the positive, statistically significant coefficient on digital sessions.

Finally, Easter breaks reduce the relative speed of decision making. The negative coefficient shows that the annual interjection of a full week into the justices' spring calendar significantly decelerates a case's adjudication. On the other hand, interventions due to grand chamber or *en banc* cases have no impact on our dependent variable. The transitory all-hands-on-deck oral argument procedures required by these salient cases may be disruptive to the Court's organization, but they have no impact on the relative speed of the ordinary five-justice panel's decision making.

6.3   Case Forces

Contrary to our initial expectation that differences between the time required for merits decisions and oral argument arise from panel attributes rather than case attributes, our findings point to the role of the latter. That is, case attributes are found to exert an influence on the Court's relative decisional time.

The results show that cases referring to the ECHR are not so different from other cases in terms of the relative speed of decisional time. However, EEA or EU issues in a case appear to produce a speeding up effect on the amount of time it takes the Court to render a final decision compared to those cases at oral argument. Similarly, civil law cases exhibit a positive and statistically significant effect, suggesting that the Court processes these cases relatively faster in the merits deliberation phase compared to the oral argument phase. Additional factors such as legal aid, third party involvement, and cases appealed from the Borgarting Court of Appeals also contribute to expedited decision making at the merits stage.

7   Conclusion

What explains the pace of an apex court's merits deliberations? As instances of collective behavior, we expected that small group forces — leadership styles, reference group identities, and professional backgrounds present in the group, levels of experience with the deliberative process, and heterogeneity in the justices' opinions — have an effect. To test for these effects, we took advantage of a major feature of the Norwegian Supreme Court. Namely, it determines the amount of time it allocates for oral argument based on the complexity of the case being argued. By comparing this time to the amount of time the Court used to render its decision on the merits, we can assess whether the pace of deliberations speeds up or slows down relative to the Court's pace at oral argument, while effectively controlling for the case's level of complexity. To buttress our analysis, we also took advantage of the Court's institutional features: the quasi-random assignment of justices to the merits panels; the random assignment of cases to panels; and the timing control mechanisms of reaching judgment in a case.

Most of the small group forces we examine do affect the pace of deliberations in the way we expect them to. A greater number of female justices on a panel and distinct voices in the majority opinion produce a slowing-down effect on the relative speed of merits decisions as compared to oral argument. As to the role of gendered leadership and judicial experience in judicial decision making, our results show that the presence of female presiding justices and the average level of judicial experience among panel members exert no impact, findings that are not in harmony with prior research (Nie et al. 2022).

Importantly, the institutional context in which the group is operating has an independent, sizable effect on the group's behavior. The workload, deadlines, and the physical setting in which the group conducts its business all bear upon the pace of the group's merits

deliberations, again in the ways we expect them to. In particular, the Court's workload exerts the largest impact on adjudicatory speed, outweighing all other panel and case attributes.

In addition, the relative speed of decision making in the Norwegian Supreme Court is influenced by various case attributes, including cases referring to EEA or EU, civil law cases, the presence of legal aid, third party participation, and whether the case has been appealed from the Borgarting Court of Appeals. While case attributes, especially case complexity, are determinants of the duration of oral argument allocated by the Court, they also exert additional influence on the amount of time devoted to merits decisions.

While our findings affirm the significance of small group dynamics, we also found that the decisional context, particularly the Court's workload, had a substantial negative effect on the speed of adjudication. Overall, our analysis has made three broader contributions. First, it has extended the research on group dynamics within high courts by using case processing time to assess the extent of judicial bargaining. Second, it has introduced a new metric to evaluate the Court's adjudicatory speed from oral arguments to final decisions, offering a more nuanced view of the Court's operational changes across different stages. Third, by focusing on Supreme Courts outside the U.S., our research has broadened the scope of judicial politics and highlighted the influence of small group dynamics in diverse contexts.

Acknowledgements and Disclosures

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