

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

## Contents

1	Descriptive Statistics .....	A2
2	Causality and the Pipeline Alternative .....	A2
3	Qualitative Analyses .....	A3
4	Coarsened Exact Matching and Docket Test .....	A8
5	Models Assessing the Supreme Court's Docket .....	A10
6	Models Assessing the "Pipeline Alternative" .....	All
7	Model Excluding Different Subsets of Cases .....	A14
8	Models Excluding All "Held" Cases .....	A15
9	Models with Alternate Specifications of Vitality .....	Alb
10	Models Assessing Negative Treatments .....	Alb
11	Models with Additional Controls & Term Dummies .....	A19

The purpose of this Supporting Appendix (SA) is to provide readers with additional information on the analyses in the main text. Within this document, we provide additional information on causal mechanisms regarding summary decisions. We also provide auxiliary analyses to demonstrate the robustness of the results in the main text.

## 1. Descriptive Statistics

SA Table 1: Descriptive Statistics

Variable	Mean	S.D.	Min.	Max.
Number of Citations	1095.124	2961.189	0	34294
Positive Treatments	268.5571	1196.395	0	27354
Precedent Vitality	.054	0.436	-3	3
Summary Decision	1.469	26.25	0	774
Supreme Court Vote Margin	5.869	3.212	0	9
Formally Altered Precedent	0.017	0.130	0	1
Political Salience	0.138	0.345	0	1
Ideological Direction of Decision	0.427	0.495	0	1
Breadth of Precedent	1.179	0.489	1	6
Criminal Case	0.251	0.434	0	1
Time Precedent in Analysis	15.674	2.856	11	20

## 2. Causality and the Pipeline Alternative

As we outline in the paper in several sections, one potential concern with the main analysis in the text of the manuscript is determining whether summary decisions are actually a causal mechanism or whether summary decisions simply serve as an indicator (or an intervening variable) that a particular decision strongly relates to a large part of the lower court docket. In this alternative, summary decisions themselves, as a signal, have no intrinsic meaning. According to this second argument, which we refer to as the "pipeline alternative," summary decisions occur, not based on a systematic view of the importance of a particular case by the Court, but

rather, could occur simply when there are many potential cases in the pipeline that are similar to a particular Supreme Court decision. According to the pipeline alternative, if there are many similar cases that are being litigated, such as cases where a precedent is "objectively" relevant, there should be an increase in the number of citations and positive treatments of precedents by lower court even in the absence of a signal by the Supreme Court. As we mention in the paper itself, while there is no one single test that directly and conclusively proves whether our theory provides an accurate picture, in the paper itself, we provide five tests of our theory and the pipeline alternative. As the paper itself states in the conclusion and in the results section, all tests of our theory compared with the pipeline alternative give greater support to summary decisions having a direct influence on lower court citations and positive treatments of precedent compared with the pipeline alternative outlined above. In the following section, we include corroborative information in several forms, most notably descriptive information about the samples that we use in the first two empirical tests of causality, as well as several corroborative analyses focusing on excluding cases from our pool based on differences in the number of summary decisions associated with each case.

### **3. Qualitative Analyses**

SA Table 2 provides the detail in support of the conclusion in the main text that there are many cases appealed to the Supreme Court that are denied *certiorari* that have issues that are very similar to the issues in formally decided precedents. The table shows that for a sample of formally decided precedents, 72% had issues similar to the issues in appeals court cases that were denied *certiorari*. The table specifically lists each Supreme Court precedent, the main issue raised in the precedent, the list of *certiorari* petitions from the courts of appeals that raised similar issues but were nonetheless denied *certiorari*.

**SA Table 2: Appeals Court Cases Denied *Certiorari***

<b>Supreme Court Citation</b>	<b>Case Name</b>	<b>Issue - West Topic &amp; Key Number</b>	<b>Appeals Court Cases</b>
513 U.S. 28	<i>Sinkfield v. Kelly</i>	92VI(A) Equal Protection-Standing	165 F.3d 973
513 U.S. 356	<i>Uni. of Alabama Bd. of Trustees v. Garrett</i>	92k3140 Discrimination (ADA)	136 F.3d 430 166 F.3d 698 184 F.3d 999 191 F.3d 1167 207 F.3d 94 210 F.3d 732
531 U.S. 438	<i>Lewis v. Marina</i>	354k208 Admiralty	...
532 U.S. 200	<i>United States v. Cleveland Indians</i>	200k4374 Employment Taxes	...
532 U.S. 504	<i>MLBPA v. Garvey</i>	231Hk1623 Collective Bargaining	190 F.3d 434 195 F.3d 1201 196 F.3d 117 205 F.3d 922 224 F.3d 316
532 U.S. 645	<i>Atkinson v. Shirley</i>	209k223 Native American Reservations	196 F.3d 1059 211 F.3d 1280
532 U.S. 769	<i>Arkansas v. Sullivan</i>	48Ak349 Stop or Arrest as Ruse	182 F.3d 643 195 F.3d 258
533 U.S. 158	<i>Kushner v. King</i>	319Hk33 Racketeering Enterprise	184 F.3d 74 191 F.3d 799 193 F.3d 85 208 F.3d 1073 214 F.3d 776 219 F.3d 1271
533 U.S. 405	<i>United States v. United Foods</i>	92k1564 Compelled Speech	...
533 U.S. 656	<i>Tyler v. Cain</i>	197k898	215 F.3d 1233

		Habeas Corpus	227 F.3d 331 244 F.3d 803
531 U.S. 278	<i>City News v. Waukesha</i>	92k980 Case and Controversy	168 F.3d 705 196 F.3d 727
531 U.S. 326	<i>Illinois v. McArthur</i>	35k60 Duration of Detention	167 F.3d 739 178 F.3d 334 181 F.3d 774 187 F.3d 663 188 F.3d 829 189 F.3d 88 209 F.3d 1153
531 U.S. 425	<i>Central Green Co. v. United States</i>	405k2885 Immunity for Damage	
531 U.S. 497	<i>Semtek v. Lockheed Martin</i>	170Bk3045 Conclusiveness of Judgment	171 F.3d 638 173 F.3d 1376 178 F.3d 132 189 F.3d 1107 195 F.3d 1225 200 F.3d 1356 203 F.3d 1190 208 F.3d 741
532 U.S. 275	<i>Alexander v. Sandoval</i>	78k1330 Civil Rights (Private Action)	191 F.3d 1020
532 U.S. 59	<i>Buford v. United States</i>	110k1158 Sentencing	171 F.3d 514 173 F.3d 974 177 F.3d 617 179 F.3d 1056 183 F.3d 374 195 F.3d 402 196 F.3d 884 204 F.3d 1021 214 F.3d 908
532 U.S. 706	<i>NLRB v. Kentucky Community Care</i>	231Hk982 Labor law (supervisory)	
533 U.S. 262	<i>Idaho v. United States</i>	209k158 Lands on Reservations	188 F.3d 1010 219 F.3d 1127

Supplemental Material (not copyedited or formatted) for: Ali S. Masood, Benjamin J. Kassow, Donald R. Songer. 2019.  
"The Aggregate Dynamics of Lower Court Responses to the US Supreme Court."  
Journal of Law and Courts 7(2). DOI: 10.1086/703067.

SA Table 3 focuses on a subset of six formally argued decisions with associated GVR's that have discrepancies between the Court of Appeals case that was remanded and the Supreme Court case that remanded the lower court case. As the main text in our manuscript states, if the pipeline alternative is a viable explanation of lower court responsiveness, one should see almost perfect congruence between the issues in a case that receives summary review and the formally argued case that the Supreme Court uses to dispose of the case that received summary review in the first place. In fact, out of the twenty formally argued decisions that we sampled with summary decisions, we found six that had discrepancies between the issue decided in the formally argued case and how the formally argued case was used by the Court to dispose of other cases summarily. The lack of congruence that we show below is illustrative of the fact that the Court has wide variation in its ability to decide how to determine which cases should receive summary review versus denials of *certiorari*. The first line in each portion of the table represents the Supreme Court case, whereas the second line represents a lower court case that received summary review based on the case listed in the first row.

As the descriptive information in SA Table 3 shows, in these six precedents with associated summary decisions, there was at least one lower court case that was remanded that was based on a different issue compared with the Supreme Court case itself, using all three schemes listed above in SA Table 3 (West Key Note Numbers, Spaeth's coding scheme, and Songer's coding scheme). We contend that this information shows that there are cases where the Supreme Court accepts cases that are not of an identical issue (and sometimes, a completely different issue); the implication of this finding is that it is likely difficult to say for certainty which cases the Supreme Court is likely to grant summary review to. It does not simply seem to be a reflexive decision where the Supreme Court simply grants summary review to cases that are of the same issue as the original formally argued precedent.

**SA Table 3: Formally Argued Decisions with Different Issues in Associated Summary Decisions**

<b>Case Name</b>	<b>Citation</b>	<b>Key Note #</b>	<b>Spaeth Coding</b>	<b>Songer Coding</b>
<i>Waste Agency</i>	<b>531 U.S. 159</b>	<b>149Ek127</b>	80130 (environment protection)	753 (environment protection)
<i>U.S. v. Rapanos</i>	235 <b>F.3d 256</b>	<b>350Hk909</b>	10560 (sentencing)	116 (white collar crime)
<i>Glover v. U.S.</i>	<b>531 U.S. 198</b>	<b>110k1519</b>	10120 (counsel)	112 (tax evasion)
<i>Robinson v. U.S.</i>	<b><u>196 F.3d 748</u></b>	<b>135Hk202</b>	10170 (double jeopardy)	<b>112</b> (narcotics)
<i>Lujan v. G&amp;'G DeBoer</i>	<b>532 U.S. 189</b> <b>206 F.3d 857</b>	92k4179 78k1376	40020 (due process) 80110 (local regulation of business)	706 (federal tax) 752 (local economic regulation)
<i>Cooper Industries (punitive damages)</i>	532 U.S. 424	90k4427	80080 economic	712 (trademarks)
<i>Time Warner v. Six Flags</i>	245 Ga. App 334	289k1156	140030 contracts (breach fiduciary duty)	736 (breach fiduciary duty)
<i>Duncan v. Sherman</i>	533 U.S. 167	<b>197k894</b> (AEDPA)	10020 habeas	125 (robbery)
<i>Allen v. Hofbauer</i>	<b>111FedAppx363</b>	197k380	10200 prosecutorial misconduct	121 (murder)
<i>U.S. v. Mead Corp.</i>	533 U.S. 218	92k2405	90120 (judicial review of administrative action)	706 (other federal tax)
<i>Matz v. TIP</i>	<b>227 F.3d 971</b>	36k1007	70180 Labor (ERISA)	610 (other labor disputes)



## 4. Coarsened Exact Matching and Docket Test

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 <sup>1</sup> Similarly to the Mahalanobis distance matching model that we use in the main paper, to get a better handle on the treatment, we dichotomize our key variable of interest, the summary decisions variable, into simply whether a Supreme Court orally argued decision has at least associated summary decision that refers to the orally argued decision.

Table 4 presents the results of our coarsened exact matching algorithm. Briefly stated, the results are extremely comparable with those in the main paper in terms of which variables which statistically significance, as well as in what direction they do so. For our 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

---

<sup>1</sup> 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 *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.

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. In the case of 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 associated sensitivity test with the Mahalanobis distance matching result, we are extremely confident in the robustness of our summary decision finding.

**SA Table 4: Coarsened Exact Matching for Lower Court Citations and Positive Treatments**

<b>Variable</b>	<b>Model 1</b>	<b>S.E.</b>	<b>Model 2</b>	<b>S.E.</b>
Presence of Summary D.	1.027*	0.149	1.155*	0.169
Precedent Vitality	0.027	0.122	-0.056	0.136
Consolidated	-1.158*	0.391	-1.378*	0.451
Vote Margin	0.010	0.024	0.009	0.027
Case Salience	0.407	0.237	0.772*	0.266
Ideological Direction of Decision	0.254	0.157	0.272	0.180
Breadth of Precedent	-0.124	0.151	-0.110	0.166
Criminal Case	1.134*	0.174	1.033*	0.196
Time Precedent in Analysis	0.677	0.408	0.874	0.509
Time Precedent in Analysis <sup>2</sup>	-0.021	0.013	-0.028	0.016
Constant	0.650	3.095	-2.284	3.870
<b>Model Fit Statistics</b>				
Observations	344		344	
Probability > X <sup>2</sup>	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

## 5. Models Assessing the Supreme Court's Docket

We also provide 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. In other words, if the justices hear many cases about sentencing decisions, the Court may choose to address those cases frequently because they are a common lower court area of interest or may be an area where the Supreme Court has a substantial number of certiorari petitions. If this is the case, we would expect to find that much of the results that we attribute to summary decisions would dissapate 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. To provide one example, the justices heard *United States v. Booker*, which is a federal sentencing case after hearing several other sentencing cases in the five years prior to *Booker*. These include *Apprendi v. New Jersey*, *Ring v. Arizona*, and *Lopez v. Davis*.

**SA Table 5: 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 <sup>2</sup>	-0.001	0.010	-0.007	0.013
Constant	6.157*	2.389	3.954	2.978
<b>Model Fit Statistics</b>				
Observations	858		858	
Probability > X <sup>2</sup>	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

SA Table 5 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, does reach statistical significance in both the citation or positive treatment models. We believe that this finding regarding Supreme Court docket suggests that our results are not driven by the Supreme Court's docket, at least with regards to cases the Court accepted for review during the three years prior to issuing a specific precedent.

## **6. Models Assessing the "Pipeline Alternative"**

Our next test offers another way to empirically differentiate the pipeline alternative from our theory. Specifically, some interpretations of the pipeline alternative theory may argue that the results of our analysis, in the main text of the paper, is driven primarily by a small number of criminal precedents that have a large degree of relevance to other criminal cases in the pipeline. We first consider the most general proposition that it might be primarily criminal cases in general that are driving our results. To test for this possibility, we first divided our overall sample into two smaller samples. The first sample was composed of all criminal cases and the second sample was composed of all non-criminal cases. If the pipeline alternative is more accurate than our theory of summary decision responsiveness, we would expect to find that the summary decision variable only reaches statistical significance in the criminal case subset and that it would not be statistically significant in the subset of non-criminal cases. When we ran our basic model of the impact of summary decisions on both citations and positive treatments in lower courts, the effect of the summary decision variable remained strong and statistically significant for both dependent variables, as seen in SA Table 6. When we separately estimated models for the subset of non-criminal cases, the summary decision variable still reached statistical significance, as is shown in SA Table 7. These results directly support the predictions based on our theory of the importance of summary decisions as a signal to lower courts and do not support the predictions derived from the alternative pipeline theory.

**SA Table 6: Models Subset on Criminal Cases**

<b>Variable</b>	<b>Model 1</b>	<b>S.E.</b>	<b>Model 2</b>	<b>S.E.</b>
Summary Decision	0.807*	0.145	0.739*	0.174
Precedent Vitality	0.006	0.178	-0.082	0.201
Supreme Court Vote Margin	-0.046	0.026	-0.050	0.032
Formally Altered Precedent	-0.420	0.488	-0.128	0.567
Political Salience	0.826*	0.290	0.801*	0.345
Ideological Direction of Decision	0.076	0.191	0.100	0.226
Breadth of Precedent	-0.293	0.251	-0.150	0.294
Time Precedent in Analysis	-0.149	0.437	0.152	0.530
Time Precedent in Analysis <sup>2</sup>	0.004	0.014	-0.007	0.017
Constant	8.739*	3.317	4.953	4.014
<b>Model Fit Statistics</b>				
<b>Observations</b>	220		220	
<b>Probability &gt; X<sup>2</sup></b>	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

**SA Table 7: Models Subset on Non-Criminal Cases**

<b>Variable</b>	<b>Model 1</b>	<b>S.E.</b>	<b>Model 2</b>	<b>S.E.</b>
Summary Decision	0.874*	0.131	0.983*	0.148
Precedent Vitality	-0.002	0.085	-0.001	0.100
Supreme Court Vote Margin	0.015	0.018	-0.004	0.021
Formally Altered Precedent	0.904	0.466	1.154*	0.562
Political Salience	0.036	0.165	0.050	0.191
Ideological Direction of Decision	0.019	0.117	0.059	0.135
Breadth of Precedent	-0.166	0.104	-0.164	0.118
Time Precedent in Analysis	-0.034	0.357	-0.020	0.441
Time Precedent in Analysis <sup>2</sup>	0.001	0.011	-0.001	0.014
Constant	6.556*	2.699	5.246	3.344
<b>Model Fit Statistics</b>				
<b>Observations</b>	641		641	
<b>Probability &gt; X<sup>2</sup></b>	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

We also conduct another test examining the pipeline theory versus our theory of summary decisions influencing 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 run 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. For consistency, we manually select the issue category in Westlaw that most closely corresponds to the Supreme Court Database's issue coding.

**SA Table 8:** T-Test of Sample of Supreme Court Cases with and without Summary Decisions

<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>Standard Error</b>
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 having a smaller pipeline than cases with summary decisions: 0.3299

If the pipeline theory is correct, we would expect to find evidence showing that cases with associated summary decisions have a substantially larger, and statistically significant, pipeline size compared with cases that lack such associated summary decisions. SA Table 8 presents these results. We find no statistically significant difference between the average pipeline size of the two sets of cases. For cases with associated summary decisions, the average size of the pipeline is 3.2 cases, which are denied certiorari by the Supreme Court. For cases without summary decisions, the average pipeline size is slightly smaller at 2.75 cases, but a difference of means test shows no statistically significant difference between the two sets of cases. This suggests that there is no evidence of the pipeline theory contributing in any meaningful way to the probability of a particular case having one or more associated summary decisions.

## 7. Model Excluding Different Subsets of Cases

In the main text of the paper, we included 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. The reason that we showed this analysis in the main paper 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. Also mentioned in that portion of the text was the fact that our results were also robust to additional specifications and exclusion criteria for summary decisions, even including removing all precedents from the analysis that have more than one summary decision.

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 five summary decisions and a more restrictive analysis removing all precedents that have more than three summary decisions from our analysis. The details on these analyses remained robust (we do not show the details for the sake of brevity, but these are available from the authors). That is, we found that even if one defines a large number of summary decisions as "more than three", and excludes from our analysis all precedents having a large number of summary decisions, the presence of one or more summary decisions, by sending a signal to lower courts, results in the lower courts substantially increasing the number of citations to the precedent and the number of positive treatments of the precedents compared to the number of citations and positive treatments of precedents without any summary decisions. As another test of the pipeline alternative that lower court citations and positive treatments may be simply driven by the number of cases in the pipeline, we re-estimated our models limiting the analysis to precedents that either had no associated summary decisions or that had only one summary decision. We present these results in SA Table 9.

**SA Table 9: Models Excluding All Cases with More Than One Summary Decision**

<b>Variable</b>	<b>Model 1</b>	<b>S.E.</b>	<b>Model 2</b>	<b>S.E.</b>
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 <sup>2</sup>	0.003	0.010	-0.002	0.013
Constant	7.221*	2.456	5.002	3.076
<b>Model Fit Statistics</b>				
Observations	777		777	
Probability > X <sup>2</sup>	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

## 8. 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 SA Table 10 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.



<b>Variable</b>	<b>Model 1</b>	<b>S.E.</b>	<b>Model 2</b>	<b>S.E.</b>
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 <sup>2</sup>	-0.004	0.009	-0.008	0.013
Constant	6.115*	1.045	4.127	3.066
<b>Model Fit Statistics</b>				
<b>Observations</b>	861		861	
Probability > X <sup>2</sup>	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

## 9. Models with Alternate Specifications of Vitality

To ensure that the results on our precedent vitality are robust, we run additional models examining alternative specifications of the precedent vitality score: one examining the vitality of a precedent 3 years after its establishment and another examining the vitality of a precedent 5 years after it was established. The correlation of these alternative vitality measures with our median measure is small, suggesting there are possibilities of changes to vitality well beyond 5 years in our data. SA Tables 11 and 12 present the estimates for these alternative specifications of precedent vitality.

**SA Table 11: Models with 3 Year Vitality Measure**

<b>Variable</b>	<b>Model 1</b>	<b>S.E.</b>	<b>Model 2</b>	<b>S.E.</b>
Summary Decision	0.771*	0.101	0.767*	0.115
Precedent Vitality	0.344*	0.103	0.496*	0.123
Supreme Court Vote Margin	-0.002	0.015	-0.015	0.018
Formally Altered Precedent	0.407	0.352	0.712	0.423
Political Salience	0.177	0.140	0.211	0.163
Ideological Direction of Decision	0.058	0.098	0.081	0.113
Breadth of Precedent	-0.169	0.093	-0.139	0.104
Criminal Case	0.945*	0.112	0.911*	0.129
Time Precedent in Analysis	0.041	0.312	0.151	0.387
Time Precedent in Analysis <sup>2</sup>	-0.017	0.010	-0.006	0.012
Constant	6.016*	2.362	3.941	2.932
<b>Model Fit Statistics</b>				
<b>Observations</b>	861		861	
Probability > X <sup>2</sup>	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

**SA Table 12: Models with 5 Year Vitality Measure**

<b>Variable</b>	<b>Model 1</b>	<b>S.E.</b>	<b>Model 2</b>	<b>S.E.</b>
Summary Decision	0.754*	0.103	0.757*	0.118
Precedent Vitality	0.251*	0.082	0.306*	0.099
Supreme Court Vote Margin	0.002	0.015	-0.016	0.018
Formally Altered Precedent	0.401	0.352	0.701	0.422
Political Salience	0.167	0.140	0.192	0.163
Ideological Direction of Decision	0.031	0.098	0.039	0.113
Breadth of Precedent	-0.174	0.093	-0.152	0.105
Criminal Case	0.933*	0.112	0.906*	0.129
Time Precedent in Analysis	0.057	0.312	0.172	0.389
Time Precedent in Analysis <sup>2</sup>	-0.002	0.010	-0.007	0.012
Constant	5.944*	2.359*	3.867	2.944
<b>Model Fit Statistics</b>				
<b>Observations</b>	861		861	
Probability > X <sup>2</sup>	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

## 10. Models Assessing Negative Treatments

In SA Table 13 we examine the impact of the Supreme Court's summary decisions on the proportion of citations that are negative treatments. The estimates demonstrate that summary decisions do not predict the proportion of lower court citations that are negative treatments. Thus, while summary decisions strongly predict the proportion of citations that are positive treatments, they do not influence the proportion of citations that are negative treatments.

**SA Table 13:** Fractional Logistic Regression of Lower Court Citations that are Negative Treatments

Variable	Coefficient
Summary Decision	-.122 (0.244)
Precedent Vitality	-0.037 (0.134)
Supreme Court Vote Margin	-0.095 (0.059)
Formally Altered Precedent	-1.177* (0.427)
Political Salience	-0.012 (0.611)
Ideological Direction of Decision	-0.476* (0.260)
Breadth of Precedent	0.606* (0.241)
Criminal Case	0.123 (0.431)
Time Precedent in Analysis	0.590 (0.485)
Time Precedent in Analysis <sup>2</sup>	-0.021(0.016)
Constant	-9.940* (3.673)
Observations	853
Probability > X <sup>2</sup>	0.036*

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

## 11. Models with Additional Controls & Term Dummies

In SA Table 14 we include three additional control variables that are not integral to our theory. These control variables include whether an issue is constitutional in nature, the number of concurrences in a Supreme Court opinion, as well as the length of the majority opinion. We obtain the first two variables from the U.S. Supreme Court Database while the majority opinion length variable comes from Ryan Black's and Jim Spriggs' data (2008). Finally, SA Table 15 presents the results from our main model with the addition of Supreme Court term dummy variables to account for differences in the U.S. Supreme Court's docket, *per annum*. The results in both models are highly robust.

**SA Table 14: Model of Citations and Treatments with Additional Control Variables**

Variable	Model 1	S.E.	Model 2	S.E.
Precedent Vitality	0.229*	0.125	0.240	0.166
Summary Decision	0.676*	0.115	0.658*	0.143
Supreme Court Vote Margin	0.009	0.022	-0.013	0.030
Formally Altered Precedent	0.338	0.445	0.524	0.523
Political Salience	0.271	0.175	0.165	0.220
Ideological Direction of Decision	0.045	0.129	0.042	0.160
Breadth of Precedent	-0.222	0.136	-0.195	0.182
Criminal Case	0.918*	0.135	0.941*	0.169
Time Precedent in Analysis	0.232	0.178	0.221	0.223
Time Precedent in Analysis <sup>2</sup>	-0.009	0.008	-0.010	0.010
Constitutional Issue	-0.223	0.129	-0.374*	0.157
Number of Concurrences	0.081	0.043	0.130*	0.055
Majority Opinion Length	0.000	0.000	0.000*	0.000
Constant	4.519*	1.002	3.172*	1.299
<b>Model Fit Statistics</b>				
Observations	777		777	
Probability > X <sup>2</sup>	0.000		0.000	

Note: The dependent variables in these two models are the number of citations and number of positive treatments. The second level unit in the hierarchical negative binomial model is the majority opinion writer and Supreme Court term combination. \*p < 0.05

**SA Table 15: Models of Citations and Treatments with Term Dummies**

<b>Variable</b>	<b>Model 1</b>	<b>S.E.</b>	<b>Model 2</b>	<b>S.E.</b>
Precedent Vitality	0.238*	0.125	0.275*	0.165
Summary Decision	0.768*	0.119	0.796*	0.147
Supreme Court Vote Margin	0.007	0.019	-0.016	0.025
Formally Altered Precedent	0.685	0.595	1.245*	0.730
Political Salience	0.400*	0.183	0.350	0.230
Ideological Direction of Decision	0.045	0.112	0.046	0.133
Breadth of Precedent	-0.152	0.101	-0.127	0.128
Criminal Case	0.912*	0.129	0.902*	0.170
Time Precedent in Analysis	-0.109	0.650	-0.832	0.789
Time Precedent in Analysis <sup>2</sup>	0.005	0.028	0.034	0.033
Constant	6.440	3.363	8.799*	4.155
<b>Model Fit Statistics</b>				
<b>Observations</b>	861		861	
Probability > X <sup>2</sup>	0.000		0.000	

Note: The dependent variables in these two models are the number of lower court citations and positive treatments of Supreme Court precedent. Term specific dummy variables are included in the analysis, but omitted from the table for space. The second level unit in the hierarchical negative binomial model is the majority opinion writer and Supreme Court term combination. \*p < 0.05