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**Political Career or Party Reputational Concerns?
Determining How Partisan Effects Matter for
Subnational Fiscal Discipline,
Evidence from Mexico**

Importante

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Abstract

State governors copartisan with national presidents are known for greater fiscal discipline than those from opposition parties. Yet, scholars use two distinct mechanisms to explain this: some argue political career concerns motivate governors' retrenchment but others that national party reputational concerns are at work. To distinguish between these alternatives, we analyze partisan effects at the municipal level. If mayors aligned with state and federal executives spend less than those with only copartisan presidents, career concerns matter more than party reputations. Statistical analysis of municipal debt and deficits in Mexico shows that copartisan governors have no effect on mayors aligned with presidents, and that party reputational concerns motivate their greater fiscal discipline over opposition places. The analysis also reveals "positive" and "negative" partisan effects: municipalities aligned with only opposition governors are less fiscally disciplined than others, while municipalities with no partisan allies are free from structural partisan effects.

Keywords: Partisan Effects, Fiscal Discipline, Municipal Debt, Municipal Spending, Mexico

Resumen

Es conocido que los gobernadores estatales que pertenecen al mismo partido político que el presidente del país tienen mayor disciplina fiscal que los de los partidos opositores. Así, los académicos usan dos mecanismos distintos para explicar esto: algunos argumentan que los deseos de una carrera política motivan el recorte del gasto de los gobernadores pero otros argumentan que la preocupación por la reputación nacional del partido político es el factor que entra en juego. Para distinguir entre estas dos alternativas, analizamos los efectos del partido a nivel municipal. Si los alcaldes alineados con los ejecutivos estatales y federales gastan menos que aquellos que sólo tienen presidente del mismo partido (pero no gobernador del mismo partido), entonces las preocupaciones por la carrera política importan más que la reputación del partido. Análisis estadísticos de la deuda y déficits municipales en México muestran que la existencia de gobernadores del mismo partido no tiene efecto en que los alcaldes alineados con el presidente, y que las preocupaciones por la reputación del partido motivan su mayor disciplina fiscal en comparación con los lugares de oposición. El análisis también revela efectos de partido político "positivos" y "negativos": municipios alineados sólo con gobernadores de oposición son menos disciplinados fiscalmente que otros, mientras que los municipios que no tienen aliados del mismo partido político (a nivel estatal y federal) están libres de efectos estructurales de partido político.

Introduction

It is well known that certain features of the federal fiscal contract and the federal constitutional bargain encourage state governors in federal systems down the path of fiscal indiscipline. Federal fiscal contracts that create vertical fiscal imbalances (Rodden, 2002) and lack hard budget constraints (Rodden, Eskeland, & Litvack, 2003) on state governments are particularly notorious for encouraging state leaders to overspend. Revenue sharing systems where taxes are collected by the federal government and shared with states reduce their incentive to design efficient public spending programs. Soft budget constraints reinforce this tendency as state executives believe that federal officials will cover excess spending if they are unable to pay. Federal constitutions that give states veto power over national policy aggravate these dynamics by preventing the rebalancing of federal fiscal contracts (Rodden, 2002, 2006; Rodden & Wibbels, 2002).

Some federal systems thus appear doomed to subnational fiscal indiscipline. Yet, scholars have shown that partisan considerations mitigate this tendency. Jones, Sanguinetti, and Tommasi (2000) note that presidential influence over the future career trajectories of copartisan state governors or vertical federal-state partisan alignment encourages state executives to rein themselves in to prevent presidential retribution. Offering an alternative argument, Rodden and Wibbels (2002) highlight how state governors' moderate their predisposition toward fiscal indiscipline when they believe it might harm the reputation of copartisan national incumbents and thus their parties; voters punish parties for national fiscal mismanagement and macroeconomic instability.

Despite strong empirical evidence of the presence of vertical partisan effects, scholars have until now not distinguished between the alternative mechanisms said to explain them. In this study, we seek to fill this theoretical gap. To this end, we take advantage of the presence of multiple tiers of government in federal systems. We show how comparison of the fiscal behavior of municipalities that share partisan ties with both state governors and federal executives to that of municipalities aligned only with federal officials can be used to distinguish between the alternative mechanisms of partisan effects. If municipalities sharing partisanship with both state and federal authorities underspend those with only copartisan federal officials, then political career concerns matter more to mayors than their parties' national reputations. If municipalities aligned with state and federal executives spend in line with those with only copartisan presidents, then national party reputational concerns matter more to mayoral fiscal behavior.

To make this case, we examine a nation whose federal structure creates opportunities for subnational fiscal indiscipline: Mexico. Mexico is a

convenient case for revealing the mechanism behind party effects. Its federal system is structured around states that are divided into municipalities. Mexico's federal fiscal contract is highly imbalanced with municipalities facing what amount to as only soft budget constraints. It is constitutionally federal with several political parties regularly winning federal, state, and municipal offices, creating vertical partisan alignment and juxtaposition. And, the relative newness of Mexico's subnational fiscal framework means that subnational executives are only just beginning to test its limits, making it a crucial case for analysis.

Although this study is designed to distinguish between alternative explanatory mechanisms, it also shows how partisan effects work at municipal levels of government. Despite evidence that mayors manipulate local spending ahead of elections in new democracies (Drazen & Eslava, 2010; Sakurai & Menezes-Filho, 2008; Veiga & Veiga, 2007) and that it sometimes benefits their parties at the polls (Jones, Meloni, & Tommasi, 2012; Sakurai & Menezes-Filho, 2008), the effect of executive partisan alignment on municipal spending in developing nations has not yet been studied. Yet, the potential benefits of increased spending for political support mean that municipal governments also likely have an incentive to overfish common pool resources just as state governors do in situations of high vertical fiscal imbalances and soft budget constraints. And, if this is the case, partisan considerations should also matter to their decisions.

The Structural Foundations of Subnational Fiscal Indiscipline

The level of subnational fiscal indiscipline is directly related to two key measures often making their way into complex federal fiscal contracts: vertical fiscal imbalances and soft budget constraints. Subnational governments that are self-financing (vertically fiscally balanced) and that face hard budget constraints (where the federal government credibly claims that it will not cover excess subnational expenditures) provide public services efficiently [see Oates (2005) and Weingast (2009) for extensive reviews of the development of scholarly research on this relationship]. Because constituents can choose their preferred subnational tax-benefit regime, subnational governments find ways to reduce their costs and strive toward the best and most efficient provision of public services to attract tax payers [see Oates (2005) and Weingast (2009)].

When federal governments bear the burden of collecting tax revenues but fund state governments, state governments have an incentive to deliver benefits but not in the most efficient way because voters cannot hold them accountable for the mismatch between taxes paid and policy benefits received (Prud'homme, 1995; Rodden, 2002, 2003; Rodden & Wibbels, 2002; Weingast, 2009). We switch from the general "subnational" government term

because much of the research examining vertical fiscal imbalances and soft budget constraints focuses on state (not municipal) levels. Policy inefficiencies associated with tax-benefit distortions are aggravated by soft budget constraints (Rodden et al., 2003). Hard budget constraints limit the capacity of subnational governments to engage in excessive spending, but soft budget constraints (whereby the federal government implicitly backs excess expenditures) push these leaders along the path of fiscal profligacy, raising distortions between taxes and benefits even further (Rodden, 2002; Rodden et al., 2003; Rodden & Wibbels, 2002; Weingast, 2009; Wildasin, 1997). State governments are thus encouraged to overfish federal “common pool” resources because they can externalize the costs of excess spending across the federation (Rodden, 2002; Rodden & Wibbels, 2002; Weingast, 2009; Wildasin, 1997).

The federal fiscal pact is just one element in the larger federal constitutional bargain that gives state leaders influence in national policy, usually through their direct territorial representation in national legislatures (usually in upper chambers) (Riker, 1964; Samuels & Snyder, 2001). State leaders see few penalties for fiscally irresponsible behavior because they would require majority congressional support. Changes to the federal fiscal contract become difficult, with those requiring constitutional amendment even harder. The federal constitutional bargain has thus been shown to foster excess public spending, lack of fiscal adjustment, high inflation, and other macroeconomic problems (e.g. Treisman, 1999, 2000; Wibbels, 2000; Wildasin, 1997).

What We Know and Don't Know about Vertical Partisan Effects

The discussion above paints a dire picture for some federal fiscal and constitutional configurations. However, scholars have shown that vertical partisan alignment between state and federal executives moderates state fiscal profligacy amidst vertical fiscal imbalances and soft budget constraints. In a study of the Argentine provinces, Jones, Sanguinetti, and Tommasi (2000) show that governors copartisan with presidents spent less than those from opposition parties. They argue that presidential influence over the future career trajectories of copartisan governors encourages these leaders to rein themselves in, even presidential influence does not extend to officials from other parties. To make their case, they cite studies showing how unified government (in the US) raises presidential capacity to encourage fiscal prudence among federal legislators who view federal resources in the same “common pool” way as governors would (Alt & Lowry, 1994; Cox & McCubbins, 2001; McCubbins, 1991).

Other scholars argue that the threat to state governors comes from voters who might punish national parties for fiscal profligacy and the negative

national macroeconomic conditions that come from it. In a cross-national analysis, Rodden and Wibbels (2002) find that greater shares of state governments copartisan with federal incumbents are linked to lower state spending. Although they recognize that presidents may exert career leverage over copartisan governors, they argue that governors also refrain from overfishing common pool resources out of concern for its effects on presidential efforts to deliver macroeconomic stability, and thus the incumbent party's national reputation. The stronger the negative national electoral externalities of state fiscal indiscipline, the more likely that state leaders will cut back (Rodden, 2006; Rodden & Wibbels, 2002).

Although both studies demonstrate the positive effect of vertical federal-state partisan alignment on fiscal discipline, neither is able to say which mechanism is at work. In the following section, we explain how to distinguish between the alternative mechanisms using municipal level analysis. Examining this third tier of government makes a lot of sense. Municipalities often manage autonomous budgets and enjoy the same vertical fiscal imbalances and soft budget constraints as states. And, a growing body of research demonstrates that municipalities, at least in developing democracies, engage in expansionary fiscal policies at election time (e.g. Drazen & Eslava, 2010; Sakurai & Menezes-Filho, 2008; Veiga & Veiga, 2007) and that this helps them at election time (Jones et al., 2012; Sakurai & Menezes-Filho, 2008).

Distinguishing Between Partisan Effects Using Municipal Fiscal Behavior

There are several possible channels through which partisan effects might work. From the perspective of municipalities aligned with national executives, municipalities might share partisan allegiance with state executives or they might not. As a notational shortcut, we call municipalities that share partisan affiliation with both state and federal executives *FSM* municipalities, and those that share partisan affiliation with only federal executives *FM* municipalities. From the perspective of municipalities not sharing partisan affiliation with national executives, municipalities might share partisan allegiance with state executives or they might not share partisan affiliation with any higher-level office and be “orphaned.” We will call municipalities that share partisan affiliation with state (but not federal) executives *SM* municipalities, and those that do not share partisan affiliation with state (or federal) executives *M* municipalities.

Let us first consider municipalities sharing partisan allegiance with federal presidents. If the career leverage logic outlined by Jones, Sanguinetti, and Tommasi (2000) is at work, then *FSM* municipalities should spend less than *FM* ones, and both less than *SM* and *M* municipalities. Political ambition theory suggests that entry-level politicians like mayors must prioritize moving up

within their state political apparatuses if they are to have a political future beyond their locality (Samuels, 2003; Schlesinger, 1966). Of course, mayors of extremely large cities might be able to jump to federal ones (and back again), but most mayors in federal systems must focus on gaining entrance to state offices as their next political goal (Samuels, 2003). We thus expect that any downward effect of federal-state-municipal (*FSM*) copartisanship on municipal spending compared to *FM* places suggests a career logic behind it.

In contrast, if *FSM* and *FM* municipalities show no difference in spending habits between them but are more fiscally disciplined than *SM* and *M* mayors, then federal party reputational effects are most likely motivating their fiscal discipline rather than state level career effects. If the presence of copartisan governors does not make a difference to *FSM* as compared to *FM* behavior, the presence of federal copartisans matters more. However, the relatively unknown status of most municipal officials to national executives means that it is unlikely that federal officials would appeal to mayors individually to rein in spending or that individual mayors would find themselves under the watchful eye of federal executives. As such, *FM* and *FSM* mayors are likely responding to concerns about the negative reputational effects their behavior can have on federal executives, as outlined by Rodden and Wibbels (2002). That mayors would undertake fiscal discipline out of concern for federal executives is in line with research showing that strong national macroeconomic conditions confer electoral benefits on copartisan subnational governors (Gélineau & Bélanger, 2005; Gélineau & Remmer, 2006). Any effort on the part of mayors to contribute to it would not benefit their careers directly but only through their effects on national incumbent party support. Of course, if *FSM* and *FM* municipalities are not different from *SM* and *M* ones, then no partisan effects of any kind - career or reputational -- are present at the municipal level.

It is also worth examining the behavior of municipalities not sharing partisan affiliation with federal authorities, that is, municipalities that share partisan affiliation with state executives only (*SM* municipalities) or that are orphaned (*M* municipalities). The literature on partisan effects demonstrates that state leaders who do not control the national executive tend to be more fiscally undisciplined than ones that do. Yet, no one has yet examined how and whether partisan effects might occur at the municipal level. If opposition state leaders do not fear career repercussions or reputational effects, given their lack of copartisan national executives, we should anticipate a similar logic motivating the fiscal behavior of copartisan municipal executives. *SM* municipal mayors thus should be less fiscally disciplined than *FSM* and *FM* municipalities. Orphans should also be less fiscally responsible than *FSM* and *FM* places. We suspect that *SM* mayors should outspend *M* mayors, however. Orphans have an incentive to spend to ensure their survival in their highly

adverse political contexts but they may be at a disadvantage compared to *SM* places that might be able to count gubernatorial support for funds.

A Crucial Case: Mexico's Multi-Tiered Federal System

We test our argument about partisan effects using data on municipal debt and deficits in Mexico. Mexico satisfies three important conditions for determining the dynamics of vertical partisan effects: its federal system includes three tiers, three large parties regularly win subnational executive offices, and its federal fiscal arrangements support subnational vertical fiscal imbalances and informal soft budget constraints. Mexico is divided into 31 states and a Federal District. States are divided into about 2,444 municipalities, depending on the year (we exclude the Federal District because it is not subdivided into fiscally autonomous municipalities). Although the dominant Institutional Revolutionary Party (PRI) controlled Mexico throughout most of the 20th century, this party lost control over the presidency in 2000. Two other parties - the National Action Party (PAN) that won the 2000 and 2006 presidential races and the Democratic Revolution Party (PRD) - that nearly won in 2006 and raced well in 2012 - frequently win subnational elections. The PRI won the national presidency in 2012.

State and municipal governments in Mexico are mainly financed through intergovernmental transfers, whose high vertical fiscal imbalances lower their incentives to ramp up own source revenues (Sour, 2004), and raise their incentive to run deficits and incur debt (e.g. Cabrero & Carrera, 2002; Giugale, Hernández Trillo, & Oliveira, 2000; Hernández Trillo, Díaz Cayeros, & Gamboa González, 2002; Hernández Trillo, Díaz-Cayeros, & Gamboa González, 2002). We calculate that between 2001 and 2010, 7% of total state revenues came from own source revenues, 85% from federal and state transfers, 2% from “financing” (a euphemism for unfunded deficits), and the remainder from a variety of other sources (Instituto Nacional de Estadística Geografía e Informática (INEGI)). Between 2001 and 2010, 22% of total municipal revenues came from own source revenues, 69% from federal and state transfers, 6% from “financing,” and the remainder coming from a variety of other sources (Instituto Nacional de Estadística Geografía e Informática (INEGI)).

Since 2001, and a series of reforms to the Fiscal Coordination Law, the Public Debt Law, and the Regulation of Article 9 of the Fiscal Coordination Law, beginning in 1997, states and municipal governments have been allowed to contract debt from public and private sources for capital investments (Auditoría Superior de la Federación, 2011). State and municipal governments must secure approval from the national Finance Secretariat (SHCP) for any contracted loans and are technically prohibited from borrowing to fund current expenditures. States and municipalities seeking to access public and private debt markets must secure credit ratings from at least two agencies,

and must often gain approval from municipal councils (for municipal loans) and state legislatures (for municipal and state loans) for debt projects. There are a variety of municipal processes and state rules, with some more restrictive than others. The SHCP has formally established criteria for approving state and municipal loans that is based on state and municipal revenues (Auditoria Superior de la Federación, 2011; Revilla, 2013). The approval process for state and municipal loans thus would appear to serve as a hard budget constraint on municipal fiscal behavior.

In practice, however, loans sought for capital investment and public works do not appear to receive such strict oversight. Any required municipal council and state legislative approval can be negotiated, while there is considerable evidence that state rules are often not always enforced (Auditoria Superior de la Federación, 2011). At the federal level, although the requirements for debt acquisition are clearly stated, it is unclear as to how and whether they are enforced, given the lack of information on vetting and vetoed loan requests. Loans from the variety of Mexico's national development banks also are known to lack formal municipal or state approval processes, while the behavior of these banks is widely criticized (e.g. International Monetary Fund & The World Bank, 2005). As such, it is possible for municipalities to engage in questionable borrowing, despite stated formal constraints, and the growing number of state and municipal debt scandals in Mexico attest to this.

Municipalities can also engage in unfunded deficit spending that does not go through any formal process of approval. Such non-sanctioned deficits often take the form of arrears on payments to service providers or public sector wages. Mayors often divert resources designated for capital investments to current expenditures, later seeking loans to finance infrastructure investments and public works (see, for example, Covarrubias, 2012; NOTIMEX, 2013). Despite the presence of state and federal laws governing debt acquisition, we conclude that Mexican municipalities face informal soft budget constraints, although they vary by state (Auditoria Superior de la Federación, 2011). Our appraisal is in line with what other scholars have concluded (e.g. Cabrero & Carrera, 2002; Giugale et al., 2000; Hernández Trillo, Díaz Cayeros, et al., 2002; Hernández Trillo, Díaz-Cayeros, et al., 2002).

Even so, it is important to point out that state and municipal debt in Mexico is still low by comparative standards. In 2001, total state and municipal debt was equivalent to 1.5 percent GDP, by 2011 it was 2.5 percent GDP (Secretaría de Hacienda y Crédito Pública (SHCP)). However, its swift rise over the past decade has raised concerns (Auditoria Superior de la Federación, 2011) and fostered national media attention and policy debates about how to rein it in (see, for example, Melgar, 2013; Ramos, 2013). In 2001, total state and municipal debt was 99 billion Mexican pesos but by 2011 it was 391 billion pesos, equivalent to 990 and 3,450 pesos per capita in those

respective years (Secretaría de Hacienda y Crédito Pública (SHCP)). As a percent share total federal transfers, total state and municipal debt represented 50% transfers in 2001 and nearly 80% in 2011 (Secretaría de Hacienda y Crédito Pública (SHCP)). Importantly, these official debt figures report only debt registered with the Finance Secretariat, with loans that have been contracted but not formally registered estimated to bring these totals much higher (Auditoria Superior de la Federación, 2011).

However, it is Mexico's low and early stage of subnational indebtedness that make it a crucial case testing arguments about partisan effects. Partisan effects should be readily detected in countries with longer histories of subnational fiscal indiscipline because subnational executives have experience in how their decisions matter for their political aspirations. Partisan effects should not be so easily detected where both competitive democracy and rules about subnational debt and deficits are recent. Mexico thus provides an inhospitable environment for finding partisan effects, strengthening our capacity to generalize beyond this case should we find that they are present.

Statistical Analysis of Mexican Municipal Debt and Deficits

We assess the presence and channels of partisan effects on municipal spending in Mexico using cross sectional times series analysis. We consider two different dependent variables. One dependent variable covers the capital investment loans described above from Mexico's Finance Secretariat (Secretaría de Hacienda y Crédito Pública (SHCP)). We transform total yearly reported Mexican peso-denominated loan debt into yearly per capita square roots. The SHCP has only recorded this data since 2004, so we consider 2004 through 2012. The other dependent variable is yearly municipal budget shortfalls from Mexico's Statistics Institute (Instituto Nacional de Estadística Geografía e Informática (INEGI)). We transform these total yearly Mexican peso figures into their per capita square roots as well. To keep the analysis consistent with the SChP debt data, and any underlying subnational or national dynamics particular to this period, we examine the same 2004 through 2012 span.

The main explanatory variables are the four possible vertical partisan alignment structures. For parties nationally incumbent, dummies record whether municipalities shared partisan affiliation with both state and federal executives (*FSM* municipalities) or whether they shared partisan affiliation with only federal executives (*FM* municipalities). For parties not nationally incumbent, dummies record whether municipalities shared partisan affiliations with state executives (*SM* municipalities) or whether they were orphans (*M* municipalities). These categories are mutually exclusive.

Mexico's 2,444 municipalities and the 9 years under study gave us 21,958 total potential municipal observations, with 1701 *FSM* (PAN president,

governor, mayor) municipal observations, 3049 *FM* (PAN president, mayor) observations, 9339 *SM* observations (PRI governor, mayor; PRD governor, mayor), and 7869 *M* observations (orphaned PRI, PRD, or a variety of other small parties). During the 2004-2012 period, only the PAN, PRI, PRD, or an infrequent PAN-PRD coalition held state executive office (on their own or in coalition with other small parties). We considered any coalition between one of these main PAN, PRI, PRD parties and other small parties as dominated by (and thus copartisan with) the main core party. The case where the state executive was run by a PAN-PRD coalition was considered copartisan with the PAN federal executive. The state of Oaxaca only holds partisan municipal elections in a minority of its municipalities, so state election results were used to estimate municipal partisan control. Election results are from state electoral institutes, the Federal Electoral Institute (Instituto Federal Electoral (IFE), Elecciones en México), and the Center for Research on Development (Centro de Investigación para el Desarrollo (CIDAC)).

We include control variables for the margin of victory in the municipal election and a municipal election year dummy because we expect greater spending in election years and when elections were only narrowly won. We also might expect municipal (earmarked and unearmarked) transfers (square root per capita), vertical fiscal imbalances (transfer revenue / total revenue), population size (square root), urbanization (percent rural), and education (percent literate) to be positively associated with municipal debt or deficit spending, and poverty (marginality index) and indigenous culture (percent indigenous language speakers) to be negatively associated with it. Data is from the National Institute for Geographic and Informational Statistics (Instituto Nacional de Estadística Geografía e Informática (INEGI)) and the National Population Council (Consejo Nacional de Población (CONAPO)).

To analyze our data, we use Generalized Least Squares (GLS) - Random Effects (RE) models. GLS models account for within-municipal unit heteroskedasticity and autocorrelation. Woolridge tests showed that we could reject the null hypothesis that there was no serial autocorrelation. Wald tests for group-wise (unit level) heteroskedasticity in the residuals showed that we could also reject the null hypothesis there as well. We choose RE models for substantive and methodological reasons. Our main explanatory variables for the different partisan alignments do not vary much over time in most municipalities, while we care most about differences in the way partisan effects explain differences across municipalities, even if they might also explain fiscal behavior over time within municipalities as well. RE estimators account for both within- and between-unit effects; Fixed Effect (FE) estimators measure only within-unit effects.

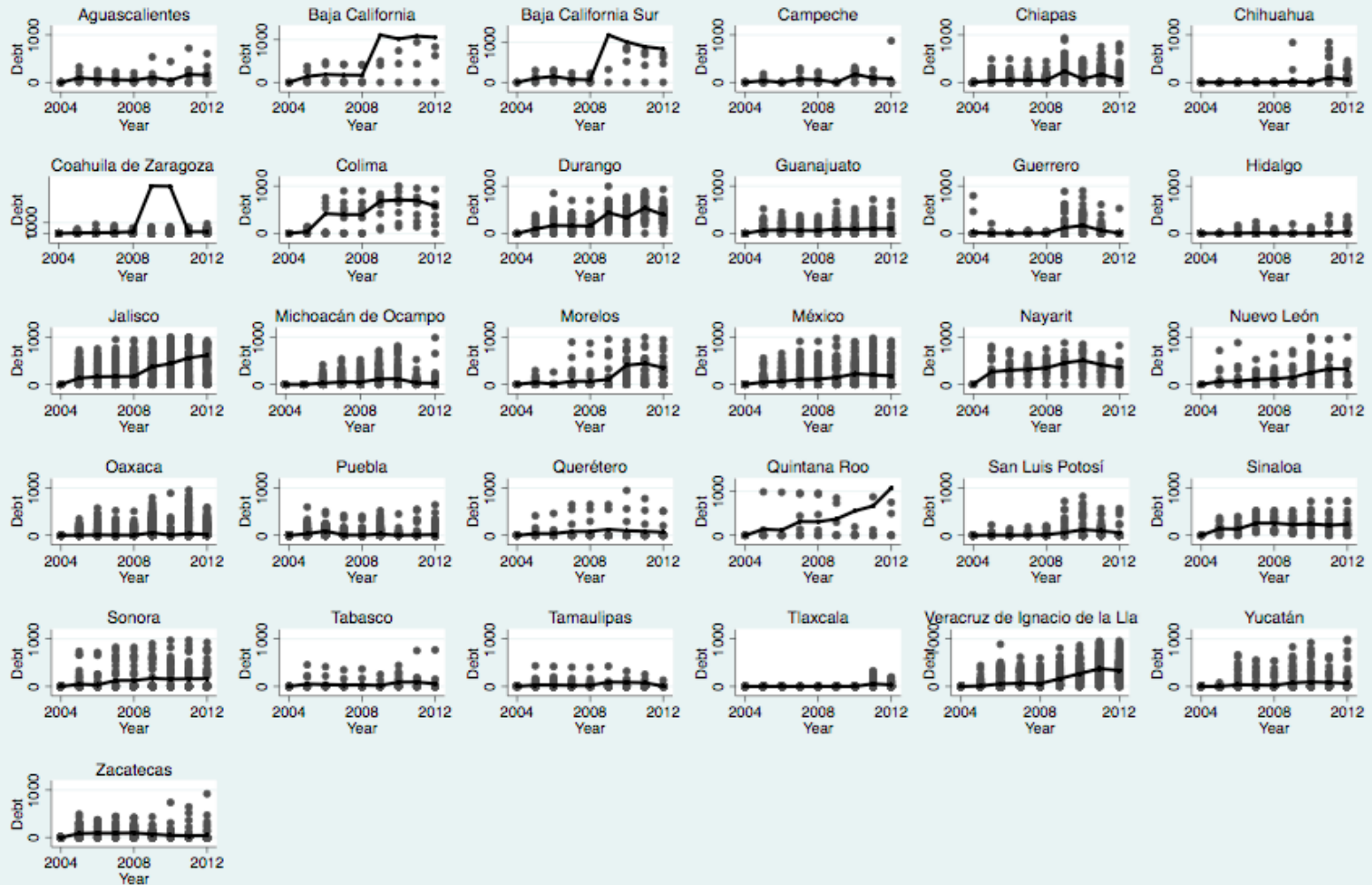
Breusch and Pagan Lagrangian multiplier tests on GLS-FE models demonstrated that we could reject the null that the unit specific residuals are all zero, showing that there is variance across the units (municipalities)

beyond that explained by our models and thus that RE models are appropriate. Hausman tests comparing GLS-RE models to GLS-FE ones showed that their estimators were statistically different from one another. However, a recent study shows that Hausman tests are not effective in deciding between FE and RE models and that larger data sets (with many units and five or more observations per unit) produce “no discernible difference in estimates of B between the two estimators, even when the regressor and the unit effects are very highly correlated” (Clark & Linzer, 2012). The large number of units and time periods, the nature of our explanatory variables (usually very little change within municipal units), and our main theoretical concerns (mostly cross-municipal unit variation) lead us to conclude that RE models are the most appropriate and can provide unbiased results (see also Clark & Linzer, 2012).

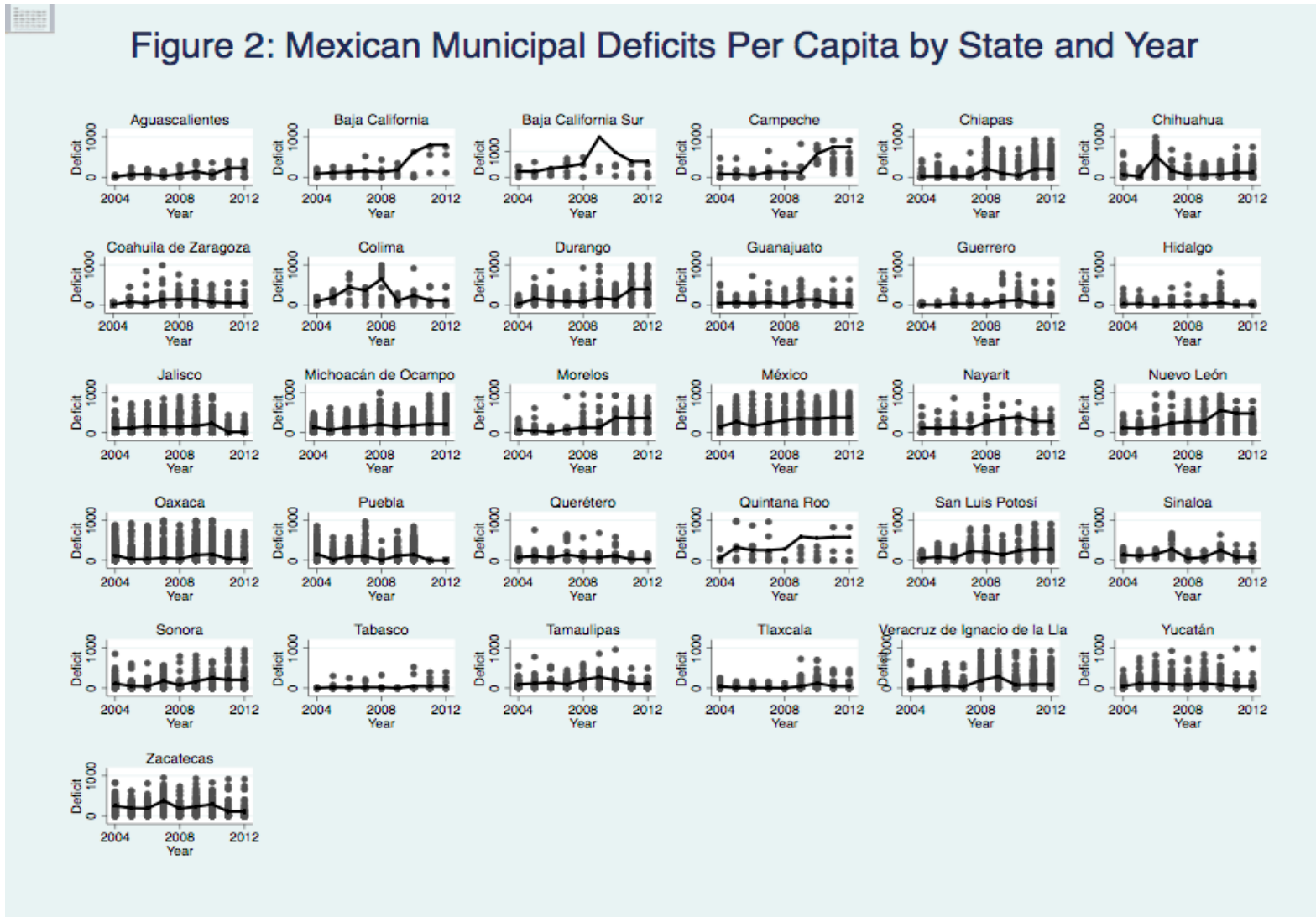
We estimate the GLS-RE models using robust standard errors (that cluster the standard errors on the municipality to address the within-unit heteroskedasticity and autocorrelation) (StataCorp LP, 2011, p. 471; Wooldridge, 2009). A test for whether coefficients for year dummy variables were jointly equal to zero failed to reject the null hypothesis that they were, so we include year fixed effects in all models. We include state fixed effect (dummy) variables to control for differences in states’ soft budget constraints and for the number of municipalities lying within them. (State level dummy variables would drop out in FE models, which is another strike against these models.) We include state dummies instead of clustering standard errors by states because, although we expect that certain state features might matter for the uppermost level of fiscal profligacy reached by some municipalities, we do not expect that all municipalities within a state will choose to reach these heights just because of this shared state attribute. Indeed, this would contradict the purpose of this study, which is to examine partisan effects on municipal fiscal behavior within states. Clustering standard errors by state would be appropriate if all municipalities within each state were affected in the same or a similar way by their common state attribute (Primo, Jacobsmeier, & Milyo, 2007).

Figure 1 and Figure 2 present our municipal debt per capita and deficits per capita data by state over time. Four things are noteworthy: variation among states in yearly per capita municipal debt and deficit averages (justifying state dummies); municipal observations that range from zero to a variety of upward bounds (justifying the omission of state clustered standard errors); patterns in municipal debt do not match those of municipal deficits (justifying their separate treatment); and wide variation in municipal debt and deficit patterns within and across states do not reflect state differences (suggesting the importance of other factors at work, the substantive purpose of this study). For presentational purposes, we limit the upward bound of the y-axis to 1,000 pesos per capita but many municipalities exceed it.

Figure 1: Mexican Municipal Debt Per Capita by State and Year



Note: Dots show individual municipal debt per capita in Mexican pesos by year. Lines show average municipal debt per capita in Mexican pesos in the state by year.



Note: Dots represent individual per capita municipal deficits in Mexican pesos by year. Lines show average per capita municipal deficits in Mexican pesos in the state by year.

Table 1 presents results for three models analyzing municipal debt. Model 1 includes the main partisan effects dummies. The coefficient for *FM* municipality was not significant, demonstrating that municipalities sharing partisan affiliation with the federal executive but not state governors engaged in the same fiscal behaviors as those sharing partisan affiliation with both state and federal executives, our *FSM* municipalities, the omitted category in the model. We omit *FSM* municipalities as we might expect these municipalities to demonstrate the most potential for fiscal discipline among all municipalities. Both *FSM* and *FM* municipalities demonstrated lower debt per capita levels compared to municipalities not incumbent at the national level but who shared partisan affiliation with state governors, our *SM* municipalities. The positive and significant coefficient for the *SM* municipality dummy variable demonstrates that these places had higher debt loads than *FSM* and thus also *FM* places. The 1.07 *SM* Municipality coefficient means that, all else being equal, *SM* municipalities would have nearly 50 pesos more per capita debt than equivalent *FSM* municipalities owing 500 pesos per capita, a 10% difference. (The number of observations in all models in Table 1 does not total to 21,958 due to missing fiscal control variable data.) Figure 3 shows the differences in predicted average per capita municipal debt (square root) between *FSM*, *FM*, *SM*, and *M* municipalities over time (calculated holding all other covariates at their means, using Stata's margins and marginsplot commands). In all years, *FSM* municipalities posted lower deficits than *SM* ones, with *FM* and *M* places not very different from *FSM* ones, as demonstrated by their coefficients' lack of statistical significance in Model 1 in Table 1. We discuss the *M* municipalities below.

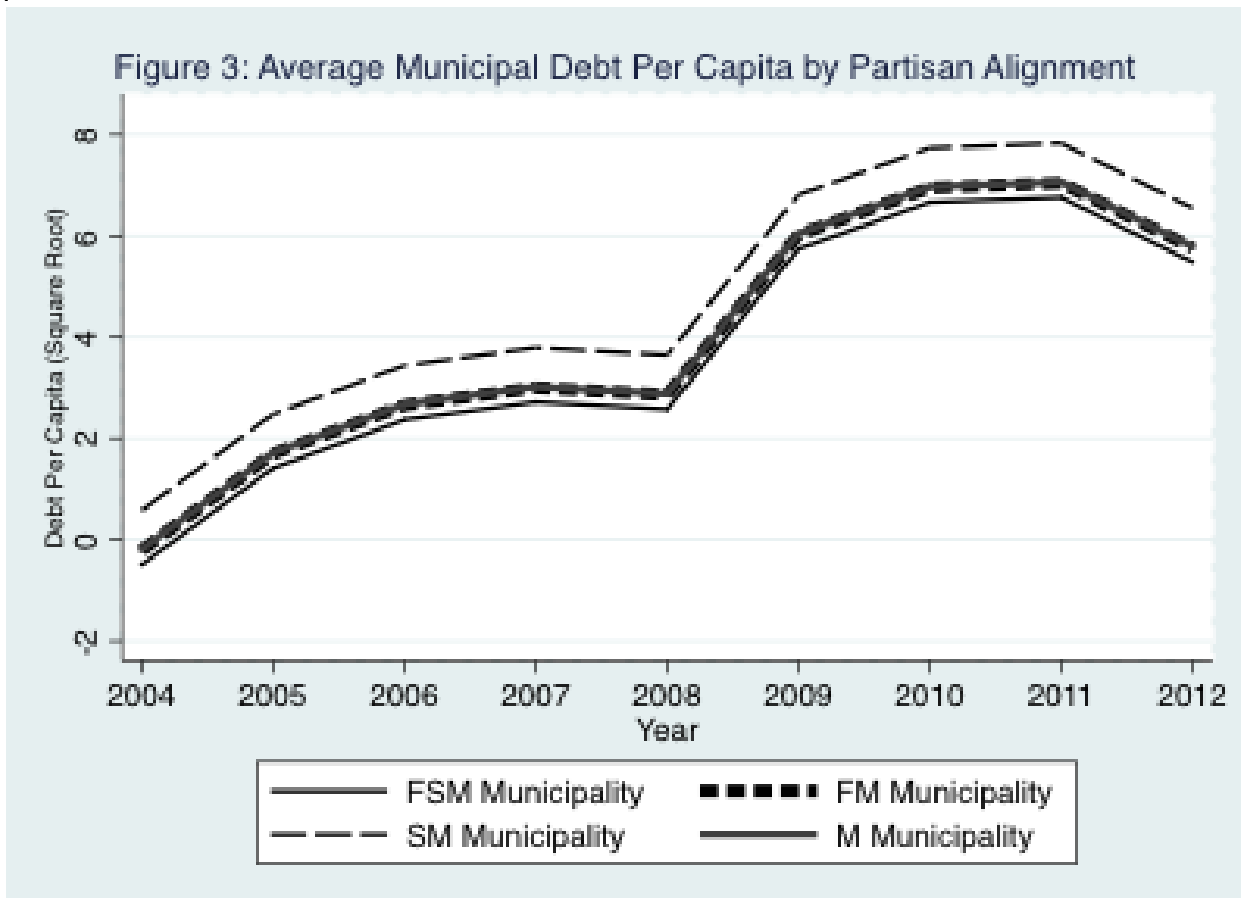
TABLE 1: PARTISAN EFFECTS AND MUNICIPAL DEBT (GLS-RE MODELS)

	MODEL 1			MODEL 2			MODEL 3		
	COEF.	SE	P-VALUE	COEF.	SE	P-VALUE	COEF.	SE	P-VALUE
TOTAL POPULATION (SQRT)	0.014	0.001	0.000	0.014	0.001	0.000	0.014	0.001	0.000
UNEARMARK TRANSF. (SQRT)	0.005	0.013	0.693	0.005	0.013	0.694	0.006	0.013	0.655
EARMARK TRANSF. (SQRT)	-0.029	0.015	0.053	-0.029	0.015	0.053	-0.028	0.015	0.060
VERTICAL FISCAL IMBALANCE	-3.495	0.802	0.000	-3.493	0.802	0.000	-3.519	0.800	0.000
MARGINALITY INDEX	-0.132	0.258	0.609	-0.133	0.258	0.608	-0.111	0.258	0.668
PERCENT RURAL	0.203	0.358	0.572	0.203	0.358	0.570	0.196	0.358	0.585
PERCENT INDIGENOUS	-1.372	0.326	0.000	-1.372	0.326	0.000	-1.383	0.325	0.000
PERCENT LITERATE	-4.606	2.078	0.027	-4.606	2.078	0.027	-4.545	2.073	0.028
MUNICIPAL ELECTION YEAR	-0.719	0.105	0.000	-0.719	0.105	0.000	-0.731	0.105	0.000
MARGIN OF VICTORY	0.273	0.553	0.622	0.278	0.560	0.620	0.386	0.555	0.487
FSM MUNICIPALITY	OMITTED			OMITTED			OMITTED		
FM MUNICIPALITY	0.286	0.366	0.433	0.286	0.365	0.434	0.363	0.366	0.321
SM MUNICIPALITY	1.073	0.330	0.001				1.136	0.332	0.001
SM: PRI MUNICIP/STATE				1.067	0.335	0.001			
SM: PRD MUNICIP/STATE				1.109	0.457	0.015			
M MUNICIPALITY	0.303	0.310	0.329	0.304	0.312	0.328			
M: PRI ORPHANS							0.067	0.328	0.838
M: PRD ORPHANS							0.257	0.373	0.490
M: NATIONAL PARTY ORPHS							0.460	0.448	0.304
M: STATE PARTY ORPHANS							1.920	0.392	0.000
CONSTANT	6.052	2.113	0.004	6.052	2.112	0.004	5.947	2.107	0.005
CORR(U _I , X _B)	ASSUME=0			ASSUME=0			ASSUME=0		
SIGMA _U	3.419			3.420			3.420		
SIGMA _E	6.747			6.747			6.742		

TABLE 1: PARTISAN EFFECTS AND MUNICIPAL DEBT (GLS-RE MODELS)

	MODEL 1			MODEL 2			MODEL 3		
	COEF.	SE	P-VALUE	COEF.	SE	P-VALUE	COEF.	SE	P-VALUE
RHO	0.204			0.204			0.205		
WALD CHI-SQUARED	3165.6		0.000	3168.6		0.000	3179.2		0.000
R-SQUARED WITHIN	0.123			0.122			0.1250		
R-SQUARED BETWEEN	0.441			0.234			0.4420		
R-SQUARED OVERALL	0.262			0.170			0.2631		
NUMBER OF OBS	18126			18126			18126		
NUMBER OF GROUPS	2430			2430			2430		
STANDARD ERRORS	ROBUST HUBER WHITE SANDWICH			ROBUST HUBER WHITE SANDWICH			ROBUST HUBER WHITE SANDWICH		
YEAR FIXED EFFECTS	YES			YES			YES		
STATE FIXED EFFECTS	YES			YES			YES		

Note: Dependent variable is the square root of per capita municipal debt. GLS-RE = Generalized Least Squares with Random-Effects.



Note: Y-Axis is the square root of the average predicted debt per capita in Mexican pesos. Values were calculated by setting all other covariates in the debt model from Model 1 Table 1 at their means.

The coefficients for the *FM* and *SM* municipalities demonstrate two important things. First, the presence of copartisan state governors among those municipalities sharing partisan affiliation with national executives (*FSM* municipalities) made no difference in their fiscal behavior compared to municipalities that only shared partisan affiliation with the national executive (*FM* municipalities). This provides support for the argument that fiscal discipline is driven by considerations for its effect on national party reputations rather than out of concern for state governors' leverage over municipal careers. Second, the positive and significant *SM* coefficient shows that municipalities enjoying copartisan state executives juxtaposed against federal executives faced the same incentive to overfish common pool resources as their state executives do in these same circumstances. As a check for robustness, we also ran all models using General Estimating Equations (GEE) models using a random effects robust variance (RE) estimator that also addresses arbitrary heteroskedasticity and within-unit correlation but in another way (see Wooldridge, 2006). All results are in line with GLS-RE

findings and can be included in an online appendix, but are not included here for reasons of space.

Out of curiosity, we broke *SM* municipalities down by party in Model 2. In Mexico, PAN, PRI, and PRD officials have regularly accused each other of excessive subnational public spending, debts, and deficits in recent years. In order to assess the merits of these claims, we separated *SM* Municipalities into PRI municipalities with PRI governors and PRD municipalities with PRD governors. Model 2 shows that both PRI and PRD municipalities had higher debt loads than *FSM* municipalities. Other models (not include here but available upon request) where we use PRI *SM* places as the omitted case shows that PRD *SM* municipalities behaved not differently from their PRI colleagues (with the coefficient for this variable not significant). There thus appears to be no difference between PRI and PRD indebtedness, although both were more indebted than their PAN counterparts. The GEE-RE model confirms these findings and can be made available in an online appendix.

Before discussing the municipal orphans, we discuss the results for *FSM*, *FM*, and *SM* partisan effects on municipal deficits found in Table 2. Model 1 presents the main partisan effects and Model 2 parses out PRI *SM* and PRD *SM* municipalities. Model 1 shows that *FM* municipalities behaved no differently from *FSM* ones, with the *FM* coefficient not significant. Again, the presence of copartisan state governors had no effect on the behavior of municipalities sharing partisan allegiance with the federal executive, lending support to theories about party reputational effects over state career concerns. Model 1 also shows that *SM* municipalities ran higher deficits than *FSM* and *FM* places. The 0.86 *SM* Municipality coefficient means that, all else being equal, *SM* municipalities would have nearly 40 pesos more per capita deficit spending than equivalent *FSM* municipalities owing 500 pesos per capita, an 8% difference. Figure 4 compares differences in predicted average per capita municipal deficits (square root) between *FSM*, *FM*, *SM*, and *M* municipalities over time (holding all other covariates at their means). In all years, *FSM* municipalities posted lower average deficits than *SM* ones, with *FM* and *M* places not very different from *FSM* ones. Parsing out the partisan identity of *SM* municipalities in Model 2 shows that both PRI and PRD *SM* municipalities were more deficit prone than PAN run *FSM* or *FM* places. Additional models (not included but available upon request) where PRI *SM* municipalities were used at the omitted dummy showed no difference between PRI and PRD deficit levels. All results were reproduced in GEE-RE models that can be made available upon request.

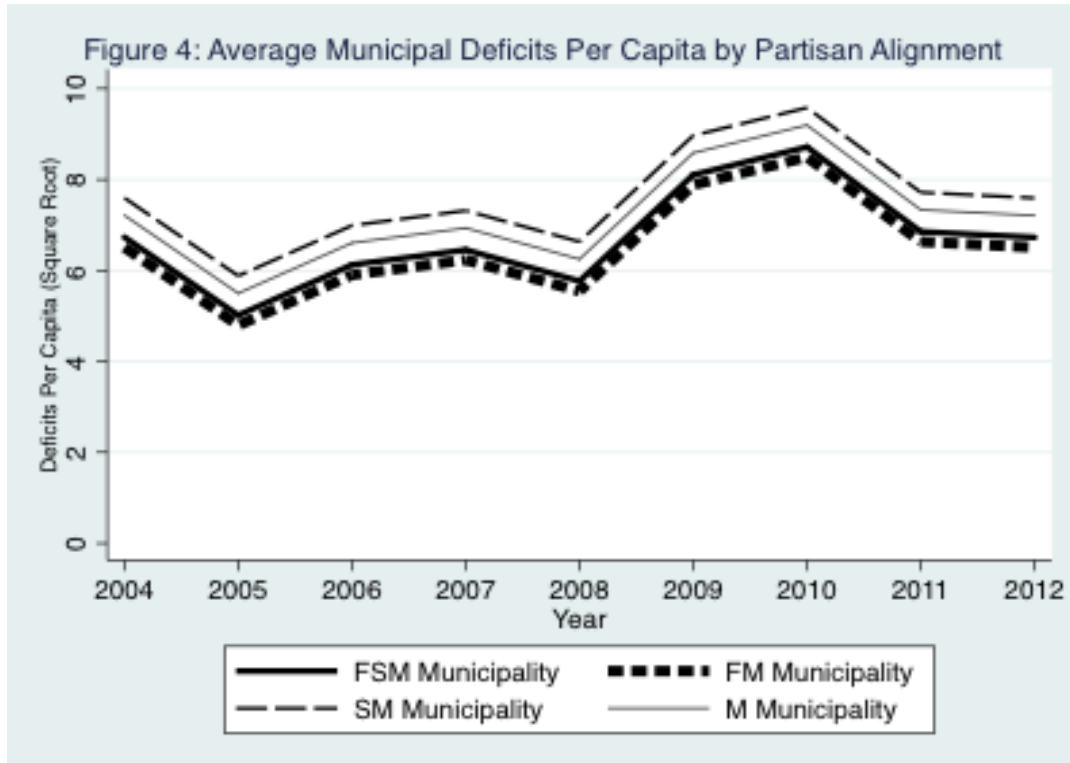
TABLE 2: PARTISAN EFFECTS AND MUNICIPAL DEFICITS (GLS-RE MODELS)

	MODEL 1			MODEL 2			MODEL 3		
	COEF.	SE	P-VALUE	COEF.	SE	P-VALUE	COEF.	SE	P-VALUE
TOTAL POPULATION (SQRT)	0.004	0.001	0.000	0.004	0.0010	0.000	0.004	0.001	0.000
UNEARMARK TRANSF. (SQRT)	0.057	0.011	0.000	0.057	0.0105	0.000	0.057	0.010	0.000
EARMARK TRANSF. (SQRT)	0.050	0.015	0.001	0.050	0.0146	0.001	0.053	0.015	0.000
VERTICAL FISCAL IMBALANCE	1.018	1.176	0.387	1.032	1.1766	0.380	1.061	1.174	0.366
MARGINALITY INDEX	-0.476	0.257	0.064	-0.477	0.2572	0.064	-0.498	0.258	0.053
PERCENT RURAL	0.483	0.355	0.174	0.486	0.3557	0.172	0.487	0.355	0.170
PERCENT INDIGENOUS	-0.778	0.428	0.069	-0.778	0.4282	0.069	-0.686	0.431	0.111
PERCENT LITERATE	-2.117	2.055	0.303	-2.103	2.0556	0.306	-2.351	2.060	0.254
MUNICIPAL ELECTION YEAR	0.294	0.145	0.043	0.293	0.1453	0.044	0.272	0.146	0.062
MARGIN OF VICTORY	-0.145	0.540	0.789	-0.103	0.5440	0.850	-0.059	0.542	0.913
FSM MUNICIPALITY	OMITTED			OMITTED					
FM MUNICIPALITY	-0.221	0.365	0.545	-0.231	0.3653	0.528	-0.260	0.367	0.478
SM MUNICIPALITY	0.864	0.343	0.012				0.815	0.345	0.018
SM: PRI MUNICIPAL/STATE				0.804	0.3478	0.021			
SM: PRD MUNICIPAL/STATE				1.243	0.5057	0.014			
M MUNICIPALITY	0.482	0.314	0.125	0.498	0.3146	0.113			
M: PRI ORPHANS							0.683	0.337	0.043
M: PRD ORPHANS							-0.661	0.383	0.084
M: NATIONAL PARTY ORPHS							0.677	0.462	0.142
M: STATE PARTY ORPHANS							1.942	0.465	0.000
CONSTANT	2.146	2.105	0.308	2.136	2.1049	0.310	0.683	0.337	0.043
CORR(U _i , X _B)	ASSUME=0			ASSUME=0			ASSUME=0		
SIGMA_U	2.045			2.046			2.054		
SIGMA_E	8.225			8.225			8.214		
RHO	0.058			0.058			0.059		
WALD CHI-SQUARED	2377.32		0.000	2386.01		0.000	2416.73		0.000
R-SQUARED WITHIN	0.030			0.030			0.033		

TABLE 2: PARTISAN EFFECTS AND MUNICIPAL DEFICITS (GLS-RE MODELS)

	MODEL 1			MODEL 2			MODEL 3		
	COEF.	SE	P-VALUE	COEF.	SE	P-VALUE	COEF.	SE	P-VALUE
R-SQUARED BETWEEN	0.391			0.391			0.391		
R-SQUARED OVERALL	0.142			0.142			0.144		
NUMBER OF OBS	18126			18126			18126		
NUMBER OF GROUPS	2430			2430			2430		
STANDARD ERRORS	ROBUST HUBER WHITE SANDWICH			ROBUST HUBER WHITE SANDWICH			ROBUST HUBER WHITE SANDWICH		
YEAR FIXED EFFECTS	YES			YES			YES		
STATE FIXED EFFECTS	YES			YES			YES		

Note: Dependent variable is the square root of per capita municipal debt. GLS-RE = Generalized Least Squares with Random-Effects. SE's clustered on the municipality.



Note: Y-Axis is the square root of the average predicted deficits per capita in Mexican pesos. Values were calculated by setting all other covariates in the deficit model from Model 1 Table 2 at their means.

Returning to the orphans, the coefficient for *M* municipalities was not significant in either the debt (Table 1) or deficit models (Table 2), suggesting that orphaned mayors behaved no differently from those in *FSM* or *FM* localities and were more fiscally disciplined than *SM* ones. In Mexico, orphans come from a wide range of parties, so we disaggregated this group into PRI (4,130 observations), PRD (1,851 observations), other national party (836 observations), and other state party (1,049 observations) orphans. (A further breakdown by party was also done but deemed unnecessary to report, but can be made available.) Beginning with the analysis of municipal debts, Model 3 in Table 1 shows that PRI and PRD orphans, as well as orphans from other national parties, behaved no differently than their PAN-run *FSM* and *FM* counterparts, with the coefficients for *M* PRI municipality, *M* PRD municipality, and *M* National Party municipality not statistically significant. Orphans from small state parties, however, assumed greater debt loads compared to all other orphans and to the *FSM* and *FM* localities, as demonstrated by the *M* small party variable's positive and significant coefficient.

Model 3 in Table 2 examines the different orphans and deficits. In contrast to the results for municipal debt, both PRI and PRD *M* municipal orphans behaved differently from PAN-run *FSM* and *FM* places, and differently from each other. PRI orphans ran greater deficits than *FSM* and *FM* places (as shown by this variable's positive and significant coefficient) and PRD orphans ran lower deficits than PRI and *FSM* and *FM* places (as shown by this variable's negative and significant coefficient). As with debt dynamics above, national party orphans ran deficits in line with *FSM* and *FM* places, while small party orphans ran greater deficits than *FSM* and *FM* places.

The variety of findings about orphans leads us to refine the logic of our original expectations about them. Generally speaking, and in line with our original argument, vertical partisan alignment affects the fiscal discipline of municipalities enjoying copartisan ties to at least one higher-level executive in predictable ways. As long as municipalities count on at least one vertically placed copartisan, partisan effects propel them toward greater (in the case of federal copartisans, as in *FSM* and *FM* places) or lower (in the case of state copartisans, as in *SM* places) fiscal discipline, depending on their particular vertical partisan configurations. However, the absence of any vertical partisan alignment, that is, the presence of full vertical partisan juxtaposition (as occurs among municipal orphans) does not produce predictable municipal fiscal behavior among them. As there are not structural partisan effects to guide them and trump other factors, the fiscal behavior of orphans comes to depend on other features of the system. The comparison of the different vertical partisan alignments and full juxtaposition reveals the presence of "positive" and "negative" partisan effects.

In the absence of vertical partisan effects on their behavior, a variety of other factors come into play. It appears from the municipal debt models (Model 3 in Table 1) that orphans' access to debt markets can be curtailed, due to the structural role that state and federal authorities play in approving debt. The lack of significant coefficients for PRI *M* municipality, PRD *M* municipality, and large party orphans but the positive and significant coefficient for orphans from small state parties suggest that higher level state and federal authorities blocked orphans' access to debt when it was in their interests to do so. It is against the interests of both presidents and opposition governors to allow mayors from other large parties access to debt financing that can be used to provide public benefits and strengthen their capacity to challenge them for power, so they block it among the most vulnerable orphans. It also appears that neither presidents nor governors are threatened by small parties, with these parties' projects to move forward. Interestingly, presidents and governors do not appear capable of singly blocking access to debt markets. Otherwise, federal authorities would have blocked the access of *SM* municipalities to debt financing and opposition governors would have blocked *FM* municipalities' access to debt as well (which would have produced

a negative and significant *FM* Municipality coefficient). It thus only takes one higher-level copartisan to allow debt and produce “positive” or “negative” partisan effects.

Even when fiscal resources are fully under orphans’ full control, the absence of higher-level copartisans still leaves them open to other political pressures. In Mexico, it appears that PRI orphans were able or possibly pressured to ramp up public spending and run deficits beyond those of all other national parties, while PRD orphans were able to or encouraged to discipline their fiscal behavior, producing lower deficits than all other orphans and national parties. Other national parties fell into line with *FSM* and *FM* places, while small state parties were more profligate. A full discussion of the national political logic behind these results that are peculiar to Mexican political dynamics is beyond the scope of this study, but suffice it to say that a combination of national political and party ideological factors were at work. The main point, however, still holds: the absence of all higher-level copartisans among orphans means that their fiscal behavior is vulnerable to and determined by other structural features and political dynamics in the system, but not the structural vertical partisan effects affecting other places.

Even so, the results for the municipal orphans are fortuitous. The period under examination was coterminous with national PAN rule, so it could be argued that the PAN-run *FSM* and *FM* places were more fiscally disciplined because their party’s neo-liberal economic policy ideology. In contrast, the more left-leaning PRD and the more clientelistic PRI and thus their *SM* municipalities were more prone to higher public spending. However, if PRD mayors were driven by ideology, they would have all behaved according to plan, with both *SM* PRD and *M* PRD variables showing the same signs on their significant coefficients, but this was not the case. If PAN mayors were fiscally disciplined for ideological reasons, then *FSM* and *FM* places should have run lower deficits than all others, including *M* PRD localities, but this was not the case. Vertical state-municipal partisan alignment in *SM* municipalities acts as a “negative: partisan effect and encourages fiscal indiscipline among them because of their structural partisan juxtaposition against national presidents. Vertical federal-municipal partisan alignment in *FSM* and *FM* places acts as a “positive” partisan effect encouraging fiscal discipline because of their structural alignment with national incumbents. The different potential direction of partisan effects is important; thus far the relative indiscipline of states juxtaposed against federal presidents has been only discussed in relation to those aligned with federal presidents; there is no explicit argument that partisan juxtaposition encourages fiscal indiscipline. We show that such a relation is at work.

Conclusions

The original objective of this study was to fill the theoretical gap left open by prior research on how partisan effects moderate the tendency of state governors to engage in fiscal indiscipline in systems characterized by high vertical fiscal imbalances and soft budget constraints. Some argue that governors control spending out of fear of copartisan presidential retribution and its effects on their political careers. Others argue that governors copartisan with national presidents cut back out of concern that their activities might undermine macroeconomic stability and hurt national party reputations. Although prior research provides ample evidence that state-federal partisan alignment matters for governors' fiscal discipline, scholars have not been able to distinguish between the different mechanisms that explain how it works.

In this study, we took advantage of federal systems' lowest tier of government to examine the variety of possible vertical partisan alignments and how they affect municipal fiscal behavior. Comparison of municipalities that are copartisan with state and federal executives to those sharing partisanship with only the federal incumbent can distinguish the underlying partisan mechanism at work. If municipalities aligned with both federal and state executives spend less than those with only federal copartisans, and both less than municipalities aligned with only state executives, then municipal fiscal restraint occurs because of the presence of copartisan governors and thus mayors' political career concerns. If the spending of federal-state partisan-aligned municipalities is in line with that of municipalities with only federal copartisans, then the presence of copartisan governors has no effect and party reputational concerns matter more.

The statistical analysis of Mexican municipal debt and deficits shows that mayors aligned with federal authorities spent no differently from mayors aligned with both state and federal executives (but that both spend considerably less than mayors aligned with opposition governors), providing evidence that the presence of governors does not affect mayoral fiscal decisions and thus that federal party reputational concerns are driving them. The analysis, however, also revealed the complexities of partisan effects in three-tiered systems. Municipalities face three basic possible partisan alignments: they can be aligned with federal incumbents (and state ones as well), they can be unaligned with federal incumbents but aligned with governors, or they can be unaligned with both federal and state incumbents. The findings for the case of Mexico show that the presence of higher-level allies is critical for the operation of both positive and negative partisan effects. Certain structures of vertical copartisan relationships (federal-municipal and federal-state-municipal partisan alignment) are critical for

moderating fiscal indiscipline, while other vertical alignments (state-municipal partisan alignment) are critical for triggering it. The absence of any higher-level partisan alignment, where municipalities are orphaned, frees mayors from the dynamics of positive and negative partisan effects but leaves them vulnerable to other forces in the system that can influence their behavior instead. These forces will vary by type of fiscal tool under consideration, and by the nature of national and local politics in the country under study.

Finally, the findings also reveal that analyses of partisan effects that focus only on state spending still must distinguish between spending made solely by states and that administered by lower levels of government. Any findings that states copartisan with federal incumbents spend less than those in opposition to federal officials might be exaggerated by the helpful presence of a large share of municipalities aligned with them. States in opposition to federal incumbents might spend relatively more because they count on large numbers of municipalities aligned with them and against federal officials as well. While these two relationships are to be expected, they also mean that the lack of findings for expected state partisan effects could occur as well, as a result of the greater presence of opposition mayors behaving in ways contrary to that expected, and/or the presence of orphans operating according to other national and local dynamics. It is thus crucial to include municipalities in studies of subnational spending and partisan effects.

APPENDIX

Appendix 1: PRI and PRD Partisan Effects on Municipal Debt (GEE-RE Models)									
	Model 1			Model 2			Model 3		
	Coef.	SE	P-Value	Coef.	SE	P-Value	Coef.	SE	P-Value
Total Population (sqrt)	0.014	0.001	0.000	0.014	0.001	0.000	0.014	0.001	0.000
Unearmark Transf. (sqrt)	0.003	0.012	0.795	0.003	0.012	0.795	0.004	0.012	0.756
Earmark Transf. (sqrt)	-0.030	0.015	0.044	-0.030	0.015	0.044	-0.029	0.015	0.050
Vertical Fiscal Imbalance	-3.144	0.762	0.000	-3.143	0.762	0.000	-3.170	0.760	0.000
Marginality Index	-0.226	0.267	0.396	-0.226	0.267	0.396	-0.201	0.266	0.450
Percent Rural	0.343	0.377	0.362	0.343	0.376	0.362	0.334	0.377	0.375
Percent Indigenous	-1.404	0.329	0.000	-1.404	0.329	0.000	-1.417	0.329	0.000
Percent Literate	-5.489	2.162	0.011	-5.489	2.162	0.011	-5.398	2.156	0.012
Municipal Election Year	-0.718	0.105	0.000	-0.718	0.105	0.000	-0.728	0.105	0.000
Margin of Victory	0.480	0.551	0.384	0.483	0.558	0.387	0.583	0.553	0.292
FSM Municipality	0.203	0.372	0.585						
FM Municipality	1.045	0.332	0.002	0.203	0.371	0.585	0.280	0.372	0.453
SM Municipality							1.107	0.334	0.001
SM: PRI Municip/State				1.041	0.337	0.002			
SM: PRD Municip/State	0.265	0.313	0.397	1.070	0.459	0.020			
M Municipality	0.203	0.372	0.585	0.266	0.314	0.397			
M: PRI Orphans							0.026	0.331	0.938
M: PRD Orphan							0.230	0.377	0.542
M: National Party Orphs							0.366	0.449	0.415
M: State Party Orphans							1.908	0.394	0.000
Constant	6.452	2.113	0.002	6.452	2.112	0.002	6.334	2.106	0.003
Correlation	Exchangeable			Exchangeable			Exchangeable		
Scale Parameter	60.172			60.173			60.095		
Wald Chi-Squared	3157.1			3160.3			3172.05		
	2								

Appendix 1: PRI and PRD Partisan Effects on Municipal Debt (GEE-RE Models)

	Model 1			Model 2			Model 3		
	Coef.	SE	P-Value	Coef.	SE	P-Value	Coef.	SE	P-Value
Number of obs	18126			18126			18126		
Number of groups	2430			2430			2430		

APPENDIX 2: PRI AND PRD PARTISAN EFFECTS ON MUNICIPAL DEFICITS (GEE-RE MODELS)

	Model 1			Model 2			Model 3		
	Coef.	SE	P-Value	Coef.	SE	P-Value	Coef.	SE	P-Value
Total Population (sqrt)	0.004	0.001	0.000	0.004	0.001	0.000	0.004	0.001	0.000
Unearmark Transf. (sqrt)	0.055	0.011	0.000	0.055	0.011	0.000	0.055	0.011	0.000
Earmark Transf. (sqrt)	0.047	0.015	0.001	0.047	0.015	0.001	0.050	0.015	0.001
Vertical Fiscal Imbalance	1.352	1.164	0.246	1.366	1.165	0.241	1.387	1.162	0.233
Marginality Index	-0.482	0.260	0.064	-0.483	0.260	0.063	-0.503	0.261	0.054
Percent Rural	0.520	0.358	0.146	0.523	0.358	0.144	0.523	0.357	0.143
Percent Indigenous	-0.780	0.428	0.069	-0.780	0.428	0.069	-0.687	0.431	0.111
Percent Literate	-2.224	2.081	0.285	-2.211	2.081	0.288	-2.448	2.086	0.241
Municipal Election Year	0.293	0.145	0.043	0.292	0.145	0.044	0.271	0.145	0.063
Margin of Victory	-0.079	0.543	0.884	-0.035	0.547	0.949	0.010	0.545	0.986
FSM Municipality									
FM Municipality	-0.280	0.365	0.443	-0.290	0.365	0.427	-0.316	0.367	0.389
SM Municipality	0.815	0.344	0.018				0.766	0.345	0.026
SM: PRI Municip/State	0.447	0.314	0.154	0.754	0.348	0.030			
SM: PRD Municip/State				1.207	0.507	0.017			
M Municipality				0.465	0.315	0.139			
M: PRI Orphans							0.644	0.337	0.056
M: PRD Orphan							-0.708	0.383	0.065
M: National Party Orphs							0.639	0.461	0.165
M: State Party Orphans							1.940	0.465	0.000
Constant	2.082	2.112	0.324	2.072	0.980	6.213	2.136	2.111	0.312
Correlation			Exchangeable			Exchangeable			Exchangeable
Scale Parameter	73.360			73.356			73.197		
Wald Chi-Squared	2376.29		0.000	2384.74		0.000	2418.78		0.000
Number of obs	18126			18126			18126		
Number of groups	2430			2430			2430		

APPENDIX 2: PRI AND PRD PARTISAN EFFECTS ON MUNICIPAL DEFICITS (GEE-RE MODELS)

	Model 1			Model 2			Model 3		
	Coef.	SE	P-Value	Coef.	SE	P-Value	Coef.	SE	P-Value
Standard Errors	Clustered on the Municipality			Clustered on the Municipality			Clustered on the Municipality		
Year Fixed Effects	YES			YES			YES		
State Fixed Effects	YES			YES			YES		

Note: Dependent variable is square root of municipal debt/capita. GEE-RE = General Estimating Equations with Robust Random Effects Variance Estimator.

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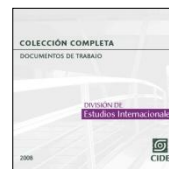
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