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**Citation:** Benton, A. L. & Smith, H. J. (2017). The Impact of Parties and Elections on Municipal Debt Policy in Mexico. *Governance*, 30(4), pp. 621-639. doi: 10.1111/gove.12234

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**The impact of parties and elections on municipal debt policy in Mexico**

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## **Abstract**

Opportunistic electoral fiscal policy cycle theory suggests that all subnational officials will raise fiscal spending during elections. Ideological partisan fiscal policy cycle theory suggests that only left-leaning governments will raise election year fiscal spending, with right-leaning parties choosing the reverse. This study assesses which of these competing logics applies to debt policy choices. Cross-sectional time-series analysis of yearly loan acquisition across Mexican municipalities – on statistically matched municipal subsamples to balance creditworthiness across left- and right-leaning governments – shows that all parties engage in electoral policy cycles but not in the way originally thought. It also shows that different parties favored different types of loans, although not always according to partisan predictions. Both electoral and partisan logics thus shape debt policy decisions – in contrast to fiscal policy where these logics are mutually exclusive – because debt policy involves decisions on multiple dimensions, about the total and type of loans.

**Keywords**

subnational capital markets, subsovereign debt, electoral policy cycles, partisan policy cycles, municipalities, Mexico

## Introduction

Decentralized subnational debt policy rights are considered critical for promoting social welfare and economic development because they allow subnational governments to finance public works (Canuto and Liu 2010b; Dillinger and Webb 1999; Farvacque-Vitkovic and Kopanyi 2014; Johnson 1996; Sáez 2016). However, overly burdensome debt loads and repayment terms can reduce the resources available for other public expenditures (Heller 2005; Sáez 2016), undermining the developmental goals that subnational debt rights were intended to support (De Mello 2001; Giugale et al. 2000a; Sáez 2016). They also risk unsustainable subnational fiscal finances, and national macroeconomic instability (Dillinger and Webb 1999; Giugale et al. 2000a; Heller 2005; Sáez 2016).

Scholars note that a variety of structural conditions and functional factors – such as low administrative capacity, low fiscal transparency and oversight, vertical fiscal imbalances, and inadequate capital market controls – can lead subnational governments to assume overly burdensome debt loads (Avellaneda 2009a, b; Canuto and Liu 2010a; Cecchetti et al. 2010; Kelemen and Teo 2014; Leigland 1997; Martell and Teske 2007; O'Toole and Meier 1999; Rodden 2006). However, this study argues that subnational governments may also respond to political incentives when taking debt decisions as well, engaging in opportunistic electoral or ideological partisan debt policy cycles noted to affect fiscal policy choices. Opportunistic electoral fiscal policy cycles occur when governments of all partisan stripes undertake expansionary economic policies to improve voter perceptions of their performance and their electoral prospects at the polls (Alesina et al. 1997; Drazen 2001; Eslava 2011; Franzese 2002; Nordhaus 1975; Tufte 1975,

1978). Ideological partisan fiscal policy cycles occur when governments implement economic policies during election periods geared toward the expansionary or contractionary preferences of their left-leaning or right-leaning supporters, respectively, to maximize support (e.g., Alesina and Rosenthal 1995; Eslava 2011; Franzese 2002; Garrett 1998; Hibbs 1987; Rodden 2006; Rodden et al. 2003; Tufte 1978).

Although most research on opportunistic electoral and ideological partisan policy cycles focuses on fiscal policy choices, it may be the case that these dynamics also shape debt policy decisions as well. The presence of opportunistic electoral policy cycles in debt decisions would imply that all parties might ramp up debt loads during election processes, aggravating the risks of unsustainable subnational fiscal finances and national macroeconomic stability (Dillinger and Webb 1999; Giugale et al. 2000a; Heller 2005; Sáez 2016). Although the presence of ideological partisan debt policy cycles would mean that only some parties would be driven in this expansionary way, their debt policy decisions might lower social welfare and economic development as well (De Mello 2001; Giugale et al. 2000a; Sáez 2016). Subnational incumbents that assume overly burdensome and overly costly debt loads – for expansionary ideological partisan or opportunistic electoral purposes – reduce the resources available for other public spending needs (Heller 2005; Sáez 2016). Those that avoid taking on large debt burdens – because contractionary ideological partisan preferences drive them in this way – may harm development by preventing or postponing needed public works.

This study adds to research on subnational debt policy choices by examining a case where opportunistic electoral or ideological partisan debt policy cycles might be at work: Mexico. Mexico's municipalities are responsible for basic public services,

including public security (regular and transit police); potable water, sewage systems, and drainage systems; trash collection; public lighting and roads; public marketplaces, parks, gardens, and cemeteries; and any other services like public transportation they are able to fund. Yet, it is precisely this level of government in Mexico, and in other developing nations, that is most at risk for opportunistic electoral or ideological partisan debt policy cycles due to its low administrative and professional capacity, low fiscal transparency and oversight, and inadequate subnational capital market framework (Cabrero and Carrera 2002; Cabrero Mendoza and Arellano 2011; Giugale et al. 2000a; Hernández Trillo and Jarillo-Rabling 2002; Merino 2006; Meza 2015; Sour 2004).

Cross-sectional time-series analysis of Mexican municipal debt policy choices conducted on matched-case subsamples of the data – to control for other supply- and demand-side factors affecting subnational capital markets – shows that neither electoral nor partisan debt policy cycles were at work in the way expected. All municipal leaders assumed lower total debt loads during election years, rather than the reverse, contrary to expectations. Right-leaning parties sometimes accessed more cost-efficient loans, in line with ideological partisan expectations. However, they also sometimes behaved no differently from their more left-leaning counterparts (in line with opportunistic electoral expectations). The results suggest that debt policy dynamics are more complex than fiscal policy ones because they involve multidimensional decisions about total debt and types of loans; total debt decisions appear prey to opportunistic electoral pressures, whereas type of debt decisions may be subject to ideological partisan concerns. As such, two theories originally deemed mutually exclusive in the fiscal policy arena may be complementary for debt policy choices.

## **Mexico's Subnational Borrowing Framework**

Mexico is a federal system comprised of a Federal District and 31 states divided into 2,443 municipalities (depending on the year). National legislation governing subnational debt rights and capital markets dates to reforms between 1997 and 2000. Subnational long-term debt liabilities must be in Mexican pesos, registered with the national finance secretariat (SHCP), and used for “economically productive” purposes (although this has been interpreted to include debt refinancing and buybacks). Public and private financial institutions must assess subnational entities’ fiscal solvency or formal credit ratings, respectively, before authorizing loans (Auditoria Superior de la Federación 2011; Giugale et al. 2000b; Revilla 2013). States are responsible for outlining fiscal limits on state and municipal debt rights, but rarely enforce them.

The main financing instruments in Mexico’s subnational capital market include public development bank loans, private commercial bank loans, and bond emissions, each with different associated financial costs to borrowers, the point of concern here. (Loans can also be organized through third-party “trusts” but this vehicle is rarely used.)

Public development bank loans are the most common debt instrument in Mexico, even if they are not the most cost-efficient to municipalities in financial terms. The aim of Mexico’s public development banks is not to provide subsidized credit but to make financing available to entities unable to access private capital markets. Development banks attach technical project and administrative (to improve fiscal management and transparency) assistance to their loans, passing these costs on to borrowers (Smith 2013). Even so, subnational entities are able to access more cost-efficient private financial



instruments often choose development bank loans for this assistance (Smith 2013). Technical assistance may improve the quality public works and municipal fiscal administration; however, the financial cost of these loans is higher than for other types of debt. Development bank loans are relatively easy to secure; the national government encourages their use to ensure timely completion of its national development objectives outlined in five-yearly plans.

Commercial bank loans tend to be less costly than development bank loans in Mexico. Although Mexico's private commercial banks are known for their traditionally high interest rates and fees (Haber and Musacchio 2004; Musacchio 2012), these have been driven down with competition from bond emissions (Villa 2009). Even so, commercial bank loans are still more costly than bond emissions because the relatively narrow range of lenders available in the market reduces competition among them and allows them to offer less favorable terms. Moreover, commercial bank loans are released in tranches, allowing banks to change terms and conditions during the life of the loan. Even so, commercial bank loans are relatively harder to access than development bank loans, as they require formal credit ratings and fiscal assessments, but they are easier to organize than bond emissions because governments can take advantage of pre-existing bank relationships (Freire 2014). Subnational governments in Mexico usually guarantee commercial bank loans with unearmarked transfers (Revilla 2013; Villa 2009).

Bond emissions provide the most cost-efficient form of financing in Mexico (and elsewhere) but they are also the most difficult to organize (Freire 2014). In Mexico, bond emissions are organized by private financial institutions that underwrite the full emission and remarket it to investors. Borrowers assume fees for this service but the relatively

wider range of lenders (investors) available in bond markets improves their terms and conditions (Farvacque-Vitkovic and Kopanyi 2014; Freire 2014; Villa 2009). Bond emissions are attractive because they provide immediate liquidity and enjoy terms and conditions that are nearly impossible to change once the issuance has occurred. Bonds are usually guaranteed with unearmarked transfers (Revilla 2013; Villa 2009).

Although there is competition between different financial institutions for subnational clients in Mexico, several factors undermine the fully efficient operation of its subnational capital market. The history of bailouts (Hernández Trillo et al. 2002a; Hernández Trillo et al. 2002b) raises the expectation of future ones. The lack of subnational fiscal transparency (on short-term fiscal deficits, payment arrears to service providers, and contingent liabilities) makes it difficult for lenders and borrowers to assess true borrowing capacity (Espinosa and Martell 2015; Giugale et al. 2000a; Hernández Trillo and Jarillo-Rabling 2002). Scholars have thus argued that Mexico's market-based framework has not worked (e.g., Giugale et al. 2000a; Hernández Trillo and Jarillo-Rabling 2002). Even partial market failures open the door for non-market factors to affect resource supply and demand. In subnational capital markets, partial market failures open the door for things like electoral or partisan factors to affect debt dynamics.

### **The Logic of Opportunistic Electoral and Ideological Partisan Debt Policy Cycles**

Three main parties dominate Mexico's federal system: the right-leaning National Action Party (PAN), the centrist Institutional Revolutionary Party (PRI), and the left-leaning Democratic Revolution Party (PRD), a splinter from the PRI. The PRI ruled Mexico in an electoral authoritarian regime for most of the 20<sup>th</sup> century, until 2000 when

the PAN won the presidential race. The PAN retook the presidency in 2006 in a close race with the left-leaning PRD, while the centrist PRI won the 2012 presidential race in competitive elections.

If Mexico's subnational governments engage in opportunistic electoral debt policy cycles, then their leaders, including those from the right-leaning PAN, centrist PRI, and left-leaning PRD, should raise total debt loads across all financial instruments during election periods. Scholars examining the effect of opportunistic electoral dynamics on fiscal policy choices argue that electorally opportunistic incumbents seek to create the illusion they have produced economic gains for constituents, leading them to raise fiscal expenditures during elections to strengthen this impression (Alesina et al. 1997; Drazen 2001; Eslava 2011; Franzese 2002; Nordhaus 1975; Tufte 1975, 1978). If this is the case, then electorally opportunistic incumbents should raise long-term debt loads during election periods as well, with their drive to increase public spending for electoral ends also leading them to disregard the difference financial costs of loans. That is:

*Opportunistic Electoral Debt Policy Cycle Hypothesis: If subnational leaders engage in opportunistic electoral policy cycles, then all parties will raise total debt loads across all types of debt instruments.*

If opportunistic electoral policy cycles drive debt policy decisions in Mexico, then the PAN, PRI, and PRD should each ramp up subnational debt loads across all types of financial instruments during election periods, without regard to the relative costs of loans.

If Mexico's subnational governments follow an ideological partisan debt policy cycle logic, then governments run by left-leaning parties like the PRD should assume greater debt loads during elections balanced toward instruments with less cost-efficient terms because these instruments are easier to access. Governments run by right-leaning parties like the PAN should assume lower debt loads during election cycles and balance this debt toward more cost-efficient instruments, with these instruments comparatively more difficult to access. Basing their arguments on "rational partisan" theory (Garrett 1998; Hibbs 1987), scholars examining fiscal policy for ideological partisan cycles argue that left-leaning parties – whose working class and poorer constituents prioritize immediate-term public spending for job creation and economic growth – will engage in expansionary fiscal spending during elections (Alesina and Rosenthal 1995; Franzese 2002; Garrett 1998; Hibbs 1987; Tufte 1978). Right-leaning parties – whose middle and upper class voters prioritize macroeconomic stability for job creation and economic growth – will engage in contractionary fiscal spending during elections (Alesina and Rosenthal 1995; Franzese 2002; Garrett 1998; Hibbs 1987; Tufte 1978). Ideologically-oriented parties time their expansionary or contractionary policies around election periods to maximize their electoral effect (Franzese 2002; Tufte 1978).

If ideological partisan policy cycles affect debt policy choices, then left-leaning incumbents should be driven to contract larger debt loads but also to access costlier debt instruments because these instruments are easier and quicker to access. Left-leaning parties' constituents value immediate public spending for job creation and economic growth. In contrast, right-leaning incumbents should assume lower debt loads and use more cost-efficient debt instruments that are relatively harder to access. Their

constituents value macroeconomic stability for job creation and economic growth, leading them to take their time when considering among different loans. That is:

*Ideological Partisan Debt Policy Cycle Hypothesis: If parties engage in ideological partisan debt policy cycles, then left-leaning parties will assume greater total debt using less cost-efficient instruments during elections, while right-leaning parties will assume lower total debt using more cost-efficient instruments during elections.*

If ideological partisan debt policy cycles drive debt decisions in Mexico, then the left-leaning PRD should assume higher debt loads balanced toward less cost-efficient instruments during election periods. The right-leaning PAN should assume lower debt loads balanced toward more cost-efficient debt during election periods. The PRI's debt policy choices should lie in between these two extremes.

Any findings in favor of the opportunistic electoral debt policy cycle logic would eliminate the possibility of the ideological partisan one, while any findings in favor of the ideological partisan debt policy cycle logic would eliminate the possibility of the opportunistic electoral one. Also, any findings that electorally-driven subnational leaders did not distinguish between election and non-election years in their debt policy choices – that is, against the opportunistic electoral cycle logic and in favor of its null hypothesis – would imply an alternative logic at work: that all politicians seek office with the altruistic policy aim of overseeing public policy provision, without thought to timing it to maximize future electoral rewards. And, any findings that ideologically-driven subnational leaders did not distinguish between election and non-election years in their

debt policy choices – that is, against the ideological partisan debt cycle logic and in favor of its null hypothesis – would imply an alternative logic at work as well: that partisan politicians seek office with “rational partisan” policy aims of implementing debt policy in line with their constituents’ preferences, without thought to timing policy measures to maximize future electoral rewards. Finally, any findings against both the opportunistic electoral and the ideological partisan logic at once would mean that neither electoral nor partisan factors affected capital markets in Mexico and that something entirely different was at work.

### **Mexico’s Municipal Debt Data, Methodological Concerns, and Statistical Strategy**

To distinguish the presence of opportunistic electoral or ideological partisan debt policy cycles, a panel dataset of debt policy choices in municipal Mexico was constructed. The dataset begins in 2005, the first year the nation’s finance ministry began to record subnational debt data, and ends in 2012, the last year for which there is complete data on all variables needed for the analysis. The database excludes the Federal District; its lower-level delegations do not enjoy the same debt rights as municipalities. The database includes all 31 states, even Oaxaca which holds nonpartisan elections in most municipalities. Parties operate in Oaxaca’s nominally nonpartisan municipalities, with municipal leaders delivering partisan-based support in state and federal elections (Benton 2012), so state elections serve as a proxy.

The database is limited to municipalities under control of one of the main PRI, PAN, or PRD parties. When identifying PRI, PAN, and PRD municipalities, coalitions between these parties and small ones were coded as falling under the main party label.

Coalitions between the PAN and PRD were excluded, as were coalitions between small parties; it is difficult to predict their ideological views. Pairing down the sample to those municipalities under PAN, PRI, and PRI rule produced 16,728 total municipal-year observations during the 2005-2012 period. Of these total municipal-year observations, there were 3,720 under PAN rule, 10,726 under PRI rule, and 2,255 under PRD rule, and a total of 5,025 elections among them (data are from state electoral institutes and the Center for Research on Development CIDAC).

There were 5,949 loans among all municipal-year observations during this period, including 4,163 development bank loans, 790 commercial bank loans, 80 bond emissions, 139 trust instruments (not analyzed), 49 “other” unspecified credits (not analyzed). 5,024 municipal-year observations had loans, 11,704 did not. Municipal-year observations with zero loans must be included in the analysis, in order to consider the full range of debt policy choices – including contractionary ones – in any year. Mean total debt among the municipal-year observations averaged 90.40 pesos per capita (standard deviation 1,423.48), mean development bank debt averaged 53.72 pesos per capita (standard deviation 147.53), mean commercial bank debt averaged 29.00 pesos per capita (standard deviation 1,413.62), and mean bond debt averaged 6.50 pesos per capita (standard deviation 68.13). Debt data are from the SHCP. All data is in 2005 pesos.

Comparing parties’ long-term debt decisions is complicated by several factors that affect municipal access to – and interest in accessing – subnational capital markets. On the supply side, municipal creditworthiness shapes debt access. However, Mexico’s more creditworthy municipalities have been the most fertile ground for the right-leaning PAN to challenge the formerly dominant PRI, while its less creditworthy municipalities

have been the most fertile ground for the left-leaning PRD to challenge the PRI. Direct comparison of all PAN to all PRI municipalities would thus compare wealthier PAN municipalities to all PRI municipalities, including less creditworthy ones. Direct comparison of all PRD to all PRI municipalities would compare poorer PRD municipalities to all PRI municipalities, including more creditworthy ones. Direct comparison of PAN and PRD debt behavior would compare generally wealthier/creditworthy PAN municipalities to generally poorer/less creditworthy PRD ones. These are inappropriate comparisons: any differences observed between parties may not be the product of different ideological partisan debt policies but the product of underlying differences in creditworthiness.

On the demand-side, federal fiscal contracts that create vertical fiscal imbalances (especially if lacking hard budget constraints) encourage subnational leaders to overspend (Rodden 2006). In Mexico, states and municipalities are known for *de jure* vertical fiscal imbalances (Díaz-Cayeros 2006) and for *de facto* soft budget constraints (Giugale et al. 2000a). States finance municipalities through the redistribution of a set share of their unearmarked federal fiscal transfers, with each state setting its own criteria, which is often politically manipulated (Timmons and Broid 2013).

To address these supply- and demand- factors affecting subnational capital markets in Mexico (and elsewhere), the statistical analysis was conducted on matched subsamples of the data. To do this, three unmatched samples of all PRD-run and all PRI-run municipalities, all PAN-run and all PRI-run municipalities, and all PAN-run and all PRD-run municipalities were constructed. Then coarsened exact matching (CEM) (Iacus et al. 2012)<sup>1</sup> was used to match PAN and PRI, PAN and PRD, and PRD and PRI



municipalities according to their supply-side creditworthiness – municipal population size (square root), total municipal fiscal revenues (own source revenues and transfer revenues; square root per capita), and human development (Mexico’s marginality index) (see Chapman 2008; Freire 2014; Thau 2011) – and their demand-side structural incentives – vertical fiscal imbalances (own source revenues / total revenues) – to take out debt (data are from the nation’s census bureau INEGI and National Population Council CONAPO). The human development (marginality) index also controls for the state of public services and thus the need for public works. Population size and human development may also affect municipal debt demand through administrative capacity (Avellaneda 2009b; Meza 2015; O’Toole and Meier 1999), while own source revenues compared to total revenues sometimes measure administrative capacity (e.g., Cabrero Mendoza 2004; Ibarra Salazar et al. 2001).

It is inappropriate to match municipalities according to their credit ratings, loan interest rates, or loan maturities because this would lead many observations to drop out of the samples, introducing selection bias into the results. Only those municipalities accessing private sector credit sought formal ratings, with those accessing only development bank loans dropping out of the models; this would bias the results against the opportunistic election hypothesis. Only those municipalities taking loans would have associated interest rates or maturities, with all zero debt observations dropping out of the models; this would bias the results against the ideological partisan hypothesis.

The impact of electoral and partisan policy cycles on municipal debt decisions was then assessed on each matched subsample using linear (Prais-Winston) cross-sectional time-series regression with panel corrected standard errors (CSTS-PCSE).

Total and types of debt were separately regressed on the party variables, a municipal election year dummy, a variable capturing vertical partisan alignment between mayors and state governors [in the case that this improves fiscal discipline, as argued by Jones et al. (2000); Rodden and Wibbels (2002)], and the variables used in the matching process (to control for any lingering differences after matching) for each matched subsample. The choice of CSTS-PCSE was made due to heteroskedasticity and autocorrelation found present in the errors.<sup>2</sup> We run all models on the data in level form.<sup>3</sup> The CSTS-PCSE model's panel (municipal) correction precludes the need for panel (municipal) fixed effects.<sup>4</sup> Even so, the inclusion of municipal fixed effects would not be appropriate given that the partisan dummy variables do not vary much over time in most municipalities, and many of the controls are highly sluggish (see Clark and Linzer 2015). Also, the study focuses on differences between rather than within municipalities.

For all analyses, yearly peso-denominated municipal debt data was transformed into per capita square roots to reduce the impact of outliers and address nonlinearity (recall, all debt data is from SHCP). (The standard transformation of fiscal data is to take the natural log but the presence of zero debt values leads us to use a square root transformation instead.) Year fixed effects (dummies) control for inter-temporal variation.<sup>5</sup> They also control for shifting subnational need for financing and investor appetite for subsovereign debt. The 2008 dummy was excluded to create a pre- and post-global financial crisis comparison. The models do not include state fixed-effects. Despite the presence of formal rules limiting subnational debt in some states, incoming mayors are regularly surprised by the liabilities left by prior administrations, demonstrating that state rules are not enforced and that there is little oversight over

municipal fiscal and debt decisions (e.g., Cabrero and Carrera 2002; Cabrero Mendoza and Arellano 2011; Giugale et al. 2000a; Merino 2006).

### **Assessing Support for Electoral or Partisan Policy Cycles in Mexico**

The presentation of the statistical results begins with the matched PAN–PRI subsample, followed by the PRD–PRI subsample, and then the PAN–PRD subsample. In all models, a partisan dummy (“Party” Municipality), an election year dummy (Municipal Election Year), and an interaction between the two (“Party” Municipality \* Muni Election) are used to distinguish the presence of opportunistic electoral or ideological partisan debt policy cycles. For ease of interpretation, results for linear combinations of these estimators are discussed instead of the main regression models.

#### **The PAN–PRI Comparison**

Table 1 presents results for the CSTS-PCSE models for the matched PAN–PRI subsample. Linear combinations of the main explanatory variables and their interaction term estimators are in Table 2. Table 3 presents a summary of the theoretical expectations and the empirical findings. The opportunistic electoral debt policy cycle logic predicts that both parties will ramp up total debt during election cycles but that they will behave no differently across different types of loans. The ideological partisan debt policy cycle logic predicts that left-leaning parties will assume greater total and more expensive debt during elections cycles and that right-leaning parties will assume lower total debt balanced toward less costly instruments during elections.

–Table 1 About Here–

–Table 2 About Here–

–Table 3 About Here–

The results in Table 2 and Table 3 show that neither the PAN nor the PRI entirely conformed to either theoretical view. Beginning with total debt, the linear combination of the estimator for PRI municipalities during election years was negative and significant (-0.834), showing that PRI municipalities assumed less total per capita debt (square root) during election- compared to non-election years (the omitted case). The linear combination of the estimator for PAN municipalities during election years was also negative and significant (-0.838), showing that PAN municipalities assumed lower total per capita debt (square root) than both the PRI (the omitted case) and the PAN in non-election years [the combination of the estimate for PAN municipalities during non-election years (-0.073) was not significant and thus not different from the PRI in non-election years]. Although the linear combinations of the estimates for PRI (-0.834) and PAN municipalities in election years (-0.838) are negative and significant, and thus significantly different from PRI and PAN municipalities in non-election years, the confidence intervals around these two estimates overlap, showing that they are not significantly different from one another. Although the opportunistic electoral cycle theory predicted no difference between parties in total debt acquisition, as is found to be the case here, it also predicted that parties would spend more, not less, during elections, contrary to the findings.<sup>6</sup>

Table 2 provides the squared linear combinations of the estimates to show the explanatory variables' substantive effects. The per capita debt figures are square roots, so the impact of the linear combinations of the dummy variables on the dependent

variable is equivalent to their squared coefficients. While PAN municipalities behaved no differently from PRI ones, together they behaved differently in election compared to non-election years. PRI municipalities enjoyed 0.697 lower and PAN municipalities 0.702 lower yearly peso per capita debt in election compared to non-election years. While seemingly a small effect, when aggregated over entire municipal populations and summed over multiple years, this effect becomes quite large.

Turning to development bank loans, Table 2 shows that the PAN and PRI both contracted less per capita development bank debt (square root) during election years and that they behaved no differently from one another in this regard. However, given that the national government pushes subnational governments toward development bank loans, as note above, these loans should mainly be examined for the presence opportunistic electoral cycles and not ideological partisan ones. The estimate for PRI municipalities in election years (-0.931) was negative and significant, with the party contracting less per capita development bank debt in election compared to non-election years (the omitted case). The estimate for PAN municipalities during election years was also negative and significant (-1.078), showing that the PAN also contracted less development bank debt than the PRI (the omitted case) and the PAN in non-election years [the estimate for PAN municipalities in non-election years (-0.001) was not significant]. The overlap in the confidence interval around the estimate for the linear combination of the PAN's (-1.078) and PRI's (-0.931) election year development bank debt shows they behaved no differently from one another. These findings are contrary to both opportunistic electoral and ideological partisan expectations. Substantive effects are in Table 2.

Concluding with the private sector debt instruments, Table 2 shows that both PAN and PRI municipalities did not distinguish between election and non-election years in their commercial bank loans, contrary to both hypotheses. The estimate for the PRI's election year commercial bank behavior (-0.119) was not significantly different from the omitted non-election year PRI, while the confidence intervals around the estimate for the PAN's non-election year (-0.275) and election year (-0.367) per capita commercial bank debt overlap. However, the statistically significant estimates for the PAN's commercial bank loan acquisition in both non-election and election years show that the PAN took out systematically less commercial bank debt than the PRI, in line with the presence of ideological partisan effects. In contrast, the PRI and PAN took out higher bond debt in election compared to non-election years (shown by the positive and significant values of their respective 0.129 and 0.521 coefficients), while the PAN took out significantly greater bond debt than the PRI, in both election and non-election years, also in line with ideological partisan expectations.

Taken together the results for the PAN–PRI subsample do not provide clear support for either the opportunistic electoral or the ideological partisan hypotheses. However, the results also do not provide clear support for either logic's null hypothesis either, nor for the global null hypothesis that there are no political effects of any kind. Instead, there appears to be some kind of electoral and partisan effect at work, but not in the way originally expected under the opportunistic electoral or ideological partisan views. This is discussed further below.

### **The PRD–PRI Comparison**

Table 4 presents results for the CSTS-PCSE analysis conducted on the matched PRD–PRI subsample. Table 2 and Table 3 show that similarly creditworthy PRD and PRI municipalities acquired less total debt in election compared to non-election years, and that these parties behaved no differently from each another within these different time periods, as found in the PAN–PRI comparison above. Table 2 also shows that PRD and PRI municipalities contracted lower development bank debt in election compared to non-election years, and that they behaved no differently from one other in this regard as well, also in line with the PAN–PRI analysis. These findings are contrary to the opportunistic electoral and the ideological partisan debt cycle logics.

–Table 4 About Here–

Moreover, the PRD and PRI municipalities also assumed greater commercial bank debt in non-election rather election years, with these parties showing no difference between each other in this tendency, as found in the PAN–PRI matched sample and contrary to both hypotheses. In line with opportunistic electoral expectations, however, PRD and PRI municipalities tended to access bond market debt at greater rates during election years. However, the left-leaning PRD assumed greater, rather than lower, cost-efficient bond debt compared to the more centrist PRI, demonstrating the presence of a partisan difference, contrary to the opportunistic electoral logic, but one that is also contrary to ideological partisan logic as well.

The results for the PRD-PRI comparison thus do not provide clear support for the opportunistic electoral or the ideological partisan logics either, nor do they confirm these logic’s null hypotheses (or the global null hypothesis of no political effects). Instead, there appears to be partial support for each of the opportunistic electoral and ideological

partisan hypotheses, suggesting that debt policy dynamics may be different from fiscal policy ones. The study elaborates on this below.

### **The PAN–PRD Comparison**

The results for the CSTS-PCSE analysis conducted on the matched PAN–PRD subsample are in Table 5. As above, Table 2 and Table 3 show that both PAN and PRD municipalities acquired lower total per capita debt during election compared to non-election years. However, in contrast to the comparisons above, the PAN’s total per capita debt in non-election years was greater than that of the PRD, contrary to the opportunistic electoral hypothesis but also contrary to the ideological partisan logic as well; the right-leaning PAN assumed greater, not lower, total debt compared to the left-leaning PRD. As is also the case with the subsamples above, PAN and PRD municipalities contracted similarly lower development bank debt in election years compared to non-election ones. However, the PAN’s non-election year development bank debt was greater than that of the PRD, contrary to the logics of both theories.

–Table 5 About Here–

Turning to private sector financial instruments, the PRD displayed no election year preference for commercial bank loans, whereas the PAN sought lower – rather than higher – commercial bank debt during electoral periods, contrary to the opportunistic electoral debt policy logic. However, the parties behaved in line with ideological partisan expectations in terms of their relative preference for commercial bank debt, with the left-leaning PRD favoring this costly instrument compared to the more right-leaning PAN. However, both parties accessed bond markets at higher rates during elections but



displayed no difference in their relative partisan preferences for this type of debt, contrary to the ideological partisan theory but in line with the opportunistic electoral model.

As above, these results do not provide clear support for either the opportunistic electoral or the ideological partisan hypotheses, but they also do not lead to the clear acceptance of either null hypothesis either (nor the global null hypothesis). There is, instead, partial support for each hypothesis, suggesting that multi-year, multi-instrument debt policy decisions operate differently from annual fiscal policy choices. The following section addresses this point.

### **Discussion and Conclusion**

At first glance, the statistical results suggest that Mexico's PAN, PRI, and PRD did not engage in opportunistic electoral or ideological partisan debt policy cycles. However, at second glance, the results do not provide unequivocal support for their null hypotheses either. Instead, there appears to be partial support for the argument that election cycles matter, because all parties raised total spending ahead of elections. Table 3 shows that nearly all matched-party comparisons produced different election and non-election year behavior across both total debt as well as across different instruments. Municipal leaders begin most public works projects well ahead of elections to ensure that they enjoy the political benefits of these expenditures rather than incoming administrations. For this reason, debt policy choices, precisely because they regard multi-year capital investment plans, are timed ahead of elections, rather than during them.

There also appears to be partial support for the proposition that parties behave in different ways, although both ideological as well as historical partisan considerations may

drive these differences. Table 3 shows that the relatively more right-leaning PAN tended to assume lower costly commercial bank debt compared to the centrist PRI and left-leaning PRD, as well as sometimes assumed greater and cheaper bond debt compared to the PRI. However, comparison of the centrist PRI to its left-leaning splinter PRD did not produce expected ideological partisan differences in these parties' relative debt behavior. Party history appears to account for this result: PRI leaders have enjoyed traditionally cozy relations with the nation's private commercial banking sector (Hernández Trillo et al. 2002a; Hernández Trillo et al. 2002b), encouraging its leaders to stick with these loans and pushing its opposition splinter PRD to access cheaper bonds instead.

Cross-national studies show that national governments tend to follow ideological partisan rather than opportunistic electoral fiscal policy cycles (Drazen 2001; Eslava 2011; Franzese 2002). Individual country case studies suggest that subnational governments in developing nations tend to follow opportunistic electoral fiscal policy cycles instead of ideological partisan ones (e.g., Drazen and Eslava 2010; Jones et al. 2012; Letelier S. 2011; Sáez 2016; Sakurai and Menezes-Filho 2008; Veiga and Veiga 2007). Examination of debt policy dynamics in Mexico produces different results contrary to both. Unlike in the case of fiscal policy decisions, the opportunistic electoral and ideological partisan logics may not provide mutually exclusive rationales for debt policy choices, because debt policy involves decisions on multiple dimensions, something not too surprising given research on budgetary allocations for debt payments (e.g., Sáez 2016).

Electoral opportunism may drive parties to raise total debt acquisition – albeit ahead of elections – in order to raise their chances of winning. Parties may couple this

with an “ideological partisan” bent when choosing among types of debt instruments, with these choices driven by partisan (or historic) rationales. Indeed, different types of debt may also require different time horizons. Table 3 shows that development bank and commercial bank debt were concentrated in non-election years, whereas bonds were assumed at greater rates during election periods. Loans released in tranches, during the course of the delivery of the public project, may be concentrated earlier in subnational leaders’ administrations in order to maximize their political benefits. Loans that provide immediate liquidity may be timed closer to elections.

Any deficiencies in subnational capital market frameworks would only serve to aggravate the opportunistic electoral and ideological partisan dynamics found here. Central governments determining the debt rights of federal or decentralized subnational entities, as well as the frameworks granting them access to subnational capital markets, should be aware that subnational governments may be driven toward opportunistic electoral and ideological partisan behavior when deciding the total and type of debt to be assumed. Overly burdensome debt loads and overly costly debt financing raise pressure on subnational fiscal finances, something that can undermine national macroeconomic stability (Dillinger and Webb 1999; Giugale et al. 2000a; Heller 2005; Sáez 2016). So, any rules that can be embedded in regulatory frameworks aimed at reducing the incentive to engage in electoral- and partisan-oriented decisions will work to the benefit of local fiscal finances and nation macroeconomic stability down the line.

## Endnotes

- <sup>1</sup> T-tests on covariate means across parties after matching were insignificant.
- <sup>2</sup> Woolridge tests for serial autocorrelation of group-wise disturbances were significant ( $p < 0.01$ ) across GLS - FE models. Wald tests for group-wise (within municipal unit) heteroskedasticity were significant ( $p < 0.01$ ) across GLS - FE models.
- <sup>3</sup> Unit-root tests – Levin-Lin-Chu, Harris-Tzavalis, and Breitung tests – show that we can reject the null hypothesis of the presence of unit roots ( $p < 0.01$ ).
- <sup>4</sup> Breusch and Pagan Lagrangian multiplier tests on GLS - FE models rejected the null hypothesis that the unit-specific residuals are zero ( $p < 0.01$ ) for all measures of the dependent variable used here), so there is variance across the units (municipalities) beyond that explained by FE models and thus that RE models are appropriate.
- <sup>5</sup> Tests for whether year dummies are jointly equal to zero reject the null hypothesis that they are (with  $p < 0.01$ ).
- <sup>6</sup> Analyses of the impact of non-election year dummies produce the same results but complicate their interpretation, so standard election-year dummy was used.

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**Table 1: Matched PAN–PRI Sample, Electoral Opportunism, Ideological Partisanship, and Debt in Mexico**

	<i>Total Debt</i>	<i>Development Bank Debt</i>	<i>Commercial Bank Debt</i>	<i>Bond Debt</i>
PAN Municipality (Dummy)	-0.0728 (0.234)	-0.000849 (0.201)	-0.275* (0.158)	0.353*** (0.0408)
Municipal Election Year (Dummy)	-0.834*** (0.149)	-0.931*** (0.103)	-0.119 (0.121)	0.129*** (0.0263)
PAN Municipality * Muni Election	0.0692 (0.260)	-0.146 (0.179)	0.0269 (0.210)	0.0388 (0.0481)
Copartisan State Governor	0.143 (0.216)	0.0999 (0.185)	0.186 (0.141)	-0.0967** (0.0454)
Total Population (sqrt)	0.0174*** (0.00130)	0.00617*** (0.00119)	0.0131*** (0.00120)	0.000116 (0.000443)
Fiscal Revenue (per cap sqrt)	-0.00188 (0.0196)	0.00118 (0.00688)	0.0113 (0.0185)	-0.0107*** (0.00200)
Vertical Fiscal Imbalance	-3.408*** (0.866)	-3.608*** (0.557)	0.339 (0.707)	-0.121 (0.159)
Human Dev. (Marginality Index)	-0.451** (0.207)	-0.518*** (0.133)	-0.160 (0.147)	0.270*** (0.0939)
Year Dummy 2005	-0.784** (0.333)	-0.438** (0.199)	-0.161 (0.275)	-0.110 (0.0777)
Year Dummy 2006	0.454* (0.274)	0.674*** (0.177)	-0.0643 (0.221)	-0.0170 (0.0630)
Year Dummy 2007	0.578** (0.237)	0.654*** (0.147)	0.0897 (0.199)	-0.0917** (0.0432)
Year Dummy 2008	omitted	omitted	omitted	omitted
Year Dummy 2009	2.821*** (0.183)	2.159*** (0.132)	0.422*** (0.140)	0.595*** (0.0424)
Year Dummy 2010	3.769*** (0.269)	2.132*** (0.181)	0.594*** (0.215)	1.404*** (0.0590)
Year Dummy 2011	3.591*** (0.303)	2.446*** (0.203)	0.397* (0.240)	1.419*** (0.0668)
Year Dummy 2012	3.007*** (0.328)	1.484*** (0.218)	0.690*** (0.261)	1.414*** (0.0734)
Constant	3.588** (1.474)	4.738*** (0.760)	-2.240* (1.316)	0.528** (0.242)
Number Observations	10385	10385	10385	10385
Number Groups	1826	1826	1826	1826
R2	0.0460	0.0581	0.0192	0.0524
Chi-2	914.7***	709.3***	198.9***	729.9***

Note: Linear (Prais-Winston) cross-sectional time-series regression with panel-corrected standard errors (in parentheses), with heteroskedastic and AR1 error corrections. \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.

**Table 2: Linear Combinations of Estimators for Election Year, Partisanship, and Interaction Term Dummies**

<b>Party</b>	<b>Election Year</b>	<b>Coefficient Squared</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>P-Value</b>	<b>CI-LB</b>	<b>CI-UB</b>
<b>PAN-PRI Matched Subsample</b>							
<i>Total Debt</i>							
PRI	No	omitted category					
PRI	Yes	-0.696	-0.834	0.149	0.000	-1.126	-0.542
PAN	No	-0.005	-0.073	0.234	0.756	-0.532	0.386
PAN	Yes	-0.702	-0.838	0.246	0.001	-1.319	-0.356
<i>Development Bank Debt</i>							
PRI	No	omitted category					
PRI	Yes	-0.867	-0.931	0.103	0.000	-1.133	-0.730
PAN	No	-1.000E-06	-0.001	0.201	0.997	-0.395	0.393
PAN	Yes	-1.162	-1.078	0.210	0.000	-1.489	-0.667
<i>Commercial Bank Debt</i>							
PRI	No	omitted category					
PRI	Yes	-0.014	-0.119	0.121	0.326	-0.356	0.118
PAN	No	-0.076	-0.275	0.158	0.081	-0.584	0.034
PAN	Yes	-0.135	-0.367	0.170	0.031	-0.700	-0.034
<i>Bond Debt</i>							
PRI	No	omitted category					
PRI	Yes	0.017	0.129	0.026	0.000	0.077	0.181
PAN	No	0.125	0.353	0.041	0.000	0.273	0.433
PAN	Yes	0.271	0.521	0.040	0.000	0.443	0.598
<b>PRD-PRI Matched Subsample</b>							
<i>Total Debt</i>							
PRI	No	omitted category					
PRI	Yes	-1.235	-1.111	0.111	0.000	-1.329	-0.893
PRD	No	-0.099	-0.315	0.199	0.114	-0.706	0.076
PRD	Yes	-0.819	-0.905	0.215	0.000	-1.327	-0.483
<i>Development Bank Debt</i>							
PRI	No	omitted category					
PRI	Yes	-1.466	-1.211	0.107	0.000	-1.421	-1.001
PRD	No	-0.211	-0.460	0.188	0.014	-0.828	-0.091
PRD	Yes	-1.501	-1.225	0.202	0.000	-1.621	-0.829
<i>Commercial Bank Debt</i>							
PRI	No	omitted category					
PRI	Yes	-0.014	-0.119	0.052	0.023	-0.221	-0.017
PRD	No	-0.017	-0.132	0.097	0.173	-0.321	0.058
PRD	Yes	-0.044	-0.210	0.112	0.061	-0.430	0.010

<i>Bond Debt</i>							
PRI	No	omitted category					
PRI	Yes	0.007	0.086	0.027	0.001	0.033	0.139
PRD	No	0.061	0.247	0.048	0.000	0.153	0.341
PRD	Yes	0.143	0.378	0.049	0.000	0.281	0.474

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**PAN-PRD Matched Subsample**

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<i>Total Debt</i>							
PRD	No	omitted category					
PRD	Yes	-0.269	-0.519	0.215	0.016	-0.941	-0.098
PAN	No	0.356	0.597	0.313	0.056	-0.016	1.209
PAN	Yes	-0.089	-0.298	0.320	0.351	-0.926	0.329

<i>Development Bank Debt</i>							
PRD	No	omitted category					
PRD	Yes	-0.512	-0.716	0.211	0.001	-1.128	-0.303
PAN	No	0.475	0.689	0.286	0.016	0.129	1.249
PAN	Yes	-0.178	-0.422	0.297	0.156	-1.004	0.161

<i>Commercial Bank Debt</i>							
PRD	No	omitted category					
PRD	Yes	-0.019	-0.138	0.099	0.165	-0.332	0.057
PAN	No	-0.002	-0.042	0.153	0.783	-0.342	0.258
PAN	Yes	-0.080	-0.282	0.158	0.075	-0.592	0.028

<i>Bond Debt</i>							
PRD	No	omitted category					
PRD	Yes	0.061	0.248	0.056	0.000	0.138	0.358
PAN	No	0.015	0.124	0.121	0.308	-0.114	0.362
PAN	Yes	0.105	0.324	0.121	0.007	0.087	0.560

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**Table 3: Theoretical Expectations and Summary Empirical Results**

<b>THEORETICAL EXPECTATIONS</b>										<b>SUMMARY EMPIRICAL RESULTS</b>										
	<b>Opportunistic Electoral Logic</b>				<b>Ideological Partisan Logic</b>				<b>PRD–PRI Matched Sample</b>				<b>PAN–PRI Matched Sample</b>				<b>PAN–PRD Matched Sample</b>			
<i>Variable</i>	Relative Placement		Relative Placement		Left-Leaning PRD		Centrist PRI		Centrist PRI		Right-Leaning PAN		Left-Leaning PRD		Right-Leaning PAN					
	<i>Left</i>	<i>Right</i>	<i>Left</i>	<i>Right</i>	<i>Left</i>	<i>Right</i>	<i>Left</i>	<i>Right</i>	<i>Left</i>	<i>Right</i>	<i>Left</i>	<i>Right</i>	<i>Left</i>	<i>Right</i>	<i>Left</i>	<i>Right</i>				
<b>Total Debt</b>																				
<b>Election Period</b>	Yes (Higher)	Yes (Higher)	Yes (Higher)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)				
<b>Partisan Policy</b>	No	No	Yes (Higher)	Yes (Lower)	No	No	No	No	No	No	No	No	No	No	Yes (Higher)	Yes (Higher)				
<b>Development Bank</b>																				
<b>Election Period</b>	Yes (Higher)	Yes (Higher)	Yes (Higher)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)				
<b>Partisan Policy</b>	No	No	Yes (Higher)	Yes (Lower)	No	No	No	No	No	No	No	No	No	No	Yes (Higher)	Yes (Higher)				
<b>Commercial Bank</b>																				
<b>Election Period</b>	Yes (Higher)	Yes (Higher)	Yes (Higher)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	Yes (Lower)	No	No	No	No	No	No	No	Yes (Lower)				
<b>Partisan Policy</b>	No	No	Yes (Higher)	Yes (Lower)	No	No	No	No	Yes (Higher)	Yes (Lower)	Yes (Higher)	Yes (Lower)	Yes (Higher)	Yes (Lower)	Yes (Higher)	Yes (Lower)				
<b>Bonds</b>																				
<b>Election Period</b>	Yes (Higher)	Yes (Higher)	Yes (Higher)	Yes (Lower)	Yes (Higher)	Yes (Higher)	Yes (Higher)	Yes (Higher)	Yes (Higher)	Yes (Higher)	Yes (Higher)	Yes (Higher)	Yes (Higher)	Yes (Higher)	Yes (Higher)	Yes (Higher)				
<b>Partisan Policy</b>	No	No	Yes (Lower)	Yes (Higher)	Yes (Higher)	Yes (Lower)	Yes (Higher)	Yes (Lower)	Yes (Lower)	Yes (Higher)	Yes (Lower)	Yes (Higher)	No	No	No	No				

**Table 4: Matched PRD–PRI Sample, Electoral Opportunism, Ideological Partisanship, and Debt in Mexico**

	<i>Total Debt</i>	<i>Development Bank Debt</i>	<i>Commercial Bank Debt</i>	<i>Bond Debt</i>
PRD Municipality (Dummy)	-0.315 (0.199)	-0.460** (0.188)	-0.132 (0.0966)	0.247*** (0.0477)
Municipal Election Year (Dummy)	-1.111*** (0.111)	-1.211*** (0.107)	-0.119** (0.0523)	0.0861*** (0.0269)
PRD Municipality * Muni Election	0.521** (0.216)	0.445** (0.206)	0.0406 (0.104)	0.0446 (0.0589)
Copartisan State Governor	0.113 (0.156)	0.0334 (0.149)	0.153** (0.0679)	-0.0569 (0.0355)
Total Population (sqrt)	0.0157*** (0.00137)	0.0117*** (0.00114)	0.00533*** (0.00112)	-0.000112 (0.000430)
Fiscal Revenue (per cap sqrt)	0.00508 (0.00819)	0.0151* (0.00790)	0.00316 (0.00288)	-0.0133*** (0.00207)
Vertical Fiscal Imbalance	-2.106*** (0.557)	-2.117*** (0.542)	-0.181 (0.213)	0.0514 (0.166)
Human Dev. (Marginality Index)	-0.561*** (0.135)	-0.528*** (0.117)	-0.177*** (0.0603)	0.155** (0.0772)
Year Dummy 2005	-0.332 (0.216)	-0.106 (0.200)	-0.0862 (0.0903)	-0.108 (0.0828)
Year Dummy 2006	0.475** (0.189)	0.538*** (0.177)	-0.0475 (0.0811)	0.0390 (0.0662)
Year Dummy 2007	0.758*** (0.157)	0.818*** (0.150)	0.0825 (0.0709)	-0.0570 (0.0474)
Year Dummy 2008	omitted	omitted	omitted	omitted
Year Dummy 2009	2.475*** (0.136)	1.976*** (0.132)	0.151*** (0.0527)	0.683*** (0.0455)
Year Dummy 2010	3.483*** (0.200)	2.346*** (0.190)	0.325*** (0.0882)	1.220*** (0.0666)
Year Dummy 2011	3.030*** (0.222)	2.002*** (0.211)	0.392*** (0.0987)	1.209*** (0.0725)
Year Dummy 2012	2.081*** (0.236)	0.924*** (0.225)	0.402*** (0.106)	1.194*** (0.0771)
Constant	2.167*** (0.810)	2.066*** (0.770)	-0.479 (0.338)	0.528** (0.243)
Number Observations	8453	8453	8453	8453
Number Groups	1695	1695	1695	1695
R2 Within	0.0793	0.0709	0.0163	0.0365
Chi-2	846.3***	690.8***	70.85***	498.8***

Note: Linear (Prais-Winsten) cross-sectional time-series regression with panel-corrected standard errors (in parentheses), with heteroskedastic and AR1 error corrections. \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.



**Table 5: Matched PAN–PRD Sample, Electoral Opportunism, Ideological Partisanship, and Debt in Mexico**

	<i>Total Debt</i>	<i>Development Bank Debt</i>	<i>Commercial Bank Debt</i>	<i>Bond Debt</i>
PAN Municipality (Dummy)	0.597* (0.313)	0.689** (0.286)	-0.0420 (0.153)	0.124 (0.121)
Municipal Election Year (Dummy)	-0.519** (0.215)	-0.716*** (0.211)	-0.138 (0.0992)	0.248*** (0.0561)
PAN Municipality * Muni Election	-0.376 (0.273)	-0.395 (0.274)	-0.102 (0.120)	-0.0479 (0.0773)
Copartisan State Governor	-0.501 (0.450)	0.121 (0.404)	-0.130 (0.164)	-0.507*** (0.117)
Total Population (sqrt)	0.0157*** (0.00243)	0.0117*** (0.00217)	0.00618*** (0.00141)	-0.000360 (0.000769)
Fiscal Revenue (per cap sqrt)	0.00631 (0.0146)	0.0241* (0.0142)	0.0117*** (0.00434)	-0.0273*** (0.00431)
Vertical Fiscal Imbalance	-4.285*** (1.069)	-4.391*** (1.063)	-0.0242 (0.493)	-0.254 (0.311)
Human Dev. (Marginality Index)	0.00540 (0.205)	-0.287 (0.190)	-0.144** (0.0677)	0.545*** (0.0749)
Year Dummy 2005	-0.811** (0.318)	-0.197 (0.308)	-0.0239 (0.116)	-0.510*** (0.0872)
Year Dummy 2006	0.500* (0.283)	1.082*** (0.278)	-0.0521 (0.106)	-0.429*** (0.0708)
Year Dummy 2007	0.611*** (0.220)	0.856*** (0.220)	0.134 (0.0855)	-0.291*** (0.0495)
Year Dummy 2008	omitted	omitted	omitted	omitted
Year Dummy 2009	2.525*** (0.224)	2.119*** (0.227)	0.0306 (0.0704)	0.593*** (0.0562)
Year Dummy 2010	4.093*** (0.312)	2.425*** (0.310)	0.362*** (0.123)	1.499*** (0.0844)
Year Dummy 2011	3.863*** (0.341)	2.729*** (0.334)	0.319** (0.139)	1.535*** (0.113)
Year Dummy 2012	2.997*** (0.361)	1.433*** (0.348)	0.555*** (0.148)	1.647*** (0.141)
Constant	4.069*** (1.479)	3.080** (1.427)	-1.095* (0.622)	2.066*** (0.505)
Number Observations	4087	4087	4087	4087
Number Groups	1090	1090	1090	1090
R2 Within	0.0753	0.0550	0.0261	0.103
Chi-2	421.2***	312.6***	54.24***	466.9***

Note: Linear (Prais-Winsten) cross-sectional time-series regression with panel-corrected standard errors (in parentheses), with heteroskedastic and AR1 error corrections. \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.