

The Aggregate Dynamics of Lower Court Responses to the U.S. Supreme Court*

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Abstract

We argue that given finite resources to review the large number of decisions by the lower courts, Supreme Court justices should primarily be interested in aggregate responses to their precedents. We offer a theory in which the U.S. Supreme Court drives aggregate responses to its decisions by signaling the utility of its precedents to judges on the lower courts. Specifically, we theorize that lower court judges have a greater propensity to rely on a Supreme Court decision when a precedent is reinforced by one or more Supreme Court summary decisions, which explicitly direct a lower court to consider a formally argued decision of the Court. To test the utility of these signals, we employ a multilevel modeling framework examining all lower court responses to the universe of cases from ten consecutive terms of the U.S. Supreme Court. Our results demonstrate that the presence of summary decisions significantly increases the frequency with which the lower courts cite and follow the precedents of the U.S. Supreme Court. We corroborate the causality of these linkages through qualitative analyses, distance matching methods, and simultaneous sensitivity analysis. Our study offers new and important insights on judicial impact and decision-making behavior within the American courts.

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In *Johnson v. United States*,¹ the U.S. Supreme Court held that U.S. District Courts have the authority to add additional supervised released time for individuals who violate the conditions of an earlier supervised release. The Supreme Court's decision explicitly states that such punitive actions by lower court judges do not violate the *Ex post facto* clause of the U.S. Constitution. Given the prodigious amount of criminal cases that come before the lower courts, the potential applicability of such a Supreme Court decision is notably broad. Later that same year, the justices heard another federal sentencing case that considered the constitutionality of a state criminal statute in *Apprendi v. New Jersey*.² In *Apprendi*, the justices declared that it is an unconstitutional violation of the Sixth Amendment for any judge to increase a criminal sentence beyond the statutory maximum imposed by a jury.³ While neither of these decisions are considered salient by contemporary measures,⁴ the difference in lower court application of these two precedents is stark. In the years that followed, *Johnson* has been cited in approximately 500 decisions with just over 100 positive treatments by the federal and state courts combined. By contrast, *Apprendi* became one of the most frequently relied on Supreme Court precedents, with approximately 33,000 citations and over 2,700 positive applications across inferior courts.⁵

The disparity in lower court attentiveness to *Johnson* and *Apprendi* raises an interesting puzzle. Could we have predicted the disparate impact of these two Supreme Court decisions on the lower courts? If so, can Supreme Court justices influence the frequency with which the lower courts adopt their precedents? We contend that the answer to both questions is yes. We argue that the Supreme Court often provides lower court judges with information on the

¹ 529 U.S. 694 (2000)

² 530 U.S. 466 (2000)

³ 530 U.S. 466 (2000) at 23-24; 526 U.S.277 at 252-253 (1999)

⁴ For instance, neither decision appears on the front page of the *New York Times* nor did they make CQ's list of important cases.

⁵ *Apprendi* has been cited over 20,000 times by the lower federal courts and over 13,000 times in state court decisions.

scope of a precedent either explicitly, within the content of the Court’s opinion, or implicitly, through actions, such as issuing a series of summary decisions “in light of” a specific formally argued decision. We provide a framework in which such actions by the justices communicate important information down the judicial hierarchy and, as a consequence, increase aggregate lower court reliance to the High Court’s precedents.

Given resource constraints and the inability to review the large number of lower court decisions, we argue that policy oriented justices should primarily be interested in the aggregate impact of their precedents. We offer a theory in which the U.S. Supreme Court is able to drive aggregate lower court responses to its precedents through its summary decisions. The Supreme Court’s summary decisions are brief, low-cost decisions that generally vacate a lower court decision and direct lower court judges to reconsider a previous decision “in light of” a specific formally argued Supreme Court precedent. Our analysis provides both direct and indirect evidence that the mechanism by which the justices decide to grant additional petitions certiorari and issue these summary decisions represents a deliberate choice by the justices and is the single, largest driver of lower court responsiveness to the Supreme Court’s precedents. We also provide evidence that issuing these decisions is not driven by the types of cases within the judicial pipeline, which separates the Supreme Court’s summary decisions from the over ten thousand petitions that are ultimately denied each term. We corroborate the causality of these linkages through distance matching techniques and simultaneous sensitivity analysis. This study holds both theoretical and empirical implications for inquiries centered on the cumulative impact of the Supreme Court’s decisions and studies exploring interactions across the American courts.

Judicial Impact and Policy Oriented Justices

Existing studies on the U.S. Supreme Court suggest that Supreme Court justices are particularly attentive to the policy impact of their decisions (see Baum 2006; Klein 2002; Maltzman and Wahlbeck 1996; Segal and Spaeth 2002; Zorn and Bowie 2010). Such a concern for policy

implications of their decisions suggests that the justices would also want to maximize the impact of their precedents on the decisions by the lower courts. Fortunately for the justices, the literature demonstrates that the lower courts are highly responsive to the precedents of the U.S. Supreme Court (see Benesh 2002; Corley 2009; Corley and Wedeking 2014; Hansford and Spriggs 2006; Klein and Hume 2003; Masood, Kassow, and Songer 2017; Pacelle and Baum 1992; Songer, Segal, and Cameron 1994; Westerland et al. 2010). Similarly, a series of studies suggest that the lower courts almost always follow the precedents of the U.S. Supreme Court, in that there are few instances in which the lower courts publicly defy the Supreme Court or overtly refuse to accept the legitimacy of a Supreme Court precedent (see Benesh and Reddick 2002; Johnson 1979; Klein 2002; Luse et al. 2009; Songer and Haire 1992; Songer and Sheehan 1990; Wahlbeck 1998).

The absence of overt defiance, however, does not guarantee that the Supreme Court will have a substantial impact on the decisions of the lower courts. As one judge on the U.S. Courts of Appeals offers, “we would all follow clear precedent I can’t even think of any exceptions; of course, different judges may disagree on whether the precedent is in fact clear; and if it is not clear, then of course your judicial philosophy influences the way you decide.” Similarly, a second judge offers, “All judges would follow the precedent if it was really clear of course we don’t always agree which precedent is most relevant that is what a lot of the attorneys are arguing about in their briefs.”⁶ Given this view of precedent, the primary threat to the ambitions of Supreme Court justices is not whether a lower court will overtly defy a precedent. Rather, policy oriented justices should be most interested in how broadly and frequently their precedents are implemented within inferior court decisions. We now discuss the mechanisms for how justices interested in the broader impact of their decisions can effectively communicate that certain precedents should be applied more broadly than others.

⁶ Both quotes are from interviews conducted by Jennifer Bowie and Donald Songer with 60 judges on the U.S. Courts of Appeals. The interviews were conducted with the understanding that no comment would be attributed to a judge identified by any set of characteristics that would reveal the identity of the judge.

A Theory for Aggregate Supreme Court Impact

An important question that alludes the scholarship is the extent to which the Supreme Court's actions influence cumulative responses to precedent by the lower courts. Empirical analyses suggest that the U.S. Supreme Court is widely seen as a legitimate institution by judges on the lower courts, which enables the Court to have a substantial impact on aggregate legal policy and "defining the parameters" for implementing such legal policies within the decisions of the lower courts (Segal, Spaeth, and Benesh 2005). It is therefore reasonable to expect that within the judicial system, the lower courts should respond favorably to the Supreme Court in the aggregate and that the justices should expect high levels of adherence with the vast majority of their precedents. Given the inability of the Supreme Court to examine each instance of lower court defiance or misapplication of precedent, Supreme Court justices should be interested in aggregate patterns of lower court adherence to their precedents. Our intuition is premised on the reality that the Supreme Court cannot conceivably review the large number of decisions issued by the lower courts each year. However, justices attuned to the impact of their decisions can follow the extent to which lower court judges rely on their precedents in the aggregate. We argue that justices communicate the applicability of their precedents through both explicit and implicit signals. Moreover, we contend that the information communicated by such actions represents a conscious choice by the justices.

A critical aspect of signaling is that the signals are manipulable with the purpose of influencing the behavior of the recipient (Perry 1991). For instance, Perry argues that such judicial signaling has a significant effect on the certiorari decisions of the U.S. Supreme Court. Similarly, we theorize that lower court responses to the Supreme Court's precedents can be influenced through key signals from the justices. Principally, we expect that the lower courts will more frequently cite and follow the Supreme Court's precedents when a formally argued decision receives support through one or more summary decisions that direct a lower court

to reconsider a decision “in light of” a new rule announced by the Court.⁷ We also expect the lower courts to be influenced by the Supreme Court’s own application of its precedents. We argue that such actions by the justices serve as important signals to lower court judges to consider and follow certain Supreme Court precedents compared to others when such informational cues are absent.

While it is beyond the scope of this paper to empirically examine when the Supreme Court issues summary decisions, the justices themselves note that a petition is likely to be GVR’d if a majority of the justices are uncertain that a case would not be reversed by the lower court after considering the new precedent (Benesh et al. 2014). If the justices believe that the potential delay and cost involved in a remand is not justified by the benefits of further consideration by the lower court, the Supreme Court is unlikely to grant *certiorari* and issue a summary decision. Additional evidence presented by Benesh et al. demonstrates that the Supreme Court does not always follow the principles stated above. Benesh et al. provide two potential motivations for the justices to issue GVRs. The authors claim that the Supreme Court relies on GVRs as a form of monitoring of the lower courts, as well as promoting the uniformity of law, by preventing random factors from denying an individual justice in a case. They also find that even though the rate with which the U.S. Court of Appeals affirms a decision following a GVR is relatively high, a circuit opinion generally attempts to comply with the GVR order by addressing the formally referenced precedent within the GVR in some way. In other words, even if a circuit court does not ultimately change the outcome of a decision following a remand, it almost always attempts to incorporate the referenced precedent within its new decision (Benesh et al. 2014).

⁷ Summary decisions are based directly on the arguments presented in the certiorari petitions without asking the parties to submit formal briefs and without oral argument. Approximately 95% of summary decisions take the form of a grant, vacate, and remand (GVR) order, in which the justices grant certiorari to a petition, vacate the decision below, and remand the decision to the lower court with instructions to reconsider their decision “in light of” an explicitly named precedent. Supreme Court GVRs are, by definition, not the same as denials of certiorari. Instead, each summary decision that is a GVR directs a lower court to draft a new opinion, which must address the formally argued precedent referenced within it in some way (see Masood and Songer 2013; Masood, Kassow, and Songer 2017).

Returning to factors motivating lower court responses to precedent, the seminal work by Hansford and Spriggs (2006) puts Supreme Court signals in broad perspective. Importantly, these scholars note that much of the leading work on the Supreme Court contends that the justices are motivated by substantive policy goals. As such, policy-oriented justices desire to set doctrine in a manner that reflects their preferences. Hansford and Spriggs see this as a dynamic process, one in which the justices constantly reconsider the applicability of prior precedents within new cases. In this process, the justices either positive apply prior precedent, reinforcing the precedent’s legal authority, or negatively treat prior precedent such that it restricts its reach or calls into question the continuing importance of a precedent (see also Corley 2008; Corley and Wedeking 2014; Hinkle 2015, 2016; Westerland et al. 2010). These positive and negative treatments of precedent send strong signals to actors involved in legal policy-making that influence future decisions of the Supreme Court, the dispositions of cases in the lower courts, and the policy choices of external actors. These treatments of precedent signal changes in the “vitality” of the precedent.

Similarly, we argue that the Supreme Court’s summary decisions also send cues to the lower courts about the importance and potential relevance of given Supreme Court precedents. As Perry’s (1991) analysis of the certiorari process makes clear, the Supreme Court frequently receives petitions requesting review of multiple cases raising similar issues. At times, this may be contemporaneous to the justices issuing a noteworthy decision, at other times it may follow an important decision in later terms. It is important to note that even when there are multiple petitions within a single term, that raise similar issues, a large majority of those petitions are denied certiorari by the justices. The presence of a large number of petitions raising similar issues does not guarantee that the justices will automatically grant each of these certiorari petitions and issue a summary decision. In addition, according to Perry’s (1991) interviews, the justices issuing a summary decision is not considered standard operating procedure even when multiple petitions raise similar issues. In fact, a strong informal norm on the Supreme Court is that a summary decision will not be issued unless at least six justices agree (Perry

1991, 101). Ultimately, Perry (1991) concludes that the decision to grant certiorari, and issue a summary decision, should not be considered automatic.

Regardless of the specific facts of any particular held cases, even if many summary decisions are based on held cases, the held cases still provide an opportunity for the justices to expand a precedent among a variety of cases. By doing so, this allows the Court to ensure that a new precedent, when warranted, will be inculcated among a variety of lower courts, encouraging increased lower court responsiveness to a given precedent in the aggregate. Theoretically, we believe that when the justices are holding petitions, pending a formally argued decision, they are still making some type of analogical decision as to which cases are relevant (Braman 2006, 2009; Braman and Nelson 2007). For cases that the justices believe are not potentially related to another contemporaneous precedent, the justices simply deny certiorari rather than hold over a petition (Perry 1991). On the other hand, if the justices see an opportunity to expand the applicability of a precedent by holding cases and issuing a summary decision, this represents an opportunity to increase lower court attentiveness to certain precedents.

Every instance in which Supreme Court justices grant certiorari to a petition is a rare event. When the justices grant certiorari in order to issue a summary decision this represents a rare occurrence.⁸ The small proportion of total petitions that are summarily decided suggests that summary decisions represent a conscious choice by the justices, that a particular issue involved in the granted cases, is not only relevant but important enough to grant certiorari. When the justices decide to resolve an issue raised in multiple certiorari petitions and want to indicate that the resolution is applicable to both other certiorari petitions currently before the Court and to similar cases on lower court dockets, the justices may hear arguments and issue a decision with a full opinion in one of the cases and resolve the other cases with

⁸ In recent years the Supreme Court receives over 10,000 certiorari petitions each term, but issues approximately 100 summary decisions, on average, per term. This means that petitions have a slightly higher probability of being summarily reviewed compared to accepted petitions that are scheduled for oral arguments.

a brief summary decision that explicitly directs the lower courts to reconsider their earlier decision. The reconsideration of the earlier case must be made by considering the merits of the formally argued precedent referenced within each summary decision. The presence of a summary decision, and particularly the presence of multiple summary decisions, directing the lower courts to consider a given precedent when re-evaluating an earlier decision implicitly communicates to the lower courts that precedents referenced within summary decisions are applicable to diverse factual situations.

Notably, the justices have another contemporaneous option to expand the potential applicability of a precedent by consolidating or “bundling” multiple petitions. The consolidation of cases is most likely when the Supreme Court is confident that several cases are similar and important enough to be decided together. In other words, bundling cases is only possible when several petitions are similar in terms of the facts and the overall resolution by the lower courts. The possibility of bundling cases together that share little overlap or require different outcomes are more challenging to consolidate. Such decisions may elicit separate opinions protesting the consolidation. An additional limitation of bundling cases is that the petitions that are placed into a single case must be received by the Supreme Court in approximately the same time period as when a specific formally argued decision is announced. The possibility of preemptively holding a case and waiting for a similar case to emerge on the Court’s docket in the future is limited, unless such a case is in an area where many cases are heard.

By contrast, the use of summary decisions affords the justices more flexibility compared with the bundling of several petitions that are extremely similar. Summary decisions allows the justices to hold a variety of cases that are related in some way to a precedent that is concurrently being decided by the Court *ex ante*, without undergoing the time-intensive process of hearing oral arguments and writing a formal opinion that fuses several petitions into a cohesive case that generates legal policy. Summary decisions can also be used as a method of error correction for lower courts that may “get the law wrong,” or can be used after a precedent is created in an attempt to expand the applicability of such a precedent *post*

hoc (Benesh 2008; Benesh et al. 2014; Bruhl 2009; Masood and Songer 2013). In contrast to the expedient nature of summary decisions, if the justices feel the need to correct lower courts through a formally argued decision, they must accept a case, hear oral arguments, bargain, and ultimately draft a detailed opinion. Doing so requires an extensive amount of work with potentially limited returns. Hence, the ease with which the justices can issue a summary decision, both contemporaneously when announcing a new precedent and shortly after announcing a new precedent, gives the Supreme Court flexibility to direct lower court judges to broadly and carefully consider the merits of a new precedent in future cases.

The two types of signals outlined above, the Supreme Court's summary decisions and the vitality of precedent, are not mutually exclusive.⁹ The justices may signal the importance and wide applicability of a precedent by issuing one or more summary decisions that explicitly reference the precedent and by issuing several formally argued decisions that enhance the vitality of the original precedent. *Brown v. Board of Education*¹⁰ is useful to illustrate this point. For more than a decade, the precedent in *Brown* was consistently reaffirmed by the Supreme Court in subsequent formally argued cases, adding to its vitality. Notably, the justices followed up their initial decision by also issuing several summary decisions that extended the *Brown* precedent to cases in substantially different factual contexts, which included prohibiting segregation in public parks, state universities, and city buses. The end result was a Supreme Court precedent that had a major impact on the lower courts.¹¹ Another prominent example is *Miller v. California*¹² where the justices consolidated multiple cases encompassing various forms of obscenity. This signaled to the lower courts that the new standard for obscenity should be applied broadly. The justices coupled this action by issuing

⁹ Nor are these two exactly the same, the variables for summary decisions and precedent vitality correlate at less than .1.

¹⁰ 347 U.S. 483 (1954)

¹¹ The Supreme Court's decision in *Brown* has been followed in over 130 lower court decisions and has been cited over 16,000 times.

¹² 413 U.S. 15 (1973)

over 20 summary decisions “in light of” of the new *Miller* precedent within the same or subsequent Supreme Court term. The direct effect of this action was that every summary decision issued “in light of” *Miller* produced a new lower court decision where both federal and state judges considered the merits of *Miller* in diverse factual situations. In fact, our analysis of *Miller* suggests that the vast majority of positive treatments of *Miller*, in the initial years, were a direct result of the Supreme Court’s summary decisions. The practical effect of issuing summary decisions within various circuits and state courts is a quicker dissemination of the Supreme Court’s new precedent within various lower court jurisdictions requiring inferior court judges to consider the applicability of the given precedent. Moreover, granting certiorari to multiple petitions to issue these summary decisions serves as a way to expand the “reach” of precedents by signaling that a new legal rule should be applied broadly.¹³

Of course, to be effective, such Supreme Court signals must be received by lower court judges. Given the considerable increase in litigation, it is unlikely that many lower court judges read every Supreme Court decision. Instead, the role of lawyers who represent litigants before their courts is likely critical in bringing the signals to the attention of lower court judges. Lawyers have a vested interest in researching all Supreme Court precedents that may help them make an effective argument and bringing those new precedents to the attention of the judges considering their case. Once a precedent is called to the attention of lower court judges in briefs and oral argument, judges will typically read the new precedent and assign their clerks to do additional research on the precedent. Once this is done, the signals should be clear to the clerks, and by extension, to the judges. Both the briefs and clerks’ memos will typically discuss the history of the precedent and will comment if it has been either consistently reinforced or called into question by subsequent decisions. Since the vast majority of the Supreme Court’s summary decisions are GVRs that result in the initial lower court

¹³ What is stunning is when we *Shepardize* the summary decisions in *Miller*, we found that lower court judges were also citing various summary decisions across the judiciary. To take just one example, the summary decision in *Blair v. Ohio*, 413 U.S. 905, was cited in decisions within two different circuits and three different state courts.

decision remanded to the lower court with an order that the court issue a new decision upon considering a formally argued precedent, some lower court judges will directly become aware of the precedent cited within the Supreme Court’s summary decision (Masood and Songer 2013). While lower court judges may not be attentive to all the actions by the Supreme Court, they are likely to pay attention to Supreme Court decisions that emanate from their own circuit or state court (Masood, Kassow, and Songer 2017). Given the prominence of inter-circuit and inter-court precedent within state courts (Bowie, Songer, and Szmer 2014; Hettinger, Lindquist, and Martinek 2006; Klein 2002) all of the other judges in the circuit or state court receiving a GVR are likely to become aware of the new Supreme Court precedent. Summary decisions directed at other circuits or states are likely to come to the attention of lower court judges when relevant to a current case because lawyers arguing before their court will identify these external GVRs within their briefs if the new precedent supports the position they are arguing.¹⁴ Thus, we expect that when the Supreme Court signals the broad applicability of a precedent through one or more summary decisions, such signals will increase the propensity of lower court judges to cite and follow a given precedent of the Court in future decisions. Compared to a formally argued decision, which entails considerable time and resource costs for the Supreme Court, a summary decision is relatively low cost in terms of time and resources allocated towards the disposition of an accepted petition. Therefore, when one or several summary decisions are announced in close proximity to a given formally argued decision of the Court, it is indicative that the precedent addresses an issue that will be important or highly relevant to the lower courts within their future decisions.

Summary Decision Hypothesis: As the number of summary decisions issued “in light of” a given Supreme Court precedent increases, the frequency with which the lower courts cite and follow a Supreme Court precedent increases.

¹⁴ Interviews with several former clerks to appeals court judges who are now practicing law revealed that all were confident that if there were a GVR of a precedent relevant to the case they were arguing that would help their side, they would find it in their research and use it in their argument. Moreover, they maintained that if either side had cited in their briefs a circuit decision vacated by a GVR, they would discover that and would report that to the judge in their memo.

Data and Research Design

To assess the impact of the Supreme Court’s signals, we examine all lower court responses to the universe of the U.S. Supreme Court’s formally argued decisions between 1995 and 2004.¹⁵ We draw these cases from one of the longest natural Supreme Court’s. We obtain data for the formally argued decisions of the Court via the U.S. Supreme Court Database (Spaeth et al. 2017).¹⁶ We then code the universe of summary decisions of the Supreme Court between the 1995 and 2004 terms from the *United States Reports*.¹⁷ In assembling this dataset, we identify each formally argued precedent the justices direct a lower court to consider within each summary decision the U.S. Supreme Court.

We test our predictions over two dependent variables, the aggregate number of lower court citations and positive treatments of the Supreme Court’s precedents. We analyze lower court citations and positive treatments of the Supreme Court’s decisions from 1995 through 2016. We obtain data for these variables from *Shepard’s Citations* via Lexis Nexis.¹⁸ Following the conventions in *Shepard’s*, we count the designation that the lower court “Cited” a majority opinion, as a lower court citation of a Supreme Court precedent. We count the designation that a lower court “Followed” a decision as a positive treatment of a precedent.

¹⁵ Our analysis includes lower court responses to the Supreme Court’s precedents from the twelve regular circuits of the U.S. Courts of Appeals, all district courts within the circuits, and all state courts. Decisions of the Federal Circuit are not included in the computation of the dependent variables, because the Federal Circuit only hears cases in specific issue areas (i.e., patent and trademarks) (see Hansford and Spriggs 2006).

¹⁶ The U.S. Supreme Court Database is maintained at the Center for Empirical Research in the Law at Washington University in St. Louis and is available at: <http://www.scdb.wustl.edu>.

¹⁷ A very small number of summary decisions directed lower courts to rely on precedents announced before the 1995 term and some were based on other authority (e.g., Solicitor General). These decisions were not used in the analysis as they may potentially bias the results.

¹⁸ *Shepard’s Citations* is a service that describes all lower court citations and discussions of particular U.S. Supreme Court precedents. *Shepard’s Citations* includes a typology of “treatment” types, with specific categories within each part of the typology. A citation that does not include any type of substantive treatment is simply “Cited.” A decision by the lower court that substantially applies, or relies on, a particular decision, is said to be “Following” a specific precedent (or set of precedents), in that a lower court decision is relying on some type of Supreme Court or other lower court decision to reach a particular legal conclusion in a different case.

To test our central claim on the impact of the Supreme Court’s summary decisions influencing lower court responses, we include a variable based on the number of summary decisions issued “in light of” a formally argued decision of the U.S. Supreme court. We take the natural logarithm of this count to compensate for the extreme range of the variable and because we do expect a non-linear effect. Since it is not possible to take the natural logarithm of zero, we add 1 to each value of the number of summary decisions. Next, we include a variable to gauge the impact of precedent vitality on lower court responses. We follow Hansford and Spriggs (2006) in coding this variable, which is the number of positive treatments by the Supreme Court minus the total number of negative treatments by the Supreme Court for a given precedent.¹⁹ Since precedent vitality is inherently dynamic, as the values for vitality change each year, we use the median vitality score for each precedent in our sample.²⁰

In testing these predictions, we account for a number of confounders. Prior work suggests that the size of the Supreme Court’s majority coalition may influence the propensity of lower court judges or the Supreme Court, itself, to rely on a given decision in future cases (see Corley 2009; Corley, Steigerwalt, and Ward 2013; Corley and Wedeking 2014; Hansford and Spriggs 2006; Kassow, Songer, and Fix 2012; Wedeking 2012). Thus, we include a variable that captures the margin by which the justices issue a decision. This variable is computed by subtracting the number of dissents from the number of majority votes. Next, we include the dichotomous indicator of whether a Supreme Court opinion includes a formal alteration of precedent (see Corley 2010; Maltzman, Spriggs, and Wahlbeck 2000; Spriggs, Maltzman, and Wahlbeck 1999). To gauge the salience of a precedent, we rely on Epstein and Segal’s (2000) measure of whether a Supreme Court precedent is cited on the front page of the *New*

¹⁹ We follow Hansford and Spriggs (2006) where “Followed” treatments are coded as positive, whereas “Criticized,” “Distinguished,” “Limited,” “Overruled,” “Questioned,” are coded as negative treatments. We additionally code “Superseded” as negative treatments of precedent. Estimating the models with or without “Superseded” treatments included in the vitality variable does not alter the results.

²⁰ To demonstrate the robustness of the results, we run additional models using precedent vitality scores for the third and fifth year that each precedent is in the dataset and find very similar results to the model with the median vitality variable.

York Times. We also include a variable to control for the ideological direction of the Supreme Court decision as either conservative or liberal. We account for the inherent breadth of a precedent by including a variable that captures the number of legal provisions raised in a case. Additionally, since cases with and without summary decisions come from a single natural Court, which by definition means no changes in the ideological composition of the Court, the impact of ideological distance on the propensity of lower courts to cite or positively treat a given precedent is effectively controlled.²¹ To mitigate any bias from the large number of criminal cases we include a control for Supreme Court decisions that address a criminal issue. We include a variable for the age of the precedent, which is coded as the number of years a precedent is in the dataset from the time the Supreme Court issues a decision to the end of the dataset in 2011.²² We include this control to mitigate any potential censoring bias based on differences in the amount of time that each precedent exists in the dataset.²³ Finally, to account for the possibility that the age of precedent exhibits a curvilinear effect, we include the squared transformation of the age of precedent variable. We obtain data for all of these variables via the U.S. Supreme Court database (Spaeth et al. 2017).

The values of the two dependent variables are counts of lower court citations and positive treatments of Supreme Court precedent. As is inherent with most count data, there is significant over-dispersion, which would bias the estimates of a standard Poisson model.²⁴ To

²¹ Since our predictions are at an aggregate level (i.e., the aggregate number of lower court citations and positive treatments to Supreme Court precedent) there is no way to control for ideology at the individual circuit or state-level other than looking at the mean ideology of the combined circuits and state courts.

²² The oldest precedent in our dataset dates from the 1995 Supreme Court term, and the newest precedent dates from the 2004 Supreme Court term, making a potential amount of time for citation and treatment from a minimum of seven to a maximum of seventeen years.

²³ An important assumption of event count models is that each observation in the model has the same follow-up time; our data violate this assumption, which would produce biased results if this variation in follow-up time is not controlled for. By including this variable of the number of years a case could possibly be treated, we are able to effectively control for any possible censoring or bias from the precedents in our data.

²⁴ An important assumption of the Poisson is that the variance of the dependent variable is equal to the mean. Since our data are over-dispersed, a negative binomial model is the appropriate model specification. In addition, a zero-inflated negative regression model or a hurdle model are not appropriate as less than 5% of our observations take values of “0” (Zorn 1998). Nevertheless, when we estimate several zero-inflated

mitigate potential concerns of heteroskedasticity and to account for the nested nature of our data, we rely on a multilevel modeling framework.²⁵ Lower court responses to the Supreme Court’s precedents (Level 1) are nested within case-level factors (Level 2). Traditional approaches suggest specifying a single second-level factor, such as the Supreme Court term or the majority opinion writer. We estimate standard errors based on the ‘Majority Opinion Writer-Supreme Court Term’ combination. This is because we expect significant variation in how the lower courts may respond to the majority opinions of each justice, and, because we also expect variation in lower court responses from one Supreme Court term to another. Not accounting for the inherent variation in lower court responses across each majority opinion writer and each term requires making an assumption that there are no differences among the majority opinions authored by the individual justices and that there are no differences across Supreme Court terms. Such assumptions are untenable. An added benefit of our approach is that it also allows us to obtain a larger number of second-level units. The models for both outcome variables are estimated with random intercepts.

Empirical Results

Table 1 presents the coefficient estimates for the citation and positive treatment models, respectively. Our key expectation is that the Supreme Court’s use of its summary decisions, issued “in light of” its formally argued decisions, increases the frequency with which the lower courts adopt a given Supreme Court precedent. The empirical results support this prediction. More specifically, the variable for summary decisions exerts a positive and statistically meaningful effect on the number of lower court citations. To illustrate the substantive effect of

negative binomial models, we find nearly identical results compared to negative binomial estimates. This is not surprising since the data are aggregated, there are a relatively small number of zeros in both models - approximately 1% in the citation model and approximately 5% in the positive treatment model.

²⁵ Not accounting for the hierarchical structure is likely to result in overstating the precision and understating the uncertainty around the quantities of interest. One consequence of underestimating the degree of uncertainty around the estimates is an increased probability of committing a Type I error (Arceneaux and Nickerson 2009).

our primary variable of interest, we plot the impact of the the summary decisions variable on the predicted number of lower court citations in Figure 1. For precedents with no associated summary decisions, the mean number of lower court citations, over time, is approximately 434. When a Supreme Court precedent is accompanied by one summary decision (log value of 0.69) the number of lower court citations increases to 795. This represents an 83.18% increase in citations when a single summary decision is issued “in light of” of a formally argued decision compared to Supreme Court decisions with no associated summary decision. For a precedent with two summary decisions (log value of 1.09), the mean number of lower court citations more than doubles from the base value to 1088. This represents an increase of approximately 150.69% more lower court citations. For a precedent with five summary decisions, the number of lower court citations increases to approximately 1,944. Finally, for a precedent with ten summary decisions (a logged score of approximately 2.30), the average number of lower court citations increases to approximately 2,162. This means that going from zero summary decisions to the maximum value, results in over a 700% increase in lower court citations. However, since 95% of the data are at or below a log of two summary decisions, the true effect of going from the minimum to the maximum value (from zero to the log of two summary decisions) results in approximately 2,314 lower court citations. Needless to say, this represents a very large substantive effect. These results suggest that the presence of even a single summary decision, compared to its absence, drastically increases lower court attentiveness to the Supreme Court’s precedents.

The results in Model 1 demonstrate that the variable for precedent vitality does not exert a meaningful effect on lower court citations to the Supreme Court’s precedents. This result departs from previous work, which suggests that the difference between prior positive and negative treatments by the Supreme Court exerts an important effect on the frequency of lower court citations (see Hansford and Spriggs 2006). It is worth noting that the vast majority of studies that explore the influence of vitality on the lower courts tend to focus on the U.S. Courts of Appeals. Our analysis, on the other hand, examines all lower court behavior.

Specifically, we examine the impact of factors such as vitality on lower court responses by the U.S District Courts, the U.S. Courts of Appeals, and all state courts combined. We also aggregate these responses over time. Thus, while precedent vitality may impact a certain family of courts in initial years, this effect seemingly dissipates once we account for all lower courts over time. We elaborate on the implications of this finding within the conclusion.

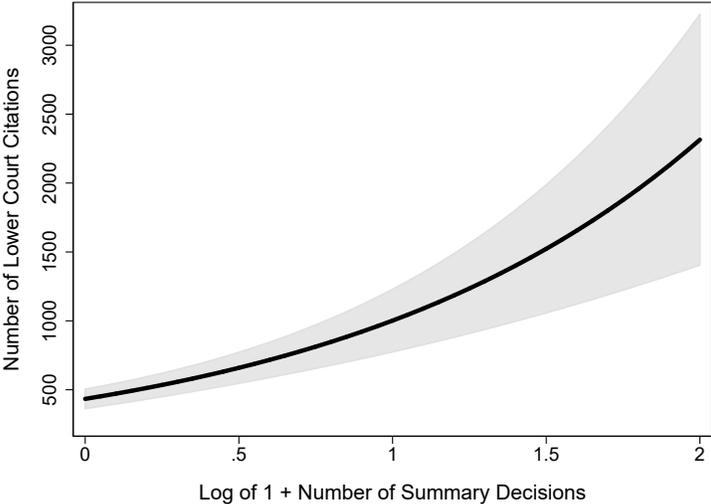
Table 1: Multilevel Negative Binomial Regression of Lower Court Citations and Positive Treatments of Supreme Court Precedent

Variable	Model 1	Model 2
Summary Decision	0.84* (0.10)	0.86* (0.12)
Precedent Vitality	-0.02 (0.08)	-0.02 (0.09)
Supreme Court Vote Margin	0.00 (0.02)	-0.02 (0.02)
Formally Altered Precedent	0.42 (0.35)	0.70 (0.42)
Political Salience	0.38 (0.18)	0.19 (0.16)
Ideological Direction of Decision	0.03 (0.10)	0.03 (0.11)
Breadth of Precedent	-0.21* (0.09)	-0.20* (0.10)
Criminal Case	0.95* (0.11)	0.92* (0.13)
Time Precedent in Analysis	0.05 (0.31)	0.17 (0.40)
Time Precedent in Analysis ²	0.00 (0.01)	-0.01 (0.01)
Constant	6.07* (2.37)	3.99* (3.00)
Observations	861	861
Second-Level Units	100	100
X^2 Statistic	192.69	0.24
Probability > X^2	0.00*	0.00*

Note: The dependent variables are the number of lower court citations and positive treatments of Supreme Court precedent in Models 1 and 2, respectively. All p-values are based on one-tailed hypothesis tests, except for the “Ideological Direction of Decision,” “Breadth of Precedent,” and the two “Time Precedent in Analysis” variables. The multilevel estimates are based on random intercepts for each Majority Opinion Writer and each Supreme Court Term. The standard errors are reported in parentheses. *p < 0.05

The margin by which the Supreme Court decides a case, the formal alteration of precedent, political salience, the ideological direction of a decision and the two time variables are all not statistically significant within the citation model. The variable for number of legal provisions associated with a precedent is significant but signed negatively. The results indicate that precedents that address a criminal issue, on average, have a higher number of citations by the lower courts than non-criminal cases. Holding all else constant, criminal cases result in approximately 841 additional lower court citations compared to non-criminal cases. This makes intuitive sense given the large number of criminal cases within the judicial pipeline. Finally, it is worth noting, that when we subset models for criminal and non-criminal cases, the finding for summary decisions remains highly robust. The implication is that the presence of summary decisions increase lower court citation in both criminal and non-criminal cases.

Figure 1: Impact of Summary Decisions on Lower Court Citations

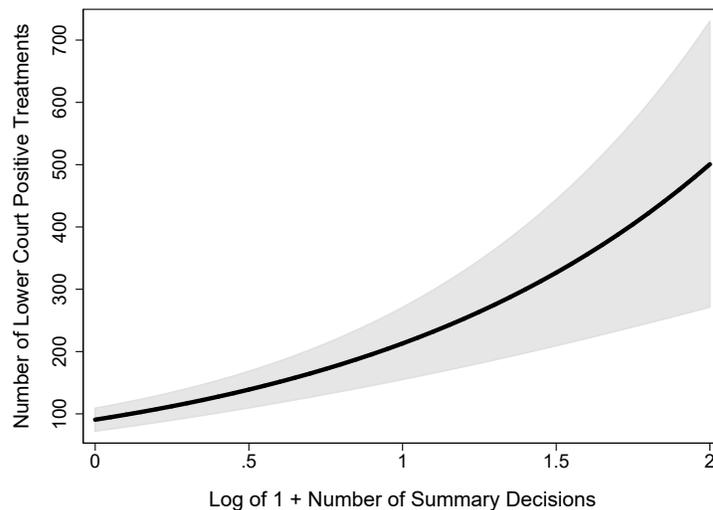


Note: The log number of summary decisions is plotted on the x-axis. We generate this plot based on the average of the predicted counts across all real values in the data. The solid line represents the predicted number of citations. The shaded area represents the 95% confidence intervals.

Table 1 also presents the coefficient estimates for the influences on lower court positive treatments of the Supreme Court’s precedents. Recall, that our expectation is that the Supreme Court’s summary decisions should increase lower court adherence to the Supreme Court’s precedents. The results in the positive treatment model demonstrate a statistically

significant and substantively strong relationship between summary decisions and positive treatment by the lower courts. Figure 2 illustrates the substantive impact of the summary decisions on positive treatments by the lower courts. Supreme Court precedents with no associated summary decisions produce on average 91 positive treatments by the lower courts combined. A Supreme Court precedent with one summary decision increases aggregate positive treatments by the lower court by approximately 164. For a precedent with two associated summary decisions, the number of positive treatments increases to approximately 232. Supreme Court precedents with five summary decisions increases positive treatments to approximately 419. Finally, for a precedent with ten associated summary decisions, lower court positive treatments increase to 758, which represents a 733% increase compared to a precedent with no associated summary decisions. The results indicate that the effect of the variable for the Supreme Court’s summary decisions going from its minimum to its maximum value for 95% of the data represents an increase from 91 to 501 positive treatments, which represents a 450% increase in the total number of positive treatments by the lower courts.

Figure 2: Impact of Summary Decisions on Lower Court Positive Treatments



Note: The log number of summary decisions is plotted on the x-axis. We generate this plot based on the average of the predicted counts across all real values in the data. The solid line represents the predicted number of positive treatments. The shaded area represents the 95% confidence intervals.

The coefficient for precedent vitality does not reach conventional levels of statistical significance in the positive treatment model. Similar to the citation model, the margin by which the Supreme Court issues a precedent, formal alteration of precedent, political salience, the ideological direction of the decision, the breadth of precedent, and the time a precedent is in existence do not meaningfully impact aggregate lower court positive treatments of the Supreme Court’s decisions. The variable for criminal cases is significant in the positive treatment model. Substantively, criminal cases result in approximately 170 additional lower court positive treatments compared to non-criminal cases.

The results for the positive treatment model are consistent with the results of the citations models. The key finding in both models is that when the U.S. Supreme Court issues one or more summary decisions “in light of” one of its precedents there is a significant increase in lower court utility of the Court’s precedent both in terms of citations and positive treatments. This finding is highly robust and substantively meaningful in predicting the propensity of lower courts to rely on the Supreme Court’s precedents. In fact, even upon accounting for a number of important factors including the vitality of precedents, formal alteration of precedents, and the salience of the Court’s decisions, the substantive impact of the Court’s summary decisions remains the single, strongest predictor of the frequency with which the lower courts cite and follow a precedent of the Supreme Court. Moreover, to alleviate concerns that our results may be driven by cases within the judicial pipeline, we also examine whether multiple cases that raise similar issues to formally argued decisions are driving the results. If our results are driven by changes in the Supreme Court’s docket, the increase in lower court responses may simply reflect increases in the size of the pool of potentially relevant cases. However, if the increase in positive treatments is driven by increases in the pool of relevant cases, the ratio of positive treatments to the ratio of positive treatments and citations combined, should not increase. If the Supreme Court’s summary decisions are meaningful actions that lower courts pick up on, we should expect that in response to a greater number of summary decisions, the proportion of citations that are positive treatments should increase

correspondingly. To test this, we estimate a model where the dependent variable is a ratio of positive treatments to the total number of positive treatments and citations combined. Given that these data are proportional, where the values of the dependent variable are bounded between 0 and 1, we estimate a fractional logistic regression model with the original set of covariates.

Table 2: Fractional Logistic Regression of Lower Court Citations of Supreme Court Precedent that are Positive Treatments

Variable	Coefficient
Summary Decision	0.09* (0.04)
Precedent Vitality	-0.02 (0.03)
Supreme Court Vote Margin	-0.01 (0.01)
Formally Altered Precedent	-0.01 (0.16)
Political Salience	0.06 (0.06)
Ideological Direction of Decision	0.05 (0.05)
Breadth of Precedent	0.02 (0.04)
Criminal Case	0.03 (0.05)
Time Precedent in Analysis	0.12 (0.11)
Time Precedent in Analysis ²	-0.01 (0.00)
Constant	-2.32* (0.86)
Observations	853
Probability > X^2	0.00*

Note: The dependent variable is the ratio of positive treatments to the total number of positive treatments and citations combined. The standard errors are clustered on the Majority Opinion Writer–Supreme Court Term. *p < 0.05

The results in Table 2 provide robust support to the claim that the Supreme Court’s summary decisions, in fact, strongly influence the propensity of the lower courts to adopt a given precedent. The results of the proportional model indicate that as the number of summary decisions increases, the proportion of positive treatments of the Supreme Court’s

precedents also increases. This result provides additional insight in that it demonstrates that the impact of the Supreme Court’s summary decisions not only increases the total number of lower court citations and positive treatments, but importantly influences a greater proportion of the citations to the Supreme Court’s precedents to be explicitly positive.

Addressing Questions of Spuriousness and Causality

While the empirical results demonstrate that summary decisions are the key element driving lower court attentiveness to the Supreme Court’s precedents, there may be questions regarding the causal impact of the Supreme Court’s summary decisions. For instance, it may be plausible to assume that the Supreme Court primarily issues summary decisions when there are many cases in lower court dockets, broadly defined, that raise similar issues to a particular Supreme Court precedent so that the choice to issue a summary decision does not reflect any systematic view by the Court on the importance of the case. Thus, if there are many similar cases that are being litigated as part of lower court dockets, there should be an increase in the number of citations and positive treatments by the lower courts even in the absence of such a signal. Another implication of this perspective is that the Supreme Court would give preference to cases to set aside for summary consideration in issue areas that receive a large number of certiorari petitions.

The notion that the Supreme Court grants certiorari and issues a summary decision represents a conscious choice by the justices is reinforced by the consensus among the justices, and their clerks, that there are certain types of issues that the justices will usually not grant certiorari regardless of how often the issues are raised within other certiorari petitions. Among these are cases involving claims of ineffective assistance of counsel, diversity cases, cases that are “messy” or have “bad facts,” sufficiency of evidence cases, or other cases that appear to be “fact driven” (e.g., whether the police met the probable cause standard to obtain a search warrant) (Perry 1991, 234). Such a selective approach for granting certiorari reinforces the conclusion that when the justices both grant certiorari and issue a summary decision, the

action represents a conscious choice by the justices that a particular issue involved within the granted cases is some of significance to the justices.

The argument that the Supreme Court’s use of summary decisions communicates to the lower courts that they should apply a precedent widely to diverse factual situations is based on the actual behavior of the justices. Deciding that two cases involve similar issues represents an analogical choice by the justices rather than an objective assessment on the similarity of the issues. For instance, the cases receiving GVRs issued in light of *Brown v Board of Education* do not, on the surface, appear to raise issues that are objectively similar to the issues decided in *Brown*. As a practical matter, the Supreme Court’s precedent in *Brown* might be read to apply only to the constitutionality of racially segregated public schools. But in a series of summary decisions, announced shortly after *Brown*, the Supreme Court quickly makes the point that the ban of state sponsored segregation is also applicable in prohibiting segregation within public parks, public universities, and public transportation.²⁶ Our data indicates that as in *Brown*, the Supreme Court, at times, issues summary decisions to reflect its choice that a given precedent should be viewed as broadly applicable to a wide variety of issues that do not appear on their face to be objectively similar to the formally argued decision referenced within a summary decision.

To address any remaining concerns, we conduct additional analyses to support our findings. For our initial test of whether summary decisions represents a conscious choice by the justices to grant certain petitions certiorari or whether summary decisions are driven by the cases that raise a similar issue, we draw a random sample of 20 formally argued precedents with at least one summary decision from the 2000 Supreme Court term and carefully examine the issue area in the formally argued decision and the issue areas within lower court cases that receive a summary decision – defining “issue” in three separate ways. While for

²⁶ See *Muir v. Louisville Park Theatrical Association*, 347 U.S. 971 (1954); *Tureaud v Board of Supervisors of Louisiana State University*, 347 U.S. 971 (1954); *Florida ex rel Hawkins et al. v. Board of Control of Florida et al.*, 347 U.S. 971; *Gayle et al. Members of the Board of Commissioners of Montgomery, Alabama, et al. v. Browder et al.*, 352 U.S. 903 (1956); *Owen et al. Members of the Alabama Public Service Commission, et al. v. Browder et al.* 352 U.S. 903 (1956).

a majority of the case pairs, the issues in the Supreme Court and the lower court decisions were the same or similar, we find that for 6 of the 20 precedents, the issue defined in the Supreme Court opinion was substantially different from the issue in the lower court decision for all three different ways of coding the issue. Together with the findings noted earlier – that many cases raising issues that appear to be objectively similar to issues in formally argued precedents are denied certiorari rather than resolved with a summary decision – the finding that the Supreme Court deliberately issues a summary decision for a number of cases that do not raise issues that are objectively similar, provides strong evidence that when the Supreme Court issues a summary decision it represents a conscious choice by the justices (see also Hellman 1984). Thus, each summary decision represents a choice among the multiple ways in which the justices might dispose similar petitions.²⁷ However, since the Supreme Court uses summary decisions sparingly when faced with multiple cases raising similar issues and since the cases dealt with summarily almost always have different factual situations than the cases set for formal arguments, the use of summary decisions may be interpreted as a signal that a precedent is viewed more important or more broadly applicable towards diverse factual situations.²⁸

Even though our initial test for whether summary decisions represents a conscious choice is supported by the analysis above, we conduct additional analysis to corroborate the mechanisms at work. Using *Westlaw*, where we search for all U.S. Courts of Appeals decisions that include the same ‘Topic’ and ‘Key Number’ as the sample of 20 Supreme Court precedents,

²⁷ It is important to note that summary decisions are not similar to denials of certiorari. Certiorari denials allow the lower court decision to stand, and the justices have repeatedly stated that certiorari denials should not be interpreted as the lower court having correctly decided a case. By contrast, a GVR, the most common form of summary decision, are petitions that are granted certiorari, which declare that the lower court must issue a new decision and that the lower court must reconsider the outcome in light of the precedent referenced within a summary decision. As one of the court of appeals judges we interviewed put it, “of course they are a ‘real’ resolution of the case – they indicate the Court’s position on the issue – they are definitely not the same as a denial of certiorari.”

²⁸ We use the term “sparingly,” given the median number of summary decisions issued per Supreme Court term compared to the total number of certiorari petitions. The large discrepancy between the number of summary decisions and the total certiorari petitions suggests that the use of summary decisions is a deliberate strategy, rather than an *ad hoc* or randomly occurring event.

with a time period of at least nine months prior to the decision date, but not exceeding two years before the precedent was announced. We further limited the search to cases that include a petition for certiorari to the Supreme Court. This search yields a list of cases that were “in the pipeline” in close proximity to the time the formally argued decisions, in our sample, were decided. Since each appeals court case identified by our search contains an issue that is similar to the issue announced in the the Supreme Court’s formally argued decision, each of these cases would be a strong candidate to receive a summary decision. Thus, if the pipeline theory is correct, we should expect that many, if not all, of these petitions would be granted certiorari and disposed via a summary decision. Instead, we find that every single petition was denied certiorari. Stated differently, our analysis reveals that for 13 of the 18 formally argued precedents (72%) remaining in the sample, where one or more certiorari petitions raised an issue similar to the issue in the formally argued decision, all related petitions were denied certiorari. This finding demonstrates that for the vast majority of certiorari petitions that raise the same issue as a recently announced formally argued decision, the justices do not issue a summary decision but, almost always, deny these petitions certiorari.

The argument that the impact of the Supreme Court’s summary decisions is driven by the number of similar petitions is most plausible for those precedents that have a large number of summary decisions. The presence of several summary decisions suggests that there are a large number of cases that have already been petitioned to the Supreme Court in close proximity to the release of a new formally argued decision. In such a situation, one may assume that when the Supreme Court decides to issue at least one summary decision “in light of” a given precedent, it will issue a summary decision for all petitions requesting certiorari that raise the same issue common to both the formally argued precedent and a case that has been adjudicated via a summary decision. For instance, if in a given term the Supreme Court receives ten certiorari petitions that all raise issues that the justices believe are similar to the issue in a recent formally argued decision, it would make little sense for the justices to resolve five of the ten cases by issuing summary decisions and deny review to the remaining

petitions. Thus, when the Supreme Court only issues a small number of summary decisions “in light of” a given precedent, it seems unlikely that in spite of the small number of summary decisions, there are actually a large number of similar cases on its docket. Consequently, if there is any credence to the idea that lower court citations and positive treatments are driven by the number of cases raising issues similar to the issues in a given precedent, one would expect the effects to be greatest in those situations in which there are a large number of cases on the Court’s docket raising the same issue. Deciding how to categorize a ‘large number’ of summary decisions is not a fully objective decision. We employ an approach in which we designate anything greater than ten as a ‘large number’ of summary decisions. We then estimate models where all Supreme Court precedents with more than ten summary decisions are excluded from the analysis.

Assuming that the docket theory is valid, and summary decisions are merely a function of the number of cases petitioned to the Supreme Court, we would expect the impact of summary decisions to be significantly muted when excluding precedents with a large number of associated summary decisions. The empirical results provide evidence to the contrary.²⁹ Instead, the results demonstrate that the impact of summary decisions remains highly robust in increasing both the lower courts’ propensity to cite and follow the Supreme Court’s precedents. That is, even after removing all cases with a large number of summary decisions, the presence of summary decisions exerts a strong, positive effect on lower court adoption of the High Court’s precedents. This result combined with all the analyses above should quell any concerns that: (1) summary decisions only influence lower court responses when the Supreme Court issues a large number of summary decisions, or (2) summary decisions are merely a function of the cases within the judicial pipeline.³⁰

²⁹ We report these models in the appendix.

³⁰ As another test, we include a model similar to our basic models in the results section, but that add a variable controlling for the number of cases the Court heard on a specific issue *prior* to the hearing of an instant decision. While we find that the docket variable does reach statistical significance, the summary decisions result remains as strong as in the main models shown in the results section. We also include, in the appendix, a t-test of 40 randomly assigned cases from the 2001 Court term stratified by whether

To address any remaining concerns about causal linkages, we turn to causal inference techniques. We rely on nearest-neighbor matching models along with a sensitivity analysis to test the robustness of our data against a hypothetical (omitted) confounder. In order to maximize the causal leverage, we utilize matched data to obtain the ‘average treatment effect on the treated’ (ATT), through a Mahalanobis distance-based matching score estimator (see Ho et al. 2007; Imai, King, and Stuart 2008; King and Nielsen 2016). We specify a caliper value of 10, which is intended to prevent poor matches from being included in the final models at the expense of some marginal loss in observations. The idea of matching is to ‘prune’ a dataset so that comparisons between the ‘treated’ and ‘not treated’ data are as valid as possible by attempting to remove imbalance among the control variables from a dataset. By doing so, we are able to dramatically reduce the amount of imbalance on all observed covariates that are included in the matching solution. Thus, reducing the degree of error in the statistical results based on imbalances among variables in the data.³¹ Since treatment variable must be binary, we convert our summary decision (i.e., treatment) variable into a dichotomous variable. This treatment variable is coded 1 for all Supreme Court precedents with at least one associated summary decision, and 0 for precedents with no summary decisions.³²

The results in Table 3 demonstrate that the presence of a summary decision increases the number of citations even after removing the bias caused by the imbalance in the data

summary decisions were present. For the t-test, we examine the number of cases that were denied *certiorari* in the same issue area, comparing the number of cert denials for those cases that receive summary decisions versus those that do not. We find no statistically significant difference between the two stratified samples, resulting in a t-test that does not reach statistical significance.

³¹ We calculate the average treatment effect on the treated (ATT) rather than the average treatment effect (ATE) because with ATE there is an assumption of randomness in observation to the ‘control’ versus ‘treatment’ group beyond all observed covariates (see Blackwell 2014; Ho et al. 2007). Since our data do not come from an experiment, calculating a true ATE is not tenable and would be invalid. The ATT allows us to compare observations that are not ‘pruned’ that fall into the control or treatment groups. To account for the non-experimental nature of our data, we utilize sensitivity analyses to calculate the degree that our results are robust to omitted variable bias that would affect the treatment assignment of receiving a summary decision (see Imai, Keele, and Yamamoto 2010; Rosenbaum 1984).

³² We also include a similar specification with a coarsened exact matching model within the appendix, which corroborates the results shown here.

Table 3: Mahalanobis Distance Matching on Degree of Influence of Summary Decisions (SD) on Citations and Positive Treatments

Dep. Variable	Sample	Cases w/ SD	Cases w/o SD	Difference	T-Statistic
Citations	Unmatched	2594.01	710.72	1883.30	7.21*
Citations	Post-Matching	2568.75	797.61	1771.13	3.51*
Pos. Treatments	Unmatched	654.98	177.36	477.62	4.37*
Pos. Treatments	Post-Matching	659.88	246.70	413.18	2.00*

through the matching analysis. For citations, under a ‘naive’ model that does not incorporate matching, we find a treatment effect of the treated of approximately 1,883 more citations for a precedent that has at least one summary decision compared to precedents with no summary decisions. Post matching, the ATT is approximately 1,771 more citations for a precedent with one or more summary decisions compared to precedents with no summary decisions. This post-matching analysis demonstrates, that upon matching on all of the covariates, the Supreme Court’s summary decisions discernibly increase lower court citations to the Supreme Court’s precedents. Further, the size of the substantive effect of summary decisions is profound. To provide some context, the post-matching results reveal, on average, precedents with summary decisions are cited approximately 220% more than precedents with no associated summary decisions.

Table 3 also presents the results for positive treatments by the lower courts. For the base model with unmatched data, the ATT is approximately 478 more positive treatments when at least one summary decision is present compared to precedents with no summary decisions. Post matching, the average treatment effect of the treated results in approximately 413 more positive treatments for precedents with one or more summary decisions compared to precedents with no summary decisions. The post-matching results demonstrate that Supreme Court precedents with one or more summary decisions have 167% more positive treatments, on average compared to precedents with no associated summary decisions. This is by no

means a trivial difference. Thus, even upon matching on a variety of potential confounders, we consistently find a statistically significant and substantively large difference in lower court responses to Supreme Court precedents with and without summary decisions.

Table 4: Rosenbaum Test for Impact of Summary Decisions on Citations and Positive Treatments

Gamma	p value Citations	p value Positive Treatments
1	0.00	0.00
1.2	0.00	0.00
1.4	0.00	0.00
1.6	0.00	0.00
1.8	0.00	0.00
2.0	0.00	0.00
2.2	0.01	0.01
2.4	0.02	0.02
2.5	0.04	0.03

Note: The p-value result shown here represents the upper bound p-value that is derived from the Rosenbaum sensitivity test. P-values below .05 are statistically significant.

Finally, we supplement our matching estimates with a sensitivity analysis. Specifically, we conduct sensitivity analysis using Rosenbaum bounds, which help show the degree of omitted variable bias that is necessary to invalidate our results. The results on the citation model in Table 4 indicate that our results are robust up to, and including, a gamma value of 2.5. What this indicates is that our key result regarding summary decisions is robust, even to omitted variable bias that may cause a particular observation to be two and a half times as likely to receive a summary decision compared with an observation that has lower values (or no value) of a hypothetical omitted confounder. This means that in order to invalidate our results post matching, we would need to identify a cofounder that is missing from our model that would cause the probability of receiving a summary decision to increase by more than 150% to negate the statistical significance. In general, having statistically significant treatment effects at a gamma value of 2 is sufficient to establish robustness against

omitted confounders within a statistical model (see Keele 2010). The Rosenbaum bounds test result for positive treatments is similar to that of the citation model, with the summary decision finding remaining robust to a gamma value of 2.4, according to conventional (p-value) significance levels. The sensitivity analysis suggests that our key finding regarding summary decisions is robust to omitted variable bias that may cause a particular a observation to be 2.4 times as likely to receive a summary decision compared with an observation that lower values (or no value) of the hypothetical omitted variable. This demonstrates that our summary decision finding is robust to any omitted confounder variables that would strongly affect the probability that a Supreme Court decision would have an accompanying summary decision. Ultimately, the sensitivity tests, analyses on matched data, and all of the other analyses provide overwhelming support for our argument that Supreme Court precedents with summary decisions are more frequently cited and followed by the lower courts compared to precedents with no associated summary decisions. The statistical analysis in this section demonstrates that this important finding is robust to hypothetical confounders and that the effect of summary decisions result is demonstrably not due to omitted variable bias.

Discussion and Conclusion

We began this paper with a discussion of two Supreme Court precedents. We compare the Court's decisions in *Johnson* and *Apprendi* to highlight an obvious truth that not all Supreme Court decisions have a comparable impact on the decision making of the courts lower down the judicial hierarchy. Our analysis offers several new and important contributions to the literature. First, we provide a framework for aggregate lower court responses to Supreme Court precedent. We argue that given the finite ability of the Supreme Court to review the large number of lower court decisions, justices of the Court should be interested in aggregate patterns of compliance in terms of citations and positive treatments to their precedents. Second, we propose a new theory that connects aggregate behavior of lower court responses to cues that come for the U.S. Supreme Court, which is whether the justices issue one or

more accompanying summary decisions along with its precedents. Third, we empirically assess lower court responses to the Supreme Court’s precedents cumulatively within federal and state courts. By doing so, we believe that our results are generalizable to a variety of lower level courts – including the U.S. District Courts, the U.S Courts of Appeals, and state courts of last resort.

Our analyses provide clear and incontrovertible evidence that there is a causal relationship between the Supreme Court’s summary decisions and the frequency with which the lower courts adopt the Supreme Court’s precedents. We find that as the number of summary decisions issued “in light of” a formally argued precedent increases, the number of lower court citations to those precedents substantially increases and a greater proportion of citations are explicit positive treatments. This finding is important in that it provides evidence that the observed behavior is not simply due to the fact that cases similar to those that have summary decisions are especially common on lower court dockets. Interestingly, we also find lower levels of support for the impact of precedent vitality in influencing lower court attentiveness to the Supreme Court’s precedents. Specifically, we find that the substantive impact of precedent vitality dissipates considerably upon accounting for the Supreme Court’s summary decisions. Ultimately, this analysis demonstrates that the U.S. Supreme Court can meaningfully drive aggregate responses to its precedents; however, the key factor through which the Court achieves greater levels of lower court adherence is by issuing one or more summary decisions along with its formally argued precedents. Our findings demonstrate that summary decisions exert the strongest substantive effect on cumulative lower court responses to precedent and that the overall reaction of the lower courts to precedents accompanied by summary decisions is overwhelmingly positive.

An important implication of our work is that when the Supreme Court issues a summary decision it is usually not due to the number of cases that are petitioned to the Court that raise the same issue. Stated differently, it is not simply due to the fact that the Supreme Court may receive a large number of petitions in a particular issue area during a given

term, that influences the justices to not deny these similar petitions certiorari. Rather, it appears that it is the legal content of the case, whether it addresses an important legal or political question, that determines the likelihood that the Supreme Court will accept a case for review. Our analysis seemingly corroborates Hellman’s (1984, 395) conclusion that it is not necessarily petitions that raise similar issues as a recently granted petition but rather it is “surface inconsistency in [the] results” of lower court decisions that “persuades the justices to remand [GVR] rather than deny review.” Ultimately, nearly all petitions to the Supreme Court raising similar or different issues as accepted cases are denied review each term.

What factors might determine whether the U.S. Supreme Court utilizes summary decisions or revisits a case by issuing a new formally argued decision? The impact of a potential signal is likely to be increased if it is a relatively rare event and the Supreme Court’s summary decisions are such rare events. While the contemporary Supreme Court denies certiorari to over 10,000 petitions each year, the number of summary decisions issued is approximately 100 each term. We speculate that one key determinant as to whether the Supreme Court issues a new formally argued decision or a summary decision relates to the time elapsed since the original precedent was announced. Given the large impact that even adding one case to the Court’s plenary docket likely has on the justices’ workload, we postulate that issuing summary decisions serves as a relatively low-cost method to signal to lower courts that a case is especially important or may have broad applicability to cases within lower court dockets. Consequently, when the justices want to reinforce a precedent using many cases in a small period of time or want to strengthen a precedent without incurring the cost of scheduling additional cases for formal arguments, summary decisions allow the Supreme Court to effectively and contemporaneously bolster lower court attentiveness to its precedents.

Our work also offers an empirical contribution to the impact literature through the use of matching and sensitivity analysis. While these analyses serve to improve the degree that one can make causal claims, together, they serve as a powerful tool to directly examine the robustness of results against omitted variables that have confounding effects. The matching

estimates help to control for a lack of balance between cases that have associated summary decisions and cases that do not. Consequently, we can be confident that the results are a direct function of summary decisions rather than imbalances among the other variables within the dataset. The sensitivity analysis allows us to examine the degree of omitted variable confounding that would be necessary to negate our results. The results of the sensitivity analysis are clear and convincing. We find that for the statistical effect of summary decisions to completely go away, a hypothetical empirical model would require some endogenous confounder that has a very large effect on both the onset of summary decisions and simultaneously influence the frequency of lower court citations and positive treatments. Stated differently, the only way to invalidate our results is to identify an unknown, and impractical, confounder that would cause the probability of receiving a summary decision to increase by more than 150% while also significantly influencing lower court responses. Taken together, the matching estimates and the sensitivity analysis compellingly demonstrate that our results are robust to hypothetical confounders, and the effect of summary decisions is demonstrably not a function of omitted variable effects.

Beyond understanding when the Supreme Court is most likely to issue summary decisions, a more in-depth analysis of how summary decisions may influence lower court norms is worth exploring in future studies. Moreover, do certain characteristics of particular lower courts make them especially prone to rely on summary decisions? Perhaps judges on more ideologically heterogeneous circuits (or state courts) utilize the precedents created by lower courts in response to a summary decision as a way to justify the inclusion of a Supreme Court precedent. It is also plausible that litigants and their attorneys are more likely to cite Supreme Court precedents with associated summary decisions, within their briefs, compared to precedents without summary decisions. If so, this would be one mechanism through which inferior court judges are made aware of Supreme Court precedents that would otherwise not be applied as broadly. Taking up these questions will undoubtedly bolster our understanding of lower court interactions with the U.S. Supreme Court.

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Appendix: The Aggregate Dynamics of Lower Court Responses to the U.S. Supreme Court

1. Descriptive Statistics

Table A1: Descriptive Statistics

Variable	Mean	S.D.	Min.	Max.
Number of Citations	1095.12	2961.19	0	34294
Positive Treatments	268.56	1196.40	0	27354
Precedent Vitality	0.05	0.44	-3	3
Summary Decision	1.47	26.25	0	774
Supreme Court Vote Margin	5.87	3.21	0	9
Formally Altered Precedent	0.02	0.13	0	1
Political Salience	0.13	0.35	0	1
Ideological Direction of Decision	0.43	0.50	0	1
Breadth of Precedent	1.18	0.49	1	6
Criminal Case	0.25	0.43	0	1
Time Precedent in Analysis	15.67	2.86	11	20

2. Models Excluding All “Held” Cases

One potential concern to the validity of our main results is that the summary decisions in our data are simply held cases. First, a sizable portion of the summary decisions in our data (approximately 35%) are not the result of held cases, but rather are the results of Court actions that occurred after the release of a relevant formally argued precedent. This provides evidence that it is not merely “held” cases that drive our findings. In other words, we have a reasonable amount of summary decisions to work with, even excluding all “held” cases from our analysis. If the results were driven by the held cases, we would expect to find that the relationship between summary decisions and the number of lower court citations and positive treatments would no longer be significant. However, the results in Table A2 demonstrate that summary decisions still reach conventional levels of statistical significance, giving additional support for the viability of our theory and the robustness of our findings.

Table A2: Models Removing All Held Cases

Variable	Model 1	S.E.	Model 2	S.E.
Summary Decision	0.783*	0.166	0.584*	0.184
Precedent Vitality	-0.032	0.078	-0.057	0.092
Supreme Court Vote Margin	-0.010	0.016	-0.030	0.018
Formally Altered Precedent	0.742*	0.352	1.025*	0.413
Political Salience	0.415*	0.145	0.476*	0.167
Ideological Direction of Decision	0.110	0.100	0.111	0.116
Breadth of Precedent	-0.277*	0.097	-0.273*	0.108
Criminal Case	1.005*	0.115	0.970*	0.134
Time Precedent in Analysis	0.085	0.192	0.201	0.404
Time Precedent in Analysis ²	-0.004	0.009	-0.008	0.013
Constant	6.115*	1.045	4.127	3.066
Model Fit Statistics				
Observations	861		861	
Probability > X^2	0.000		0.000	

Note: The dependent variables are the number of lower court citations and positive treatments of Supreme Court precedent, respectively. The second level unit in the hierarchical negative binomial model is the majority opinion writer and Supreme Court term combination. *p < 0.05

3. Model Excluding Multiple Summary Decisions

Here we include an empirical test to help differentiate between our theory of direct influence of summary decisions and the pipeline alternative theory, where we removed all cases that had more than ten summary decisions from the empirical analysis. We present these results in Table A3. The reason we discuss this analysis in the main text was to illustrate the point that even if one removes the relatively small number of cases that have a very large number of summary decisions, our results remained robust. In the process of examining the robustness of our results to exclusion criteria, we excluded the effects of precedents associated with differing numbers of summary decisions, including the removal of all cases that have more than one summary decision. The results remain highly robust. We present this analysis in Table A4.

Table A3: Models Excluding All Cases with More Than Ten Summary Decisions

Variable	Model 1	S.E.	Model 2	S.E.
Summary Decision	0.94*	0.11	0.96*	0.13
Precedent Vitality	-0.02	0.07	-0.06	0.09
Supreme Court Vote Margin	0.00	0.02	-0.02	0.02
Formally Altered Precedent	0.38	0.35	0.65	0.42
Political Salience	0.16	0.14	0.16	0.16
Ideological Direction of Decision	0.03	0.10	0.03	0.11
Breadth of Precedent	-0.21*	0.09	-0.19*	0.10
Criminal Case	0.95*	0.11	0.94*	0.13
Time Precedent in Analysis	0.03	0.31	0.15	0.38
Time Precedent in Analysis ²	0.00	0.01	-0.01	0.01
Constant	6.15*	2.37	4.06*	3.01
Model Fit Statistics				
Observations	856		856	
Probability > X^2	0.00*		0.00*	

Note: The dependent variables are the number of lower court citations and positive treatments of Supreme Court precedent, respectively. The second level unit is the majority opinion writer and Supreme Court term combination. *p < 0.05

Table A4: Models Excluding All Cases with More Than One Summary Decision

Variable	Model 1	S.E.	Model 2	S.E.
Summary Decision	1.066*	0.192	0.985*	0.221
Precedent Vitality	-0.049	0.077	-0.053	0.089
Supreme Court Vote Margin	-0.000	0.016	-0.020	0.019
Formally Altered Precedent	0.594	0.430	0.961	0.514
Political Salience	0.218	0.157	0.193	0.181
Ideological Direction of Decision	0.017	0.104	-0.022	0.121
Breadth of Precedent	-0.193*	0.098	-0.167	0.111
Criminal Case	0.886*	0.120	0.905*	0.140
Time Precedent in Analysis	-0.110	0.324	0.024	0.406
Time Precedent in Analysis ²	0.003	0.010	-0.002	0.013
Constant	7.221*	2.456	5.002	3.076
Model Fit Statistics				
Observations	777		777	
Probability > X^2	0.000		0.000	

Note: The dependent variables are the number of lower court citations and positive treatments of Supreme Court precedent, respectively. The second level unit is the majority opinion writer and Supreme Court term combination. *p < 0.05

4. Additional Corroborative Analyses

We conduct a test to address the possibility that Supreme Court docket selection may affect the types of cases that the Supreme Court accepts in future terms. If true, we would expect to find that much of the results that we attribute to summary decisions would dissipate and be replaced by the docket variable. To construct the docket variable, we take the number of cases that the Court heard in a specific issue during the three years prior to the Court hearing a case. Table A5 presents the estimates with the Supreme Court docket variable. The variable for summary decisions is statistically significant even though the Supreme Court docket variable, which shows the number of cases in a specific issue in the three years prior to a particular formally argued precedent is significant in both the citation and positive treatment models.

Table A5: Models with Supreme Court Docket Variable

Variable	Coeff.	S.E.	Coeff.	S.E.
Summary Decisions	0.824*	0.099	0.847*	0.114
Precedent Vitality	0.000	0.075	-0.027	0.087
Supreme Court Docket	0.041*	0.120	0.040*	0.014
Vote Margin	-0.002	0.015	-0.020	0.018
Formally Altered Precedent	0.499	0.349	0.796	0.418
Case Salience	0.172	0.140	0.186	0.162
Ideological Direction of Decision	0.021	0.098	0.017	0.113
Breadth of Precedent	-0.194*	0.092	-0.177	0.104
Criminal Case	0.762*	0.121	0.761*	0.139
Time Precedent in Analysis	0.258	0.316	0.158	0.393
Time Precedent in Analysis ²	-0.001	0.010	-0.007	0.013
Constant	6.157*	2.389	3.954	2.978
Model Fit Statistics				
Observations	858		858	
Probability > X^2	0.000		0.000	

Note: The dependent variables in Models 1 and 2 are the number of aggregated citations and number of aggregated lower court positive treatments of a Supreme court precedent, respectively. The second level unit in the hierarchical negative binomial model is the majority opinion writer and Supreme Court term combination. *p < 0.05

We also conduct a test examining whether summary decisions influence lower court citations and treatments of precedent, comparing a hypothetical “size of pipeline” between a random sample of 20 formally argued cases from the 2001 term that have summary decisions and cases with no associated summary decisions. Specifically, we conduct a t-test to examine whether there is a statistically significant difference in the size of the pipeline between cases that have associated summary decisions versus those that do not. For this test, we collect the population of certiorari denials between the years 2000-2002 that come are of the same issue area (as coded by Westlaw) as any particular formally argued case in our sample. The results are presented in Table A6. A difference of means test shows no statistically significant difference between the two sets of cases.

Table A6: T-Test of Sample of Supreme Court Cases with and without Summary Decisions

Group	<i>N</i>	Mean	Standard Error
Summary Decisions Present	20	3.20	0.73
Summary Decisions Absent	20	2.75	0.70
Combined	40	2.98	0.50

Note: P-value for cases without summary decisions compared to cases with summary decisions: 0.3299

5. Coarsened Exact Matching

While we include a Mahalanobis distance matching algorithm in the main paper, we conduct an alternate matching analysis to demonstrate the robustness of our core findings to alternative matching paradigms. Here we provide a coarsened exact matching algorithm, which includes all variables that would be in the model prior to treatment. The advantage of using a coarsened exact matching (CEM) paradigm is that the modeling is more flexible to choice of specific models. Unlike the Mahalanobis distance matching algorithm which does not work with event count models *per se*, one can use the results from a CEM process in any empirical model. The disadvantage of a CEM model is that one potentially loses more data due to the exact matching

process that is required, resulting in large increases in data loss compared with a Mahalanobis distance matching regime ¹ We dichotomize our key variable of interest that captures whether a formally argued decision has at least one associated summary decision.

Table A7: Coarsened Exact Matching for Lower Court Citations and Positive Treatments

Variable	Model 1	S.E.	Model 2	S.E.
Presence of Summary D.	1.03*	0.15	1.16*	0.17
Precedent Vitality	0.03	0.12	-0.06	0.14
Consolidated	-1.16*	0.39	-1.38*	0.45
Vote Margin	0.01	0.02	0.01	0.03
Case Salience	0.41	0.24	0.77*	0.27
Ideological Direction of Decision	0.25	0.16	0.27	0.18
Breadth of Precedent	-0.12	0.15	-0.11	0.17
Criminal Case	1.13*	0.17	1.03*	0.20
Time Precedent in Analysis	0.68	0.41	0.87	0.51
Time Precedent in Analysis ²	-0.02	0.01	-0.03	0.02
Constant	0.65	3.10	-2.28	3.87
Model Fit Statistics				
Observations	344		344	
Probability > X^2	0.00		0.00	

Note: The dependent variables in Models 1 and 2 are the number of aggregated citations and number of aggregated lower court positive treatments of a Supreme court precedent, respectively. The second level unit in the hierarchical negative binomial model is the majority opinion writer and Supreme Court term combination. *p < 0.05

¹ We use the following variables listed for matching as follows: declaration of unconstitutionality, ideological direction of the decision, precedent alteration, whether a case has consolidated cases, whether a case was decided unanimously, whether the Supreme Court reversed a lower court, and whether the Court stated that there was lower court disagreement about a specific legal issue being resolved in a case. These variables are all dichotomous. We also include several non-dichotomous variables including the number of legal provisions (divided into three equally sized bins), margin (divided into two equally sized bins), the term of a decision (divided into three equally sized bins), and the number of issues in a case (divided into three equally size bins). Because one cannot obtain exact matches on all combinations of all variables, the CEM algorithm removes roughly half of the observations in our data from the matched model. However, one can be confident that on all matched variables in the analysis, there is a roughly comparable case that has at least one summary decision with a case that does not have an summary decision. For purposes of intuitiveness of results, we also specify a *k by k* algorithm, which requires that the number of cases with summary decisions and the number of cases without summary decisions is identical in our matched dataset.

Table A7 presents the results of our coarsened exact matching algorithm. The results are very similar to with those in those reported in the main text. For the CEM citation model, results are essentially identical to the main paper, despite the loss of over 50% of the observations in our data, due to lack of comparability between cases that have summary decisions and cases that do not on some of the matched variables. The same variables are significant in the matched model versus the unmatched model, namely the presence of at least one summary decision, the presence of consolidated cases within a Supreme Court case, and whether a case is criminal in nature. For positive positive treatments, we find similar results to our main model as well, with the summary decision signal variable being statistically significant, as well as political salience, the presence of consolidated cases, and whether a case is criminal in nature. Thus, based on both of our matching results and the sensitivity test with the Mahalanobis distance matching result, the findings are highly robust.