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Supreme Court Precedent in a Judicial Hierarchy

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Abstract

We offer a novel theory on Supreme Court impact that makes several key contributions beyond existing accounts. We argue that policy-oriented justices are particularly attentive to the impact of their precedents within the U.S. Courts of Appeals. We provide a framework in which both Supreme Court and circuit-level influences drive U.S. Courts of Appeals responses to the Supreme Court's precedents. Principally, we argue that the Supreme Court's use of its summary decisions, which explicitly reference its formally argued decisions, increase circuit court utility of the High Court's precedents. We test our predictions using new data on appeals court responses to the Supreme Court's precedents. The empirical results support our account and shed new light on the hierarchical dynamic within the American federal judiciary.

Keywords

Supreme Court precedent, U.S. Supreme Court, U.S. Courts of Appeals, judicial impact, judicial hierarchy

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Studies of the U.S. Supreme Court routinely assert that Supreme Court justices are policy entrepreneurs who are strongly concerned with the policies created by their decisions (Caldeira, Wright, & Zorn, 1999; Maltzman, Spriggs, & Wahlbeck, 2000; Segal & Spaeth, 2002; Songer, Segal, & Cameron, 1994; Spaeth & Segal, 1999; Zorn & Bowie, 2010). This concern for policy implications suggests that Supreme Court justices are also interested in maximizing the impact of their decisions within the judicial hierarchy. Testing the validity of such an assumption, however, requires scholars to examine the cumulative impact of Supreme Court decision making on the policy output for each of the circuits below.

Regrettably, little empirical work examines the impact of Supreme Court decisions from such an aggregate perspective. Instead, most studies on judicial impact address a very different question. Most often, the research question is a variant of one posed by a recent contribution to the impact literature, "Why do lower courts defy (or alternatively, comply with) high court precedent?" (Westerland, Segal, Epstein, Cameron, & Comparato, 2010, p. 892). Thus, the primary objective of most existing research designs is to identify the causal factors that increase the likelihood that a lower court decision shirks or complies with a precedent of the Supreme Court. We believe that a more useful approach to assessing the degree to which appeals court judges adhere to the Supreme Court's precedents is one that relies on responses from the circuit as a whole. Through an approach that treats circuits as theoretically distinct, individual entities over time, we believe that we are better able to identify the conditions under which Supreme Court decisions have the greatest impact on the circuit courts. Theoretically, this means that our focus is on assessing the factors that influence the frequency with which the circuit courts rely on the Supreme Court's precedents. Such an approach is both theoretically and analytically different from studies that examine the conditions under which an appellate court panel will positively, neutrally, or negatively apply a Supreme Court precedent. Stated differently, existing studies, such as Westerland et al. (2010), explore the probability of a particular type of treatment of precedent. Our analysis, instead, offers insight on the factors that increase the propensity of judges on the U.S. Courts of Appeals to cite and follow the precedents of the U.S. Supreme Court.

We offer a theory in which both Supreme Court and circuit-level influences drive U.S. Courts of Appeals responses to the Supreme Court's precedents. Our theory allows us to more fully assess the implications of choices that circuit court judges make in their decision to rely on a particular precedent of the Court. We make the case that the impact of the Supreme Court's precedents is substantially affected by a key factor that escapes previous empirical examinations. Specifically, we contend that the Supreme Court's

use of its summary decisions issued "in light of" its formally argued decisions increases the frequency with which the circuit courts will cite and follow a given precedent of the Court. Existing studies that exclude the Supreme Court's growing number of summary decisions, and exclusively rely on the Court's formally argued decisions, provide a systematically incomplete assessment of the overall impact of the Supreme Court on the U.S. Courts of Appeals. The Supreme Court's summary decisions are brief, low-cost decisions that generally vacate a lower court decision and mandate lower court judges to reconsider a previous decision "in light of" a specific formally argued precedent. Furthermore, we theorize that factors at the circuit-level also exert an influence on courts of appeals attentiveness to the Supreme Court's precedents. Specifically, the extent to which prior decisions of judges within a given circuit have been positively or negatively applied will influence adherence to precedent by judges within the same circuit. Jointly exploring the effects of these factors helps improve our understanding of the vertical interactions between the U.S. Supreme Court and the U.S. Courts of Appeals. A key theoretical implication of our analysis is that the U.S. Supreme Court is able to influence circuit court adoption and adherence to its precedents to a greater degree than previous studies suggest.

The Puzzle of Judicial Impact

An extensive literature suggests that the lower courts are highly responsive to the policy pronouncements of the U.S. Supreme Court (Hansford & Spriggs, 2006; Klein & Hume, 2003; Songer et al., 1994; Westerland et al., 2010). One account concludes that the Supreme Court has a "stunning capacity" to impact the courts below (Segal, Spaeth, & Benesh, 2005, p. 364). Thus, the implication from these findings is that the impact of the Supreme Court within the judicial hierarchy is strong. Corroborating the previous literature, most impact studies find that lower courts rarely publicly defy the Court or overtly refuse to accept the legitimacy of a Supreme Court precedent (Benesh, 2008; Benesh, Jacobson, Schaefer, & Simmons, 2014; Benesh & Reddick, 2002; Canon & Johnson, 1998; Johnson, 1979; Klein, 2002; Songer, 1988; Songer & Haire, 1992; Songer & Sheehan, 1990; Wahlbeck, 1998).

The conclusion derived from the body of work on judicial impact is reinforced by the judges themselves. Interviews with judges on the U.S. Courts of Appeals indicate near universal agreement that lower court judges would follow Supreme Court precedent if the precedent is unambiguous and clearly applicable.[1] As Judge B put it, "when precedent is really clear, everyone will follow it." But Judge C offers an important caveat that is repeated in some form by most of our respondents, "but often precedent isn't so clear." Judge E elaborates,

> Of course everyone would follow precedent if it were clear—those are the cases that we wouldn't have to spend much time discussing . . . but all of us are pretty good at being able to distinguish precedent. There is always an element of discretion in deciding which precedent controls a case.

The primary "threat" then to the ambitions of Supreme Court justices to have the greatest policy impact is not the possibility that the lower courts will overtly refuse to abide by the Court's precedents. Rather, policy-oriented justices need to be concerned with how frequently their precedents will be relied on by the lower courts in future decisions. One theoretical reason that the Supreme Court may be interested in levels of adherence to its new precedents is the goal to "steer" lower court policy in certain directions. In addition, a lack of attention to new precedents may indicate issues with the perceived legitimacy of the Court. Invariably, most cases that come before the U.S. Courts of Appeals involve an issue bearing some similarity to a Supreme Court decision. However, in most instances the facts are not identical to those in the Court's precedent. Thus, circuit judges routinely face the question of whether the facts in a case before them share enough similarities to standing Supreme Court precedent. In such situations, circuit judges must determine whether a specific precedent should be relied on or whether the case facts are different enough to justify "distinguishing" or omitting an explicit reference to the Court's precedent.

To a considerable degree, the actions of lower court judges are a function of the choices litigants and their attorneys make by referencing precedents as controlling within their briefs. In making these choices, there are two separate stages to the decision-making process for lower court judges that are analytically distinct.[2] First, judges need to decide whether or not to adopt (i.e., cite) a given precedent.[3] If the judges decide to reference a precedent they must then decide whether their use of the precedent constitutes a positive or negative interpretation, or only a citation to the Court's precedent. Most impact studies on the Supreme Court (e.g., Benesh & Reddick, 2002; Songer & Sheehan, 1990; Westerland et al., 2010) are less attentive to the first stage of decision making and proceed directly to the second stage. That is, these studies limit their focus to cases in which the lower court decides to treat a given High Court precedent. These analyses often develop a model that attempts to identify the causal mechanisms that drive lower court treatment of Supreme Court precedent as positive or negative. Cases in which one or both attorneys argue the relevance of a given precedent, that judges decide not to cite or treat within their opinions, are thus systematically excluded from such examinations. Given the fact that an explicit lower court treatment of Supreme Court precedent as either positive or negative is an exceedingly

rare event, the exclusion of the lower courts' propensity to reference precedent becomes considerably more important in assessing the policy impact of the Supreme Court on the courts below.[4] As such, we contend that an analysis which incorporates both the first and second decision-making stages of lower court judges (i.e., the decision to cite and treat precedent) provides a more compelling account of the hierarchical dynamic and the overall impact of the U.S. Supreme Court on the U.S. Courts of Appeals.[5]

A Theory for Judicial Impact

We offer a theory of Supreme Court impact that makes four novel and important contributions to the literature. First, we make the case that policy-oriented justices are especially concerned with the aggregate impact of their policies by the circuits. We posit that by focusing on an individual judge's or a circuit panel's decision to follow or shirk from Supreme Court precedent, previous studies fall short in fully assessing the Court's overall impact within the judicial hierarchy. As a result, these studies, while important, miss the opportunity to fully assess the role of the Supreme Court as a policymaker. Second, we argue that a focus on circuit-level responses to precedent is necessary to assess the implications of the choices circuit judges make in the first stage of decision making. That is, their decision to cite a precedent prior to considering whether to treat it positively or negatively. In other words, it is difficult to know how frequently a circuit is relying on Supreme Court precedent, without understanding the degree to which the same court is choosing to reference a particular precedent. In contrast to this two-tier approach that we use, prior studies on judicial impact, generally examine only how lower court judges respond after these judges conclude that a given precedent is relevant to an instant case. However, the impact of a given precedent can be limited, either because the lower courts reference the precedent and negatively apply it or because the lower courts simply fail to discuss the precedent at all. Beyond the contribution of circuit-level impact, previous studies on Supreme Court impact also fail to examine the role of the Supreme Court's summary decisions in impacting circuit responses to their precedents. As our analysis below demonstrates, the omission of summary decisions is consequential, as these decisions have a more pronounced and meaningful effect on lower court adoption of precedent than any of the factors in traditional theories of judicial impact (e.g., precedent vitality). Finally, while many impact studies examine how fact patterns, and characteristics (such as ideology) of circuit judges affect lower court responses to precedent, previous studies have generally been unsuccessful at examining the significance of the intracircuit context in which circuit judges respond to precedent.

Existing studies on judicial impact generally focus on several attributes of Supreme Court decisions. Principally, how the Supreme Court applies its own precedents over time and the size of the majority coalition that issues a decision (Benesh & Reddick, 2002; Corley, 2009; Hansford & Spriggs, 2006; Johnson, 1979; Spriggs & Hansford, 2001; Wedeking, 2012). From a theoretical perspective, precedent vitality is expected to impact circuit court behavior in several ways. For one, circuits are expected to know how the Supreme Court has applied its own precedents. Based on this knowledge, circuit judges are expected to be more (or less) committed to specific precedents over time, depending on how the Supreme Court, itself, applies them. A second potential avenue of influence would be through litigants potentially noting within their briefs whether the Supreme Court has applied certain relevant precedents favorably or unfavorably, providing circuit judges with critical information on the viability of a precedent. Existing studies also theorize that the size of the Supreme Court's majority coalition either induces or minimizes compliance. Generally the argument proffered within these studies is that a larger vote margin likely increases compliance, whereas, precedents with a minimum winning coalition are adhered to less frequently since they have a higher baseline probability of being overruled in the future.

We argue that the Supreme Court's use of its summary decisions plays a critical role in increasing circuit court attentiveness to its precedents beyond the role of precedent vitality. More specifically, we theorize that summary decisions issued "in light of" the Court's formally argued precedents increase the propensity with which the circuit courts cite and follow Supreme Court precedents referenced within these decisions. We theorize that the Supreme Court's summary decisions strengthen a precedent by providing an explicit affirmation by the justices that a recent precedent should be considered by circuit judges in particular cases that come before the courts of appeals.[6] Thus, summary decisions may be interpreted by the lower courts as an indicator of the wide applicability of a given precedent. Such an indicator is noteworthy given the direct nature of the source (i.e., the Supreme Court itself). Rather than a litigant highlighting the potential applicability of a precedent to a lower court, the signal for potential relevancy explicitly comes from the justices themselves. We believe that circuit judges are attentive to such informational signals and are more likely to apply such precedents to a wider set of cases.

Most Supreme Court summary decisions that reference a formally argued precedent remand the case back to the original court who must then issue a new ruling that explicitly considers the applicability of the referenced precedent.[7] Many cases remanded back to the U.S. Courts of Appeals will have a factual situation that differs from the facts in the referenced formally argued

precedent. The practical effect of this sequence of events is for appeals court judges to apply the Supreme Court's precedent to a wider set of cases as they address the Supreme Court's remands. Therefore, our expectation is that the circuit courts will cite and follow such Supreme Court precedents with a greater propensity compared with precedents when such a summary decisions signal is absent.

Theoretically, the temporal effects of summary decisions in the way they influence circuit court adherence is substantively different from precedent vitality (see Hansford & Spriggs, 2006; Spriggs & Hansford, 2001). Summary decisions are almost always issued within the same or the term immediately following the newly announced precedent. This means that the time frame in which the justices issue these summary decisions, relative to the release of the precedent, is fairly short. Whereas changes in precedent vitality, or the positive and negative application of precedent by the justices, can occur over any length of time (sometimes decades), the justices issue nearly all summary decisions in close proximity to a new precedent being announced.[8] Interestingly, we find evidence that suggests that summary decisions are not only issued for cases that involve the same issue as an initial precedent, but rather, may be issued for a variety of cases.[9]

Building on the argument above, our intuition is that summary decisions serve as a way to expand the "reach" of precedents by signaling that a new legal rule should be broadly applied to a variety of cases. There are two potential avenues for the Court's summary decisions to influence circuit judges. First, any circuit to which a summary decision is directed receives a direct order from the Supreme Court that either affirms or reverses an earlier circuit decision. This order compels the circuit courts to address a precedent, referenced within the summary decision, at least once.[10] In addition, litigants have several opportunities to bring to the attention of lower court judges the precedents referenced within summary decisions as well as the outcome of the new decisions that are produced by the remand orders within summary decisions. What this means is that litigants have multiple opportunities to raise the potential relevance of a Supreme Court precedent, which increases the likelihood that the circuit courts will be more attentive to a given precedent of the Court.

In contrast to summary decisions, the justices affirming or altering a precedent through another formally argued decision is a significantly more resource intensive process. This is because the justices must first schedule and then hear oral arguments for cases that are not summarily decided. Following oral arguments, the justices must produce detailed opinions, which are often accompanied by one or more separate opinions. Thus, even an incremental change in precedent vitality (i.e., one positive or negative treatment) comes at

a significantly higher cost for the justices compared with issuing a summary decision. Another key difference between vitality and summary decisions is where nearly every summary decision involves a remand, most formally argued decisions are not sent back to the lower courts. The practical effect of this difference is that the Supreme Court's summary decisions will always produce at least one immediate response by the circuits for each decision that is issued. In the absence of summary decisions, the circuits must wait for a new case to come to them where they have an opportunity to address a new Supreme Court precedent that is potentially relevant. As such, summary decisions will immediately be noticed by circuit judges either directly through the summary decision or indirectly through the litigants. Because summary decisions are issued in close temporal proximity to a formally argued case, we expect that summary decisions will immediately increase lower court attentiveness to new Supreme Court precedents. Precedent vitality, on the contrary, has at best a gradual effect on circuit responses. This is because, any change in precedent vitality requires that the justices grant certiorari to a related case, schedule and hear oral arguments, and finally produce a majority opinion where they positively or negatively treat a precedent.[11] When the Supreme Court follows its own precedent, within other formally argued decisions, the justices may seemingly encourage lower courts reactions to their precedents. Importantly, such an influence is less explicit and slower in comparison with the impact of summary decisions.

A GVR ("grant, vacate, and remand" order) sends a direct signal to a circuit instructing the circuit judges to reconsider the outcome of a case due to a new, potentially relevant precedent. By contrast, when the Court positively or negatively applies its own precedents, the signal to circuit judges may be more opaque. What commonly happens is that a precedent is followed and is expanded by a new case that supersedes the earlier case. Although there may be more citations and positive treatments of the earlier case, a new precedent is created that receives its own citations and positive treatments. Hence, while circuit courts might be following the legal rule, they may choose to rely on the earlier precedent or the newer precedent that reinforces the earlier one.[12]

The hypothesized effect of summary decisions on influencing circuit court responses makes two assumptions. First, that circuit judges will become aware of these summary decisions. Second, that circuit judges will apply the precedents referenced within these decisions in future cases that come before them.[13] Approximately 95% of the summary decisions in our data are GVRs that void a previous appeals court decision and thus alter circuit law. As every judge we interviewed indicated that they paid close attention to circuit law, it is reasonable to assume that they or their clerks quickly become aware of any Supreme Court decision, including a GVR

order, that also overturns intracircuit law. Summary decisions directed at other circuits are likely to come to the attention of appeals court judges when relevant to a current case because lawyers arguing before their court will find those precedents created by a circuit's response to a Supreme Court GVR and will argue in favor of or in opposition to the new circuit precedent in their briefs. However, this is likely contingent on whether the new precedent supports a particular side's argument within a federal appeal. Therefore, even though appeals court judges in other circuits may not directly follow all summary decisions of the Supreme Court, through the arguments of lawyers appearing before them, they are likely to become aware of any new circuit law that is created in response to the Supreme Court's summary decisions.[14]

Although national-level influences that determine the strength of precedent should apply globally to all circuits, we believe that circuit-level factors will also influence lower court reliance on Supreme Court precedent within their particular circuit. A novel expectation we have is that when a Supreme Court precedent originates from the review of a particular circuit, the circuit the Supreme Court "takes the case from" might feel especially compelled to address the precedent more directly, and more frequently, than the other circuits, *ceteris paribus*. The intuition behind this belief is that when the Supreme Court reviews a lower court's decision, the Court decides to either uphold or overturn the lower court's decision, which affects not only the instant case but also the circuit law. We believe that while judges in each circuit may not be able to follow every decision of the Supreme Court, they are likely to be attentive to precedents that directly impact the law within their circuit. When the Court affirms the decision of a given circuit, it also affirms the circuit precedent, which we expect to increase the frequency that a given circuit utilizes and follows the newly strengthened precedent. Similarly, when the Supreme Court overturns the decision from a circuit, circuit precedent is affected. As such, judges within the circuit should be expected to at least consider the precedent within future decisions more so than a circuit whose precedent is not affected.

Predictions for Supreme Court Influences

The theory outlined above leads to the expectation that circuit responses to the Supreme Court's precedents reflect both national-level and circuit-level influences. National-level influences include the number of summary decisions from the same term that a formally argued decision is released and the vitality of precedent. We posit that summary decisions of the Supreme Court serve as an important and useful indicator to the lower courts that a

new formally argued precedent is applicable to a diverse range of fact patterns.[15] When the Supreme Court receives multiple certiorari petitions that raise similar issues, and decides that it wants to give formal consideration to the issue, it has several alternatives. The most frequent way of handling the multiple petitions is to grant certiorari to one and schedule it for oral argument and then deny certiorari to the other petitions (Benesh, 2008; Benesh et al., 2014; Perry, 1991). Alternatively, the Court may consolidate several of the petitions and schedule an oral argument for the combined cases (e.g., as it did in *Brown v. Board of Education*, 1954).[16] But on occasion, the Court grants certiorari to several petitions but only schedules one of the cases for oral argument. Once the justices arrive at a decision and issue an opinion in that formally argued case, the justices then issue summary decisions "in light of" the newly announced formally argued precedent. As the cases receiving a GVR order typically have different fact patterns than the case that received formal consideration, the practical effect of issuing multiple summary decisions rather than denying certiorari or consolidating multiple cases signals to the lower courts that a given formally argued precedent cited within the summary decisions deserves increased consideration and may be widely applicable to many disputes involving diverse factual patterns.[17]

Hypothesis 1: As the number of summary decisions issued "in light of" a given Supreme Court precedent increases, the frequency with which the courts of appeals cite and follow a precedent will increase.

We also expect the vitality of a precedent to play an important role. Existing research consistently demonstrates that prior Supreme Court interpretations influences future citation and interpretations in both the Supreme Court and the lower courts (Corley & Wedeking, 2014; Hansford & Spriggs, 2006; Wedeking, 2012; Westerland et al., 2010). Notably, Hansford and Spriggs (2006) find that positive Supreme Court interpretations of a precedent increases the likelihood that a precedent is cited and followed in subsequent decisions by both the Supreme Court and the lower courts. These scholars argue that the Court enhances the strength, or "vitality," of a precedent by explicitly reaffirming the precedent in subsequent decisions (see also Corley, 2009; Wedeking, 2012; Westerland et al., 2010). An important indication of the policy preferences of the Supreme Court is how the justices themselves interpret their precedents within their subsequent decisions. Thus, positive application of a given precedent by the justices may serve as an important signal to lower court judges that a given precedent is still relevant, important, and good law.

Hypothesis 2: As Supreme Court precedent vitality increases, the frequency with which the courts of appeals cite and follow a precedent will increase.

Predictions for Circuit-Level Influences

We argue that the extent to which circuit judges will cite and follow the Supreme Court's precedents is strongly conditioned by influences within each individual circuit. Namely, as circuits review Supreme Court precedents, past circuit behavior should influence the frequency of citations and positive treatments within a circuit. Both horizontal stare decisis and the norm of collegiality within circuits encourage courts of appeals judges to correspond with similar patterns of behavior within the circuit as in the past (see Cohen, 2002; Hettinger, Lindquist, & Martinek, 2003a, 2003b, 2004, 2006; Klein, 2002; Kornhauser, 1992; Westerland et al., 2010).

Hypothesis 3: As circuit vitality of a Supreme Court precedent increases, the frequency with which the courts of appeals cite and follow a precedent will increase.

We posit that the circuit from which the Supreme Court precedent originates (i.e., the circuit which the Supreme Court reviews in issuing its precedent) should offer a greater number of citations and positive treatments to the new precedent compared with other circuits. Circuit law is particularly important for judges in a given circuit (Klein, 2002). A precedent established from a case originating from a given circuit thus simultaneously carries the weight of new circuit law as well as national law. Moreover, judges in the circuit of origin are likely to pay particular attention to a new precedent given that the Supreme Court decision directly affects circuit precedent, which ultimately may change the law within the originating circuit. Often when the Supreme Court issues a decision, it typically does not result in the conflict coming to a end, but typically results in a new trial or appellate hearing. In this new hearing, the relevant judges are forced to directly consider a new precedent, even without a potentially ambiguous signal cited within the merit briefs by one or both parties. What this effectively means is that judges within a particular circuit must directly address the Supreme Court's precedent if the justices vacated, remanded, or reversed the circuit's decision.

Hypothesis 4: A circuit that addresses a precedent that comes directly from their circuit, prior to Supreme Court review, will more frequently cite and follow the precedent from their own circuit than a precedent that emerges from a different circuit.

Research Design

We examine the universe of courts of appeals responses to a sample of U.S. Supreme Court precedents from the longest natural Court era of the modern Supreme Court between 1994 and 2005. Because our theory suggests a difference in how the appeals courts respond to Supreme Court precedents with and without associated summary decisions, we sample two sets of Supreme Court decisions. We assess appeals court responses to a sample of 150 Supreme Court precedents, with no associated summary decisions, and a second sample of 150 Supreme Court precedents with at least one associated summary decision. The data for the formally argued decisions of the Court are obtained from the expanded U.S. Supreme Court database.[18] The summary decisions data are original data, collected by the authors on the universe of Supreme Court summary decisions, between 1994 and 2005. In assembling this dataset, we first identify the formally argued precedent each Supreme Court summary decision is issued "in light of." We then randomly select 150 formally argued decisions that involve at least one U.S. Supreme Court summary decision. Since the proportion of Supreme Court decisions with an associated summary decision is relatively small, we oversample Supreme Court precedents with associated summary decisions. To account for the oversampling, we assign weights based on the proportion of cases that are in our dataset, compared with the actual proportion of decisions by the Supreme Court.[19]

We test our predictions using two dependent variables, which are the number of appeals court citations and the number of lower court positive treatments of the Supreme Court per circuit-year-precedent. That is, for each of the 300 Supreme Court precedents in our sample, we look separately at the responses of each circuit to each individual precedent. The circuit responses are disaggregated further into counts of positive treatments and citations of a given precedent for each year. To obtain information for the dependent variables, we collect data from *Shepard's Citations* on the number of appeals court citations and positive treatments to a precedent of the Supreme Court. Following the conventions in *Shepard's Citations*, we count the designation "Cited," "Explained," or "Harmonized," and any positive or negative treatment of the majority opinion, as an appeals court citation to a Supreme Court precedent. We count the designation that an appeals court "Followed" the Supreme Court precedent as a positive interpretation of the precedent.[20]

To assess our claim that appeals courts respond differently to Supreme Court precedents with and without associated Supreme Court summary decisions, we include a count variable of the number of summary decisions associated with a Supreme Court precedent. To account for the extreme range of

the variable, we take the natural logarithm of the number of summary decisions.[21] In addition, because it is not possible to take the logarithm of zero, we add 1 to each value of the number of summary decisions. A variable for Supreme Court vote margin captures the number of votes by which a Supreme Court precedent is decided. We include a variable for Supreme Court precedent vitality, which is the number of positive Supreme Court treatments of its own precedents minus the negative treatments by the Court (Hansford & Spriggs, 2006).[22] We lag the vitality variable by 1 year to prevent issues of simultaneity.[23]

To assess the impact of circuit-level influences, we include a variable for circuit vitality (Westerland et al., 2010).[24] This variable captures the difference between prior positive and negative treatments of a Supreme Court precedent by a given circuit.[25] We lag this variable by 1 year to avoid issues of simultaneity. We include a dichotomous indicator that captures whether a circuit responding to a precedent is the same circuit which the Supreme Court reviewed in issuing a new precedent. We also include a variable that captures the ideological distance between the enacting Supreme Court median and the U.S. Court of Appeals circuit median, lagged 1 year to avoid issues of simultaneity.[26] We obtain data for this variable via the "Judicial Common Space" (Epstein, Martin, Segal, & Westerland, 2007).

We include a control variable for the salience of a Supreme Court Precedent using T. A. Collins and Cooper's (2012) data to measure whether a Court precedent is cited in one of the four leading newspapers in the country.[27] We control for the caseload of a circuit by including a variable for the number of merit terminations within each circuit for each year.[28] We also include a dummy variable to account for the possibility that circuit court responses may vary heavily based on whether a precedent involves a criminal or noncriminal case.[29] Finally, we account for the age of the Supreme Court precedent to mitigate any potential effects the age of precedent has on annual citation and treatment counts by circuit. This variable is coded as the number of years a precedent is in the dataset from the time the Supreme Court establishes the precedent to the year that corresponds with each observation.

Because the values of the dependent variables are counts of citations and positive treatments of Supreme Court precedents, there is over-dispersion in the data as well as a large number of zero-values.[30] To account for the unobserved heterogeneity and the excess zero-values, we initially estimate zero-inflated negative binomial regression models for both outcomes. However, assessments of model fit indicate that the standard negative binomial model performs similarly; in fact, the model performs slightly better than the zero-inflated model for both dependent variables.[31] Given the similarity between the models, we conform to convention and select the more parsimonious negative

Table 1. Descriptive Statistics.

Variable	Observations	*M*	Minimum	Maximum
Citations	32634	1.526	0	801
Positive treatments	32634	0.213	0	46
Summary decisions	32634	0.507	0	3.951
Vote margin	32634	5.646	0	9
Circuit terminations	32634	4.881	1.148	13.604
Supreme Court vitality (lagged)	29056	0.078	−2	3
Circuit vitality (lagged)	29056	0.673	−36	102
Circuit of origin	32634	0.060	0	1
Ideological distance	32634	0.253	0	.583
Case salience	32634	2.595	0	8
Criminal cases	32634	0.268	0	1
Age of precedent	32634	4.546	0	13

Note. Due to the extreme range of the "circuit terminations" variable, we divide the values of the variable by 1,000.

binomial model over the zero-inflated model (Cameron & Trivedi, 2010; Long, 1997; Long & Freese, 2006).[32] Finally, to account for any potential issues of serial autocorrelation or heteroskedasticity, we cluster the standard errors on each circuit by each Supreme Court Precedent. By clustering the standard errors, we obtain consistent estimates when the disturbances are not identically distributed (Arellano, 2003; Stock & Watson, 2008; Wooldridge, 2012).

Empirical Results

We present the descriptive statistics in Table 1. Due to our oversampling strategy, approximately 50% of the observations are associated with a case with at least one summary decision.[33] The large degree of dispersion suggests that several sets of variables likely impact the frequency with which the circuits cite and follow a given Supreme Court precedent within a given year. The descriptive statistics suggest a high percentage of zeros within the dependent variables. Approximately 52% of the values of our citation dependent variable are 0 for precedents that have associated summary decisions, versus approximately 71% of the values of our citation dependent variable being at 0 for precedents that do not have associated summary decisions. For positive treatments, approximately 81% of the values are zero for precedents with summary decisions versus roughly 92% of the observations with no associated summary decisions.

Table 2 presents the coefficient estimates for the citation and positive treatment models, respectively. Because the coefficients of a negative

Table 2. Courts of Appeals Responses to Supreme Court per Circuit-Year-Precedent.

Variable	Citations model	Positive treatments model
Summary decisions	0.746* (.046)	0.652* (.057)
Vote margin	0.034* (.010)	0.011 (.011)
Supreme Court vitality	0.072 (.039)	−0.001 (.057)
Circuit vitality	0.100* (.020)	0.190* (.027)
Circuit of origin	0.637* (.110)	0.571* (.113)
Ideological distance	−0.344 (.216)	−0.683* (.222)
Case salience	0.147* (.013)	0.108* (.012)
Criminal case	0.967* (.079)	0.549* (.066)
Circuit caseload	0.079* (.011)	0.073* (.010)
Age of precedent	−0.094* (.008)	−0.065* (.011)
Constant	−1.314* (.111)	−2.853* (.123)
Model fit statistics	29,055	29,055
Observations		
Clusters	3,589	3,589
χ^2 statistic	1,300.98	1,317.46
Probability > χ^2	0.000*	0.000*

Note. The table reports negative binomial regression estimates. The dependent variables are Citations and Positive Treatments of Supreme Court precedent, respectively. The standard errors, clustered on the circuit-Supreme Court precedent, are reported in parentheses.
*$p < .05$.

binomial model are not directly interpretable, we calculate the predicted counts for each of the continuous and interval variables of interest.[34] The results indicate that the effect of the log number of summary decisions going from its minimum to its maximum value produces approximately eight additional citations to Supreme Court precedent.

While the substantive impact of the summary decisions variable seems modest on the surface, recall that our unit of analysis is circuit-year-precedent. As the average number of years for citation and treatment by the circuit courts is 7 years in our data, and there are 12 circuits below, this means that going from zero summary decisions to the maximal value results in approximately 672 additional appeals court citations to a Supreme Court precedent. However, such an interpretation exaggerates the substantive effect as 95% of the data are at or below a log of two summary decisions. Given the location of the vast majority of observations, the impact of summary decisions going from zero to the log of two, results in approximately 126 additional lower court citations. This represents a very large effect.[35] We plot this effect in Figure 1, which demonstrates that an increase in the number of summary

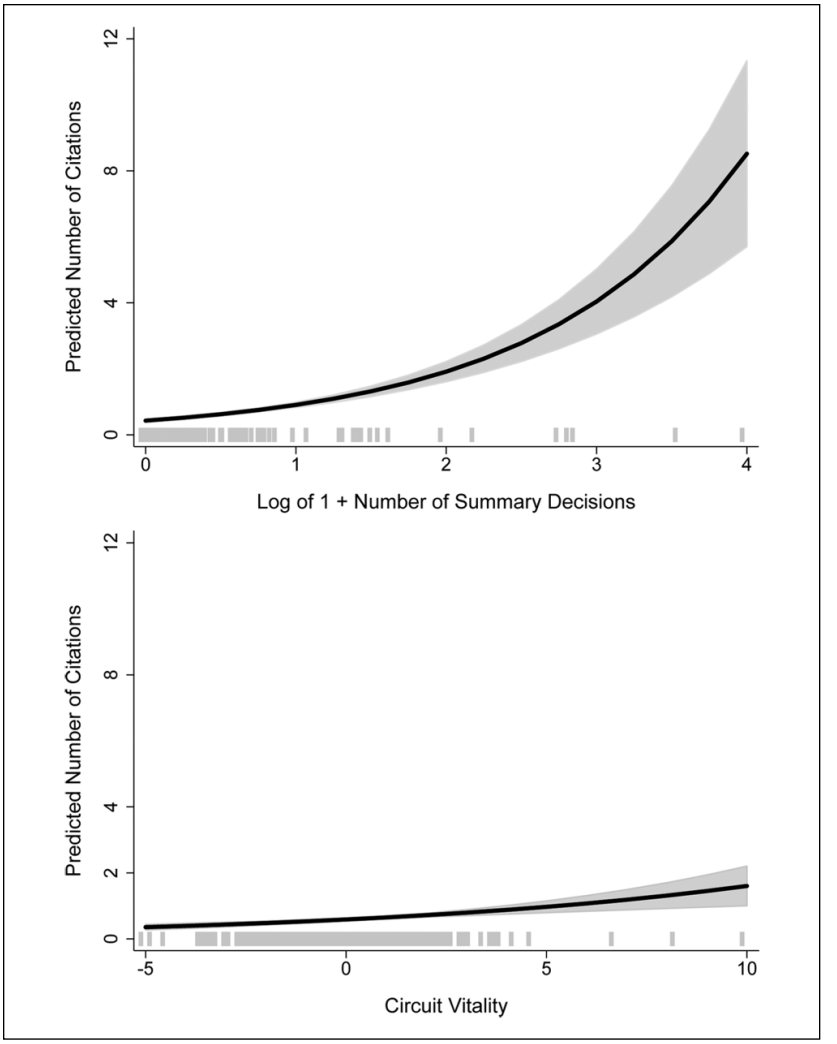

Figure 1. Influences on citations to Supreme Court per circuit-year-precedent.
Note. To plot these effects we generate the predicted counts based on the average of the predicted counts across all real values in the data. The solid line represents the predicted number of citations to the Supreme Court per circuit-year-precedent. The shaded area represents the 95% confidence intervals.

decisions by the Supreme Court corresponds with a positive increase in citations to Supreme Court precedent.[36]

Supreme Court vote margin exerts a very modest effect on the number of citations to Supreme Court precedent. Holding all else constant, going from the minimum to the maximum vote margin increases the predicted number of citations by approximately .2 per circuit-year-precedent. This represents an increase of approximately 17 total appeals court citations. These results suggest that vote margin has little impact on aggregate appeals court citations to the Supreme Court's precedents. Supreme Court vitality does not reach conventional levels of statistical significance.[37]

Circuit vitality exerts a positive effect on subsequent appeals court citations. Circuit vitality has a very large range from a minimum of −36 to a maximum of 102. However, very little of the data are at the extreme ranges. In fact, more than 95% of the data are between vitality scores of −4 and 4. The effect of circuit vitality going from a score of −4 to 4 results in approximately 42 additional citations by the courts of appeals. In addition, a circuit that addresses a precedent that originates from a Supreme Court review of the same circuit results in a discrete change of approximately .6 additional citations per circuit-year-precedent. In other words, when the circuit of origin addresses a precedent, there are approximately 50 additional citations compared with when a circuit addresses a precedent originating from the review of a different circuit. Interestingly, the substantive impact of the circuit of origin indicator is stronger than both vitality signals when examining the effect of vitality from two standard deviations below and above the mean.

The final circuit-level prediction on the ideological distance between the enacting Supreme Court and the contemporary courts of appeals does not reach conventional levels of statistical significance in the citation model, although it is signed in the expected direction. The case salience of a precedent from the minimum to its maximum value results in 80 additional citations by the appeals courts combined. Criminal cases increase appeals court citations by 84 total citations by the circuits combined. As circuit caseload increases, going from the minimum to the maximum value, there are 42 total lower court citations. Finally, as the age of a precedent increases, appeals court citations decrease by approximately 37.

Table 2 also presents the coefficient estimates for positive treatments of Supreme Court precedent. When interpreting these results, it is worth reiterating that positive treatments are a rare event (see Supporting Appendix [SA], p. A18). The results indicate that the number of summary decisions substantially affects appeals court interpretations of Supreme Court precedent. We plot the effect in Figure 2. Substantively, the results indicate that the effect of the log number of Supreme Court summary decisions going from its minimum to its maximum value for 95% of the data results in an increase of approximately .2 additional positive treatments per circuit-year-precedent or

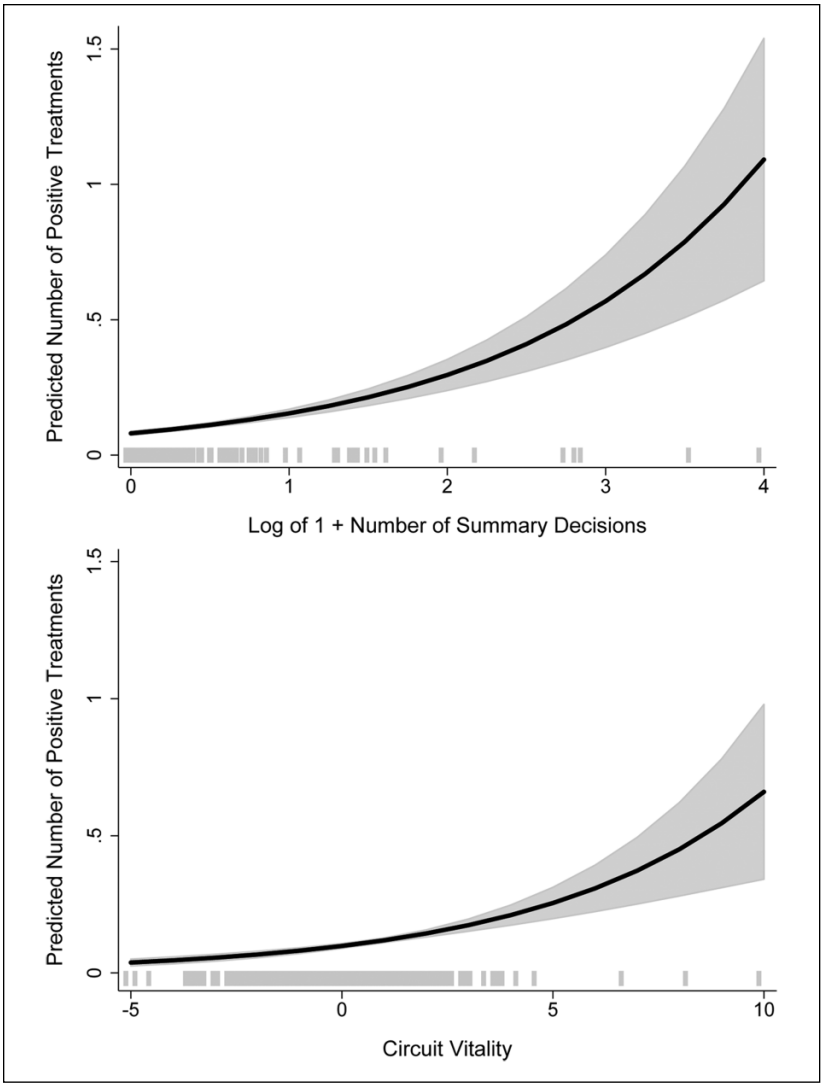

Figure 2. Influences on positive treatments of Supreme Court per circuit-year-precedent.

Note. To plot these effects, we generate the predicted counts 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 of the Supreme Court per circuit-year-precedent. The shaded area represents the 95% confidence intervals.

17 additional positive treatments by the appeals courts combined.[38] The effect of Supreme Court vote margin is not statistically significant in this model. Supreme Court vitality is also not statistically significant and signed in the wrong direction. The lack of significance for vitality notably departs from previous findings, which suggests that prior positive Supreme Court interpretations of its own precedents exert an important effect on adoption and adherence by the courts of appeals (see Hansford & Spriggs, 2006). We discuss the implications of this new and important finding in the conclusion.

Circuit vitality again exerts a strong effect on appeals court responses to Supreme Court precedent. Going from its minimum to its maximal value results in approximately .6 additional positive treatments per circuit-year-precedent, or 50 additional positive treatments by the circuits combined. This finding is consistent with Westerland et al.'s (2010) account that circuit vitality is an important predictor of positive lower court interpretations of Supreme Court precedent. The circuit of origin treating a precedent results in approximately. 1 additional positive treatments per circuit-year-precedent, which represents approximately eight more positive treatments of Supreme Court precedent by the appeals courts combined.

Ideological distance between the enacting Supreme Court and the contemporary appeals court is statistically significant in the positive treatment model, and in the expected direction. The substantive impact of ideological distance, however, is extremely modest. For the full range of the variable going from the minimum to the maximum value results in approximately .04 fewer positive treatments per circuit-year-precedent. That is, there are approximately three fewer positive treatments of Supreme Court precedent by the appeals courts combined. The case salience of a precedent from its minimum to its maximum value results in eight additional appeals court positive treatments. Criminal cases receive six additional positive treatments by the circuits combined compared with noncriminal cases. As circuit caseload increases, going from the minimum to the maximal value, there are approximately eight additional positive treatments by the appeals courts. Finally, as the age of a precedent increases, there are approximately seven fewer positive treatments by the courts of appeals.

Robustness Checks

One potential concern that might be raised is whether summary decisions are actually a causal mechanism or whether summary decisions are simply an indicator that a particular decision strongly relates to a large part of the lower court docket and that the summary decision itself has no intrinsic meaning. That is, are summary decisions issued when there are many potential cases in

the pipeline that are similar to a particular precedent such that the decision to issue a summary decision does not reflect any systematic view by the justices on the importance of the case. In such a scenario, if there are many similar cases that are being litigated, there should be an increase in the number of citations and positive treatments by the lower courts even in the absence of a signal from the Supreme Court.

Although this alternative explanation of our results has some plausibility, we do not believe that it is consistent with what is known about the process of certiorari and the decision to adjudicate a case summarily. First, we note that there are a very large number of cases in the pipeline. In recent years, the number of certiorari petitions approximate to about 10,000 cases per term.

But in spite of the large number of cases appealed, both the decision to grant certiorari and the decision to issue a summary judgment remain rare events with 97% of the petitions denied certiorari. We know from interviews with the justices and their clerks that certiorari petitions in a given year often include many cases that raise very similar issues (Perry, 1991). The interviews indicate that even when there are multiple petitions in a single year that raise similar issues, most of those petitions will be denied certiorari. According to these interviews, issuing a summary decision is not considered standard operating procedure even when multiple petitions raise similar issues (Perry, 1991, p. 99). Hellman (1984, p. 395) concurs, concluding that there is nothing automatic about the justices issuing a summary decision regardless of the nature of the issue. Our analysis of a random sample of cases from the 2000 term confirms this intuition (see SA p. A5-A8). To put it simply, the act of issuing a summary decision represents a conscious choice by the justices rather than an automatic response to multiple petitions raising similar issues.

We next address the argument that summary decisions may merely be a function of the types of cases populating the judicial pipeline. This argument is most plausible for precedents accompanied by a large number of summary decisions. This is due to the presumption that a large number of cases in the pipeline raise similar issues. Thus, when the Supreme Court issues a small number of summary decisions "in light of" a given precedent, it would be implausible to argue that in spite of the small number of summary decisions, there are actually a large number of cases within the pipeline raising the same issue. Consequently, if one is to maintain that the number of citations and positive treatments by the circuit courts is 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 where there are a large number of cases in the pipeline raising a given issue. However, when we exclude precedents with large and moderate numbers of summary decisions, we find that the impact of the summary decision variable remains substantively strong.[39]

Finally, critical to our assessment of the impact of the Supreme Court's summary decisions is a discussion on the influence of issue area. Given the prominence of Supreme Court decisions such as *United States v. Booker*,[40] where a large number of summary decisions were issued "in light of" *Booker*, a conclusion one might draw is that Supreme Court summary decisions almost always relate to criminal cases.[41,42] Thus, one might interpret the findings of our analysis as limited to a single issue area. We are sensitive to the dichotomy between criminal and noncriminal cases and, therefore, subset the empirical models on these case types.[43] First, we note that over two thirds of our observations are appeals court responses to Supreme Court precedents in noncriminal cases. Second, the results for criminal and noncriminal cases for both the citation and positive treatment models demonstrate the summary decision signal to be robust and remain the strongest predictor of both appeals court citations and positive treatments as illustrated by Figure 3.[44] Ultimately, while causation is always difficult to prove, the analysis within this section offers compelling support to the idea that an increase in adoption and adherence of precedent by the circuits is a result of the deliberate use of summary decisions by the U.S. Supreme Court.

Discussion and Conclusion

We offer a new theory on judicial impact in which we argue that given the finite ability of the U.S. Supreme Court to review the large number of lower court decisions, the justices should be interested in general patterns of compliance by the circuits individually. As such, we offer a framework in which two primary factors drive courts of appeals responses to the Supreme Court's precedents: (a) the actions by the justices themselves and (b) influences at the circuit level.

Whether or not the U.S. Supreme Court deliberately sends signals to attempt to influence the overall impact of its precedents, our analysis demonstrates that the Supreme Court is capable of, and under some circumstances, substantially increases the impact of its precedents. Thus, even if it is difficult for the Court to monitor all of the specific individual treatments of its precedents by the myriad of lower courts, it is possible for the Court to influence lower court responsiveness to its precedents by issuing one or more summary decisions that direct a lower court to reconsider its earlier decision "in light of" a specific formally argued precedent of the Court. Our analysis reveals that the most meaningful action the justices can take, vis-à-vis the future decision making of lower courts, is to reference a precedent within their summary decisions. The decision of the justices to not deny certiorari and issue a separate summary decision is unambiguously conscious. A grant of certiorari separates

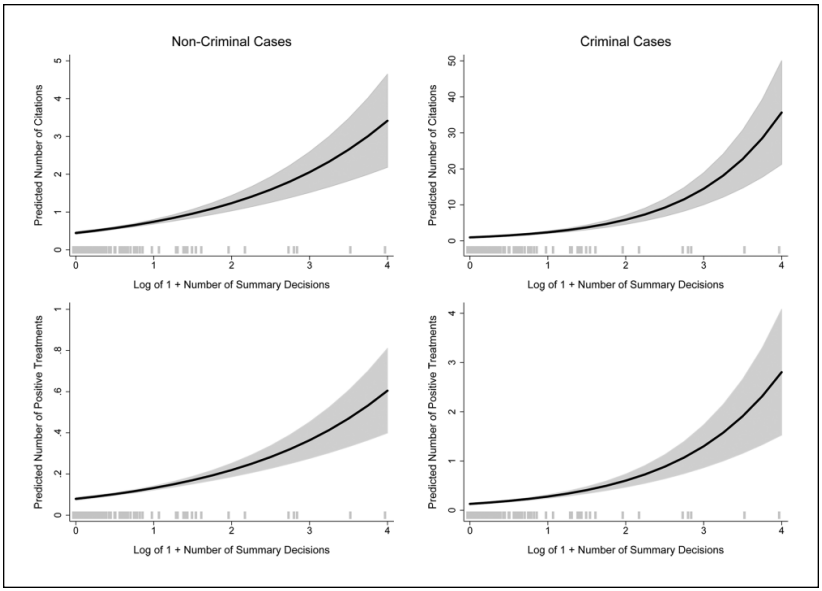

Figure 3. Impact of summary decisions on citations and positive treatments of Supreme Court precedent on noncriminal and criminal cases.
Note. To plot these effects, we generate the predicted counts based on the average of the predicted counts across all real values in the data. The solid line represents the predicted number of citations and positive treatments. The shaded area represents the 95% confidence intervals.

the Supreme Court's summary decisions from the thousands of petitions that are ultimately denied review each term. Our findings demonstrate that the policy impact of such actions is increased reliance on the Court's formally argued precedents that are cited within these summary decisions.

We also find that once we account for the Supreme Court's summary decisions and the circuit of origin, Supreme Court vitality is no longer a substantively meaningful predictor of appeals court citations and positive interpretations of the Supreme Court's precedents. This finding is important in that it suggests that the Supreme Court has relatively little utility in trying to compel circuits to rely on its precedents by positively applying a precedent itself. Instead, our findings suggest that the best approach for the justices is to issue summary decisions "in light of" its precedents to increase circuit court attentiveness to its decisions. Taken together, our findings demonstrate that the Supreme Court's summary decisions have the greatest effect on the propensity of the courts of appeals to cite and follow the precedents of the Court.

Although the U.S. Supreme Court can influence lower court responses to its precedents, this impact is constrained to some degree by circuit-level influences. First, circuits that are ideologically at odds with the Supreme Court may be less likely to cite and follow its precedents. However, our analysis demonstrates that the impact of this ideological constraint is of less substantive significance than the impact of the positive steps that the Court can take to increase the impact of its precedents. Similarly, whether a given circuit takes prior action to reinforce the vitality of a precedent and whether the precedent-generating case arose in a given circuit will independently affect its impact on a particular circuit regardless of the actions taken by the Supreme Court. Our results reinforce earlier findings on the importance of horizontal stare decisis in influencing appeals court responses to precedent (see Cross, 2007; Westerland et al., 2010). Although important, these circuit-level influences have less of an effect on the overall impact of precedent compared with the actions taken by the Supreme Court itself. We believe that this is a significant finding with important implications for future research examining the hierarchical dynamic within the courts. The finding that the circuit from which a precedent eventually emerges will more frequently adopt and follow that precedent than precedents originating from other circuits is new. The decision of the Court to review a case from a particular circuit has important implications for that circuit's precedent in that the Supreme Court's review will either affirm or overturn existing circuit precedent. Such a direct treatment of a circuit's decision by the Supreme Court serves an important signal to members of the circuit, which increases the frequency that a circuit will consider and follow a new precedent. This suggests that a prudent course for a policy-oriented Supreme Court is to be strategic in selecting which cases to ultimately review. Future research might explore whether the Supreme Court does in fact consider which circuit a certiorari petition emerges from, whether circuit characteristics are strategically evaluated by the Court to maximize impact on aggregate support from the circuits, and if so, whether such a strategy is effective.

As we note above, our findings contribute to the literature on judicial impact in several ways. Yet, in a broader sense, our understanding of the summary decisions is still not complete. Two related puzzles emerge. Is there some cost associated with the justices issuing summary decisions? If not, then why do the justices not issue summary decisions more frequently? There are several options at the justices' disposal. These include, but are not limited to, the bundling of multiple cases into one formally argued decision. Although we theorize that the cost of issuing a summary decision is relatively low compared with a formally argued decision, there may be several reasons why the justices are reluctant to issue summary decisions more often.[45] Although we can only speculate at this

point, a couple of plausible and somewhat related reasons exist. These include the potential for the overuse of summary decisions inducing a weakening of the importance of such a signal, similar to what we see today with the Supreme Court and amicus curiae briefs, where these briefs have become ubiquitous and, therefore, no longer serve as a useful signal of political salience (P. M. Collins, 2007). A second, and perhaps more tenable reason, relates to the fact that while summary decisions are low cost compared with formally argued decisions, they are not necessarily cost free. This means that process of issuing a summary decision involves some degree of decision making by the justices. This includes the justices deliberating whether a petition is worthy of certiorari and which specifically formally argued precedent will be referenced within the summary decision. These questions are worth exploring in future studies.

The theoretical implications of our research hold import for additional empirical inquiries. Beyond judicial politics, we suggest using our framework of aggregate institutional impact within a hierarchical environment, in other subfields within Political Science, particularly in American and comparative institutional analyses. For instance, the cumulative impact framework may be particularly fruitful for examinations on policy implementation within federal and state governments. For studies on the Court, we suggest using our framework for signaling and institutional effects in federal district courts, state high courts, and courts in comparative settings. Such inquiries hold significant promise in improving our understanding of judicial impact within these important legal environments. We also suggest judicial scholars undertake research designs that examine Supreme Court monitoring and responsiveness based on general patterns of lower court citation and treatment of their precedents. In pursuing these puzzles, we suggest scholars take account of our, and other recent, findings (see Corley, Collins, & Calvin, 2011). Broadly, these new findings demonstrate that the courts of appeals are a significant driver of interpretations of U.S. Supreme Court precedent and as such are agencies where the law takes shape and legal doctrine develops. In addition, the U.S. Supreme Court has the ability to communicate its legal and policy preferences through the use of their decisions, particularly their summary decisions, to encourage circuit courts to interpret and apply Court precedent to a diverse set of cases. Ultimately, if we accept the proposition that lower court of precedent is a significant influence on the diffusion of law, then certainly the U.S. Supreme Court has both cause and the capacity to drive responses to its precedents.

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Notes

1. The quotations 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.
2. In some instances, the judges in practice may make these two decisions simultaneously.
3. Frequently, the briefs of opposing counsel suggest the relevance of alternative precedents as key to resolving a legal dispute. As a result, judges must decide which, if any, of these precedents is most controlling.
4. This assessment is based on our data, which indicate that the modal value for positive treatments by the courts of appeals of a Supreme Court precedent is zero. See the Supporting Appendix (SA) Figure 1 (p. A-18).
5. An analysis of the aggregate impact of precedent incorporates both stages, because the number of positive treatments of a given precedent depends both on the number of circuit judges who decided that a given precedent was relevant for their instant case and then on the percentage of such treatments that were positive.
6. While the vast majority of summary decisions are issued "in light of" a precedent announced within the same or following term, there are rare instances where the justices might reference an older precedent (Bruhl, 2009; Masood & Songer, 2013).
7. A recent study by Benesh, Jacobson, Schaefer, and Simmons (2014) finds that in 92% of the cases remanded to the courts of appeals with a GVR ("grant, vacate, and remand"), the appeals court responded by issuing a new opinion that substantively interpreted the "in light of" precedent referenced within the GVR (p. 171).
8. As an example, consider the Supreme Court's precedent in *Brown v. Board of Education* (1954). The justices continue to positively apply *Brown* decades after the original decision. However, the Supreme Court only issued summary decisions referencing *Brown* in the two terms immediately following the landmark decision. Where precedent vitality compounds over time, summary decisions are almost always issued in close proximity to the formally argued precedent.
9. We offer supporting evidence in SA Tables 1 and 2 (p. A5-A8).

10. Benesh et al.'s (2014) analysis on "grant, vacate, and remand" (GVR) orders suggests that the lower courts are not required to positively treat the precedents referenced within GVRs. However, the lower courts must directly address the precedent within the new decision following the remand.
11. It is worth noting the endogenity that is inherent within precedent vitality. Precedent vitality requires that the justices apply an existing precedent within a new formally argued decision. However, each new decision establishes its own precedent that has its own vitality. This circularity does not manifest within summary decisions.
12. An example of this is *Dickerson v. United States* (2000), which followed *Miranda v. Arizona* (1966).
13. We provide a detailed defense of this argument in the SA Tables 1 to 7 (p. A4-A14).
14. We provide additional information on courts of appeals attentiveness to summary decisions in the SA (see p. A2-A4).
15. See Benesh et al. (2014) and Masood and Songer (2013) for general information on the summary decisions of the U.S. Supreme Court.
16. *Brown v. Board of Education*, 347 U.S. 483 (154)
17. A GVR is a decision by the Supreme Court to grant the petition certiorari, vacate the lower court decision, and remand the case back to the lower court. A GVR constitutes a binding legal order to the circuit being addressed by the Supreme Court (Masood & Songer, 2013).
18. The U.S. Supreme Court Database is maintained by the Center for Empirical Research in the Law at the Washington University in St. Louis and is available at http://www.scdb.wustl.edu.
19. Since the stratified sample oversamples cases with summary decisions, we generate proportional weights to compensate for the oversampling. The proportional weights represent the probability that a particular case is selected into our sample from the population of cases.
20. We conducted a formal analysis of inter-coder reliability for the data collection. The circuit-year-precedent counts were independently coded by two coders. There was a raw agreement rate of 90% for the coding of citations and an agreement rate of 100% for positive treatments. Cohen's weighted kappa statistic was 0.917 for the coding on citations and 1.000 for the coding on positive treatments.
21. We also run models using the raw number of summary decisions; the results are similar in all models. We report these models in the SA p. A29.
22. We follow Spriggs and Hansford (2000) where "Followed" treatments are coded as positive, whereas "Criticized," "Distinguished," "Limited," "Overruled," and "Questioned" are coded as negative treatments. We additionally code "Superseded" as negative treatments of precedent. Although "Superseded" treatments are not included in Spriggs and Hansford's analysis, we construct vitality variables with and without the "Superseded" designation and find that the results do not change. In addition, we estimate models using a vitality variable that excludes "Distinguished" treatments and again find the results to be highly robust. We provide this analysis in the SA (see p. A25-A26).

23. It is worth noting that precedent vitality and summary decisions correlate at just .148. Thus, there are no concerns about multicollinearity.
24. The Supreme Court vitality and circuit vitality variables correlate at .112.
25. This variable is constructed in the same way as the variable for Supreme Court vitality. We estimate models with and without "Superseded" and "Distinguished" treatments for the circuit vitality variable and find that the results remain robust.
26. Recent work provides strong evidence that appeals court judges do not respond strategically to the possibility of threat of reversal by the Supreme Court. The judges also consistently report in interviews that they do not possess the information needed to determine the likelihood of review in a large majority of their cases and that there are few costs associated with reversal. In addition, a number of studies indicate that a rational judge concerned with the policy consequences of their decisions will consistently vote sincerely rather than strategically, and statistical analyses of voting patterns indicate that court of appeals judges frequently vote their sincere policy preferences in cases most likely to be reviewed by the Court (see Bowie & Songer, 2009; Hettinger et al., 2006). There is, therefore, no compelling theoretical reason to include a variable to account for the distance between the enacting Supreme Court and the contemporary Supreme Court in a model for aggregate citation and treatment patterns. Nevertheless, given the findings reported by Westerland, Segal, Epstein, Cameron, and Comparato (2010) that the distance between the enacting Supreme Court and the contemporary Supreme Court is related to individual judge decisions to cite or positively treat precedents, we ran additional models. These models include the ideological distance between the enacting and contemporary Supreme Court (lagged 1 year). Consistent with our expectations, we find no evidence that increasing ideological distance results in a lower number of citations or positive treatments. Yet further, we also consider models that account for the ideological distance between the contemporary Supreme Court and contemporary responding court of appeal, and find nearly identical results to the included measure of ideological distance. We cannot include both ideological distance variables within the same model due to concerns of multicollinearity as they correlate at approximately .940.
27. This measure expands Epstein and Segal's (2000) indicator measure on whether a Supreme Court decision appears on the front page of the *Chicago Tribune*, the *Los Angeles Times*, or the *Washington Post* in addition to the *New York Times*. T. A. Collins and Cooper's (2012) measure correlates highly with Epstein and Segal's salience measure ($r = .612$). We estimate models with Epstein and Segal's measure and find similar results. We report this model in the SA (see p. A26-A28).
28. This variable has a wide range of values so we divide it by 1,000.
29. We report models controlling for other issues areas in the SA. The results are almost identical.
30. The zeros in the citation data indicate that for a given precedent, no appeals court opinion cited or treated that precedent in a given circuit in a particular year. It is possible, in theory, that the absence of citation could mean one of two different

things: either that there was no case considered by the circuit that year for which the precedent was legally relevant or that in one or more cases, the appeals court panel engaged in defiance of the Supreme Court by deliberately ignoring the precedent that "should" have been the basis for their decision. If the latter possibility was a frequent occurrence, it would raise substantial questions about the interpretation of our data. However, we are confident that it is not a frequent occurrence for several reasons. First, existing studies on the impact of precedent on the courts of appeals suggest that the overt refusal to follow precedent is extremely rare (Benesh & Reddick, 2002; Klein, 2002; Songer & Haire, 1992; Wahlbeck, 1998). In addition, our interviews with appeals court judges indicated that the judges are in agreement that such defiance is rare and that it does not make sense from a strategic perspective. The judges noted that if one wanted to avoid following a precedent, it is generally easy to distinguish the precedent, which would show up in our data as a citation. Moreover, the Supreme Court is much more likely to review a decision in which a key precedent was ignored. This is especially true compared with instances where the justices must analyze the specific facts of a case to determine whether the lower court acted inappropriately in distinguishing precedent.

31. We follow the prescription by Long and Freese (2006) and plot the mean predicted probability for each count model to compare model fit. A comparison of model fit is included in the SA (see p. A18-A20).
32. To demonstrate the robustness of the results, we report the zero-inflated model estimates for both dependent variables in the SA (see p. A20-A24). We report two sets of zero-inflated models: one in which we inflate every variable and a second set of models in which we inflate the variables that we theoretically expect to increase the likelihood of observing a zero value. Although it is not practical to report every estimated model, we note here that we estimated a very large number of zero-inflated models by inflating every combination of the covariates (independently and together) for both outcomes and find no significant differences in the results.
33. As we note in the previous section, we rely on sampling weights to account for the oversampling.
34. To compute the substantive effect, we hold all continuous and interval variables constant at their means and all indicator variables constant at their modal values.
35. Estimating the models for the Ninth Circuit, individually, yields nearly identical results.
36. As we note earlier, our theory assumes that even circuits that do not directly receive a summary decision from the Supreme Court will frequently cite and positively treat Supreme Court precedents that are accompanied by summary decisions directed at other circuits. To test this assumption, we reran the analysis presented in Table 1, excluding all appeals court citations and treatments by circuits that were either the origin of the Supreme Court precedent or circuits that directly received a summary decision related to the precedent. The results of this reanalysis, presented in SA Table 4 (p. A11), demonstrate that the number of

summary decisions issued in light of a given precedent still have a statistically significant and substantively strong effect on both the number of citations and number of positive treatments issued by the other circuits.

37. Substantively, Supreme Court vitality exerts an extremely small effect. For the full range of the variable going from the minimum to the maximum value produces .2 additional citations per circuit-year-precedent. However, a very small number of observations occur at the extreme values. For 95% of the data, the impact of Supreme Court vitality going from its minimum to its maximum value results in approximately .1 additional citations per circuit-year-precedent, which represents an increase of eight total circuit court citations.
38. For the full range of the data, the impact of summary decisions, going from the minimum to the maximum value results in an increase of one positive treatment per circuit-year-precedent; this represents approximately 84 additional positive treatments by the appeals courts combined.
39. *Booker* and the summary decisions associated with *Booker* are not in our sample.
40. We provide a detailed account of this analysis in the SA (see p. A12-A14).
41. 543 U.S. 220 (2005)
42. We include an additional analysis within the appendix, which includes control variables for all of the general issues in the United States Supreme Court Database (see p. A14-A17).
43. These models are reported in the SA p. A16-A19.
44. Although the substantive relationship between summary decisions and the number of citations and positive treatments is stronger for criminal cases, for both sets of models, the presence of one or more summary decisions exert the largest substantive effect among all the covariates.
45. Of course, there are notable exceptions to this, such as in the aftermath of the Court's decisions in *Apprendi v. New Jersey* (2000), *Bailey v. United States* (1995), and *United States v. Booker* (2005), where the justices issued a very large number of summary decisions.

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