Supplemental Appendix for "States Testing the Legal Limits: The Effect of Electoral Competition on the Constitutionality of State Statutes"

This supplemental appendix contains additional data information and alternative model specifications to demonstrate the robustness of our main findings. Within each subsection, we describe the motive for each alternative model specification and why we did not include it in the main text.

Our appendix proceeds with eleven sections. First, we describe how we operationalize our variables and the sources for our data. Second, we provide basic descriptive statistics. Third, we present a model with the exclusion of pairings in which a law is invalidated the same year it is enacted. Next, we present the findings when estimating coefficients with a rare events logistic estimator. Then, we show that our findings remain when we cluster on state with a probit GLM model. Sixth, we discuss why we are limited on using alterative model specification (e.g. fixed effects and random effects). We also provide the results from a GEE estimator. Seventh, we include a table that describes the frequency of invalidation by state. Eight, we show that our results remain robust when including additional variables. Nine, we conduct various robustness checks which suggest that the lower court system may have little influence on our findings. Tenth, we present several models that show our results are robust across time. Finally, we present some simple correlations between party competition and electoral competition

Appendix A1: Dependent and Independent Variables Operationalization

Table A1- Dependent and Independent Variables Operationalization

Variable	Description and Source
Laws Stricken	The dependent variable we use to estimate our models is dichotomous capturing whether the Court invalidated any laws passed by a state in a specific enactment-review pairing. Observations coded as "one" indicate the Court invalidated a state statute. All other observations are coded as "zero." Source: Hall and Black (2013)
Electoral Competition	This variable involves four district-level state legislative election results: winning candidate vote share, margin of victory, uncontested elections, and safe seats (winning at least 55% of the vote share). The four components are averaged together and then subtracted from 100. This variable is created by Holbrook and Van Dunk (1993) and we use the four-year moving average measure. Higher scores indicate a state is more electorally competitive. This is coded by year of enactment. Source: Klarner (2002)
Percent Urban	The percentage of a state's population that lives in an urbanized area. U.S. Census Bureau
South	States in the South are coded as (1). We coded the following states as southern: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Tennessee, Texas, South Carolina, and Virginia. All other states are coded as (0).
Divided Government	Observations coded as "one" is when one party does not control both the legislative executive branch. All other observations are coded as "zero". This is coded by year of enactment. Source: Klarner (2003).
Age	Years since enactment. Source: Hall and Black (2013)
Number of Cases Heard	Total number of cases the US Supreme Court granted cert. Source: Epstein et al. (2007b).
Number of Laws Enacted	Total number of laws enacted with a state in a year. We rescaled the number of laws enacted variable by 100 to

	ease the interpretation of the coefficient. Source: *The Book of the States*
Population	This is a measure of population density. Specifically, it is a state's total population divided by the state's land mass. Higher scores indicate a state is more densely populated. This is coded by year of enactment. Source: Klarner (2003).
State Partisanship	This is a measure of state partisanship. We use the Ranney Index (1976) to capture this value. Higher values indicate a state is more Democratic. This indicator includes the distribution of legislative seats by party, governor vote share, and party control over the legislature. Ranney averages this variable over 10 years. This is coded by year of enactment. Source: Klarner (2003)
Legislative Professionalism	For this analysis, we use King's (2000) measure of legislative professionalism. We use his measure over Squire's (2007) because it has a wider time span. King's measure incorporates the following sub-indices: compensation, days in session, and expenditures for services. To make this variable more normally distributed, We transform it with the square root function. Higher values indicate a state is more professionalized. This is coded by year of enactment. Source: King (2000)
Incumbent Governor	Dichotomous variable. Observations in which an incumbent governor is running for reelection =1. All other observations =0. This is coded by year of enactment. Source: *Book of the States*
Enacting state-national regime distance	This variable accounts for the regime theory. This theory claims that if a state is ideologically distant from national institutions (e.g. President and Congress), then the Supreme Court will invalidate the law. However, Hall and Black (2013) find the inverse relationship. This measure is constructed with the Berry state ideology scores (2010) and Poole's NOMINATE common space scores (1998). States which are ideologically between the president and congress are coded as zero. All other states are calculated as the absolute ideological distance from the nearest political actor. Higher values indicate that a state is outside the national regime or ideologically distant from the dominant national actors. Source: Hall and Black (2013)

Appendix A2: Descriptive Statistics

Attached in Table A2 are basic descriptive statistics.

Table A2- Descriptive Statistics

Variable	Mean	SD	Minimum	Maximum
Laws Stricken	0.005	0.072	0.000	1.000
Electoral Competition	42.01	13.30	2.872	68.46
Legislative Professionalism	0.248	0.140	0.039	0.900
Incumbent Governor	0.119	0.324	0.000	1.000
Population	5.506	2.752	3.239	20.03
Percent Urban	67.38	14.48	32.20	95.00
Age	13.74	9.967	0.000	41.00
State Partisanship	0.586	0.166	0.176	0.968
Number of Cases Heard	109.9	45.71	73.00	299.0
Number of Laws Enacted	472.3	374.1	1.000	3,200
Enacting state-national regime distance	0.210	0.231	0.000	1.069
South	0.224	0.416	0.000	1.000
Divided Government	0.512	0.499	0.000	1.000

Appendix A3: Removal of Cases in Which Supreme Court Reviewed a Statute Same Year Enacted

While it is theoretically possible for the Supreme Court to invalidate a statute the same year it is enacted, it is highly unlikely. To demonstrate that our findings are not driven by the inclusion of these pairings, we remove these observations from our model. The results are robust with their removal.

We include these pairings to be consistent with previous literature (Hall and Black 2013).

Table A3-Removal of Pairings in which Law Reviewed Same Year Enacted

Variable	Coefficient (S.E.)
Electoral Competition	0.009*
	(0.003)
Legislative Professionalism	0.568*
	(0.205)
Population	-0.026*
	(0.011)
Incumbent Governor Reelection	-0.173
	(0.102)
Percentage Urban	0.571*
	(0.161)
Age	-0.055*
	(0.007)
Number of Cases Heard	0.039*
	(0.004)
Number of Laws Enacted	0.016*
	(0.007)
State Partisanship	0.793*
	(0.231)
Divided Government	-0.052
	(0.067)
South	0.201*
	(0.101)
Enacting state-national regime distance	-0.350*
	(0.147)
Constant	-5.904*
	(0.721)
AIC	2,039
Number of Observations	37,260

*$p \leq 0.05$ Dependent variable is at least one state law invalidated by the Court in a given enactment year-review year pairing: 1 = state law invalidated, 0 = otherwise. The standard errors are clustered on a given state-enactment year pairing.

Appendix A4: Logistic and Rare Event Logistic Models

Whether the Supreme Court invalidates a law is a rare event. Thus, we have estimated a rare events logistic regression model as developed by King and Zeng (2001) with standard errors clustered on state-enactment year pairing and the results are shown in Table A4. We have also provided the coefficients from a GLM logistic regression model.

The results are not substantively different from the ones presented in the manuscript. We rely on the probit results instead of the rare logit estimates because the findings are more conservative.

Table A4-Logistic and Rare Event Logistic Models

Variable	Rare Logit Coefficient (S.E.)	Logit Coefficient (S.E.)
Electoral Competition	0.025*	0.026*
	(0.008)	(0.008)
Legislative Professionalism	1.256*	1.265*
	(0.510)	(0.510)
Population	-0.069	-0.074*
	(0.029)	(0.029)
Incumbent Governor Reelection	-0.466	-0.502
	(0.279)	(0.279)
Percentage Urban	1.698*	1.719*
	(0.418)	(0.418)
Age	-0.130*	-0.131*
	(0.014)	(0.014)
Number of Cases Heard	0.009*	0.009*
	(0.001)	(0.001)
Number of Laws Enacted	0.036*	0.035*
	(0.016)	(0.016)
State Partisanship	2.155*	2.172*
	(0.593)	(0.593)
Divided Government	-0.138	-0.137
	(0.171)	(0.171)
South	0.614*	0.621*
	(0.255)	(0.255)
Enacting state-national regime distance	-0.948*	-0.971*
	(0.385)	(0.385)
Constant	-14.895*	-15.002*
	(1.849)	(1.849)
AIC	2,170	2,170
Number of Observations	38,996	38,996

*$p \leq 0.05$ Dependent variable is at least one state law invalidated by the Court in a given enactment year-review year pairing: 1 = state law invalidated, 0 = otherwise. All models are clustered on state-enactment year pairing. Model I is estimated with a rare logistic estimator; Model II is estimated with GLM logistic estimator; both models display robust standard errors clustered on the enact year-review year pairing.

Appendix A5: Standard Errors Clustered on Each State

As an additional robustness check, we have estimated a model with standard errors clustered on each state. The results are provided in Table A5. The results are similar to those presented in the manuscript.

Table A5-Standard Errors Clustered on State

Variable	Coefficient (S.E.)
Electoral Competition	0.010*
	(0.003)
Legislative Professionalism	0.511*
	(0.198)
Population	-0.026*
	(0.011)
Incumbent Governor Reelection	-0.187
	(0.101)
Percentage Urban	0.605*
	(0.159)
Age	-0.045*
	(0.004)
Number of Cases Heard	0.035*
	(0.004)
Number of Laws Enacted	0.016*
	(0.006)
State Partisanship	0.825*
	(0.225)
Divided Government	-0.058
	(0.066)
South	0.215*
	(0.098)
Enacting state-national regime distance	-0.377*
	(0.147)
Constant	-6.128*
	(0.710)
AIC	2,166
Number of Observations	38,996

*$p \leq 0.05$ Dependent variable is at least one state law invalidated by the Court in a given enactment year-review year pairing: 1 = state law invalidated, 0 = otherwise. The robust standard errors are clustered on each state

Appendix A6: Alternative Model Specifications and GEE Probit Model

It should be noted that multicollinearity and our rare data structure prevent us from using many alternative model specifications. First, we cannot estimate a model with fixed effects (pairing, state, year of enactment, etc.) because of perfect collinearity.

We present the results with standard errors clustered on the state-enactment year pairing for two reasons. First, we want to be consistent with Hall and Black (2013) and Miller et al. (2015). Second, we are hesitant to use fixed effects with a rare dependent variable for methodological reasons. Beck and Katz (2001, p. 490) claim that a rare binary event combined with fixed effects "is never a good idea" because it leads to inaccurate conclusions. Moreover, Gary King says fixed effects coupled with a rare event response variable "wreaks havoc on the … model" (2001, p. 503). See Beck and Katz (2001) and King (2001) for more information about the problems associated with estimating fixed effects on rare events data. For these reasons, we rely on the results with clustered standard errors on state-enactment year pairing.

Moreover, we could not estimate a model with random effects because the model failed to converge. This is most likely due to the lack of information (Gelman and Hill 2007). However, we could estimate generalized estimating equation (GEE) probit model. GEE models are more flexible when estimating a limited dependent variable and provide similar results relative to random effects models. The main difference is interpretation. GEE models are interpreted as the population-average effect and random effects are interpreted as subject-specific effects (Zorn 2001). Thus, we present a probit GEE model in Table A6 below. The results are consistent with the GLM probit model presented in the main text.

Table A6- Probit GEE Regression

Variable	Coefficient (S.E.)
Electoral Competition	0.010*
	(0.003)
Legislative Professionalism	0.511*
	(0.196)
Population	-0.026*
	(0.011)
Incumbent Governor Reelection	-0.187
	(0.100)
Percentage Urban	0.605*
	(0.157)
Age	-0.045*
	(0.006)
Number of Cases Heard	0.035*
	(0.004)
Number of Laws Enacted	0.016*
	(0.006)
State Partisanship	0.825*
	(0.231)
Divided Government	-0.058
	(0.065)
South	0.215*
	(0.097)
Enacting state-national regime distance	-0.377*
	(0.146)
Constant	-6.128*
	(0.703)
QIC	2,165
Number of Observations	38,996

*$p \leq 0$ .05 Dependent variable is at least one state law invalidated by the Court in a given enactment year-review year pairing: 1 = state law invalidated, 0 = otherwise. Results are clustered on a given enactment year-review year pairing

Appendix A7: Frequency of Invalidation by State

Table A7 examines the frequency of the US Supreme Court exercising judicial review on state laws passed between 1971 and 2010.

Table A7-State Frequency State Laws Invalidated by Supreme Court 1971-2004

State	Number Law Invalidated	State	Number Law Invalidated
Alaska	5	Nevada	1
Alabama	10	New Hampshire	2
Arizona	3	New Jersey	5
Arkansas	3	New Mexico	2
California	10	New York	13
Colorado	4	North Carolina	6
Connecticut	7	North Dakota	2
Florida	11	Ohio	7
Georgia	5	Oklahoma	6
Hawaii	3	Oregon	1
Illinois	7	Pennsylvania	8
Indiana	6	Rhode Island	1
Iowa	2	South Carolina	1
Kentucky	3	Tennessee	2
Louisiana	9	Texas	12
Maine	2	Utah	2
Maryland	2	Vermont	1
Massachusetts	4	Virginia	6
Michigan	4	Washington	7
Minnesota	5	West Virginia	3
Missouri	6	Wisconsin	2
Montana	2		
Total		**203**	

Appendix A8: Controlling for Additional Variables

In this section, we demonstrate that our finding is not a product of model misspecification.

First, in the main text, we measure population with population density. This is a state's total population divided by the land area. Higher values indicate a state is more densely populated. We have also estimated a model with a state's total population and we transform it with the natural logarithm. The results are presented in Table A8.1-Model I. Again, the electoral competition variable does not change when using this measure of population. We rely on the population density measure to be consistent with previous literature (Miller et al. 2015).

Second, Hall and Black (2013) include an *age-squared* variable in their model to account for any potential non-linearities for the effect of age. The results are shown in Table A8.1-Model II. The electoral competition variable does not change and age-squared is not significant. We have also conducted a likelihood ratio test to determine if age-squared should be included in the model. The chi-square statistic is 0.203 and is statistically insignificant ($p \leq 0.65$). This suggests the age-squared variable does not improve the model's fit and should not be included.

Third, Hall and Black (2013) also include the absolute ideological distance between the median Supreme Court justice and the state government with the *enacting state-court median distance* variable. This variable directly accounts for the justices ideological preferences as suggested by the attitudinal approach (Segal and Spaeth 2002). Hall and Black use the Judicial Common Space Scores (Epstein et al. 2007a) and Berry et al.'s (2007) state ideology measure to create this variable. For more details on the construction of the enacting state-court median distance variable, see Hall and Black (2013). The results are shown in Table A8.1-Model III. Both the enacting-state-court median distance and the enacting state-national regime distance variables are insignificant with this model specification. However, the electoral competition variable, again, does not change with the inclusion of this ideological variable. Moreover, we have conducted a likelihood ratio test to determine if the enacting state-court-median distance variable should be included in the model. The chi-square statistic is 0.581 and statistically insignificant ($p \leq 0.45$), thus, suggesting controlling for the absolute ideological distance between the median Supreme Court justice and the state government does not significantly improve the model's fit. Thus, we remove it for parsimony. We also omit this variable because it is conceptually and empirically similar to the national regime variable that we display in the main text.

Fourth, we note in the main text that electoral competition and partisan competition are two distinct concepts. We also estimate models accounting for *party competition* to show that we are not omitting an important variable. We use the four-year moving average of the folded-Ranney index to account for how competitive the parties are in a state. Higher scores indicate a state is more competitive (Ranney 1976). The results with this measure of party competition are shown in Table A8.1-Model IV. The party competition variable is insignificant and the effect of electoral competition variable is unchanged with its inclusion. Further, we have conducted a likelihood ratio test to determine if party competition should be included in the model. The chi-square statistic is 0.091 and statistically insignificant ($p \leq 0.76$). Thus, controlling for state party competition does not significantly improve the model's fit.

However, our main reason for omitting the *party competition* variable is out of theoretical concerns. In theory, higher levels of party competition should correspond with both major parties trying to differentiate one another by taking extreme partisan positions on legislation (Hicks 2015). We cannot offer any theoretical explanation for a party under divided government enacting the extreme legislation proposed by the opposing party. Therefore, the effect of party competition on judicial review should only occur under unified government. Examining the party competition variable reveals that states with unified government and high levels of party unity is exceptionally rare. We have also estimated a model with the party competition variable interacted with divided government and find that it is statically insignificant as shown by Table A8.2 in Model V. Further, we have conducted a likelihood ratio test to determine if the Divided Government × Party Competition variable should be included in the model. The chi-square statistic is 0.228 and is statistically insignificant ($p \leq 0.89$), thus, suggesting the interaction variable should not be included in the model. Our electoral competition variable does not change with the inclusion of this interaction. Given our theoretical and empirical concerns, we do not include the party competition variable within our model.

We have also estimated a model with an interaction between the divided government and the number of laws enacted by a state variables. During unified government, a state legislature might be more willing to push more constitutionally risky laws as they become more productive. The results are shown in Table A8.2 in Model VI. The interaction variable is insignificant. We have also conducted a likelihood ratio test. The chi-square statistic is 0.956 and is statistically insignificant ($p \leq 0.33$). Our electoral competition variable does not change with the inclusion of the interaction variable. Thus, we do not include them in the main text.

All models displayed below are estimated with a probit GLM estimator and the standard errors are clustered on the enactment year-review year pairing. The results are identical when we use a GEE probit estimator. Further, we have conducted various diagnostic tests of multicollinearity for all models in Table A8.1 and Table A8.2. In none of our models, did we find any evidence of severe collinearity.

Finally, we also omit these additional control variables to avoid the problems associated with an over-fitted model as described by Achen (2002, 2005).

Table A8.1-Controlling for Additional Variables

Variable	Model I Coefficient (S.E.)	Model II Coefficient (S.E.)	Model III Coefficient (S.E.)	Model IV Coefficient (S.E.)
Electoral Competition	0.009*	0.010*	0.010*	0.009*
	(0.003)	(0.003)	(0.003)	(0.003)
Legislative Professionalism	-0.207	0.512*	0.512*	0.505*
	(0.286)	(0.192)	(0.192)	(0.194)
Population Density	-	-0.025*	-0.025*	-0.025*
		(0.010)	(0.010)	(0.010)
Population Total	0.223*	-	-	-
	(0.056)			
South	-0.016	0.241*	0.205*	0.212*
	(0.105)	(0.095)	(0.097)	(0.096)
Percent Urban	0.205	0.603*	0.611*	0.598*
	(0.159)	(0.153)	(0.154)	(0.155)
Age	-0.045*	-0.040*	-0.046*	-0.045*
	(0.005)	(0.012)	(0.005)	(0.005)
Age-Squared	-	-0.0003	-	-
		(0.0004)		
Number of Cases Heard	0.036*	0.036*	0.036*	0.036*
	(0.004)	(0.004)	(0.004)	(0.004)
Number of Laws Enacted	0.012	0.016*	0.016*	0.016*
	(0.006)	(0.006)	(0.006)	(0.006)
State Partisanship	0.942*	0.824*	0.861*	0.873*
	(0.223)	(0.218)	(0.218)	(0.251)
Party Competition	-	-	-	0.141
				(0.404)
Divided Government	-0.046	-0.058	-0.067	-0.072
	(0.062)	(0.063)	(0.068)	(0.076)
Incumbent Governor Election	-0.195*	-0.186	-0.185	-0.212
	(0.098)	(0.097)	(0.098)	(0.096)
Enacting state-national regime distance	-0.345*	-0.376*	-0.304	-0.371*
	(0.143)	(0.142)	(0.175)	(0.143)
Enacting-state-court median distance	-	-	-0.211	-
			(0.297)	
Constant	-7.751*	-6.140*	-6.140*	6.236*
	(0.856)	(0.693)	(0.689)	(0.739)
AIC	2,146	2,167	2,167	2,168
Number of Observations	38,996	38,996	38,996	38,996

*$p \leq 0.05$ Dependent variable is at least one state law invalidated by the Court in a given enactment year-review year pairing: 1 = state law invalidated, 0 = otherwise. All probit GLM models include standard clustered on state-enactment year pairing.

Table A8.2-Controlling for Additional Interaction Variables

Variable	Model V Coefficient (S.E.)	Model VI Coefficient (S.E.)
Electoral Competition	0.010*	0.010*
	(0.003)	(0.003)
Legislative Professionalism	0.573*	0.573*
	(0.197)	(0.197)
Population	-0.024*	-0.024*
	(0.010)	(0.010)
Percent Urban	0.609*	0.609*
	(0.153)	(0.153)
South	0.215*	0.215*
	(0.096)	(0.096)
Age	-0.045*	-0.045*
	(0.005)	(0.005)
Number of Cases Heard	0.035*	0.035*
	(0.004)	(0.004)
Number of Laws Enacted	0.016*	0.009
	(0.006)	(0.009)
State Partisanship	0.832*	0.832*
	(0.218)	(0.218)
Divided Government	0.151	0.088
	(0.599)	(0.064)
Incumbent Governor Election	-0.185	-0.185
	(0.097)	(0.097)
Enacting state-national regime distance	-0.376*	-0.376*
	(0.142)	(0.142)
Party Competition	0.196	-
	(0.526)	
Divided Government × Party Competition	-0.255	-
	(0.676)	
Divided Government × Bills Passed	-	0.011
		(0.010)
Divided Government × Income Per Capita	-	-
Constant	-6.281*	-6.292*
	(0.743)	(0.709)
AIC	2,169	2,167
Number of Observations	38,996	38,996

* $p \leq 0.05$ Dependent variable is at least one state law invalidated by the Court in a given enactment year-review year pairing: 1 = state law invalidated, 0 = otherwise. The standard errors are clustered on a given state-enactment year pairing.

Appendix A9: Lower Court Rulings

One potential concern with our analysis is that laws from electorally competitive states could be invalidated in the lower court system, therefore, they fail to arrive before the U.S. Supreme Court (Cameron et al. 2000). However, according to Hall and Black (2013), this data structure allows us to avoid case-specific factors that would otherwise cause a selection bias. This includes the rulings of lower courts. Miller et al. (2015) examine this issue thoroughly with the same dataset. They find no evidence of a selection bias. As a robustness check, we provide two additional tests to account for lower court rulings.

Based on our understanding of the literature, we believe there is little concern that the rulings from the state court system have a significant influence on our findings. First, most judicial research suggests that state courts rarely invalidate state statutes on federal grounds (Wilkes 1973; Emmert 1992). To empirically demonstrate that the state court system is not overwhelmingly invalidating state laws for violating the U.S. Constitution before they reach the U.S. Supreme Court, we turn to Matthew Hall and Jason Windett's (2013) exhaustive database on state Supreme Court decisions between 1995 and 2010. It should be noted, Paul Brace and Melinda Hall (1999) also have an impressive database on state Supreme Court decisions, but it only covers the years 1995-1998. Given that Hall and Windett's state Supreme Court dataset has a wider timespan, we rely on it to explore the rulings of state Supreme Courts.

Within the Hall and Windette database, we search for all cases that involve state legislation that were in violation of the U.S. Constitution. Specifically, we briefly searched through 131,692 state Supreme Court cases. Of those cases, we found only 17 cases in which a party argued that a state statute was in violation of the U.S. Constitution. Of those 17 cases, in only one case did a state Supreme Court declare a state statute unconstitutional (*Commonwealth of Pennsylvania, Appellant, v. Damon Butler*). Even though Hall and Windette's dataset does not cover the entire time period in which we are analyzing, this evidence does suggest that state Supreme Courts rarely declare state statues invalid because they are violating the U.S. Constitution. Instead, most cases that involve a state statute violating the U.S. Constitution are taken into the federal court system (see, Emmert 1992).

It should be noted that we recognize the robustness check we utilize for the state judicial system is not perfect. Specifically, this test does not cover the entire time period we are analyzing and some statutes could be invalidated based on their state constitution. We do not examine state statutes that are invalidated by state Supreme Court justices based on their state constitutions because these governing documents vary widely by state and time (Hamm and Squire 2005). Notwithstanding this shortcoming, we believe this test does at least suggest that the state judicial system most likely has a minimal effect on our results.

In regards to the federal court system, we conduct two additional robustness checks. Given the influence that a justice's ideology has on case outcomes (Segal and Spaeth 2002), the Supreme Court may be less likely to review cases from circuits that have similarly held ideological preferences. In other words, circuits that are ideologically incongruent with the Supreme Court may have their cases reviewed more frequently. Therefore, as our first robustness check, we use

an approach adopted by Lindquist, Haire, and Songer (2007) and Lindquist and Corley (2013) in which they argue accounts for the rulings of the lower court system. It should be noted that Lindquist and her colleagues (2007) also employ an aggregate data structure similar to the data we utilize. Specifically, we identified the ideology of the median justice for each Circuit Court using the justice ideology scores that are developed by Giles, Hettinger, and Peppers (2001). These scores are derived from Poole's (1998) NOMINATE common space scores. Next, we calculate the absolute ideological distance between the median justice on the U.S. Supreme Court using the judicial common Space scores (Epstein et al. 2007a) and each median Circuit Court justice. Higher scores indicate a circuit is ideologically distant from the U.S. Supreme Court and has a higher likelihood of being reviewed.

The results with this control variable are presented in Table A9.1. We also estimate several models that account for the circuit that a state resides in and interact it with a time variable to account for any changes in the lower federal appellate court system across history. The circuit court variable is coded as a categorical variable. We omit the coefficients for the circuit courts variables from the regression table for the sake of parsimony. In none of our models is the electoral competition variable insignificant. This suggests that the lower appellate court system most likely has a minimal effect on our findings.

Table A9.1-Ideology of Lower Court

Variable	Coefficient (S.E.)	Coefficient (S.E.)	Coefficient (S.E.)
Electoral Competition	0.010*	0.011*	0.009*
	(0.003)	(0.003)	(0.003)
Legislative Professionalism	0.511*	0.496*	0.518*
	(0.197)	(0.226)	(0.228)
Population	-0.045*	-0.015	-0.045*
	(0.011)	(0.015)	(0.011)
Age	-0.045*	-0.045*	-0.043*
	(0.006)	(0.006)	(0.006)
Number of Cases Heard	0.035*	0.035*	0.00001
	(0.004)	(0.004)	(0.001)
Number of Laws Enacted	0.016*	0.016*	0.015*
	(0.006)	(0.006)	(0.007)
State Partisanship	0.847*	0.847*	0.701*
	(0.223)	(0.223)	(0.296)
Divided Government	-0.058	-0.058	-0.033
	(0.065)	(0.065)	(0.065)
Incumbent Governor Election	-0.186	-0.186	-0.202
	(0.100)	(0.100)	(0.104)
Enacting state-national regime distance	-0.383*	-0.367*	-0.310*
	(0.147)	(0.147)	(0.149)
South	0.217*	0.217*	0.157
	(0.097)	(0.097)	(0.097)
Percent Urban	0.605*	0.605*	0.530*
	(0.157)	(0.157)	(0.181)
Median Circuit-Median Supreme Court distance	0.138	-0.010	-0.032
	(0.264)	(0.283)	(0.284)
Constant	-6.160*	-5.865*	-0.805
	(0.704)	(0.717)	(29.111)
Circuits Categorical Variables?	NO	YES	YES

Circuits Categorical Variables and Time Interaction?	NO	NO	YES
AIC	2,167	2,061	2,172
Number of Observations	38,996	38,996	38,996

*$p \leq 0.05$

Second, we have also collected and created a new dataset of all circuit court rulings that invalidated a state law but did not arrive before the U.S. Supreme Court. To collect this data, we conducted several searches on circuit court rulings via *LexisNexis*, *Bloomberg Law*, major newspapers, and various textbooks. In total, we briefly searched through 9,305 circuit court cases. Additionally, we examined Donald Songer's U.S. Appeals Courts dataset. This dataset is a random sample of all circuit court rulings and it has been used in numerous studies (see, Collins 2011; Cross 2003; Hettinger et al. 2004). In total, we found 89 cases that were invalidated in the federal circuit courts, but were not heard before the U.S. Supreme Court between 1971 and 2006. We only examined cases in this time span due to time limitations and the sheer number of cases heard in the federal appellate court system.

The mean electoral competition value for state laws invalidated in the federal court system (but do not reach the Supreme Court) is approximately 41.17. The average electoral competition value for a state statute invalidated by the Supreme Court is around 42.03. With a difference of means test, we find these two groups are not significantly different from one another ($p \leq 0.916$). This basic test suggests that the level of electoral competition for states with laws invalidated by circuit courts is similar to those that have laws invalidated by the U.S. Supreme Court. In other words, the sample of laws invalidated at the Supreme Court is similar to those invalidated in the Appellate Court system. This suggests there is little evidence of a selection bias occurring in this particular stage of the legal process.

We also examined the 89 circuit court cases and searched how many involved an appeal that was denied by the U.S. Supreme Court. We found six cases of a denied *writ of certiorari*. We have estimated a model that includes those six denied cases by the U.S. Supreme Court. The results are presented in Table A9.2 and again are consistent with those presented in the manuscript.

It should be noted that we cannot directly explore the effects of district court rulings due to our data structure. Specifically, multiple districts reside within a state. Further, collecting the data in all 89 district courts would be unmanageable and an area of future research. Thus, we are left to examine only the circuit court rulings.

Table A9.2-Lower Rulings

Variable	Model I Coefficient (S.E.)
Electoral Competition	0.006*
	(0.003)
Legislative Professionalism	0.241
	(0.227)
Population	-0.197*
	(0.059)
Age	-0.045*

	(0.006)
Number of Cases Heard	0.034*
	(0.005)
Number of Laws Enacted	0.011
	(0.006)
State Partisanship	0.547*
	(0.250)
Divided Government	-0.032
	(0.061)
Incumbent Governor Election	-0.167
	(0.100)
Enacting state-national regime distance	-0.629*
	(0.267)
South	0.085
	(0.103)
Percent Urban	0.525*
	(0.185)
Constant	-5.309*
	(0.821)
AIC	2,072
Number of Observations	28,314

*$p \leq 0.05$

Taken together, the results from Tables A9.1 and A9.2 suggest that the lower court rulings most likely have a minimal effect on our findings. This is consistent with Miller et al. (2015) and the argument presented by Hall and Black (2013).

Unfortunately, we cannot conduct any additional robustness checks because of data limitations and data feasibility. Further, this methodological issue (cases not reaching the Supreme Court because of the lower court system) troubles nearly all studies that pertain to judicial review and voting by the Supreme Court justices, even research that adopts the case-centric approach (see, Langer 2002). Again, we would like to recognize that the robustness tests we have conducted do not completely assuage this potential empirical issue involving the lower court system.

Appendix A10: Effect of Electoral Competition Across Time

First, to ensure that our results are robust to time, we have estimated parameters for a varying coefficient regression model (Hastie and Tibshirani 1993). Specifically, we interact the electoral competitiveness variable with a time trend variable. If the electoral competition × time trend variable is significant, this would suggest that the effect of electoral competition on the likelihood of the Supreme Court invalidating a state statute changes significantly over time. However, if this interaction variable is not significant, this would indicate that there is little evidence supporting that the effect of electoral competition varies significantly across time. The substantive meaning of the varying coefficient regression model is summarized in the Table A10.1 below.

Table A10.1- Expectations of Varying Coefficient Regression Model

Variable of Interest	Significant	Not Significant
Electoral Competition × Time Trend	Effect electoral competition changes over time	Little evidence that the effect of electoral competition changes over time

Included in Table A10.2 are the results from our varying coefficient regression model. The first model includes the same variables as those presented in Table 1 in the manuscript. We have included a time trend variable without the interaction. The results show that our findings are robust to the inclusion of a time trend variable. We do not include a time trend in our manuscript for several reasons. First, we wish to be consistent with previous literature (see, Hall and Black 2013, Miller et al. 2015). Second, we find that the time trend variable is highly correlated with the cases granted variable (r = -0.87). Finally, we omit the time trend variable from our manuscript out of parsimony and because its inclusion has no effect on our variable of interest.

The second model includes the electoral competition × time trend variable. Importantly, the Electoral Competition × Time Trend variable is insignificant in the second model. This suggests that there is little evidence of the effect of electoral competition changing significantly across time within the time period we are analyzing.

It is also important to note that one should not directly interpret the main effects or also known as the constitutive terms (e.g. "electoral competition" and "time trend") in Model II (Brambor, Clark, and Golder 2006). The interpretation of the electoral competition variable and time trend variable are of little substantive importance. For electoral competition, this indicates that when the time trend variable equals 0, an increase in electoral competition is associated with an increased likelihood of a state law being invalidated by the Supreme Court. For the time trend variable, this indicates that when the electoral competition variable equals 0, that time has a negative effect on the likelihood of a state law being invalidated. Again, the substantive interpretation of the main effects, based on the coding of our independent variables and the insignificance of the interaction variable, is of little importance.

We have also conducted a likelihood ratio test to determine if the inclusion of the electoral competition × time trend variable significantly improves the amount of explained variation in the

model. The likelihood ratio test was insignificant ($p \leq 0.29$). This indicates that the inclusion of the interaction variable does not significantly influence the amount of explained variation in our dependent variable. Further, this suggests there is little evidence suggesting that the effect of electoral competition changes significantly over time.

Table A10.2-Varying Coefficient Regression Model

Variable	Model I Coefficient (S.E.)	Model II Coefficient (S.E.)
Electoral Competition × Time Trend	–	0.0002
		(0.0002)
Electoral Competition	0.009*	0.011*
	(0.003)	(0.004)
Time Trend	-0.023*	-0.032*
	(0.007)	(0.012)
Legislative Professionalism	0.535*	0.511*
	(0.170)	(0.169)
Population	-0.025*	-0.025*
	(0.008)	(0.009)
Percent Urban	0.628*	0.634*
	(0.132)	(0.132)
Age	-0.043*	-0.043*
	(0.005)	(0.005)
Number of Cases Heard	0.0003	0.0003
	(0.0011)	(0.0011)
Number of Laws Enacted	0.016*	0.016*
	(0.005)	(0.005)
State Partisanship	0.655*	0.610*
	(0.193)	(0.239)
Divided Government	-0.058	-0.054
	(0.054)	(0.054)
South	0.235*	0.246*
	(0.082)	(0.082)
Incumbent Governor	0.192	0.191
	(0.100)	(0.101)
Enacting state-national regime distance	-0.338*	-0.321*
	(0.120)	(0.146)
Constant	-5.800*	-5.908*
	(0.704)	(0.704)
AIC	2,158	2,159
Number of Observations	38,996	38,996

*$p \leq 0.05$ (all two-tailed tests). Dependent variable is at least one state law invalidated by the Court in a given enactment year-review year pairing: 1 = state law invalidated, 0 = otherwise. The standard errors are clustered on a given state-enactment year pairing.

Second, we have conducted one final robustness check to determine how sensitive our results are to time. We have explored whether a "switch" occurred in regards to the effect of electoral competition within the time period we are analyzing. Specifically, we have estimated 34 models and interacted our electoral competition variable with a time dummy variable. We have created dummy variables for the time periods between 1974 and 2007. For instance, in 1974, all laws

enacted before 1974 would receive the value of "zero." All laws enacted in 1974 or afterwards would receive a value of "one." We also create a dummy variable for 1975 and every year until 2007. Next, we have separately interacted all 34 dummy variable with the electoral competition variable. If the electoral competition × time dummy variable is significant, this indicates that a change has occurred. If it is not significant, that suggests the effect of electoral competition has not changed.

The central results are displayed in Table A10.3 below. In particular, the table reports the parameter estimates on the key variable, Electoral Competition × Time Dummy, with the standard errors clustered on each pairing. The parameter estimates on the control variables are available upon request and we have chosen not to report them to conserve space and because the results replicate those presented in Table 1 of the original manuscript.

Overall, we find little evidence of electoral competition switching or changing in time. If anything, the results suggest that electoral competition becomes stronger in more recent elections. Only in the enactment years of 1994, 1995, 2002, 2003, and 2004 does the interaction variable reach conventional levels of statistical significance. This aligns with Tim Storey's depiction of state legislative elections outlined in the 2004 edition of *The Book of the States*. The reasons electoral competition might have a more prominent effect in recent years is because of growing polarization, nationalization of state elections, growing influence of interest groups in local elections, and the rise of sophisticated campaign techniques.

However, we do believe some caution should be used when interpreting the results reported in Table A10.3. Specifically, after 1994, very few state laws are invalidated by the Supreme Court in our dataset. Therefore, only a handful of states could be driving our results. We are conscious of the limitation with our data.

Table A10.3-Electoral Competition and State Law Invalidation
1971-2010 Interacted with Time Dummy: By Year of Enactment

	Electoral Competition × Time Dummy with Control Variables		
1974	0.002	1991	-0.0003
	(0.005)		(0.006)
1975	0.0001	1992	0.002
	(0.004		(0.007)
1976	0.004	1993	-0.0003
	(0.004)		(0.006)
1977	0.002	1994	0.020*
	(0.004)		(0.009)
1978	0.004	1995	0.020*
	(0.004)		(0.009)
1979	0.004	1996	0.021
	(0.004)		(0.010)
1980	0.003	1997	0.014

	(0.004)		(0.009)
1981	0.005	1998	0.011
	(0.004)		(0.010)
1982	0.005	1999	0.015
	(0.004)		(0.012)
1983	0.003	2000	0.022
	(0.004)		(0.012)
1984	0.004	2001	0.023
	(0.004)		(0.012)
1985	0.005	2002	0.041*
	(0.004)		(0.017)
1986	0.002	2003	0.041*
	(0.005)		(0.017)
1987	0.006	2004	0.040*
	(0.005)		(0.017)
1988	0.001	2005	0.039
	(0.005)		(0.0165)
1989	0.001	2006	0.049
	(0.006)		(0.026)
1990	0.001	2007	0.049
	(0.006)		(0.026)

*$p \leq 0.05$ Dependent variable is at least one state law invalidated by the Court in a given enactment year-review year pairing: 1 = state law invalidated, 0 = otherwise. The standard errors are clustered on a given state-enactment year pairing.

Appendix A11: Correlation between Electoral and Party Competition

Two concepts that are frequently and erroneously conflated are party and electoral competition. Shutfeldt and (Flavin 2012) note that the two concepts are conceptually and empirically distinct. We analyze how strongly correlated party competition and electoral competition are with each other. To do so, we calculate the Pearson product-moment correlation coefficient between electoral and party competition between 1971 and 2010 in each state. To measure the level of partisan competition within a state, we use a measure of the folded-Ranney Index. We use the Ranney Index because it is the most prominent measure of party competition used in state politics research. This index combines the partisan distribution of legislative seats in both chambers and the governor's vote share over an extended time period. This measure is calculated so that the highest value indicates that the parties are equally competitive in a state. Conversely, the lowest value indicates a state is dominated by only one party (e.g., very Republican or Democratic states). For more details on the calculation of the Ranney Index, see Ranney (1976) and Shutfeldt and Flavin (2012). For the electoral competition measure, we use Holbrook and Van Dunk's (1994) measure as described in the manuscript.

Table A11 below displays the Pearson correlation coefficients between the electoral and partisan competition variables across four decades in all states within our dataset: 1970s, 1980s, 1990s, and 2000s. Overall, the evidence suggests there is only moderate correlation between the two concepts; however, it is time dependent. In the 1970s, high partisan competition over governing institutions does appear to translate into competitive elections within a state as the two concepts are strongly correlated. However, over time, the two concepts become very weakly correlated. In fact, during the 2000s, they are correlated only at 0.06.

A similar pattern is observed in an examination with only Southern states. Specifically, in the 1970s, party and electoral competition are strongly correlated with Southern states. However, over time, they became weakly correlated. Those results are available upon request.

Table A11-Pearson's Correlation between State Electoral and Party Competition, 1971-2010

Decade	Correlation
1970s	0.784
1980s	0.651
1990s	0.474
2000s	0.055

In other words, it is not uncommon for a heavily Republican (or Democratic) state to have a high level of electoral competition because the members of the party win by a slim electoral margin. There are several recent examples that illustrate this relationship. For instance, in 2010, the heavily Democratic state of New Jersey also has a high level of electoral competition. While the Democratic Party controls 65% of the seats in New Jersey's lower chamber and 60% in the upper

chamber, the legislators are elected by relatively narrow margins. In another example, Republicans overwhelmingly control the legislative branch in the southern state of Florida. However, the legislators in Florida are also elected by relatively narrow margin of victories. However, a very partisan state can also have low levels of electoral competition. In Mississippi, a predominately Republican Southern state, state legislators face relative little electoral pressure.

Our understanding of the literature also supports this claim. Specifically, current research also shows that party and electoral competition are weakly correlated (see, Shutfeldt and Flavin 2012, p. 333).

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