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Judicial Politics in the Mexican States:
Theoretical and Methodological Foundations

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Abstract

This paper presents a mixed-methods approach to the study of state courts in Mexico, integrating (1) econometric analyses of time-series cross-sectional (TSCS) data from all 32 states between 1993 and 2003, (2) quantitative tools for the selection of individual states for in-depth qualitative analysis, and (3) an examination of two states in greater detail. The discussion builds on recent scholarship on “nesting” case studies within large-N research and on quantitative tools for case selection. Thus, the paper offers a substantive illustration of these methods in the study of state politics and judicial change in Mexico, with particular attention to the modifications and opportunities for richer case selection that arise from the TSCS character of the large-N dataset. Although the results identify a positive relationship between political competitiveness and judicial spending, this paper focuses on outlining a methodological framework for the study of state-level judicial performance in Mexico. The framework can be applied to substantive questions regarding other components of court performance, and can also be expanded to study sub-national politics in other federal systems.

Resumen

Este ensayo expone una metodología combinada para la investigación del desempeño judicial en México, integrando (1) análisis econométricos de datos panel de las 32 entidades federativas de 1993 a 2003, (2) diagnósticos cuantitativos para la selección de casos para análisis cualitativos, y (3) un análisis a profundidad de dos estados. La presentación se apoya en bibliografía reciente sobre el uso de análisis econométricos y herramientas cuantitativas para la selección y estudios de casos. De esta manera, el estudio ofrece una ilustración sustantiva de estos métodos en la investigación de políticas subnacionales y el cambio judicial en México, con atención particular a las modificaciones y oportunidades adicionales para un proceso de selección de casos más fructífero, que surgen de las bases de datos panel. Aunque los resultados señalan una relación positiva entre la competitividad política y el presupuesto judicial, el enfoque principal de este trabajo es la propuesta de un marco metodológico nuevo para la investigación del desempeño judicial a nivel estatal en México. Este marco se puede aplicar a la investigación de otros aspectos del desempeño judicial, y también se puede expandir a la investigación de la política subnacional en otros sistemas federales.

Introduction

Over the last twenty years, a growing literature on comparative judicial politics emphasizes the vital role of courts for the quality of both democracy and markets. In the political arena, effective courts allow for the vindication of individual rights and liberties, promoting what the United Nations Development Program has called the “civil dimension” of citizenship (UNDP 2004).¹ In the economic arena, effective courts facilitate the enforcement of contract and property rights, leading to predictability and efficiency in commercial transactions. Existing research also identifies several components of judicial performance, with important variation across countries and between developed and developing countries. Although existing research has focused on one aspect of judicial performance - independence - other principal components include access, efficiency, accountability, and quality.

Despite important achievements in the field of comparative judicial politics,² three methodological shortcomings remain: (1) a predominantly national level of analysis; (2) an emphasis on qualitative methods, and (3) a dearth of explanatory propositions.³ First, existing research emphasizes a national level of analysis, focusing on supreme courts and federal tribunals. Where comparative studies have emerged, they maintain a national or even regional focus, aggregating cross-national data, reflections, or conclusions to the regional level (Méndez, O’Donnell and Pinheiro, 1999; Domingo and Sieder, 2001; Pásara, 2004). In a region where a full 60% of the population and 75% of economic production is generated by the federal systems of Argentina, Brazil, and Mexico (ECLAC, 2004), subnational research is critical. State courts are the source of the majority of litigation in federal systems. In Mexico, for example, more than 80% of criminal cases originate in state courts (INEGI),

¹ The UNDP report, *Democracy in Latin America*, identifies three dimensions of citizenship: (1) political, (2) civil, and (3) social. The political dimension refers to the capacity to vote and participate in the electoral process, the civil dimension refers to the capacity of individuals to access the courts and vindicate their formal legal rights, and the social dimensions refers to the relative socioeconomic equality among citizens and the capacity to earn a living and maintain a decent quality of life. While acknowledging the significant accomplishments in the political dimension (relatively free elections, universal suffrage, and broad participation), the UNDP report emphasizes shortcomings in the civil and social dimension due to the failings of the justice system, including the courts and the patterns of poverty, unemployment, and inequality. This paper is situated squarely within the debate regarding the civil dimension of democratic citizenship, seeking to understand ways in which this dimension varies across states within a single country.

² Significant achievements include (a) attention to judicial politics as an area of study in its own right, apart from executive politics or legislative politics, (b) sufficient resources for the judicial branch (at the national level); (c) judicial selection is a much more transparent process (at the national level); and (d) advances in judicial independence (see Pásara, 2004: 19).

³ Recent work identifies notable exceptions to each of these three claims. For instance, Caballero Juárez and Concha Cantú (2002) provide a state-level descriptive study of judicial institutions, Helmke (2002) exemplifies recent large-N work in comparative judicial politics, and Helmke (2002) and Chávez (2004) both demonstrate the power and promise of explanatory propositions in this area. Nevertheless, the exceptional character of this work seems to prove the rule that it is largely absent from the study of comparative judicial politics.

and it is reasonable to anticipate a similar state-heavy distribution of cases in other areas of litigation.⁴ In short, state courts are “the foundation of justice” in these countries (Fix Fierro, 2004: 287).⁵ Moreover, there is important variation in the level of court performance across states within these countries. Given the link between the effectiveness of courts and the quality of democracy and markets, understanding the sources of this variation is of critical importance for both political and economic development, not only in these three countries but also in the region.

A second shortcoming is that existing literature emphasizes case studies or small-N qualitative research. Qualitative research has distinct advantages over large-N, quantitative analyses. However, the opposite is also true. Each approach has its own set of strengths and weaknesses. Large-N statistical analyses allow for the examination of variation and co-variation among independent and dependent variables across a large number of cases. However, these analyses often miss important details, or questions remain about quality of measurement, timing, sequence (causal order), complexity, or heterogeneity (Lieberman, 2005: 442). Conversely, small-N analyses or single case studies may not be representative, may not follow systematic procedures, may not pay attention to competing or alternative hypotheses, and may lead to overgeneralization from case-specific or idiosyncratic causal process (Munck, 2004; Lieberman, 2005: 435). The dearth of large-N research in comparative judicial politics, therefore, results in an almost exclusive reliance on the strengths of qualitative research. In doing so, existing research fails to take advantage of the strength of quantitative research, but also exposes itself to the weaknesses of qualitative research.

Finally, existing research also tends towards descriptive rather than explanatory propositions. In this way, comparative judicial politics mirrors the patterns of research in comparative politics more generally in the early 20th century, cataloguing differences in institutional arrangements and measuring differences in judicial performance, but not proposing explanatory arguments about judicial change—variation in judicial performance—across countries or over time. Although descriptive propositions are important, and are also an important advance over the normative propositions that dominated judicial reform literature only a short time ago, the step from descriptive to explanatory propositions is a necessary one.

This paper presents a mixed-methods approach to the study of state-level court performance that seeks to address each of these shortcomings. First, the subnational level of analysis makes state courts the center of attention.

⁴ Despite the absence of systematic judicial statistics, most ordinary civil litigation also originates in states courts (e.g., family law cases, landlord-tenant conflicts, etc.). Additionally, although the Commercial Code is a federal law in Mexico, state courts share jurisdiction over cases arising in commercial law (CCF, 2004).

⁵ Author’s own translation. Original quote: “Los sistemas judiciales de las entidades federativas constituyen... la base de la justicia en el país” (Fix Fierro, 2004: 286-287).

Second, the systematic integration of quantitative and qualitative methods draws on the strengths of each method to offset the shortcomings of the other. A large-N econometric analysis of court performance across Mexico's 32 states (including the Federal District) identifies broad patterns of judicial output across a large number of cases, and quantitative diagnostics of this analysis identify compelling candidates for qualitative analysis. Full, in-depth case studies are beyond the scope of this paper, but the closer examinations of two states suggests ways in which the qualitative analysis complements the quantitative work. In the language of *Rethinking Social Inquiry* (Brady and Collier, 2004), this mixed-methods approach combines “data-set observations” (DSOs) and “causal-process observations” (CPOs), nesting the latter within the former to maximize the analytic leverage gained from triangulation.

Both approaches are imperfect, but their combination—a “diversity of imperfection”—allows us to draw on the strengths of one approach to “compensate for [the] particular faults and imperfections” of the other approach (Brewer and Hunter, 1989: 16-17). In drawing on this diversity of imperfections, the analysis avoids the pitfalls associated with “mono-method” or mono-data approaches, relying on the strengths of each tradition to offset the weaknesses of the other (Jick, 1979; Tashakkori and Teddlie, 1998: 40-42). These different “streams of evidence” (Beer, 2003: 8) join in a process of triangulation across data (data triangulation) and across methods (methods triangulation) in order to enhance the validity of conclusions (Denzin, 1978; Tarrow, 1995).

Finally, the analysis seeks to explain variation in judicial performance across the Mexican states and over time within each state. In this way, this research contributes to advancing explanatory propositions in the field of comparative judicial politics.

The paper is organized as follows: First section provides an overview of the systematic strategies for integrating quantitative and qualitative analysis. This discussion focuses on Lieberman's (2005) recent work on “nested analysis”, and Gerring and Seawright's (2006) work on quantitative tools for case selection. Second section presents the quantitative phase of the analysis. This phase consists of an econometric analysis of judicial performance in the Mexican states using time-series cross-sectional data on all 32 states from 1993-2003. The first part of this section introduces the dependent variable—judicial spending per capita—and identifies variation in spending across states and over time within individual states. Although this variable is an important indicator of the independence of state courts in Mexico, and despite significant findings regarding the relationship between state politics and judicial spending, the main role of the quantitative analysis of judicial spending is to illustrate the methodological discussion, not digress into a discussion of judicial spending or judicial independence. Third section presents quantitative tools for case selection, relying on the results of the

quantitative analysis. This discussion offers a substantive application of the methods presented in first section that are gaining attention in political science. This section systematically links the large-N analysis with the small-N analysis, aiming to “nest” the case studies within the sample of cases in the econometric analysis (Lieberman, 2005: 435), enhancing the analytic leverage gained from the case studies. Fourth section undertakes a closer examination of two states identified in the prior section. Last section offers some conclusions and implications.

1. “Nested” Cases: Typicality, Model-Testing Cases, and Model-Building Cases

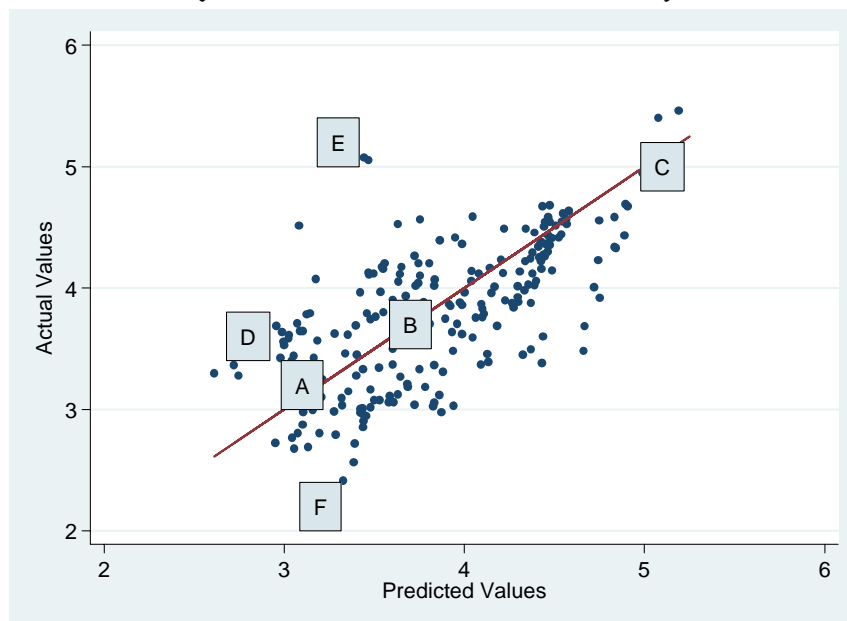
Although many scholars have integrated quantitative and qualitative methods in an informal way (Martin, 1992; Swank, 2002; Beer, 2003; Jepsen, 2006), recent scholarship offers guidance on how to conduct this integration in a systematic fashion.

Lieberman’s (2005: 435) explicit goal is to provide this kind of systematic guidance. His “nested analysis” involves sequencing quantitative and qualitative analyses so that the case studies are selected from the sample in the quantitative analysis, *i.e.*, the case study is “nested” within the large-N sample. Lieberman’s suggested sequence of nested analysis is the following: (1) preliminary quantitative large-N analysis (LNA); (2) robustness-check of LNA; (3) case selection for small-N analysis (SNA); (4) qualitative SNA in the cases selected in step 3; (5) repeat the steps in an interactive process, if necessary.

Once the LNA is complete and we are fairly confident in its results (steps 1 and 2 above), Lieberman suggests two types of SNA –model-testing SNA (Mt-SNA) and model-building SNA (Mb-SNA)–. In each type of qualitative analysis, he emphasizes the need to give special attention to two types of rival explanations.

In the first strategy (Mt-SNA), Lieberman suggests identifying cases that are well-predicted by the statistical model. Well-predicted or “typical” cases offer opportunities for within-case analysis that “provide[s] support for, or clarification of, an existing causal hypothesis” (Gerring and Seawright, 2006: 11). If we were to plot actual values against predicted values, with a 45-degree line designating the perfect fit, these cases would be on or close to this line (see Figure 1, adapted from Lieberman, 2005: 445).

**FIGURE 1. POTENTIAL TYPICAL AND ATYPICAL CASES
(USING ACTUAL DATA FROM ANALYSIS)**



In Figure 1, the typical cases would be cases A, B, and C. After identifying which cases are well-predicted, we select from among this group cases that vary on the value of the principal independent variable(s). For example, if cases A, B and C in Figure 1 are the most well-predicted cases, we would select the two that display the most variation on the independent variable of interest. As stated above, the statistical model is explaining these cases well and the goal is to identify causal mechanisms in order to clarify or confirm causal hypotheses, so selecting on different values of the independent variable allows us to perform confirmatory case studies regarding the causal relationship between the IV and the DV. In these cases, Lieberman advises that we should pay close attention to two rival explanations: (1) plausible alternative hypotheses that did not lend themselves easily to measurement across a large number of cases, so they could not be included in the LNA; and (2) the causal sequence of events to ensure that there is temporal precedence between our independent variables and the dependent variable.

The second strategy (Mb-SNA) selects poorly-predicted cases, *i.e.*, cases that are off the 45-degree line (*e.g.*, cases E and F in Figure 1). In contrast to Mt-SNA, after identifying this group of poorly-predicted cases, we select from among this group cases that vary on the value of the dependent variable, approximating Mill's method of difference. The model does not explain these observations well, suggesting a specification problem with the model. Selecting on the IV would not be particularly informative since the analysis

already told us these observations are not explained well by this variable. Conversely, selection on the DV maximizes the opportunity to identify alternative causal mechanisms and explanations, *i.e.*, aside from the variables specified in our model, what else explains the variation between cases E and F in Figure 1? In this strategy, closer attention is paid to improving measurements of important concepts, and to identifying concepts or explanations that were omitted from the original model but might play a significant role. Thus the name, “model-*building*” SNA.

Gerring and Seawright (2006) provide quantitative tools that make Lieberman’s argument more explicit. Specifically, Gerring and Seawright specify diagnostics that can be performed on the quantitative model. These diagnostic tests are well-known in statistics, but they have rarely been applied to the task of case selection and for the purpose of nested analysis. In short, Gerring and Seawright provide guidance on how to employ mathematical tools to identify well-predicted and poorly-predicted cases, what Lieberman called Mt-SNA and Mb-SNA, they call “typical” (low residual) and “deviant” (high residual) cases, respectively. By calculating “typicality” scores, therefore, we can identify model-testing and model-building cases. Additionally, Gerring and Seawright provide other tools for case selection, including extreme values (*i.e.*, “extremeness”) and influence statistics.

TSCS data offers a rich environment for the application of these quantitative tools for case selection. Lieberman and Gerring and Seawright discuss the application of their methods to conventional regression analyses, where each observation corresponds to a case. Stated in the inverse, each case has a unique observation in the dataset. Therefore, each typical (on-the-line) or atypical (off-the-line) observation corresponds to one and only one case. In contrast, each case in TSCS data contributes more than one observation. Consequently, diagnostics of TSCS data raise the possibility of identifying multiple typical and atypical observations from the *same* case. Where there is variation in the typicality of observations over time within a single case, this case may be a particularly promising candidate for SNA. In combination with extreme values and influence statistics, typicality can be a powerful tool for case selection. Thus, TSCS data offers opportunities for case selection that are not present in non-TSCS data.

In sum, a recent literature on using quantitative tools for case selection offers strategies for systematically integrating quantitative and qualitative tools in a way that enhances the analytic leverage gained from data and method triangulation. Three of these strategies consist of (a) identifying typical and atypical observations in a large-N analysis, (b) calculating extreme values, and (c) identifying influential observations in the analysis. These strategies are promising when applied to conventional datasets where each observations corresponds with one and only one case, but are even more promising with TSCS data. The following sections illustrates this process of

integrating LNA, SNA, and TSCS data with an analysis of judicial spending in the 32 Mexican states from 1993 to 2003.

2. Judicial Spending in the Mexican States

This section presents the quantitative, large-N phase of the analysis, *i.e.*, Lieberman's "LNA". The purpose of this section is not to engage in a full analysis of one of the components of judicial independence, but to use this analysis to illustrate the integration of quantitative and qualitative methods in the discussion of case selection in the following section. Therefore, the discussion of the analysis is necessarily briefer than it would be if it were the focus of the paper. The following paragraphs provide an overview of the data, methods and results of the analysis.

2.1 Data and Methods

The large-N analysis applies an econometric model of judicial performance to time-series and cross-sectional (TSCS) data from the 32 Mexican states from 1993-2003. Therefore, the unit of analysis is the "state-year". For example, Aguascalientes in 1993 is one state-year, Aguascalientes in 1994 is another state-year, and so on for all 32 states from throughout the time period analyzed.

The dependent variable is judicial spending per capita.⁶ The variable is transformed (logged) for normality and lagged one year. Data is primarily from official reporters –*Diario Oficial* or *Periódico Oficial*– from individual states, and supplemented with data from the following sources: *Instituto Nacional de Estadística, Geografía e Información* (INEGI, Mexico's national statistics office), *Consejo Coordinador Financiero* (2004), Bello Paredes (2006: 101, n.12), and individual state websites.⁷ The variable captures the annual judicial budget per capita in real terms, adjusting for inflation and using 2000 as the base year (2000=100). All data used to deflate budget figures is from the International

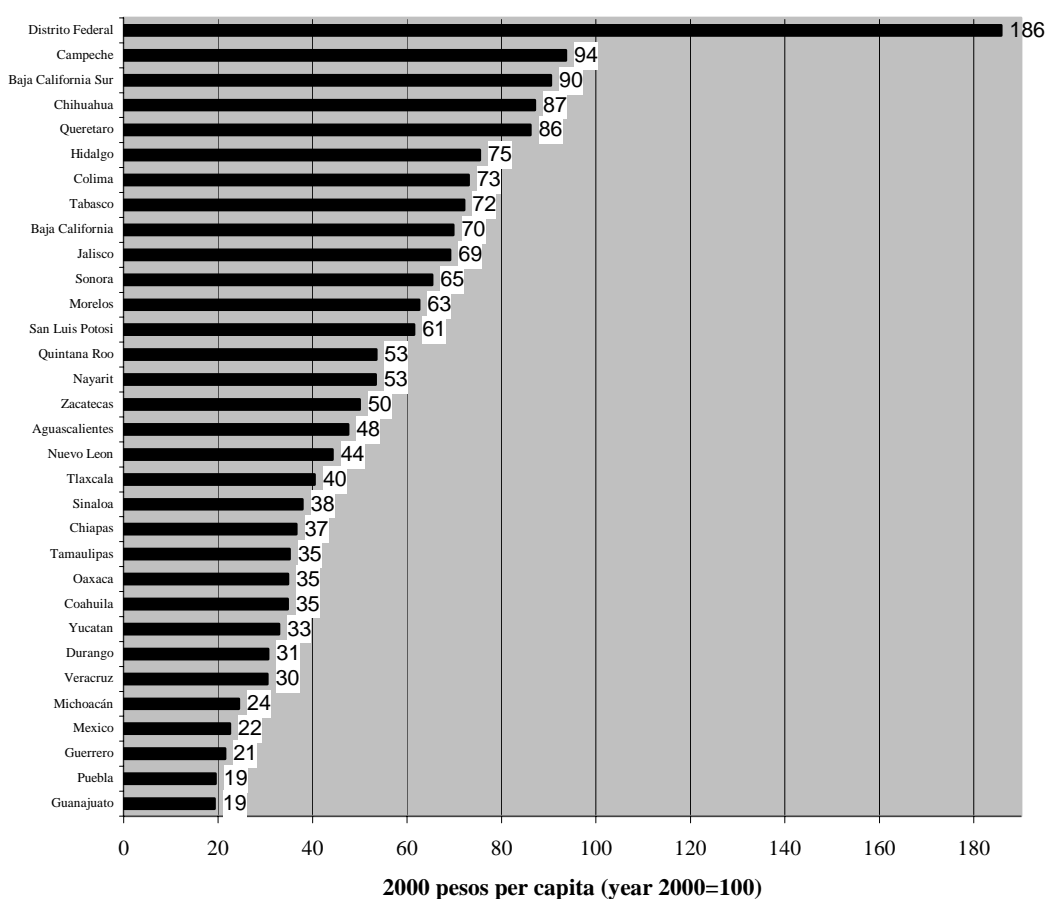
⁶ Judicial spending is an important indicator of judicial independence in Mexico. Although the judicial budget does not receive (or merit) much attention in U.S. politics, resource independence remains an important subject in Latin American judicial politics. Pásara (2004: 18) identifies sufficient financial resources as one of the five principal themes of judicial reform in Latin America. Caballero Juárez (2005: 89-90) also identifies budgetary difficulties as a major problem for state courts in Mexico. A 2006 report sponsored by the Mexican Supreme Court issued perhaps the definitive statement regarding the need to guarantee sufficient resources for the judiciary, listing this guarantee as the seventh of thirty-three measures in its comprehensive plan for judicial reform in Mexico (Caballero Juárez, López Ayllón and Oñate Laborde, 2006).

⁷ Poder Judicial del Estado de Baja California, Informe relativo a la administración de justicia (2005), available at: <http://www.poder-judicialbc.gob.mx/transparencia/documentos/pdfs/infadmin/5.pdf> (last accessed Nov. 1, 2006).

Financial Statistics (IFS) database from the International Monetary Fund (IMF 2006).⁸ All population figures are from INEGI.

Figure 2 below demonstrates the variation in annual judicial spending across states in Mexico. All 32 states, including the Federal District, appear along the Y-axis, and annual judicial spending per capita appears along the X-axis. The amounts for each state represent the *average* spending per capita per year during the time frame analyzed (1993-2003), and the states are listed in descending order by judicial budget per capita.

FIGURE 2. AVERAGE ANNUAL JUDICIAL SPENDING ACROSS THE 32 MEXICAN STATES, 1993-2003



⁸ Data was also transformed using “UDIS”, or unidades de inversión (SAT, 2006), which deflates currency using 1995 as the base year, i.e., 1995 = 100. Quarterly data is available, similar to the IFS data. However, UDIS deflation statistics start on April 4, 1995(available at: http://www.sat.gob.mx/sitio_internet/asistencia_contribuyente/informacion_frecuente/valor_udis, last accessed October 31, 2006), while IFS statistics are available for a longer time span. Both transformations (IFS deflation and UDIS deflation) are my own, using the second quarter data available in both series since this is likely the information that legislators and other political actors would have had available prior to negotiating the annual budget in the fall months of each year.

On average, the Federal District spends far more per person than any other state. However, several states in the top quintile (including Campeche, Baja California Sur, Chihuahua, Querétaro and Hidalgo) spend more than three times as much as states in the bottom quintile (including Guanajuato, Puebla, Guerrero, México, and Michoacán). Additionally, the average of these averages is \$55.02 (pesos) per year (including DF), and \$50.80 per year (excluding DF). The variation in judicial spending is even more dramatic if we consider the distribution of the values across all observations in the time-series cross-sectional dataset (minimum=11.18; maximum=235.33; mean=52.15; standard deviation=34.54; see Table 2 below and its notes for descriptive statistics).

What accounts for this variation? Judicial reform literature consistently emphasizes the political “will” or “impulse” required for reform (Hammergren, 1993; Fix Fierro, 2004). Fix Fierro emphasizes this point in noting that judicial change is necessarily a political process (2004: 287). Additionally, existing comparative research finds evidence for the causal relationship between political competitiveness and (a) institutional performance (Beer, 2003), (b) public spending (Hecock, 2006), and (c) judicial independence (Chavez 2004). In this study, competitiveness and ideological orientation are expected to capture the structural and directional characteristics of the state political system that shape judicial spending. These political variables and their formulas are listed in Table 1 (adapted from Schedler, 2005). Thus, the independent variables of interest focus on operationalizing the structural conditions for the political “will” (openness or competitiveness) and the programmatic goals of parties that might also shape this “will” or create the impulse for change (ideological orientation).

TABLE 1. INDICATORS OF POLITICAL COMPETITIVENESS AND IDEOLOGICAL ORIENTATION*

Abbreviation	Description/Source	Formula
MARGIN_GOV	Margin of victory, governor's race	$v_1 - v_2$ where v_1 is the vote share of the party in first place and v_2 is the share of the runner-up
MD_GOV	Majority distance, governor's race	$v_1 - .5$ where v_1 is the vote share of the party in first place
ENC	Effective number of candidates, governor's race (Laakso-Taagepera Index; Laakso and Taagepera 1979)	$1/\sum v_i^2$ where v_i is the vote share for the i -th party in the race
ENC_M	Effective number of candidates, governor's race (Molinar Index; Molinar 1991)	$1 + ENC * (\sum v_i^2 - v_1^2) / \sum v_i^2$
MARGIN_LEG	Margin of victory, legislature	$s_1 - s_2$ where s_1 is the seat share of the party in first place and s_2 is the share of the runner-up
MD_LEG	Majority distance, legislature	$s_1 - .5$ where s_1 is the seat share of the party in first place
ENLP	Effective number of parties, (Laakso-Taagepera Index; Laakso and Taagepera 1979)	$1/\sum s_i^2$ where s_i is the seat share for the i -th party
ENLP_M	Effective number of parties, (Molinar Index; Molinar 1991)	$1 + ENLP * (\sum s_i^2 - s_1^2) / \sum s_i^2$
DIVGOV	Divided government	Dummy variable (0,1), where 1 indicates the party of the executive and does not have an absolute majority in the legislature
IDEOL_GOV	Ideology, governor	Ordinal variable: -1 for PRD, 0 for PRI, and 1 for PAN
IDEOL_MLRP	Ideology, legislature (Coppedge 1997; 1998)	$(XR + SR) + (XCR + XCR) - .5(XCL + SCL) - (XL + SL)$, where the letters "XR", "SR", "XCR", "XSR", "XCL", "SCL", "XL", and "SL" stand for Christian Right, Secular Right, Christian Center-Right, Secular Center-Right, Christian Center-Left, Secular Center-Left, Christian Left, and Secular Left, respectively.

* Adapted from Schedler, (2005).

Control variables include per capita gross domestic product of the state (GDP per capita, also deflated), and population. GDP figures were obtained from the state reporters cited above and INEGI. Population figures for census years were also obtained from INEGI. For intervening years, population figures were estimated using official growth rates, also from INEGI. Table 2 reports the descriptive statistics for the above-mentioned data.

TABLE 2. DESCRIPTIVE STATISTICS

Variable	N	Mean	Std. Dev.*	Min.	Max.
Judpercap**	254	3.84	0.59	2.41	5.46
MARGIN_GOV	252	0.27	0.25	0.01	0.93
MD_GOV	254	0.07	0.14	-0.15	0.45
ENC	254	2.27	0.50	1.10	3.37
ENC_M	254	1.73	0.47	1.00	2.99
MARGIN_LEG	241	0.30	0.18	0.00	0.90
MD_LEG	241	0.07	0.97	-0.13	0.45
ENLP	241	2.35	0.39	1.10	3.54
ENLP_M	241	1.62	0.42	1.00	2.86
IDEOL_GOV	254	0.11	0.46	-1	1
IDEOL_MLRP	241	0.33	0.11	-0.12	0.47

* Overall standard deviation and minimum/maximum values. Stata also returns between and within values with xtsum command, but these are omitted for ease of presentation.

** Values for Judpercap are in its logged form. Corresponding actual values, in 2000 pesos per capita, are the following: mean=55.11; std. dev.=34.71; minimum=11.18; maximum=235.33

The analysis utilizes a population-averaged panel-data model, or a generalized estimating equation (GEE), in order to overcome the difficulties presented by the TSCS structure of the data.⁹ Beck and Katz (1995) recommend using OLS modified to calculate panel-corrected standard errors (PCSEs) for TSCS data. These methods, however, work best when the number of time points is greater than the number of cross-sections or “panels”. In such circumstances, PCSEs are indeed the “gold standard” in the discipline.¹⁰ However, because this study analyzes judicial efficiency in 17 states from 1993-2003, the number of panels (32) is greater than the number of time points (11), so PCSEs is not appropriate. Therefore, the population-averaged panel-data model is used. In all panels, the number of time points exceeds the number of model parameters (see Hecock (2006) for an analysis of public spending in Mexico that also employs GEE).

⁹ All models estimated with Stata v9.0, using the xtgee command after formatting the data for time-series analysis (tsset). Do-file available from the author. Alternative models with fixed effects, as well as a model estimated with maximum-likelihood estimation, show no appreciable differences.

¹⁰ Although other methods to analyze time-series cross-sectional (TSCS) data have been suggested, Greg Wawro commented that PCSEs are still the “gold standard” in the discipline at a panel on time-series analysis at the 2005 annual meeting of the American Political Science Association.

The results of this analysis demonstrate that the competitiveness and ideological orientation of state political systems shape judicial spending in Mexico. Table 3 reports the results of this analysis in four models. Model 1 analyzes the influence of executive competitiveness (using the MD_GOV variable), Model 2 analyzes the influence of legislative competitiveness (using the MD_LEG variable), Model 3 analyzes the influence of executive ideology (IDEOL_GOV), and Model 4 analyzes the influence of legislative ideology (IDEOL_MLRP).

TABLE 3. RESULTS OF ANALYSIS OF JUDICIAL SPENDING PER CAPITA (LAGGED)

Model	1	2	3†	4
Majority Distance (Executive)	-1.10 *** (0.14)			
Majority Distance (Legislative)		-0.90 *** (0.21)		
Ideology (Executive)			-0.10 (0.07)	
Ideology (Legislative)				-0.46 * (0.22)
GDPpercap (logged)	1.15 *** (0.14)	1.59 *** (0.17)	1.80 *** (0.18)	1.62 *** (0.17)
Population (logged)	-0.13 (0.09)	0.05 (0.12)	0.15 (0.13)	0.07 (0.12)
Constant	0.62 (0.92)	-2.41 * (1.11)	-4.03 *** (1.15)	-2.60 * (1.12)
N	254	241	254	241
States	32	32	32	32
Wald x2	177.86	125.64	107.41	100.47
Prob > x2	0.0000	0.0000	0.0000	0.0000

GEE population-averaged models, using xtgee in Stata 9.0.

Coefficients with standard errors in parentheses.

* p < .05, ** p < .01 *** p < .001

† Models excluding the Federal District show no appreciable differences with one exception - Model 3 changes to show that the ideology of the governor has a significant and negative relationship with judicial spending, supporting the relationship between ideology and spending reported in Model 4.

Model 1 demonstrates that the competitiveness of executive politics has a positive relationship with judicial spending that is both statistically and substantively significant. The negative sign on the coefficient indicates that as the margin of victory increases, judicial spending decreases. Conversely, as competitiveness increases, judicial spending increases. Therefore, competitiveness has a positive relationship with judicial spending. Auxiliary models with alternative measures of executive competitiveness (MD_GOV, ENC, and ENC_M) show no appreciable differences.

Model 2 demonstrates a similarly significant relationship between legislative competitiveness and judicial spending, and auxiliary models with

alternative measures for legislative competitiveness (MD_LEG, ENLP, and ENLP_M) show no appreciable differences.

Models 3 and 4 show that, while the ideological orientation of the governor's office is not statistically significant, the ideological orientation of the legislature is both statistically and substantively significant. Centrist legislatures increase judicial budgets more than rightist ones, and leftist legislatures increase judicial budgets more than centrist ones.

These models include the Federal District (Distrito Federal, or D.F.). Given the size of this "case", it might be considered anomalous and perhaps even drive the results. However, despite contributing extreme values on the dependent variable and being dominated in politics by the PRD, the D.F. is not identified as an influential observation (see discussion of extremeness and influence in case selection below). Additionally, auxiliary models excluding the Federal District show no appreciable differences, with one important exception—Model 3 changes to show that the ideology of the governor has a significant and negative relationship with judicial spending, supporting the relationship between legislative ideology and spending in Model 4—. Thus, across the 31 states, *i.e.*, excluding the D.F., legislative and executive ideology have a significant and negative relationship with judicial spending.

In sum, political competitiveness exerts an upward pressure on judicial spending, suggesting that the ongoing process of democratization and the opening of the political system is generating the political "will" or "impulse" for reform. This finding is robust across all models, all measures of competitiveness, and at both the executive and legislative levels. The finding regarding ideological orientation is slightly less stable in that executive ideology seems not to matter, but left-leaning legislatures spend more on the judiciary.

In the following section, these models and results are used to link this preliminary quantitative analysis to the qualitative phase of research. The discussion highlights the use of quantitative tools, based on the models above, in the process of case selection, thereby nesting the case studies within the econometric analysis, triangulating quantitative and qualitative analyses and increasing the analytic leverage brought to bear on the problem of explaining judicial change. This framework could be repeated for other components of judicial performance (*e.g.*, access or efficiency).

3. Quantitative Tools for Case Selection

Case selection requires consideration of both methodological and non-methodological issues. Feasibility is one of the principal non-methodological considerations (Gerring and Seawright, 2006: 2). The in-depth case studies are more likely to receive support and cooperation, and therefore more likely to be successful, in states where there are fewer public crises and where the

judicial organs have developed greater levels of transparency. With regard to the former, Oaxaca in late-2006 seems an unlikely candidate for a case study of this type due to the lengthy conflict between the teachers' union and the governor's office.¹¹ With regards to transparency, an index by Magaloni and Negrete (2004) offers guidance regarding the relative openness and availability of information in each state, and could also inform a decision about feasibility. While these non-methodological issues must be considered, the focus here is on methodological issues.

3.1 Conventional Tools

Conventional qualitative approaches to case selection offer several options. The logic of crucial cases (*e.g.*, least likely or most likely cases), and typical or deviant cases ("typical" or "deviant" in the general sense of appearing to conform or not conform to theoretical expectations, which is different from the "typicality" of cases as discussed below) is prominent in the case study literature. Paired cases might also follow Mill's method of agreement or method of difference as articulated in the logic of most similar or least similar case designs (Przeworski and Teune, 1970; Mill, 1838).

Finally, a case selection rationale that is particularly applicable to the study of judicial performance in Mexico is that of selection on the dependent variable. Although conventional social science methods tend to disfavor selection on the dependent variable, the quality of within-case analysis ultimately matters more (Gerring and Seawright, 2006). Moreover, Collier and Mahoney (1996) and Collier, Mahoney, and Seawright (2004) argue selection bias may not be as significant an issue in case studies. Of particular relevance to judicial performance, especially state-level judicial performance, is their argument that selection on the dependent variable is a negligible concern when little is known about the research topic.

This is certainly the case with the problem of explaining judicial change, especially at the subnational level. Thus, we could select a state that has achieved high levels of judicial performance or is widely recognized for its unusual accomplishments in this area, and within-case analysis in such a state would likely yield useful lessons regarding the source of judicial accomplishments.

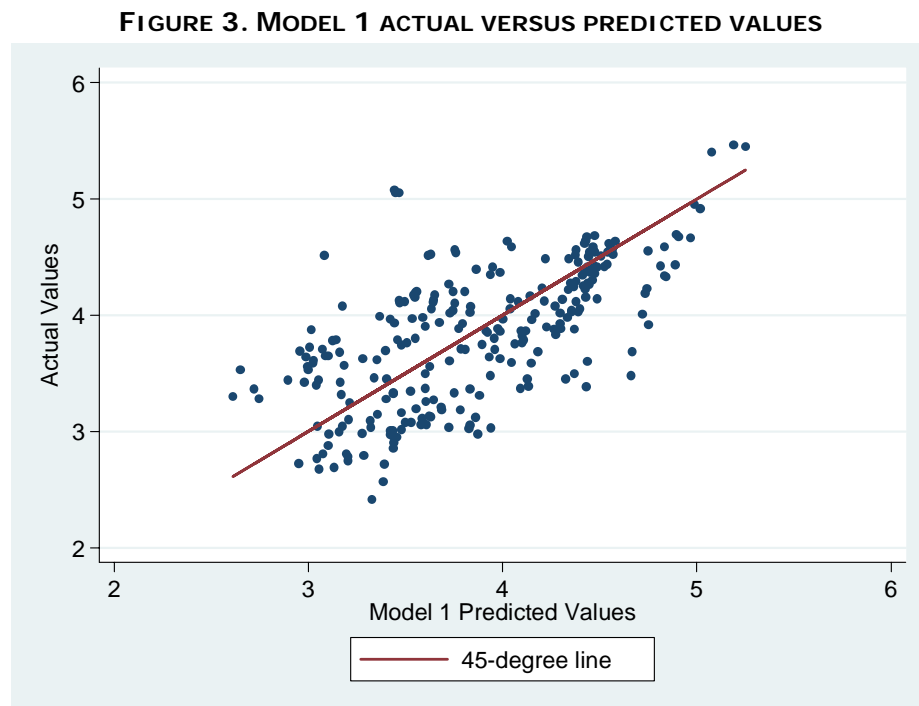
¹¹ As of November 21, 2006, the conflict continued after more than five months, several people had been killed, federal police had intervened with partial success, and several bombs that detonated in Mexico City were claimed by pro-teacher guerillas (Pérez Silva and Garduño, 2006; Pensamiento y Sánchez, 2006).

3.2 Quantitative Tools

All of the above options are conventional approaches to the problem of case selection. The remainder of this section is dedicated to quantitative tools for case selection, testing alternatively for (1) typicality, (2) extremeness, and (3) influence. This discussion draws on recent literature on the use of quantitative tools for case selection in order to integrate quantitative and qualitative research (Lieberman, 2005; Gerring and Seawright, 2006; Gerring, 2007), relying on the previously estimated econometric model of judicial spending in order to nest the case studies within this model, thereby enhancing analytic leverage and the validity of conclusions.

3.3 Typicality: Typical and Atypical Observations

Using the results from Model 1 estimated in the previous section, Figure 3 plots predicted values (X-axis) versus actual values (Y-axis) of the dependent variable –judicial spending per capita–. The solid line is the 45-degree line and the thin line is the regression line.



Each of the plotted dots represents a “state-year”, and the cases that fall on or close to the 45-degree line are the ones that were predicted well, *i.e.*, these are the low-residual or “typical” observations. The dots that are farther away from the 45-degree line are high-residual or “atypical” cases.

TABLE 4. TYPICAL OBSERVATIONS – MODEL 1

code	state	year	r1	typscore1	mdgov
3	Baja California Sur	1999	0,0023	-0,0023	0,02
2	Baja California	2000	0,0030	-0,0030	0,01
8	Chihuahua	2000	0,0041	-0,0041	0,00
14	Hidalgo	1996	-0,0042	-0,0042	0,30
3	Baja California Sur	2002	0,0167	-0,0167	0,06
26	Sonora	1997	0,0167	-0,0167	0,19
1	Aguascalientes	2003	-0,0208	-0,0208	0,03
1	Aguascalientes	1998	0,0223	-0,0223	0,24
23	Quintana Roo	1999	0,0291	-0,0291	0,45
1	Aguascalientes	2000	-0,0327	-0,0327	0,03

These are the ten observations that Model 1 explains the best. Any of these (one or more) suggest the corresponding state is a good candidate for in-depth analysis. Among these observations, Baja California Sur and Aguascalientes stand out because of their repeat appearances. Since the object of this exercise is to use typical *observations* (state-years) to identify compelling *cases* (states), these states appear to be good candidates for in-depth, within-in case analysis. Following Lieberman, however, we must choose cases that represent variation on a principal explanatory variable. This is why the political competitiveness variable is included (majority distance). However, these two states have similar values on this variable (with the one exception of Aguascalientes in 1998). Hidalgo has a high value of .30 majority distance, so it might make a good comparison with Aguascalientes. Additionally, Aguascalientes may be a good case to analyze on its own due to its consistent typicality despite changes on the principal independent variable. In other words, Aguascalientes in 1998 makes a good comparison with Aguascalientes in 2000 or 2003, *i.e.*, within-case analysis over time. Thus, as far as Model 1 is concerned, Aguascalientes and Hidalgo constitute good candidates for Mt-SNA.

We are also interested in model-building cases, and for that we need to identify the atypical, deviant, or poorly-predicted cases. Table 5 reports the typicality scores for the four cases on the far left of the histogram in Figure 5, as well as an additional six observations, rounding out the ten most atypical observations. Observations in this table are listed in reverse order of typicality, with the most atypical/deviant cases at the top. Again, following Lieberman, the values of the *dependent* variable are listed in this table as

part of the process of selecting cases for Mb-SNA, and we are interested in cases that vary on this value.

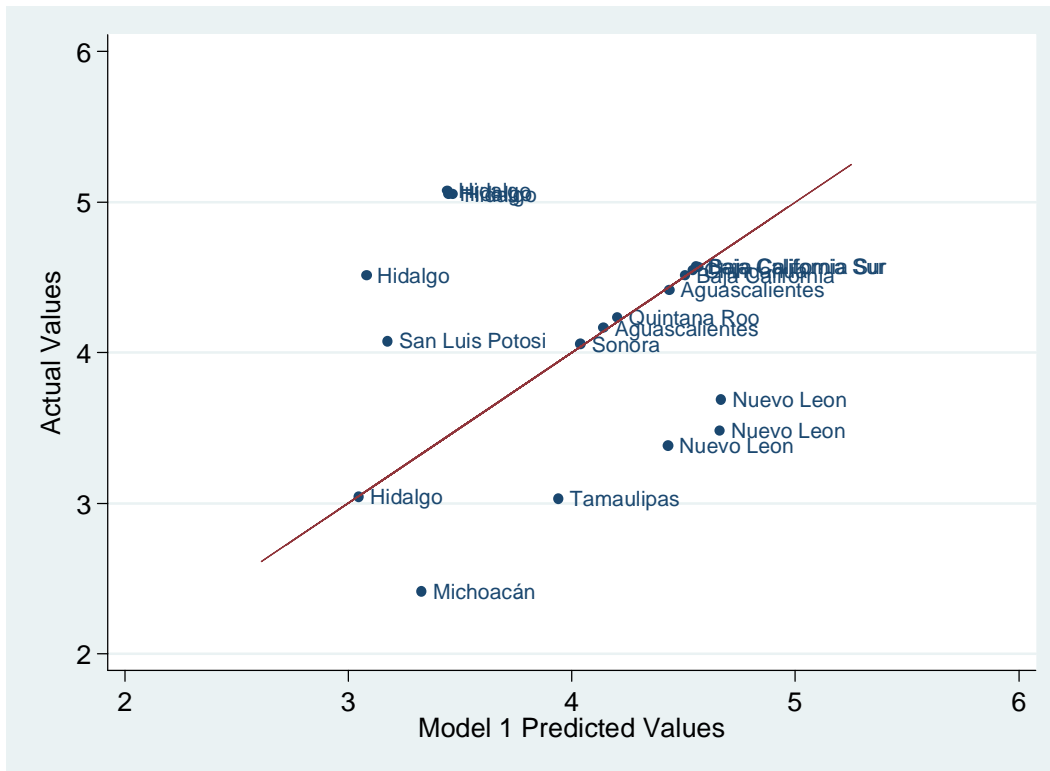
TABLE 5. ATYPICAL OBSERVATIONS – MODEL 1

code	state	year	r1	typscore1	Judpercap
14	Hidalgo	2001	1.6325	-1.6325	5.08
14	Hidalgo	2002	1.6040	-1.6040	5.05
14	Hidalgo	2000	1.5842	-1.5842	5.05
14	Hidalgo	1997	1.4339	-1.4339	4.51
19	Nuevo León	1998	-1.1800	-1.1800	3.48
19	Nuevo León	1994	-1.0458	-1.0458	3.38
19	Nuevo León	1999	-0.9809	-0.9809	3.69
16	Michoacán	1996	-0.9140	-0.9140	2.41
28	Tamaulipas	1998	-0.9115	-0.9115	3.03
24	San Luis Potosí	1997	0.9004	-0.9004	4.08

The first four “state-years” all correspond with the case of Hidalgo. There is little variation on the independent variable, however, so Hidalgo does not constitute a good case on its own as Aguascalientes did above. However, Hidalgo is interesting because it appears on both tables. That is, it is a case with both typical and atypical observations. Given this within-case variation on typicality over time, Hidalgo is a compelling candidate for in-depth analysis. Again, any one of these cases is a good candidate. Focusing only on the values of the dependent variable, however, Hidalgo and Michoacán represent the maximum and the minimum values, respectively. Therefore, this is the most promising pair of cases for Mb-SNA. Other promising pairings would be Hidalgo-Nuevo León and Nuevo León-Michoacán.

In sum, Tables 4 and 5 identify typical and atypical “state-years” that indicate which states are promising candidates for in-depth case studies. Figure 6 is a graphical representation of this typicality, labeling the typical cases close to the 45-degree line and the atypical cases away from this line, and deleting all other cases (contrast with Figure 3 or 4).

FIGURE 6. MODEL ACTUAL AND PREDICTED VALUES, LABELING THE MOST TYPICAL AND MOST ATYPICAL OBSERVATIONS



Repeating this analysis with Model 2 (legislative competitiveness), Tables 6 and 7 report the typical and atypical observations, respectively.

TABLE 6. TYPICAL OBSERVATIONS – MODEL 2

code	state	year	r2	typscore2	MD_LEG
1	Aguascalientes	1999	0.0046	-0.0046	0.12
13	Guerrero	1998	-0.0085	-0.0085	0.15
8	Chihuahua	2002	-0.0108	-0.0108	0.05
16	Michoacán	2001	-0.0182	-0.0182	0.10
1	Aguascalientes	2000	0.0220	-0.0220	0.12
31	Yucatan	2001	0.0237	-0.0237	0.10
13	Guerrero	1999	0.0276	-0.0276	0.15
8	Chihuahua	2001	-0.0284	-0.0284	0.05
13	Guerrero	1996	-0.0308	-0.0308	0.20
3	Baja California Sur	2002	0.0311	-0.0311	-0.02

TABLE 7. ATYPICAL OBSERVATIONS – MODEL 2

code	state	year	r2	typscore2	Judpercap
14	Hidalgo	2001	1.8818	-1.8818	5.08
14	Hidalgo	2002	1.8493	-1.8493	5.05
14	Hidalgo	2000	1.8261	-1.8261	5.05
19	Nuevo Leon	1998	-1.4973	-1.4973	3.48
14	Hidalgo	1997	1.4679	-1.4679	4.51
19	Nuevo Leon	1996	-1.3529	-1.3529	3.49
19	Nuevo Leon	1997	-1.3412	-1.3412	3.60
19	Nuevo Leon	1995	-1.3252	-1.3252	3.45
19	Nuevo Leon	1999	-1.3036	-1.3036	3.69
19	Nuevo Leon	2000	-1.1945	-1.1945	3.92

In Table 6, typical observations again correspond with Aguascalientes and Michoacán. Also, in Table 7, all ten of the most atypical observations correspond with either Hidalgo or Nuevo León.

Relying on typicality and atypicality in both Models 1 and 2 (executive and legislative competitiveness, respectively), the following states present compelling candidates for in-depth case studies: Aguascalientes, Hidalgo, Michoacán and Nuevo León. Additionally, these states are interesting due to the variation they represent in political history. First, Hidalgo has historically been dominated by the PRI. The PRI has always occupied the governor's office, and the PRI has never relinquished a majority in the legislature. In fact, the PRI has maintained at least a 60% majority in the legislature. Therefore, Hidalgo is "typical" in a broader sense of state politics in Mexico during this time frame (1993-2003), representing a large number of PRI-dominated, non-competitive states.

Second, Aguascalientes has had a PAN governor since 1999. Also, its legislature has been highly competitive since 1996, when the PAN drew even with the PRI in terms of seat share (each with 41%). Similarly, Nuevo León has had a PAN governor since 1998, and the PAN and PRI have alternated majorities in the legislature since the mid-1990s.

Finally, Michoacán has had a PRD governor since 2002, and the PRD has received at least 23% of legislative seats since 1996, obtaining an absolute majority of seats (53%) in 2005.

These four cases, therefore, offer a range of between-case and within-case typicality, a range of competitiveness at both the executive and legislative levels, and a range of ideological orientation at both the executive and legislative levels. Indeed, even if we reduced the cases to three (choosing

between Aguascalientes and Nuevo León), we would retain this variation, providing a compelling set of case studies.

3.4 Extremeness

Extremeness offers another logic for case selection. This approach selects cases based on extreme values of the independent or dependent variable of interest. In this analysis, we might select cases based on extreme values of either majority distance (MD_GOV) or judicial spending. Following Gerring and Seawright, extreme values are those that lie “far away from the mean of the distribution” (23). Thus, extremeness is calculated using the following formula (where \bar{x} is the mean, and *S.D.* is the standard deviation for that variable).

$$E_i = \frac{|(x_i - \bar{x})|}{S.D.}$$

Figure 7 displays a histogram of the extremeness values for the dependent variable, judicial spending. As a general rule, a case is not considered extreme unless it has an “extremeness” score of at least two, indicated by the vertical line in the histogram (Gerring and Seawright, 2006: 17). Thus, we are interested in the nine observations to the right of this line.

FIGURE 7. HISTOGRAM OF EXTREMENESS VALUES FOR JUDICIAL SPENDING

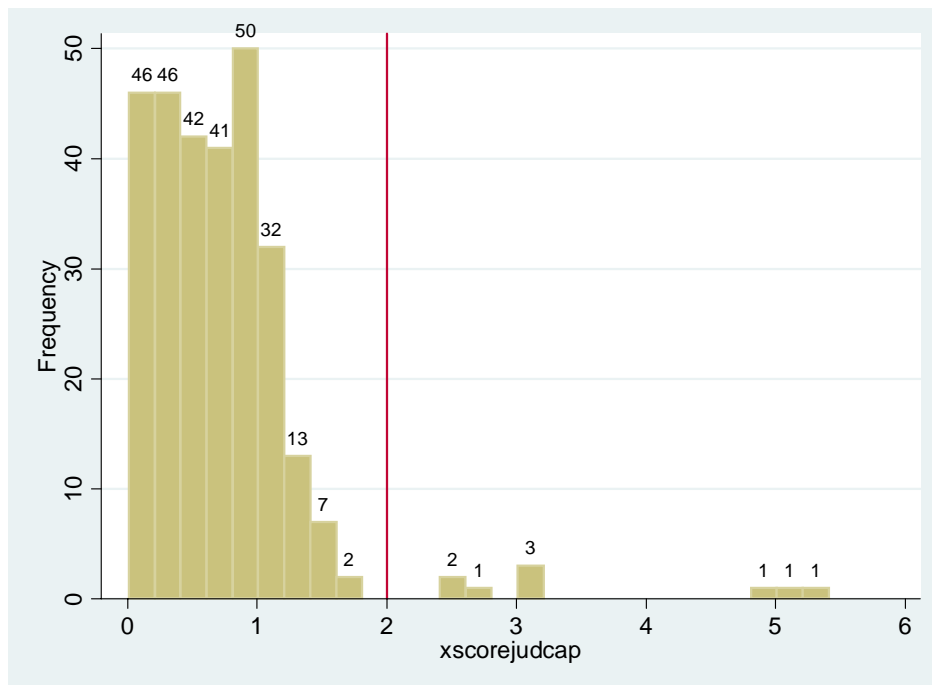


Table 8 identifies these nine observations. The Federal District appears as the case with the three most extreme values. However, Hidalgo accounts for the next three observations. Indeed, even if we based the determination of extremeness on the value of “3”, thereby being more conservative in characterizing observations as extreme, all three observations from Hidalgo would still count as extreme.

TABLE 8. EXTREMENESS VALUES FOR JUDICIAL SPENDING

state	year	judpercap	xscorejudcap
Distrito Federal	2002	235.33	5.3029
Distrito Federal	2003	232.00	5.2065
Distrito Federal	2001	221.12	4.8915
Hidalgo	2002	160.03	3.1230
Hidalgo	2003	156.34	3.0162
Hidalgo	2001	156.29	3.0147
Distrito Federal	1998	148.90	2.8008
Distrito Federal	1999	141.14	2.5761
Distrito Federal	2000	136.51	2.4421

3.5 Influential Cases

Observations may also be interesting given the influence they exert over the overall results of the analysis. If the results of the analysis would change substantially by changing the value of the dependent variable for a given observation, then that observation is considered to be influential. States with one or more influential observations may be interesting cases, especially if those influential observations are also atypical.

Gerring and Seawright suggest three measures for influence, but among these they recommend Cook’s distance (*cookdist*) (Gerring and Seawright, 2006: 23). The formula for *cookdist*, in matrix notation, is the following:

$$cookdist = \frac{r_i^2 \mathbf{H}_{i,i}}{(K+1)(1-\mathbf{H}_{i,i})}$$

In this equation, “*r*” represents the studentized residuals from the large-*N* analysis, and *H* is the hat matrix. The studentized residuals transform the regression residuals so that they have the same variance, and the diagonal elements of the hat matrix identify the leverage that each case exerts over the total outcome of the regression (with higher values indicating greater influence). Thus, the diagonal elements of *H*, individually identified as *H_{i,i}*, are often used on their own as indicators of influence. However, Gerring and Seawright recommend Cook’s distance statistic over the diagonal elements of

H because Cook's distance takes into account the value of the dependent variable in the regression (by including residuals in the calculation), while H is computed without reference to the dependent variable.

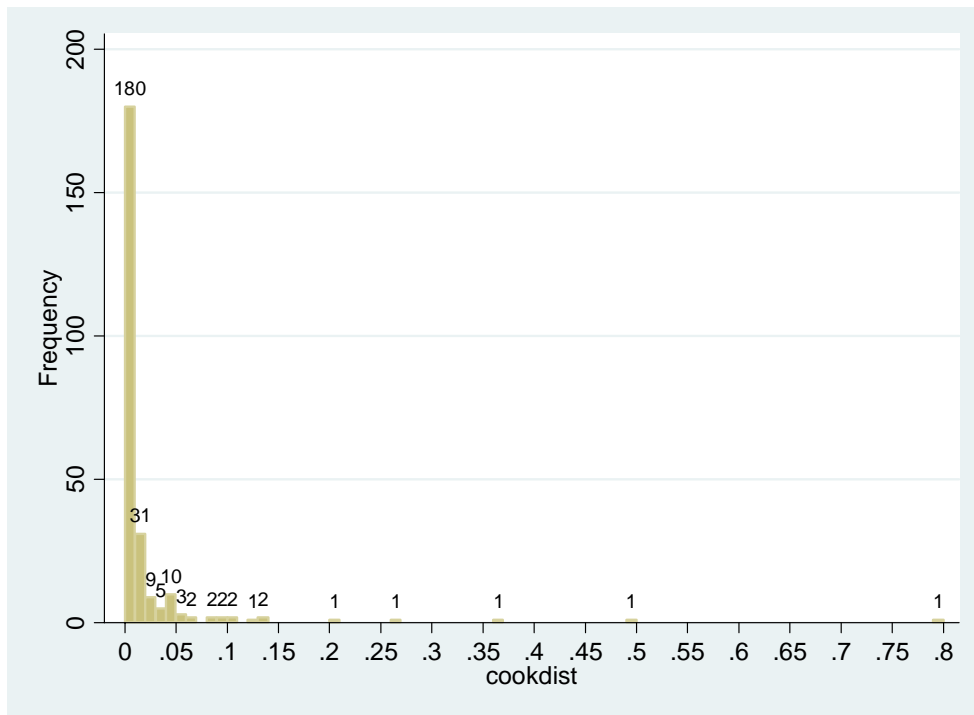
$$r_i = \frac{\varepsilon_i}{\sqrt{MSE(1 - \mathbf{H}_{i,i})}}$$

$$\mathbf{H} = \mathbf{X}(\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'$$

In sum, *cookdist* provides a combined measure of the leverage and of the adjusted residuals of each observation. In other words, *cookdist* tells us how influential and how typical an observation is within the large-N analysis, or “the most influential cases are those with substantial leverage that lie significantly off of the regression line” (Gerring and Seawright, 2006: 23). In Lieberman’s language, *cookdist* identifies important model-building observations.

Figure 8 below displays a histogram of *cookdist* as calculated from the results of the analysis of Model 1. The majority of observations have low influence and are grouped on the left end of the graph (180 out of an N of 254, or 71 %, are on the far left). High-influence observations are to the right of 0.2.

FIGURE 8. HISTOGRAM OF COOK’S DISTANCE STATISTIC (COOKDIST) FOR MODEL 1



A quick examination of this graph draws our attention to the observation with a *cookdist* value of approximately 0.8, and then the other four or five observations to its left (at approximately, 0.5, 0.37, 0.27, and 0.2). In selecting cases for in-depth analysis, we would certainly want to identify these influential observations.

Table 9 lists these observations and their *cookdist* values. The observations are listed in descending order, with the most influential observations at the top. Aguascalientes occupies the first two spots, with the highest *cookdist* values by far. In combination with the typicality scores, *cookdist* suggests there is within-case variation in typicality in Aguascalientes. The observations at years 1998, 2000, and 2003 are typical (Table 4), while the observations in years 1993 and 1994 are influential in the model, *i.e.*, they have a compelling combination of leverage and *atypicality*.

TABLE 9. TEN MOST INFLUENTIAL OBSERVATIONS

State	Year	cookdist
Aguascalientes	1993	0.7935
Aguascalientes	1994	0.4982
Chiapas	1994	0.3688
Chiapas	1993	0.2697
Campeche	1995	0.2015
Baja California Sur	1993	0.1369
Hidalgo	1997	0.1344
Baja California	1995	0.1233
Baja California	1996	0.1087
Coahuila	1994	0.1014

Figure 9 below plots actual and predicted values of judicial spending, weighting each observation by its value of *cookdist*. This is exactly the same graph as in Figures 3 and 4, except that the size of each observation corresponds to its value of *cookdist*. Thus, the two largest circles in the middle exert the greatest influence, followed by two circles off to the left, and then various other circles scattered both above and below the 45-degree line. Figure 10 is the exact same graph, except that it only includes the 10 most influential observations listed in Table 9 and labels each of these observations.

FIGURE 9. MODEL 1 ACTUAL AND PREDICTED Y-VALUES, WEIGHTED BY INFLUENCE (COOKDIST)

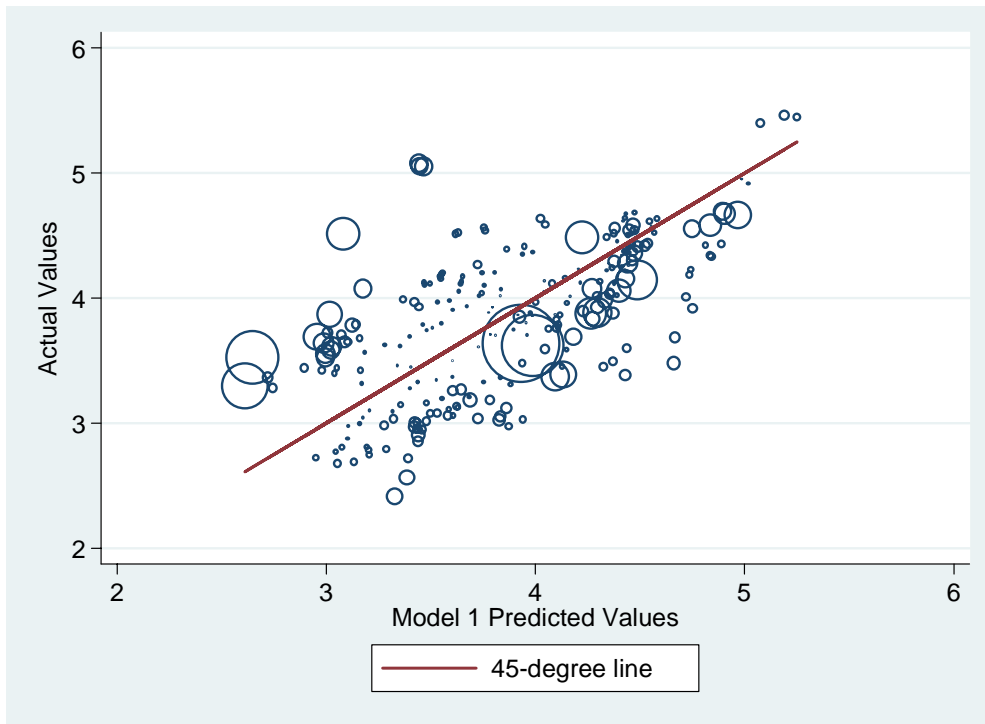
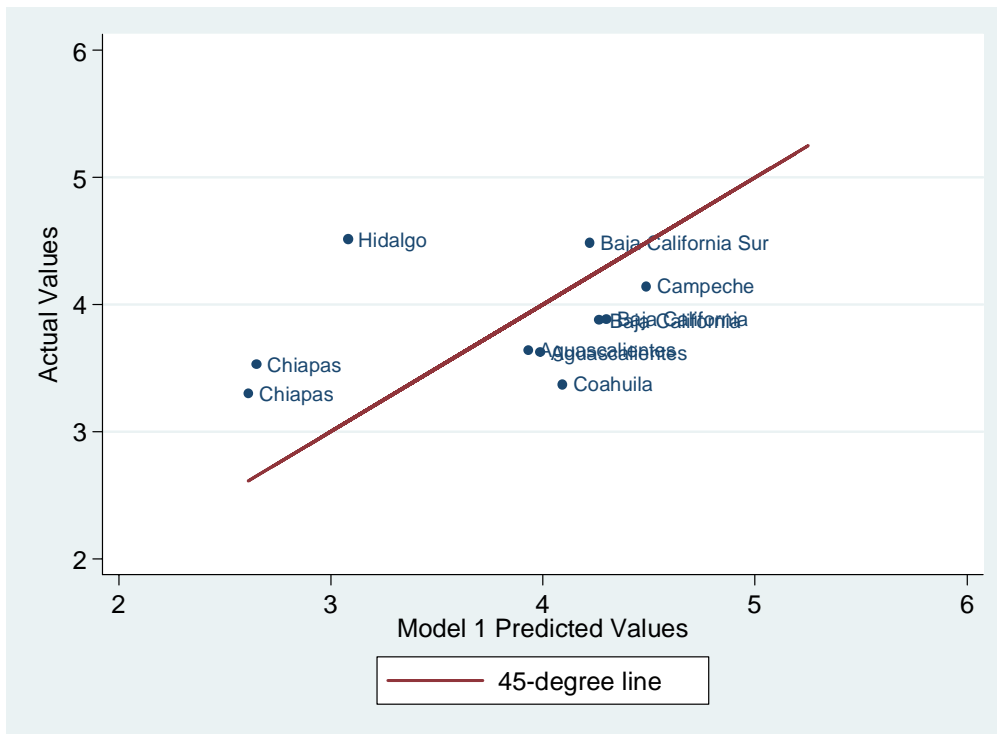


FIGURE 10. MODEL 1 ACTUAL AND PREDICTED VALUES, IDENTIFYING ONLY THE TEN MOST INFLUENTIAL OBSERVATIONS



In this last graph we can match the *cookdist* values from Table 9 and the two largest circles from Figure 8 with the state of Aguascalientes. Indeed, Aguascalientes makes a third appearance up and to the right of the other two observations. Among the states that were indicated as promising candidates for case selection from the analysis of typicality and extremeness, Hidalgo, Michoacán and San Luis Potosí also appear on this graph.

4. Two Cases: *Aguascalientes and Hidalgo*

This section focuses on two of the cases identified above –Aguascalientes and Hidalgo– “zooming in” to offer a more detailed analysis of the relationship between competitiveness at the executive level and judicial spending. First, Aguascalientes contributes typical observations in both Model 1 and Model 2 (Tables 4 and 6, respectively). In Model 1, Aguascalientes appears three times among the ten most typical observations, and it also demonstrates variation on the executive competitiveness variable, so it presents a good model-testing case. Additionally, Aguascalientes contributes the two most influential observations in Model 1.

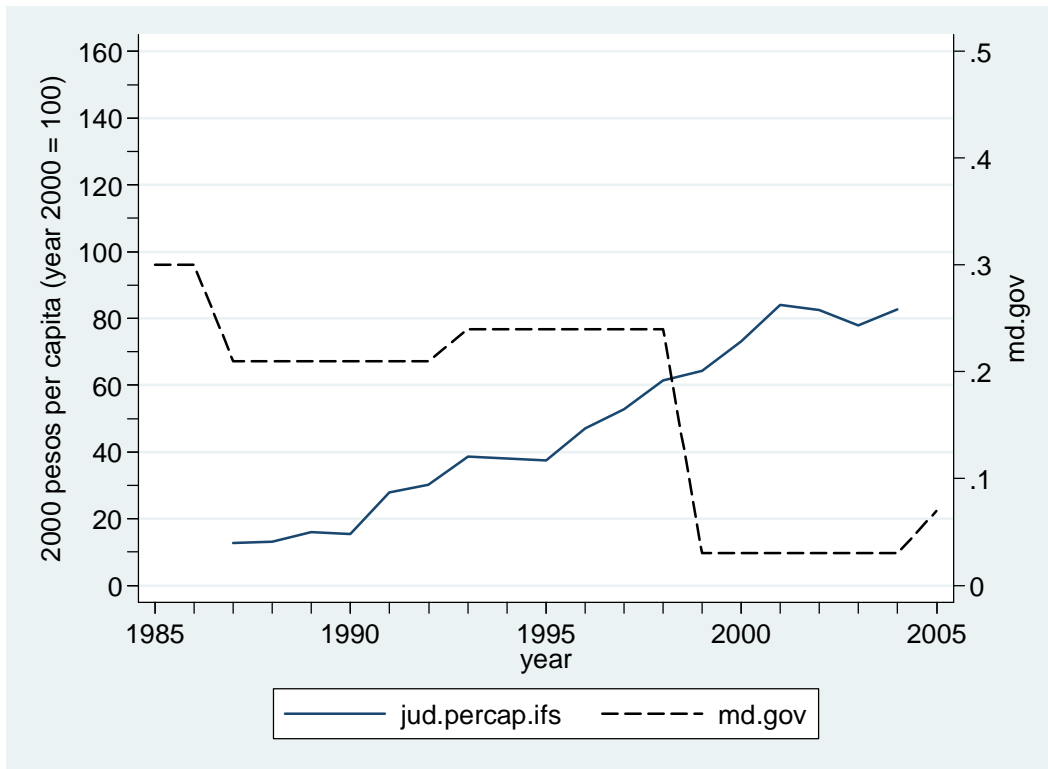
Thus, if we take a closer look at Aguascalientes, we expect to find a close relationship between competitiveness and judicial spending, offering confirmatory evidence of the theory of political competition and spending. Second, Hidalgo contributes typical and atypical observations in Model 1 (Tables 4 and 5). In other words, Hidalgo’s judicial spending is predicted very well one year, but very poorly in at least three other years. This variation in typicality across observations and over time within a single case suggests Hidalgo is a compelling candidate for within-case analysis, offering opportunities to build the model (*i.e.*, identify other explanations), while also offering at least one opportunity for confirmatory evidence. Furthermore, Hidalgo contributes three of the most extreme observations of judicial spending (Table 9). Finally, the state-year observation of Hidalgo-1997 is one of the ten most influential observations (Table 10).

The following paragraphs offer greater detail regarding patterns of judicial spending over time in each of these two states, along with observations about patterns of political competitiveness. These are not true, in-depth, qualitative case studies, but they are an intermediate step between the large-N analysis and such qualitative work, offering greater detail and texture regarding each case in order to further test the relationship between political competitiveness and judicial spending. In this section, all graphs have the same scales on X and Y axes for ease of comparison.

4.1 Aguascalientes

Figure 11 below displays judicial spending and executive majority distance over the last 20 years in Aguascalientes. The solid line is the dependent variable, and the dotted line is the principal explanatory variable from Model 1 (MD_GOV). This graph shows that judicial spending in Aguascalientes has increased fairly consistently since 1991, with some flat or slightly negative growth (*e.g.*, 1993-1995), and some clearly negative growth (2001-2003). Majority distance has been moderate considering the range of values in the Mexican context (-.15 to .45; see Table 2), and the large decrease in 1999 signals a rise in competitiveness. In other words, the governor's race that year was won by just over an absolute majority.

FIGURE 11. JUDICIAL SPENDING AND MAJORITY DISTANCE IN AGUASCALIENTES, 1985-2005



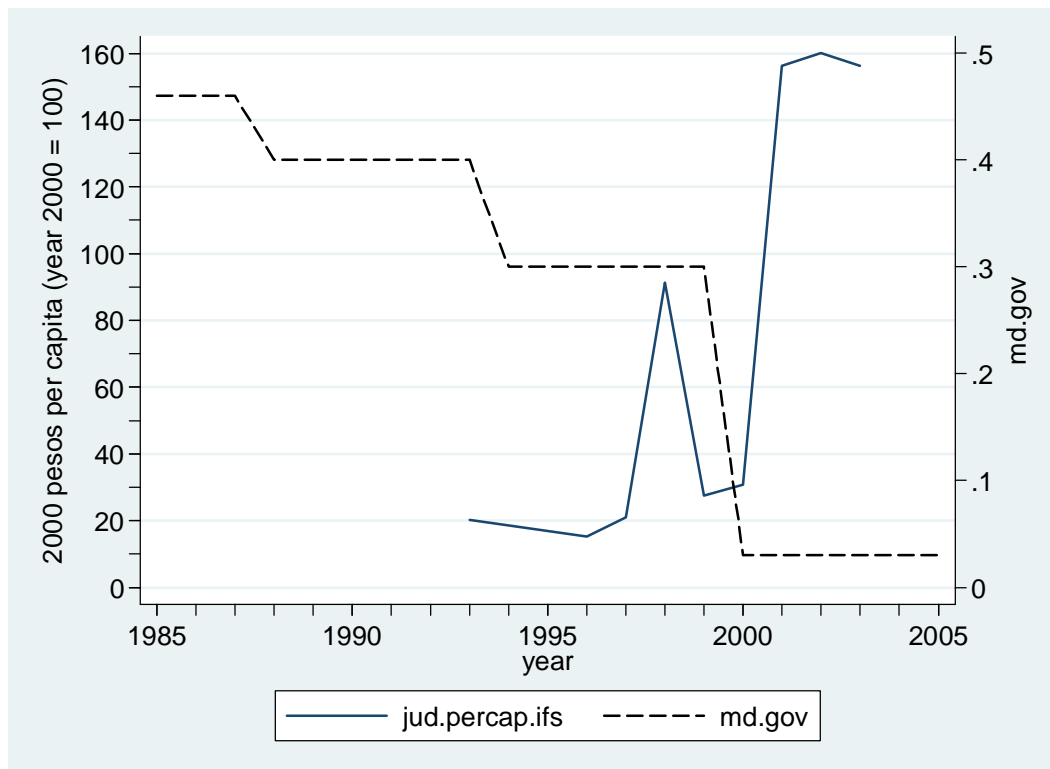
This graph offers supporting evidence for the findings of the large-N analysis. First, the large rise in competitiveness in 1999 (decrease in majority distance) is followed by a rise in judicial spending in 2000. Additionally, the decrease in competitiveness in 1993 is followed by a flattening or even small decrease in judicial spending in 1994 and 1995. Finally, the rise in competitiveness in 1987 may have provided the political environment for the initial impulse for growth in judicial spending in 1991, though the implied four-year delay between 1987 and 1991 makes this unlikely.

However, the graph also raises some questions. For instance, what causes the pronounced increase in judicial spending in 1996? Or the decrease in 2002? Admittedly, judicial spending cannot rise indefinitely (for political as well as pragmatic reasons), so does approximately 80 pesos per capita represent a kind of equilibrium for judicial spending in Aguascalientes? Thus, while offering confirmatory tests of the analysis in Model 1, Aguascalientes raise some additional questions. These are all questions that could be addressed in an in-depth case study. I leave this kind of study for future research, and turn to a more detailed examination of Hidalgo.

4.2 Hidalgo

Figure 12 displays judicial spending and executive majority distance for the state of Hidalgo over the last 20 years. Hidalgo's judicial spending starts at around 20 pesos per capita, spikes in 1998, drops again in 1999 and 2000, then rises dramatically in 2001 and remains high through the end of the time series in 2003. Majority distance started out very high—at the upper, most non-competitive limit for Mexican states—but has decreased consistently over time, with the largest decrease in 2000.

FIGURE 12. JUDICIAL SPENDING AND MAJORITY DISTANCE IN HIDALGO, 1985-2005



As with Aguascalientes, this graph offers supporting evidence for the large-N results, but also raises some questions. First, the large decrease in majority distance in 2000 is followed in 2001 by a large increase in judicial spending. Indeed, the magnitude of the rise in competitiveness seems to be matched by the magnitude of the rise in judicial spending. Spending increases by a factor of five from 2000 to 2001. Even if we consider the spike in 1998, spending in 2001 almost doubles the amount in 1998. Additionally, the low levels of judicial spending through 1997 are unsurprising given the low levels of competitiveness through approximately the same time period.

The spike in 1998, however, is anomalous and raises several questions. Given the static, non-competitive environment, what caused the change? Or, is it measurement error? Even if measurement error in 1998, what caused the steep rise in 2001? Or, if judicial spending is erroneously low in 1999 and 2000, what caused the increase in 1998? As with Aguascalientes, this closer examination of Hidalgo offers some supporting evidence for the positive relationship between competitiveness and judicial spending, but also suggests that other causal forces may be at work in 1998, and that other causal forces may be augmenting the effect of political competitiveness in 2001 through 2003. In both cases, legislative competitiveness, especially mid-term changes in competitiveness, may answer some of these questions. Again, however, these are questions that are left to future qualitative analysis.

Conclusions

This paper outlines a methodology for the study of state-level judicial performance in Mexico. The approach combines large-N and small-N analyses, relying on quantitative tools for case selection to “nest” the small-N analyses within the large-N sample. The large-N analysis identified a positive relationship between political competitiveness and judicial spending per capita, quantitative diagnostics identified interesting cases for qualitative work, and a quasi-qualitative analysis of two of these cases offered supporting evidence for the large-N analysis, while also raising other questions.

The methodology presented in this paper suggests a research path that can enhance our understanding of sub-national judicial politics in Mexico. The approach addresses three methodological shortcomings in the area of comparative judicial politics, highlighting state courts rather than federal courts, systematically integrating quantitative and qualitative methods, and leveraging this integration to identify causal mechanisms and explanatory propositions.

The discussion builds on recent scholarship that advocates the systematic use of quantitative tools for case selection in order to integrate qualitative and quantitative analysis, applying those tools to time-series cross-sectional data on judicial spending in the Mexican states. Although the findings of the analysis show a significant relationship between political competitiveness and judicial spending, as well as between the ideological orientation of the legislature and judicial spending, the discussion focuses on selecting cases for in-depth analysis to test this relationship further. Aguascalientes, Hidalgo, Michoacán, Nuevo León, and San Luis Potosí stand out as promising candidates for case studies. Among these, Aguascalientes and Hidalgo are perhaps the most compelling cases.

Although applied to judicial spending in Mexico, the integrated approach presented here could be applied to other components of judicial performance and to sub-national politics in other federal systems. Just as this model applies systematic and rigorous attention to variation in typicality, extremeness, and influence in the analysis of judicial spending, other models could do the same with indicators of accessibility, efficiency, quality, and accountability, as well as other metrics of judicial independence. Some of these concepts do not lend themselves easily to measurement across a large number of cases, and it is even more difficult to construct time series with data that has either not been reported or not been collected by state courts.

However, by conducting large-N analyses where such measurement is possible, and combining it with small-N analysis, scholars can contribute to empirical studies of the judiciary and enhance the analytic purchase leveraged against questions regarding variation in performance across states

or over time within individual states. Benefits from this kind of approach include the following: (1) systematic and transparent procedures, facilitating understanding and replication; (2) flexible analysis of different components of judicial performance; (3) a capacity to distinguish tensions and synergies between different components of performance, (*e.g.*, access vs. efficiency; independence vs. accountability); and (4) a capacity to identify the sequence of reforms, both among components and between levels of government. Finally, TSCS data offers a rich environment for both large-N analysis and case selection for small-N analysis. Where possible, efforts should be made to construct datasets with these spatial and temporal characteristics.

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