Do Political Parties Matter? Evidence from U.S. Cities*

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Abstract

Partisan political differences have important effects on policy outcomes at the state and federal levels of government. We reexamine this issue at the local level using a new panel data set of mayoral elections in the United States. Applying a regression discontinuity design to deal with the endogeneity of the incumbent party, we find that party labels do not affect key fiscal policy outcomes of municipal governments, even though there is a large advantage to incumbency in terms of the probability of winning the next election and the margin of victory. The absence of a strong partisan impact at the local level appears due to two factors: (a) narrower differences in the parties' preferences regarding policies relevant to city government; and (b) Tiebout-related forces provide the proper incentives for local politicians to be able to credibly commit to moderation.

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I. Introduction

Much recent research concludes that political partisanship influences various policy and economic outcomes at the state and national levels of government.[1] In this paper, we analyze whether political parties matter in a similar sense at the municipal level of government. Not only is the local public sector large in economic terms and responsible for many essential services[2], but the environment in which city governments operate is different in important ways that could affect the influence of partisan politics. For example, the nature of city spending and the scope of services provided could be such that the parties' preferences regarding issues relevant to local government may not be that far apart. In addition, the competitive environment in which local governments operate certainly is much different from that faced by state and national governments. Tiebout-like forces leading to the formation of relatively homogenous communities and the high mobility of households within a metropolitan area could provide conditions to constrain partisanship at the local level.

Data limitations, not any lack of interest, account for the absence of studies on the impact of political partisanship at the city level in the United States.[3] The key drawback has been the absence of a large electoral data base at the municipal level. This deficit is eliminated by a new mayoral elections data set we collected for this paper. The sample includes information on more than 3,000 mayoral races between 1950 and 2005 in approximately 400 cities with populations of at least 25,000 residents as of the year 2000. These data are used to analyze the impact of the two national political parties - specifically, whether the mayor is a Democrat or Republican - on local policy outcomes such as the size of local government and the composition of local public expenditures. Our study

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[1] There is now a consensus that U.S. congressional voting behavior is highly partisan (e.g., Poole and Rosenthal (1984), Snyder and Groseclose (2000), and Lee, Moretti, and Butler (2004)). Snowberg, Wolfers and Zitzewitz (2007) report that political party control matters for the executive branch of the federal government, too, by showing that the probability of electing a Democrat versus a Republican President (as observed in prediction markets) influences the value of financial market indexes. At the state level, Besley and Case (2003) find that partisanship affects key fiscal measures such as the size of government and welfare-related expenses. Their review of the literature also notes several studies with similar findings (e.g., Grogan (1994), Besley and Case (1995), Knight (2000), and Rogers and Rogers (2000)).

[2] The latest *Annual Survey of Governments* shows local government full-time employment to be nearly 12 million, or almost three times the number working for the fifty state governments, and total local government revenues in excess of $1.2 trillion. These figures include data on counties, cities, townships and school districts. Cities and townships which constitute the municipalities that are our unit of observation account for approximately one-third of those totals. While we use the terms local and municipal government interchangeably, our data are for municipalities exclusively.

[3] There are recent papers that study the impact of local politics abroad. Bertrand and Kramarz (2002) analyze the influence of parties on local zoning boards in France, and their effect on the long-term growth of regional income and employment. Ferraz and Finan (2005) look at the political determinants of corruption in cities in Brazil, and Pettersson-Lidbom (2006) shows that party labels matter for local policies in Sweden. Levitt (1997) is an example of related work on the U.S, in which he estimates the impact of local electoral cycles on investments in public safety and the subsequent affect on crime.

differs from research at the federal level since we are able to compare actual policy outcomes after politicians were elected by voters, including over multiple terms. Another benefit of studying cities is the large number of such governmental units in the United States, since it facilitates the estimation of econometric models that use appropriate treatment and control groups.

Comparisons between cities with Democrat and Republican mayors find only negligible differences in the composition of local expenditures, including the proportion spent on police and fire departments. However, there is a substantial difference in the average size of city government depending upon whether the mayor is a Democrat or Republican, with Democrat mayors presiding over larger local public sectors. For example, current spending and full-time municipal employment per capita are about 18 percent higher in cities where a Democrat won the last election. The data for revenues and taxes raised show only slightly smaller gaps between the two major parties. Naïve OLS regressions that control for a variety of local traits reduce these unconditional mean differences by half, but this still could overstate the impact of political partisanship on the size of city government if the winning political party is endogenously determined. Given the likelihood that some unobserved factors (e.g., the differential quality of mayoral candidates across parties or the true underlying political leanings of the voters) are influencing the outcome, we employ a regression discontinuity design (RDD) approach akin to that in Lee (2003) and Lee and Dinardo (2004) to deal with the endogeneity issue. More specifically, we compare policy outcomes from cities where Democrats barely won an election with cities where Democrats barely lost an election. The RDD estimates tend to be only about one quarter the magnitude of the naïve OLS estimates, and in no case is the remaining estimated gap in size of government across the parties statistically significant. Thus, we find no evidence of partisan differences in the scale of city government, nor in the composition of its spending.

Why are local politics less divisive, at least in terms of the fiscal outcomes we examine? The answer could be due to institutional difficulties to make changes quickly.[4] We empirically rule out this institutional inertia explanation by comparing outcomes in the final year of the mayor's term, in cities with longer terms of office, and in the final year of the (potential) second term, always finding no significant partisan differences in fiscal results. Another possible explanation is political weakness. It could be that the mayor's party is highly partisan, but does not have the political

[4] While some political scientists have argued that changes in policy are easier to approve at the local level (e.g., Peterson (1981)), it could be time-consuming to get a recalcitrant city council to ratify new policy or there could be legal constraints requiring popular votes for certain tax or spending changes.

strength to move policy to its preferred point. We rule out the political weakness mechanism after documenting a large political advantage to incumbency: Democrats who barely won the last election are 36% more likely to win re-election than are Democrats who barely lost, and by much larger margins of victory. Thus, the political strength of the winning party is much greater in the second term, but we continue to find no differences in fiscal policy outcomes even after the large exogenous shift in party strength.[5] This observed shift also allows us to apply a formal test of the Alesina (1988) model of policy divergence based on the empirical decomposition of Lee, Moretti and Butler (2004). Estimates from this formal model lend additional support to the case for a high degree of convergence in policy space regarding the size of local government.

The lack of partisan impact on local fiscal outcomes is arguably due to two facts regarding the environments in which city governments operate: (a) that for issues relevant to local government, the parties' preferences for policy are closer to one another; and (b) that there is some force related to Tiebout-sorting leading the parties to adopt moderate positions even if their preferred policies are relatively extreme. With respect to the first factor, Glaeser and Ward (2006) report survey results showing clear differences of opinion along partisan lines in the United States on cultural, but not economic, grounds. Some of the most divisive cultural issues such as abortion and the place of religion in the public square effectively have been 'federalized' and are no longer subject to much local control, thereby lowering their partisan content at the city government level. Our estimates on the size of local government and the composition of its spending are consistent with the view that they primarily are economic matters for which partisan differences are neither extreme nor passionate, although this is somewhat surprising given that the proper scale of government has been the focus of debate between Democrats and Republicans for decades.

That the two major parties are behaving as if differences in preferences were non-existent at the local level also is consistent with the Tiebout (1956) model. Indeed, a long-running debate within urban economics is 'whether Tiebout even needs politics' (Epple and Zelenitz (1981); Henderson (1985)). The intuition is that if sorting were perfect and everyone was located in a jurisdiction that provides just the desired public goods, there seems little need for partisanship. Of course, that stylized outcome does not reflect reality in most places, so the issue is whether Tiebout-like forces provide a mechanism to constrain partisanship. In theory, it should be more costly for a

[5] In addition to Lee (2003), a number of other studies estimate the incumbent effect or the mechanisms leading to the electoral advantage of incumbents. Some important examples in this literature are Alesina and Rosenthal (1989), Snyder (1990), Besley and Case (1995) and Levitt (1996).

political party not to cater to a representative median voter in an environment in which the residents of any given community are relatively homogeneous and are highly mobile within a labor market area in which similar competitive jurisdictions exist. We present evidence consistent with Tiebout-related forces making it easier for political parties to commit to centrist policies.

Before getting to that, the next section describes the new mayoral elections data set, as well as the fiscal policy variables used in the empirical analysis. This is followed in section III with a discussion of our econometric strategy which is based on a well-known model of political partisanship. Section IV then presents the empirical estimates, and Section V discusses the mechanisms related to policy convergence at the local level. Section VI concludes the paper.

II. Data Description

II.A. The Mayoral Electoral Survey Data

The mayoral election data used in this paper were collected from a survey sent to all cities and townships in the United States with more than 25,000 people as of the year 2000. We requested comprehensive information on the timing (year and month) of all mayoral elections since 1950, the name of the mayor and 2nd place candidate, aggregate vote totals and vote totals for each candidate, party affiliation, type of election, and some additional information pertaining to specific events such as runoffs and special elections.[6]

Our final data set contains information on 3,496 elections held in 392 cities between 1950 and 2005.[7] The first column of Table 1 reports various demographic, economic, and location data on these cities as of the year 2000. Naturally, we are keenly interested in the representativeness of our sample, so the remaining columns in this table report analogous information on different samples of cities. The second column provides data on the universe of municipalities in the United States. There are well over 35,000 municipalities, and given our 25,000 population cut-off, it is not surprising that our cities are much larger than the typical jurisdiction in the country.[8] Bigger cities also tend to have better educated households that earn more money and live in more expensive houses. They also have more minority households, as indicated by the much larger share of the

[6] The strengths of this survey compared to other publicly available data are readily evident. The *Municipal Yearbook*, for example, only records the name of the current mayor for a given year, without specifying the year of election. The International City Managers Association (ICMA) only collects data on type of election and organizational features of cities every five years, without asking any question related to election outcomes. The Census of Governments also collects some information about type of election, as well as data on the race and gender of elected officials.

[7] All results reported in this paper are based on data collected through December 2006. Data collection efforts are ongoing, so the sample will be updated periodically.

[8] Average population in our final sample is also skewed by a few very large cities. The median population is 51,464.

African-American population. Regionally, our sample is more heavily weighted towards the West and South, with there apparently being numerous small towns in the Midwest region that do not make it into our sample.

Perhaps more relevant is how representative our sample is compared to all municipalities with more than 25,000 residents in the year 2000. As indicated by the data in the third column of Table 1, there are 1,644 such cities. However, in several municipalities mayors are appointed by a city council, while others hire professional managers to run the city. Column 4 contains descriptive statistics for the 877 cities that directly elect a mayor.[9] Our final sample is very similar in demographic, economic, and geographic terms to this group of cities. From survey responses, we were able to obtain at least some information on vote totals and candidate names for 57% of the 877 cities that elect mayors by popular vote. Summary statistics for this group of 503 places are displayed in Column 5. Our final sample of 392 cities, which is 45% of those places that directly elect a mayor, also contains information on party affiliation, not just vote totals.

Two factors made it difficult to collect information on candidates' party affiliation even when we knew who they were and how many people voted for them. Some cities and counties could not provide the data because it required gathering information from inaccessible voter registration records. More importantly, there is a large fraction of cities that are institutionally non-partisan in that they prohibit party labels from being printed on election ballots or used in election campaigning. Fifty-nine percent of the cities in our sample are officially non-partisan in this sense. While this certainly does not mean that nearly 60% of mayoral races literally had no partisan content, it does signify a major difference with state and federal elections. Indeed, a quick review showed that elections in many such cities (e.g., Los Angeles, CA) clearly were partisan in the standard use of that term. Hence, we decided to complement the survey information with on-line searches for party affiliation information on candidates in all 'non-partisan' cities.[10]

Another interesting feature about the nature of mayoral races is the relatively large fraction of cities with two-year term elections. While 51% of our elections are for 4-year terms, 44% are for

[9] The total number of cities that elect a mayor is an estimate that was backed out from three different sources: Census of Governments, ICMA and our own survey. Given that we find several discrepancies between the two external surveys and the results directly obtained from the cities, it is very likely that the total number of such cities is slightly larger than 877, potentially reaching 1,000-1,100 cities.

[10] These online searches were conducted by accessing restricted content of local newspapers from News Bank, and also by using search engines such as Google. Party affiliation data was easily found for candidates in larger cities, where the mayoral candidates are popularly known as Democrats or Republicans even though the election is officially non-partisan. We also had greater success in finding this information for jurisdictions in larger urban areas that have a richer stock of information online. Overall, approximately 40% of the party affiliation data for non-partisan cities were found with one of the methods above. The remaining 60% were collected directly from city or county clerks.

2-years only, with 4% being for 3-year terms. The high proportion of 2-year terms generates a cyclical pattern in the total number of elections by year, as shown in Figure 1. In addition to this annual cycle, Figure 1 also documents that the number of observations is growing over time. Three factors account for this: (a) a number of cities in the sample did not have direct elections for mayor in the past; (b) some city clerks and county clerks lost their records of historical elections or they were not able to recover the earlier data from old archives; and (c) our on-line searches for party affiliation had a higher success rate for recent decades. While this means that we work with an unbalanced panel, this feature of the data is not a concern for the research design used in the analysis below.

With respect to party affiliation, 51% of the winners in our sample were Democrats, with 40% being Republicans. Over time, however, the proportion of Republican mayors has been increasing as is documented in Figure 2. This plot of party affiliation since 1950 shows that Democrats were twice as likely to be in power than Republicans from mid-1950's through the late-1970's. However, the fraction of Democratic mayors has fallen from 60% to 42%. This was primarily due to Republican gains, as their share of mayoral office in our sample rose from about 25% in the mid-1950's to 41% in 2005. It is also the case that this sharp reduction in the Democratic-Republican gap was accompanied by an increase in the proportion of independent mayors or mayors from other parties.

II.B. Local Public Finance Data

We also collected information on a variety of local public finance variables that are merged with our elections data. The public finance data span the years 1970-2004 and are from the *Historical Data Base of Individual Government Finances*. These data are based on a *Census of Governments* conducted every five years, from *Annual Survey of Governments* collected at every non-census year, and are complemented with state data provided by the Census Bureau. The local public finance variables include measures of revenues and taxes, spending (on current operations and capital goods), employment (full and part time), as well as distributional data regarding shares of spending on labor, public safety, and parks and recreation.

The first column of Table 2 reports summary statistics on eleven different variables.[11] The cities in our sample raise and spend just below $1,400 per capita on average.[12] The rough equality of these measures is not surprising given that localities generally are subject to balanced budget requirements. Taxes correspond to 60% of the overall revenues raised, indicating there are plentiful transfers from higher levels of government, along with numerous fees not counted as taxes. Most spending is on current operations, with less than a third on capital items. There are almost 13 full-time employees per 1,000 residents and just over half of all spending goes towards salaries and wages in our sample of cities. Public safety in the form of police and fire departments receives over one quarter of all spending, with parks and recreation receiving less than ten percent on average.

Naive partisan differences in local public finance outcomes are reported in the second and third columns of Table 2. Unconditional differences between the parties are reported in column 2, with the conditional differences based on an OLS regression controlling for a number of local traits in column 3.[13] In all cases, a positive value implies that Democrat mayors are running cities with 'more' of a particular public finance activity, and the size of government measures are converted to logs so the numbers represent the proportional differences between Democrats and Republicans. Cities in which a Democrat won the last mayoral election on average raise more revenues, both tax and spend more, and have more public employees, with conditional differences ranging from 6-10 percentage points. While the overall size of local government is bigger if the mayor is a Democrat, there is no evidence of partisan differences regarding how resources are allocated across functions. All the unconditional differences reported in the bottom panel of Table 2 on the percentage of spending on police, fire, and parks and recreation are approximately one percentage point or less, and these become more miniscule after controlling for local traits. In addition, none of those differences are statistically significantly different from zero.

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[11] The total number of elections in this final sample is 1,796 because we eliminate the elections with third party mayors since our goal is to compare differences in policy outcomes from Democrats and Republicans. Similarly, we do not use elections where the first and second place candidates were from the same party. Also, the most recent election for each city is discarded since we cannot observe the electoral outcome for election $t+1$ in such cases. [Being able to estimate partisan effects consistently over multiple terms is an important feature of our empirical strategy. See below for more on that.] Finally, we only use elections data from 1970-2004 because this is the period over which the local public finance data are available.

[12] All monetary variables are reported in 2000 dollars.

[13] In addition to an indicator variable for whether the mayor is a Democrat, the local controls include city population, the type of election (partisan versus non-partisan, length of term status), median income, percentage of white households, percentage of households with a college degree, the homeownership rate and median house value. Year and region fixed effects also are included. See the notes to the table for the details.

We interpret these initial descriptives as signaling that partisanship is less intense at the local level. Crime may get a lot of play on the nightly news, but Democrats and Republicans seem to agree on how much of the city budget should be spent on public safety. The same holds true for parks and recreation, and we suspect, for most other government functions handled at the local level. That said, the OLS estimates also show that the aggregate size of city government--whether measured in terms of revenues or taxes raised, expenditures made, or employees hired--differs by party, with local government being larger if the city has a Democrat as mayor. However, a more appropriate modeling strategy and research design is needed to account for the potentially serious endogeneity issue that plagues the measurement of partisan differences in local public finance outcomes. The next section outlines that strategy.

III. Background and Modeling Strategy

The inspiration for economic analysis of political parties dates back at least to Hotelling's (1929) famous model of spatial competition. While his framework of a 'city on a line' was intended to explain the central location of firms in physical space, Hotelling himself mentions its applicability for understanding the tendency of the Democrat and Republican parties to move toward similar policy positions (on tariffs at the time he wrote). Downs (1957) expanded upon Hotelling's conjecture, building a more formal and elaborate structure with rational voters and political parties. Importantly, the parties cared only about winning elections, and the probability of winning was maximized if they moved to the center of policy space and captured the median voter.[14] In Downs' framework, democracy and the median voter forced the parties to offer similar platforms, so that the impact of political partisanship on policy outcomes was nil.

Downs' convergence result had a powerful influence and became intertwined with the development of median voter models in the fields of urban economics and political economy.[15] The stark result that partisan politics does not affect policy outcomes at all left many uneasy, and much effort has been made to amend it. Even before Downs wrote, Smithies (1941) challenged Hotelling's pure central location result by pointing out that it relied on an assumption of perfectly inelastic demand at all locations. In that scenario, moving to the center did not cost anything in

[14] Downs' (1957) dealt with a variety of other matters pertaining to the way democracy worked, including offering predictions on how two versus three (or more) party systems would function. In this paper, we are only concerned with his implications for the effects (or lack, thereof) of political partisanship in a two-party system.

[15] Technically speaking, convergence and median voter theorems are not one and the same, as the former is more general than the latter. For our purposes, we can treat them as the same without confusing the interpretation of any of our empirical results.

terms of lower demand on the fringes of the market. However, if demand was elastic, moving away from the edge could be so costly that it was not optimal to locate in the middle of the space. In the language of politics, passionate voters on the extremes might be lost from a move to the center.

Much recent work has more formally introduced passion or ideology of the parties and the candidates themselves into the analytical framework.[16] Intuitively, if a party cares about policy outcomes, not just being elected, locating in the center of policy space may not maximize the utility of its members. However, Alesina (1988) showed that incomplete convergence was about more than whether the party or the candidate cared about something other than being elected. In many contexts, complete convergence is not dynamically consistent because commitments to centrist policies by the political parties are not credible. And, if parties cannot credibly commit to moderate policies, then they will diverge in policy space.

This is most easily understood in the context of a simple one-shot electoral game. In that situation, the only time consistent equilibrium is one in which the parties follow their own policy preferences rather than converging on the preferences of the median voter. If parties have an incentive to announce a moderate policy platform to raise the probability of election, rational, forward-looking voters will take that incentive into account, rendering the initial commitment non-credible and leading each party to announce it will implement is own policy preferences upon winning. While it is possible to get convergence in more complex settings, Alesina (1988) demonstrated that the ability to credibly commit is an essential underpinning of the traditional Downs (1957) model of the median voter and political convergence. Alesina's model serves as the foundation of our empirical work, so we describe it in the next subsection.

III.A. A Model of Credibility and Policy Convergence

Because Alesina's (1988) model also has recently been used by Lee, Moretti, and Butler (2004) to establish the theoretical foundation for an empirical study of the effects of political parties on U.S. congressional voting behavior, we only briefly outline its basic structure and discuss how its key comparative static results relate to our empirical estimation. Alesina (1988) models the problem as a bargaining game between two parties, here denoted as Dems and Reps, that have preferences over a single policy outcome, S, representing the size of the local government. Each party's utility

[16] In economics, Wittman (1977, 1983) is an excellent example of this subset of the literature on political partisanship. There is much in political science, too, but space limitations prevent us from cataloguing or reviewing that work. See the references in Wittman (1983 especially) and in Besley and Case (2003) for more detail.

function is concave in the policy outcomes, and the parties' preferred policy outcomes or bliss points are different from one another (and exogenously determined).[17] The Dems' bliss point is defined as s and the Reps is 0, without loss of generality.

Elections are held at the beginning of each period t. Each party announces its policy position just prior to the election. These are denoted x^a and y^a, respectively, for the Dems and Reps. Voters are forward-looking and form rational expectations regarding what policies actually will be implemented. These expectations are formed prior to the election when the outcome is uncertain, and are denoted as x^e and y^e.

The probability that the Dems will win is common knowledge and is given by P, with $P=P(x^e, y^e)$. In this framework, each voter favors the party closest to his own bliss point and there is uncertainty about the true distribution of voter preferences so that the bliss point of the median voter is not known with certainty. There is an advantage to moving toward the other party in policy space, potentially attracting voters with preferences in between the parties, so $\partial P/\partial x^e < 0$ and $\partial P/\partial y^e < 0$ if $x^e > y^e$.

The efficient frontier of outcomes is given by $x^*=y^*=\lambda s$, where λ ranges in value from 0 to 1 and represents the weight of the Dems in the bargaining process. Note that if $\lambda=1$, the chosen policy is identical to the Dems' preferred size of government. In addition, as long as both parties have concave preferences in the policy outcome, they will prefer a moderate policy with certainty to the electoral win probability weighted-sum of the outcomes s and 0.

The three possible equilibria from this model are full convergence, full divergence, and partial convergence. Full convergence is the Downs' outcome in which the Dems and Reps announce the same moderate policy and voters expect them to carry out that policy. The latter requires the commitment be credible and Alesina (1988) discusses conditions such as low discount rates (which make the parties 'farsighted') that could render commitments believable by the voters. Below, we discuss other mechanisms related to Tiebout sorting that also could increase credibility. In this case, the important comparative static results are $dx^*/dP^* = dy^*/dP^* = (d\lambda^*/dP^*)s > 0$, with P^* representing the underlying probability the Dems would win at the party bliss points $s=x^e$ and $0=y^e$. An increase in P^* reflects an exogenous increase in the political strength of the Dems, so that their bargaining power is greater and the equilibrium moves closer to their preferred policy position. While the Dems obviously prefer a higher P^*, this should not be confused with them determining

[17] The model does not distinguish between a party and its candidates. Similarly, we will not analyze the process by which parties choose a given candidate to run in the general election.

the relevant policy outcome in the sense discussed above. Voters are in control here in a classic Downsian sense, as that is what it means when $dx^*/dP^*>0$ and $dy^*/dP^*>0$.

The second possible outcome is partial convergence, and it implies that $0 < y^* < x^* < s$. In this scenario, it is still the case that $dx^*/dP^*>0$ and $dy^*/dP^*>0$. The intuition is that voters can affect policy to some degree, but are unable to force full convergence.

Full divergence is the last possible outcome, and it occurs when $x^*=s$ and $y^*=0$. That is, the parties implement policies consistent with their bliss points if elected, and voters expected them to do just that. This equilibrium occurs when it is impossible to credibly commit to moderation relative to one's preferred position. In this case, an exogenous increase in the Dem's political strength has no effect on the equilibrium so that $dx^*/dP^* = dy^*/dP^* =0$. Voters do not affect the size of government here. The parties determine that, with the voters simply electing one of parties' bliss points.

Empirically, the clearest distinction will be between full divergence and the other two outcomes. This is a test for whether dx^*/dP^* and dy^*/dP^* are strictly positive or whether they equal zero. While recent researchers dismiss the possibility of full convergence and focus on differentiating between full divergence and partial convergence, we will take the former outcome more seriously.

III.B. An Empirical Model

Because we only observe the policy outcome associated with the winning party, the main economic outcome studied in this paper - size of government S - must be written as,

$$(1)\quad S_t = D_t x_t + (1-D_t) y_t,$$

where D_t is a dichotomous dummy variable indicating whether the Dems won the mayoral election in period t. To parameterize the key comparative statics, dx^*/dP^* and dy^*/dP^*, we follow Lee, Moretti, and Butler (2004) and rewrite (1) as

$$(2)\quad S_t = a + \pi_0 P_t^* + \pi_1 D_t + \varepsilon_t$$

with the residual ε capturing the possibility that bliss points can vary across cities. An analogous equation applies for S in period $t+1$. The variable P_t^* represents the probability of victory assuming

the fixed policy platforms represented by *s* and *0*, so that the estimated coefficient π_0 measures the impact of an increase in the Dems' political strength. An estimate of $\pi_0=0$ implies the full divergence outcome noted above; $\pi_0>0$ implies some amount of convergence. Note that this coefficient is estimated controlling for the pure effect of party, which is captured by the π_1 term.

Since econometricians do not observe the underlying popularity of the Democrat party as represented by *P**, equation (2) cannot be estimated directly via OLS. However, if there is exogenous variation in whether the Dems win, a set of individual equations can be estimated which allow us to identify all the relevant factors.[18] For example, the pure party effect (or π_1) from equation (2) can be determined by estimating the average treatment effect in period *t* :

$$(3)\quad E\{S_t \mid D_t=1\} - E\{S_t \mid D_t=0\} = \pi_1.$$

This is the expected difference in the size of local government depending on whether the Dems or Reps win the mayor's office. If preferences for policy between Democrats and Republicans are different, and if they are actually able to implement their preferred policies during the mayoral term, then π_1 should be different than zero. Thus, a positive estimate of π_1 is the first and most important indicator that Democrats and Republicans have differing preferences for policy.

A similar average treatment effect can be estimated for period *t+1*:

$$(4)\quad E\{S_{t+1} \mid D_t=1\} - E\{S_{t+1} \mid D_t=0\} = \pi_0(P^*_{D,t+1} - P^*_{R,t+1}) + \pi_1(P_{D,t+1} - P_{R,t+1}) = \psi$$

where $P_{D,t+1}$ represents the equilibrium probability of a victory by the Dems in period *t+1* given that they held the mayor's office in period *t* , while $P_{R,t+1}$ is defined analogously but with a Republican mayor holding office in period *t*. Equation (4) says that the difference in size of local government that occurs after the next election, depending upon whether Dems or Reps won the previous election, can be decomposed into effects due to voters forcing the parties to offer moderate positions (the $\pi_0(P^*_{D,t+1} - P^*_{R,t+1})$ component) and those due to purely partisan political differences (the $\pi_1(P_{D,t+1} - P_{R,t+1})$ component). The left-hand side of (4) is directly observable by comparing policy outcomes between Republicans and Democrats after election *t+1*, and π_1 can be estimated as in (3), but we still need an estimate of $(P_{D,t+1} - P_{R,t+1})$ in order to back out the pure partisanship component.

[18] The source of exogenous variation comes from the comparison of close elections, as discussed below.

The term $(P_{D,t+1} - P_{R,t+1})$ can be thought as the 'incumbent effect', which is defined as the difference in the equilibrium probability that the Dems will win the next mayoral election (in period $t+1$) depending upon which party won the current election. Another way to think about the incumbent effect is that in addition to policy implications, holding the office during a term will also potentially lead to electoral gains at the end of the term. More formally, this electoral advantage from incumbency can be written as:

$$(5)\quad E\{D_{t+1} \mid D_t=1\} - E\{D_{t+1} \mid D_t=0\} = P_{D,t+1} - P_{R,t+1}, = \gamma$$

The product of the pure party effect and the incumbent effect, $\pi_1(P_{D,t+1} - P_{R,t+1})$, measures the extent to which political parties directly affect policy outcomes via their own preferred positions. As such, it is a reflection of policy divergence. The extent of policy convergence $\pi_0(P^*_{D,t+1} - P^*_{R,t+1})$, or of Downsian-type forces, cannot be observed directly but it can be computed as a residual in equation (4).[19]

III.C. Estimation Design

The fundamental identification problem in generating unbiased estimates of the pure party effect π_1 in equation (3) arises from the likelihood that whether or not a Democrat leads a given city is determined by local traits that are unobserved by the econometrician. In order to overcome this endogeneity issue, we compare cities where Democrats barely won an election with cities where Democrats barely lost (and a Republican won). Lee (2003) and Lee and Dinardo (2004) demonstrate that such a strategy provides quasi-random variation in party winners, since for narrowly decided races, which party wins is likely to be determined by pure chance as long as there is some unpredictable component of the ultimate vote.[20]

A key underlying assumption of the RDD approach is that cities in which Democrat mayors won a closely contested election are similar on average to cities where Republicans were barely winners. This implies that all observable and unobservable pre-determined features of cities should be similar among those races, and it represents a powerful validity test of the research design. More

[19] We should emphasize that $P_{D,t+1}$ is different from $P^*_{D,t+1}$ in these equations. The latter reflects the true electoral strength of the Dems assuming the parties are expected to choose their policy bliss points, s and 0. This is not observed by the econometrician, which is why the entire term $\pi_0(P^*_{D,t+1} - P^*_{R,t+1})$ must be imputed as a residual.

[20] That there is randomness in the outcomes of close elections is supported by the fact that Democrat and Republican incumbents do not win a disproportionately high fraction of these close races. Thus, there is no evidence that incumbents are able to rig close elections. These results are available upon request.

specifically, all relevant observed covariates should be continuous for elections decided by narrow margins of victory. If they are, then it is likely that the unobservables also will be continuous.

The RDD framework can be estimated parametrically or non-parametrically. Hahn, Todd and Van der Klaauw (2001) focused on identification and non-parametric estimation when the discontinuity occurs on a continuous variable. Lee (2005) and Lee and Card (2005) showed that the RDD can also be estimated parametrically, with similar properties to the non-parametric approach. Because the former approach allows for straightforward hypothesis testing, in this paper we estimate the following polynomial functional form for equation (3):

$$(3') \; S_{c,t} = \beta_0 + D_{c,t}\pi_1 + MV_{c,t}\beta_1 + MV^2_{c,t}\beta_2 + MV^3_{c,t}\beta_3 + D_{c,t}MV_{c,t}\beta_4 + D_{c,t}MV^2_{c,t}\beta_5 + D_{c,t}MV^3_{c,t}\beta_6 + \eta_{c,t}$$

where $MV_{c,t}$ refers to the margin of victory in election t in city c (defined as the difference between the percentage of votes received by the winner and the percentage of votes received by the second place candidate),[21] and S_t represents the size of local government in the term immediately following election t (i.e., it is not the size of government on election night). Thus, the pure party effect which is reflected in the coefficient π_1 in equation (3') is estimated controlling for the margin of victory in linear, quadratic, and cubic form, as well as interactions of each of these terms with a dichotomous dummy for whether a Democrat won the mayor's race in election t in city c.[22]

A similar RDD will be used to estimate the impact of winning a close election on fiscal policy outcomes after election $t+1$, and on the electoral outcomes at the end of the mayoral term, according to the following equations:

$$(4') \; S_{c,t+1} = \delta_0 + D_{c,t}\psi + MV_{c,t}\delta_1 + MV^2_{c,t}\delta_2 + MV^3_{c,t}\delta_3 + D_{c,t}MV_{c,t}\delta_4 + D_{c,t}MV^2_{c,t}\delta_5 + D_{c,t}MV^3_{c,t}\delta_6 + \nu_{c,t}$$

$$(5') \; D_{c,t+1} = \lambda_0 + D_{c,t}\gamma + MV_{c,t}\lambda_1 + MV^2_{c,t}\lambda_2 + MV^3_{c,t}\lambda_3 + D_{c,t}MV_{c,t}\lambda_4 + D_{c,t}MV^2_{c,t}\lambda_5 + D_{c,t}MV^3_{c,t}\lambda_6 + \upsilon_{c,t}$$

[21] Margin of victory is used in lieu of the vote share in order to facilitate comparison across elections, as some have more than two candidates because of write-in ballots or independent candidates. Non-partisan elections also can have more than one candidate from the same party.

[22] The proper order of the polynomial regression is still open to debate in the RDD literature. Although a quadratic polynomial would fit our data well (see the pictures in the empirical results section), we estimate a 3rd order polynomial given that Porter (2003) argues that odd polynomial orders have better econometric properties.

where the total effect of party labels on policy, ψ ,is estimated with the same regressors in equation (4'), but the size of government is measured in the term immediately following election $t+1$. The incumbent effect, $P_{D,t+1} - P_{R,t+1}$, which is represented by the coefficient γ in equation (5') reflects the increased probability of a Democrat winning the next election assuming a Democrat won the previous one, also controlling for the third-order polynomial in margin of victory and its interaction terms.

The comparison of policy outcomes after election $t+1$ provides an estimate of the causal effect of exogenously holding the office during the campaign (i.e., after having won election t). As we saw in the previous section, this overall effect can be decomposed into two parts. The first component is due to partisan differences in the preferences of each party regarding the size of local government. Mathematically, this is the product of the incumbent effect, $(P_{D,t+1} - P_{R,t+1})$, and the pure party effect which is reflected in the π_1 term in the econometric model above. The larger this component, the more it is the case that voters are 'electing' a policy by picking one of the parties' bliss points regarding size of government. The second component is that due to Downs-like forces of convergence in which the desire to capture the median voter drives the parties to adopt moderate positions (the same position in the extreme). Mathematically, this is the residual from subtracting the first component from the overall effect which is given by ψ in the econometric model. The larger is this component, the more it is the case that the voters are 'affecting' policy in the sense it is the median voter's bliss point, not the political parties' bliss points, which determine the ultimate policy outcome.[23]

The intuition behind this framework is that policy outcomes after election $t+1$ are also affected by the exogenous change in electoral strength of the Democrat party associated with victories in close races. In a Downsian view of the world, an increase in the electoral strength of the Democrat party would lead them to vote in a more partisan way. On the other hand, if politicians cannot credibly commit to policies in the sense of Alesina (1988), a shift in electoral strength should not affect their behavior.

IV. Empirical Results

IV.A. RDD Estimates of the Party Effect on the Size of Local Government

[23] The 'elect' versus 'affect' language was used by Lee, Moretti, and Butler (2004) and we adopt it in some of the discussion below.

Regression discontinuity estimates of π_1 , the pure party effect on the size of local government, are reported in Table 3. We present RDD estimates for the four main fiscal variables with large positive conditional OLS estimates of partisan differences: total revenues per capita, total taxes per capita, total expenditures per capita and full time employment per 1000 residents. The results in the first column are based on the estimation of equation (3'), showing the impact over the term of office immediately following the mayor's election. These estimates are directly comparable to the OLS results in column 3 of Table 2 because both represent differences in size of government between Democrat and Republican mayors that are elected in time *t*. The RDD coefficients are no more than 25%-50% of the magnitude of the conditional OLS estimates, and none is significantly different from zero. This suggests that unobserved factors were driving a great deal of the OLS differences in policy outcomes.

Because pictures can be very illuminating in a regression discontinuity context, Figure 3 graphs the results from this regression for the same four measures of government size. The top left panel depicts the findings for log total revenues per capita. Each dot in the panel corresponds to the average log total revenues per capita during the term that follows election *t*, given the margin of victory obtained by Democrats in election *t*. The solid line in the figure represents the predicted values from the polynomial fit described in equation (3'), with the dashed lines identifying the 95% confidence intervals. Only results for the Democrats are presented because the Republicans are the mirror image. Although we observe an overall positive relationship between total revenue per capita and the margin of victory for Democrats – just as in the OLS estimates – there is no meaningful discontinuity around the cut off for close elections. Similar patterns are documented in the other panels of Figure 3 for the other measures of government size.

The second column of Table 3 reports results from a specification that includes the lagged value of the dependent variable for the year prior to election *t*. The intuition here is that including this pre-determined feature in the RDD equation might control for some of the noise observed in Figure 3. The standard errors are lower, sometimes by 50% or more, and the RDD point estimates continue to indicate no meaningful impact of political partisanship on the size of government. Similarly, the results reported in the third column of Table 3 show that there is no material difference in outcomes for the last year of the mayor's term compared to the average effects over the entire term. While the absence of larger partisan effects later in the term of office argues against the difficulty of implementing institutional change as an explanation for the absence of partisan

impacts, that issue is dealt with more extensively below when we analyze the influence of party in the subsequent term of office.[24]

These findings are in stark contrast to the host of estimates from the studies discussed above that focus on behavior at the state and federal levels. If taken at face value, they indicate that local politics are much less partisan than national or state politics. However, there are other potential explanations that warrant discussion and analysis, including political weakness preventing a party from behaving in a preferred partisan manner and the possibility that it takes more than one term to implement fiscal changes of the type we are examining. To gain insight into those issues, we first estimate the change in political strength due to incumbency.

IV.B. The Incumbent Effect and Changes in Political Strength

It could be that the mayor's party is highly partisan, but does not have the political strength to move to its bliss point. After all, we are identifying π_1 off the variation from elections with very tight margins of victory. However, estimation of equation (5') finds a very large value for γ, which represents the incumbent effect (the $P_{D,t+1} - P_{R,t+1}$ term in our model). The RDD point estimates of γ are reported in the first row and column of Table 4 for our full sample, with Figure 4 plotting the underlying data from this specification. Each dot corresponds to the Democrat party probability of victory in election *t+1* given the margin of victory obtained by Democrats in election *t*. As expected, the slope of this relationship is positive, signaling that the larger the margin of victory in the current election, the greater the probability of winning the next election. More importantly, this relationship clearly is not continuous. When Democrats barely win an election, they have about a 70% chance of winning the next election. If they barely lost in election *t*, they win only 35% of the time in the subsequent election. The difference between both outcomes is the causal incumbent effect - about 35 percentage points as depicted in Figure 4.[25]

Figure 5 then documents that this change in political strength is also reflected in the margin of victory in the next election. Democrat mayors who win election *t* by a very small margin go on to win in election *t+1* by a margin of about 10 percentage points. In contrast, if the Democrats barely lost election *t*, they tend to suffer a heavy penalty in the subsequent election, losing by about 20

[24] The absence of a pure party effect is also observed for selected subsamples of the data, such as elections in larger cities, officially partisan elections, elections to four year terms, and elections in the 1990s. Results for these groups are analogous quantitatively and qualitatively to those in the first column of Table 3, although they naturally are less precise because of the reduced number of observations. These estimates are available upon request.

[25] Regressions not reported here show this large incumbent effect almost does not vary much by type of election (partisan vs non-partisan), by size of the city and for the most recent elections.

percentage points. The full gap is about 28 percentage points, as reported in the second row of the first column of Table 4. Thus, incumbency conveys significant political advantage to a political party, both in terms of the probability of winning the next election and in terms of the ease of winning that election. While our estimate for the probability of winning an election is slightly smaller than the 38.5 and 47.6 point effects reported by Lee (2003) and Lee, Moretti, and Butler (2004), respectively, for the U.S. congressional representatives, the impact on margin of victory at the local level is more than double the estimates observed in those two studies.

IV.C. Formal Test of Political Divergence

Since incumbent office holders have greater political strength in election $t+1$, we can test if they are also more likely to implement different policies during the term that follows election $t+1$. These results, presented in Table 5, are estimates of the full partisan effect ψ shown in equation (4'). As in Table 3, results from three specifications are reported. The first two columns are based on data over the full term of office, with the second also controlling for the relevant fiscal condition in the year prior to election t. The third only uses fiscal data from the last year of the relevant term. The results essentially rule out political weakness as an explanation for the lack of partisan effect at the local level. There is no doubt that political strength is much greater given the large incumbency effect, but this does not translate into significantly larger government (however measured) in the second term, as evidenced by the small and insignificant RDD estimates. Figure 6's graphs visually highlight the lack of any material discontinuity associated with a close election t.

Statistically, our results are consistent with there being no partisan impact on this local public outcome. However, the stringent data requirements the regression discontinuity approach imposes lead us to caution against drawing the stark conclusion that there is absolutely no policy divergence due to party partisanship. Consequently, we still carry out the decomposition presented in Lee, Moretti and Butler (2004), taking the point estimates at face value (i.e., ignoring the fact that the standard errors are such that we cannot reject estimates of zero). Table 6 then reports the decomposition of our ψ estimate into two components as described in equation (4). The first column reproduces the total impact estimates from Table 5. Column 2 then provides a calculation of the divergence component, or $\pi_1(P_{D,t+1} - P_{R,t+1})$. Column 3 notes the difference between the total effect and divergence estimate, which represents the degree of convergence, with the final column showing the percentage of this effect in terms of the overall impact. All but one of the convergence shares is two-thirds or more, which is in stark contrast to the almost zero convergence share found

by Lee, Moretti and Butler (2004) for voting behavior in the U.S. House of Representatives. Therefore, even when taking all our coefficients at face value, we find relatively little evidence of policy divergence for the size of government at the local level.

IV.D. Validity Tests

Our primary identification assumption is that the set of cities where Democrats barely won a mayoral election are *ex ante* comparable to cities where Republicans barely won the election. To test the validity of this assumption, we present evidence on the similarity of four sets of pre-determined characteristics of cities: demographics, regional location, size of government and previous electoral outcomes. Table 7 reports all the underlying regression results, but we focus our discussion on the graphical depictions of our findings.

Figure 7 plots the distribution of four demographic variables by the Democrat party margin of victory. The upper left panel graphs the results for the average proportion of whites in those cities. Although a negative relationship between the Democratic margin of victory and percentage white is evident, this variable does not present any indication of a discontinuity for closely contested races. Similar patterns are observed for educational achievement (as measured by the fraction of adults with college degree), median family income, and median house prices in the remaining panels of Figure 7. The discontinuity tests for population and geographic location are presented in Figure 8. Once again, we do not observe any differential outcome at the cut off point for close elections for any of these variables.

Figure 9 shows the analogous plots for four pre-determined fiscal outcomes: total revenues per capita, total taxes per capita, total current expenditures per capita, and total full time employees per 1,000 residents. Again, they all validate the key identification assumption of continuity for all observed covariates in cities with closely contested elections. Finally, Figure 10 presents three previous electoral outcomes: the Democrat probability of winning election *t-1*, the corresponding margin of victory in election *t-1*, and the total number of previous Democrat mayors in a city. There is no evidence of any discontinuity in these plots, in stark contrast to the incumbent effects depicted in Figures 4 and 5.

In sum, we can find no discontinuity in any predetermined demographic, political, or geographic traits of our municipalities. As such, our main identification assumption appears to be robust.

V. Mechanisms and Discussion

The evidence presented here suggests that partisan effects are very limited at the local level. Given how much at variance that is from recent empirical investigations into the impact of partisanship at other levels of government, it is important to think about the different conditions and mechanisms that could justify the differences in results.

One potentially important difference is that local governments typically are situated in urban labor market areas that may be Tiebout-like in nature. Consider an extreme case in which sorting is perfect and each city is homogenous in the sense that the residents of any given community have the same attributes and desire the same things from local government. In that case, it pays for political parties not to deviate from a 'moderate' position – which in this case is the position of the population in that locale - even if they want a substantially different sized government for partisan reasons. The virtually certain chance of losing the next election if one deviates from the announced moderate position is what would make for a credible commitment by a political party. Of course, this extreme does not exist in reality, but a typical city jurisdiction certainly is more homogeneous than the typical congressional district, metropolitan area, or state simply because of geographic and population sizes. If more homogeneity in voter's traits translates into similar preferences for local public goods, as seems likely, then deviating very far from the center of the distribution is going to be very costly to a political party.[26]

To see whether there is any evidence in support of this hypothesis, we investigated whether there were partisan differences based on how similar were family incomes within the community. More specifically, for a large subset of our sample, we were able to compute the coefficient of variation in family income across census block groups within each community in the year 2000.[27] We then divided the municipalities in half and estimated OLS and RDD specifications analogous to those reported above on each subsample. The first two columns of Table 8 report results for the relatively homogenous cities with coefficients of variation of family income below the sample

[26] In addition, Tiebout sorting also implies competition among several relatively homogenous jurisdictions within labor market areas. If a mayor does not cater to the median voter, the city faces the risk of losing population to neighbor municipalities. In the near term, this may increase the chances of re-election since dissident voters are moving out, but it also brings with it the potential for house values and tax revenues to decline, especially if new citizens are not attracted immediately. How land prices will adjust across all communities is not easy to determine in the absence of a complex urban model, but competition among municipalities for residents should provide an incentive for mayors not to deviate from moderate policies (as defined by the relevant median voter) when moving costs are low.

[27] The coefficient of variation is based on the standard deviation of all block group average incomes in a city divided by the average income in each city. Census block groups are regions with approximately 1,000 people.

median value for that statistic; the final two columns report the analogous data for the more heterogeneous places with relatively large variation in mean income levels across census tracts.

The conditional OLS partisan differences always are higher (sometimes by a large amount) in the cities with relatively high income variability across tracts (e.g., compare columns 1 and 3 of Table 8). The RDD estimates for the more homogenous communities always are small and never statistically significant (column 2). However, the RDD results for the more heterogeneous places in terms of income are much larger on average and some are statistically greater than zero at standard confidence levels (column 4). The general pattern of these findings is quite consistent with what one would expect if Tiebout-like forces were relevant in restraining the effects of political partisanship.

Since local municipalities are more homogeneous, local politicians are probably more likely to have more similar preferences for policy. That even large shifts in the political strength of a party do not lead to changes in policy suggest that the two national parties' preferences at the local level are less far apart from each other than at the state or national level. It is also possible that the greater convergence in the policy space we have focused upon - size of government and composition of local expenditures - occurs because political partisanship along these lines is less intense than for other issues. Glaeser and Ward (2006) argue that the real differences in partisan beliefs in recent decades are along cultural, not economic, lines. If the size of city government primarily is an economic matter, then it may be easier to compromise because partisan differences are not all that great in the first place.

Another distinctive feature of the local political environment is that there does not appear to be any viable mechanism by which a state or national party leader could pressure a mayor to deviate from policies desired by the median voter in the community. For legislators at the state or federal level, the party leader has a potentially powerful enforcement mechanism through the ability to decide on the assignment to committees of relevance to the legislator's district or the allocation of campaign funds from the state or national party.[28] Not only is this type of mechanism absent for mayors, but the fundamental Tiebout-like forces in effect at the local level probably would lead to less use of such a mechanism were it available.

VI. Conclusion

[28] See Snyder and Groseclose (2000) for an example of the influence of the party whip in a legislative setting.

This is the first direct study of the impact of political parties at the local level in the U.S. It relies on information from a new panel data base of mayoral elections between 1950 and 2005. A host of recent empirical findings concludes that political partisanship is playing an important role in determining various policy or economic outcomes at the state and federal levels of government. That is, the parties themselves, not the electorate through the preferences of the median voter, are effectively determining policy. We find virtually the opposite result when we investigate the role of partisanship at the local level, using various measures of local allocation of resources and of size of city government. Controlling for the endogeneity of which party wins the mayor's office in local elections with a regression discontinuity design that relies on the quasi-experimental variation from closely contested races, we find that local fiscal outcomes are virtually the same regardless of whether a Democrat or Republican becomes mayor. More formal decompositions of the impact of partisanship also conclude that there is substantial convergence in policy space at the local level.

That partisanship does not always dominate suggests that future research in this area focus more closely on identifying the mechanisms and conditions that mediate its influence at all levels of government. The impacts of political parties on policy outcomes appear to be malleable. Our study suggests that similar party preferences and spatial sorting into relatively homogenous groups provide conditions that help parties make credible commitments, but it may not be feasible (or even desirable) to create a similar environment for other levels of government. Finally, future research should try to expand beyond our analysis of the size of government and the allocation of resources to policies such as zoning laws and the attraction of new business, among others. It is possible that the two major political parties may have different views of other aspects of the local economy, but we leave such investigation for future empirical work.

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Table 1. Sample Representativeness

	final sample	all US cities	cities with >25000 population	cities with >25000, and elected mayor	cities >25000, elected mayor,and survey response
observations	392	35660	1644	877	503
population	125,501	6457	87821	112392	114,000
	(261497)	(58103)	(256860)	(346409)	(234973)
% west	0.19	0.06	0.23	0.18	0.21
	(0.39)	(0.24)	(0.42)	(0.39)	(0.41)
% south	0.24	0.18	0.21	0.25	0.29
	(0.42)	(0.38)	(0.41)	(0.44)	(0.45)
% north	0.17	0.17	0.22	0.23	0.13
	(0.37)	(0.38)	(0.42)	(0.42)	(0.34)
% white	0.69	0.89	0.70	0.69	0.68
	(0.22)	(0.18)	(0.23)	(0.23)	(0.22)
% black	0.13	0.04	0.11	0.13	0.12
	(0.18)	(0.13)	(0.15)	(0.17)	(0.17)
% college degree	0.26	0.16	0.28	0.26	0.27
	(0.13)	(0.12)	(0.14)	(0.13)	(0.13)
median family income	53,232	45574	56790	53334	53,478
	(16760)	(17560)	(18772)	(16687)	(16669)
median house value	132,910	89466	151817	133838	135,065
	(69127)	(76311)	(99470)	(70988)	(69964)

Notes: All variables are based on the 2000 Census. Column 1 presents descriptives for the final mayoral election sample used in this paper. Column 2 reports descriptives for all cities in the US. Column 3 restricts the sample to cities with more than 25,000 people as of year 2000. Column 4 additionally constrains the sample to cities that directly elect a mayor. Column 5 present results for cities that replied to the survey with vote totals but no information about party affiliation. See the text for other details.

Table 2. Local Public Finance Variables Descriptive Statistics and OLS Estimates of Differences between Democrat and Republican Cities

variables	baseline mean	% diff Dems and Reps OLS unconditional	% diff Dems and Reps OLS conditional
size of government			
total revenues per capita	1370	0.152	0.087
	(807)	(0.032)	(0.026)
total taxes per capita	838	0.115	0.066
	(651)	(0.036)	(0.028)
total expenditures per capita	1380	0.151	0.088
	(830)	(0.032)	(0.027)
current expenditures per capita	999	0.176	0.096
	(663)	(0.035)	(0.028)
investments and construction per capita	362	0.066	0.039
	(287)	(0.044)	(0.040)
full time employment per 1000 residents	12.53	0.180	0.086
	(8.04)	(0.037)	(0.028)
partial time employment per 1000 residents	2.27	0.072	0.057
	(2.12)	(0.055)	(0.049)
allocation of resources			
percentage spent with salaries and wages	0.506	0.012	0.007
	(0.119)	(0.007)	(0.006)
percentage spent with police department	0.174	-0.012	-0.004
	(0.080)	(0.005)	(0.004)
percentage spent with fire department	0.109	-0.006	-0.004
	(0.050)	(0.003)	(0.003)
percentage spent with parks and recreation	0.079	-0.010	-0.004
	(0.063)	(0.004)	(0.003)
observations	1796	1796	1796

Notes: Columns 2 and 3 report coefficients from an OLS regression of the independent variables indicated in the table on an indicator variable for whether the mayor is a Democrat. All size of government variables were transformed to logs in the OLS regressions. Local controls used in column 3's specification include city population, the type of election (partisan versus non-partisan, length of term status), median income, percentage of white households, percentage of households with college degree, homeownership rate and the median house value. Year and region fixed effects also are included. See the text for a more detailed explanation of the political and fiscal variables. Reported standard errors are based on clustering by city and decade.

Table 3. RDD Estimates of the Differences in Size of Government Measures between Democrat and Republican Mayors

dependent variables	average of the term	average of the term	last year of the term
total revenues per capita	0.020	-0.021	-0.023
	(0.054)	(0.028)	(0.032)
total taxes per capita	-0.008	0.006	0.012
	(0.057)	(0.033)	(0.035)
total expenditures per capita	0.021	-0.004	0.006
	(0.056)	(0.027)	(0.032)
full time employment per 1000 residents	0.045	0.007	0.011
	(0.056)	(0.021)	(0.025)
lagged value of the dependent variable	NO	YES	YES
covariates	YES	YES	YES
observations	1796	1715	1715

Notes: The table presents RDD coefficient estimates of each fiscal policy outcome on an indicator for Democrat victory in election t as described in equation (3') in the text. All size of government variables were transformed to logs. All regressions also include a cubic polynomial on margin of victory, and interactions of these polynomials with the indicator for Democrat victory. The lagged value corresponds to the fiscal variable in the year prior to election t. Covariates include city population, the type of election (partisan versus non-partisan, length of term status), median income, percentage of white households, percentage of households with college degree, homeownership rate and the median house value. Year and region fixed effects also are included. Reported standard errors are based on clustering by city and decade.

Table 4. RDD Estimates of the Democrat Incumbent Effect

dependent variables	RDD
Democrat probability of win, t+1	0.358
	(0.056)
Democrat margin of victory, t+1	0.277
	(0.049)
covariates	YES
observations	1796

Notes: The table presents RDD coefficient estimates of each electoral outcome on an indicator for Democrat victory in election t as described in equation (5') in the text. All regressions also include a cubic polynomial on margin of victory, and interactions of these polynomials with the indicator for Democrat victory. Covariates include city population, the type of election (partisan versus non-partisan, length of term status), median income, percentage of white households, percentage of households with college degree, homeownership rate and the median house value. Year and region fixed effects also are included. Reported standard errors are based on clustering by city and decade.

Table 5. RDD Estimates of the Differences in Size of Government Measures between Democrat and Republican Mayors after Election t+1

dependent variables	average of the term	average of the term	last year of the term
total revenues	0.033	-0.005	0.031
	(0.057)	(0.036)	(0.038)
total taxes	-0.010	0.019	0.026
	(0.057)	(0.035)	(0.038)
total expenditures	0.034	0.009	-0.011
	(0.058)	(0.036)	(0.040)
full time employment per 1000 residents	0.050	0.015	0.027
	(0.059)	(0.022)	(0.026)
lagged value of the dependent variable	NO	YES	YES
covariates	YES	YES	YES
observations	1536	1455	1455

Notes: The table presents RDD coefficient estimates of each fiscal policy outcome after election t+1 on an indicator for Democrat victory in election t as described in equation (4') in the text. All size of government variables were transformed to logs. All regressions also include a cubic polynomial on margin of victory, and interactions of these polynomials with the indicator for Democrat victory. The lagged value corresponds to the fiscal variable at the year prior to election t. Covariates include city population, the type of election (partisan versus non-partisan, length of term status), median income, percentage of white households, percentage of households with college degree, homeownership rate and the median house value. Year and region fixed effects also are included. Reported standard errors are based on clustering by city and decade.

Table 6. Total Partisanship Effect Decomposition

dependent variables	(1) total impact (ψ)	(2) divergence $\Pi_1(P_{D,t+1} - P_{R,t+1})$	(3) convergence (2) - (1)	(4) convergence share (3)/(1)
total revenues	0.033	0.007	0.026	78.3%
total taxes	-0.010	-0.003	-0.007	71.4%
total expenditures	0.034	0.008	0.026	77.9%
full time employment per 1000 residents	0.050	0.016	0.034	67.8%

Notes: Column 1 reproduces the results from the first column of Table 5. Column 2 multiplies the incumbent effect in Table 4 and the pure party effect estimated in Table 3. Column 3 subtracts column 1 from column 2. Finally, Column 4 calculates the ratio of column 3 over column 1. For additional details see equation (4) in the text.

Table 7. RDD Estimates for Pre-Determined Features of Cities

Discontinuity Estimates for Demographic Characteristics			
% white	% college	family income	house values
-0.009	-0.013	-1768	-3112
(0.023)	(0.014)	(1742)	(8417)
Discontinuity Estimates for Population and Regional Location			
% north	% west	% south	population
0.029	-0.035	-0.107	8102
(0.052)	(0.046)	(0.058)	(29628)
Discontinuity Estimates for Fiscal Outcomes Prior to Election t			
total revenues per capita, t-1	total taxes per capita, t-1	total expenditures per capita, t-1	full time employees per 1000 residents, t-1
0.045	0.001	0.041	0.065
(0.054)	(0.055)	(0.059)	(0.055)
Discontinuity Estimates for Previous Election Outcomes			
Democrat probability of win, t-1	Democrat margin of victory, t-1	Democrat number of previous mayors	
0.044	-0.052	0.004	
(0.065)	(0.049)	(0.546)	

Notes: The table presents RDD coefficient estimates of each variable on an indicator for Democrat victory in the election t. All regressions also include a cubic polynomial on margin of victory, and interactions of these polynomials with the indicator for Democrat victory. All regressions were clustered by city and decade.

Table 8. OLS and RDD Estimates By Cities with Low and High Coefficient of Variation in Income

	Homogenous Group		Heterogeneous Group	
variables	OLS conditional	RDD	OLS conditional	RDD
total revenues per capita	0.053	-0.037	0.138	0.134
	(0.039)	(0.072)	(0.036)	(0.083)
total taxes per capita	0.045	-0.025	0.089	0.061
	(0.040)	(0.084)	(0.032)	(0.069)
total expenditures per capita	0.056	-0.044	0.147	0.155
	(0.040)	(0.075)	(0.038)	(0.087)
full time employees per 1000 residents	0.084	0.007	0.121	0.167
	(0.040)	(0.074)	(0.034)	(0.077)
observations	855	855	823	823

Notes: The homogenous group corresponds to the cities with a coefficient of variation in income below the median. The heterogeneous group corresponds to the cities with a coefficient of variation in income above the median. Regressions follow similar OLS and RDD specifications presented in previous Tables 2 and 3.

Figure 1. Total Number of Municipal Elections by Year, 1950-2005

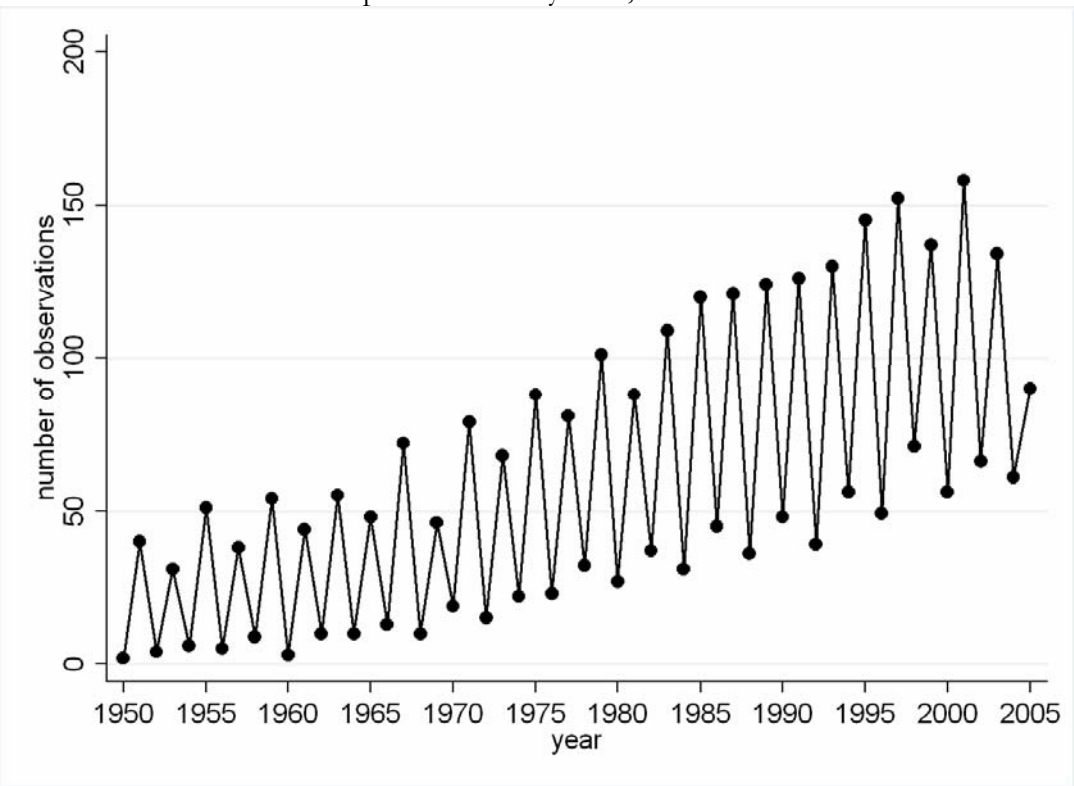

Figure 2. Proportion of Democratic and Republican Mayors by Year, 1950-2005

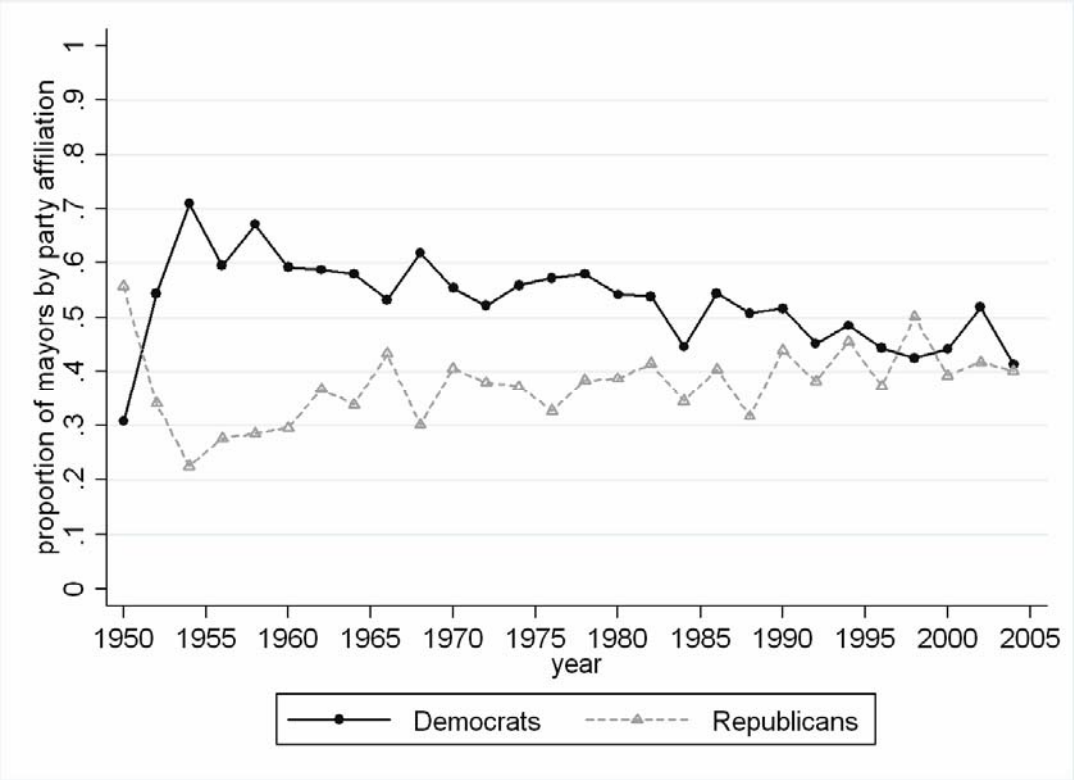

Figure 3. Local Public Finance Variables by Democrat Margin of Victory in Election t

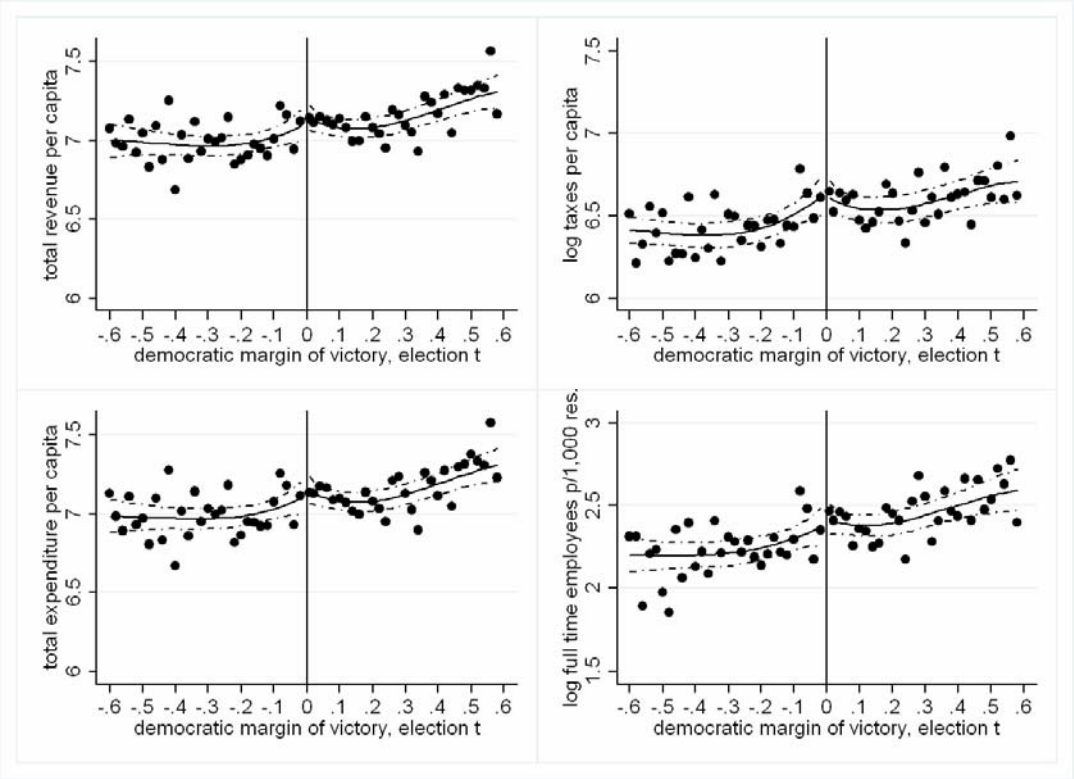

Figure 4. Democrat Probability of Victory in Election t+1 given Margin of Victory in Election t

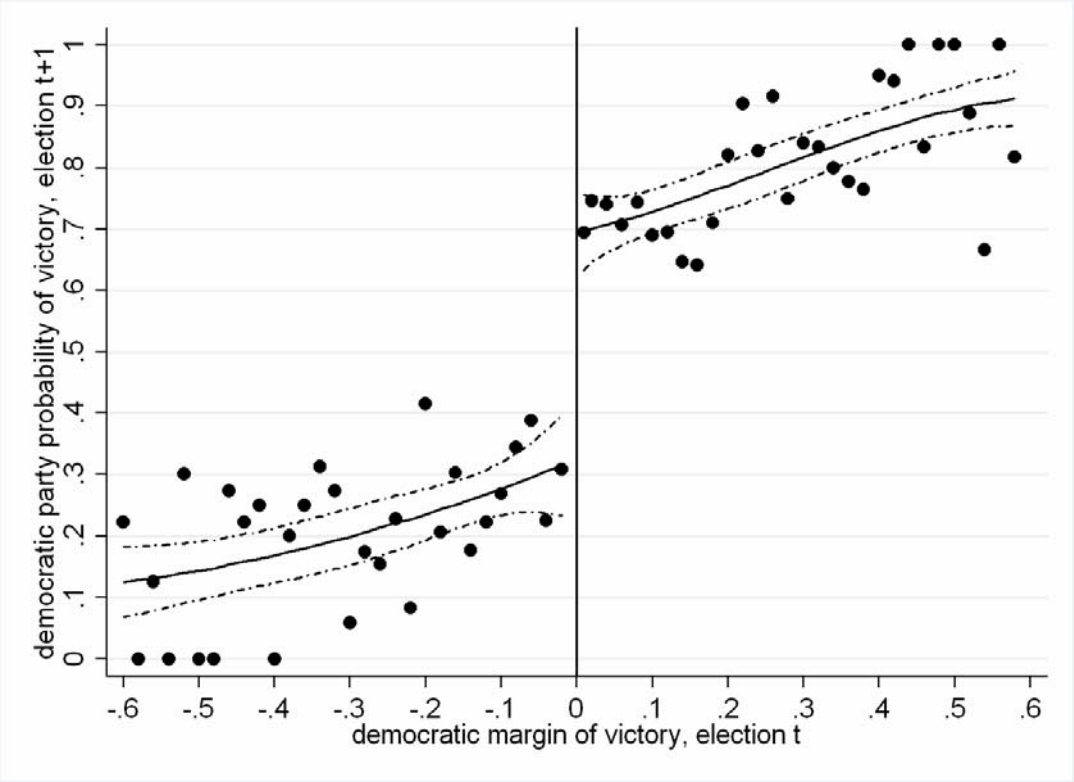

Figure 5. Democrat Margin of Victory in Election t+1 given Margin of Victory in Election t

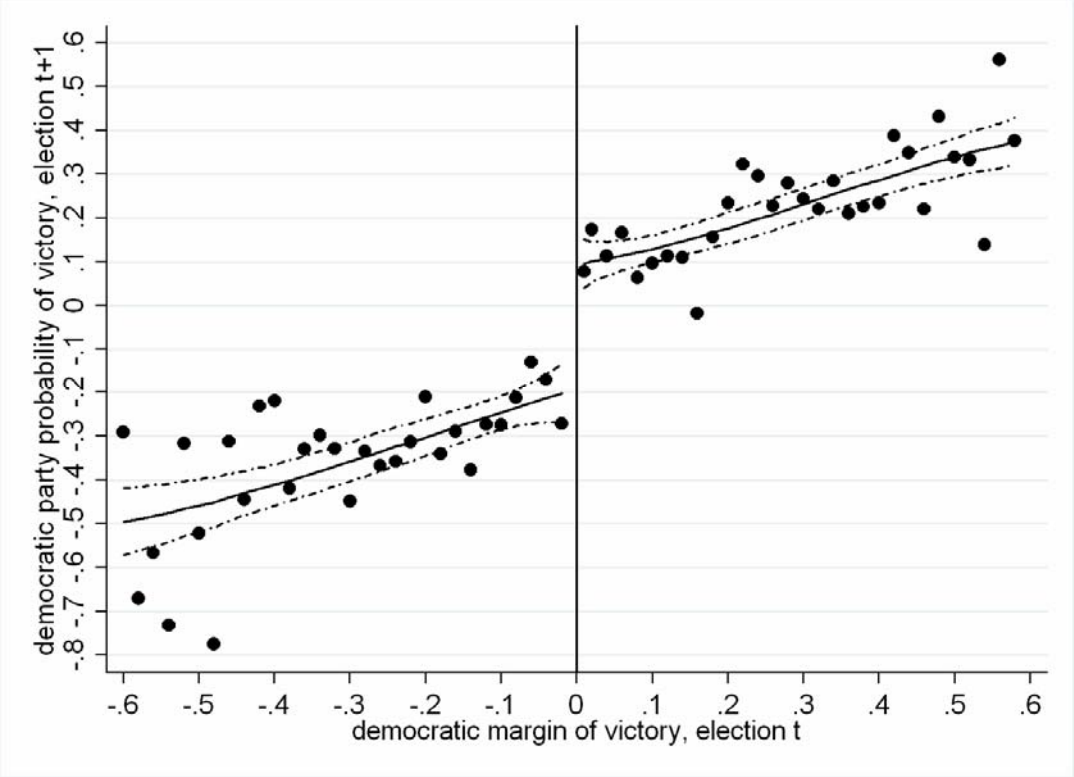

Figure 6. Local Public Finance Variables After Election t+1 by Democrat Margin of Victory in Election t

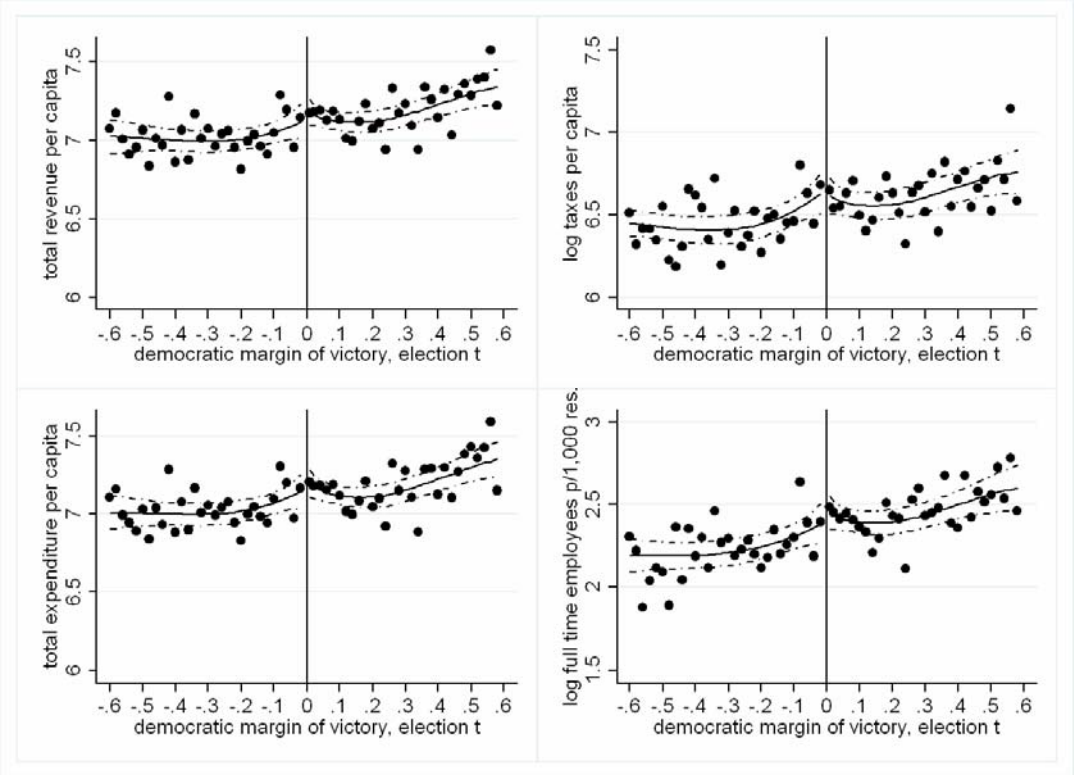

Figure 7. Validity Test I: Demographics

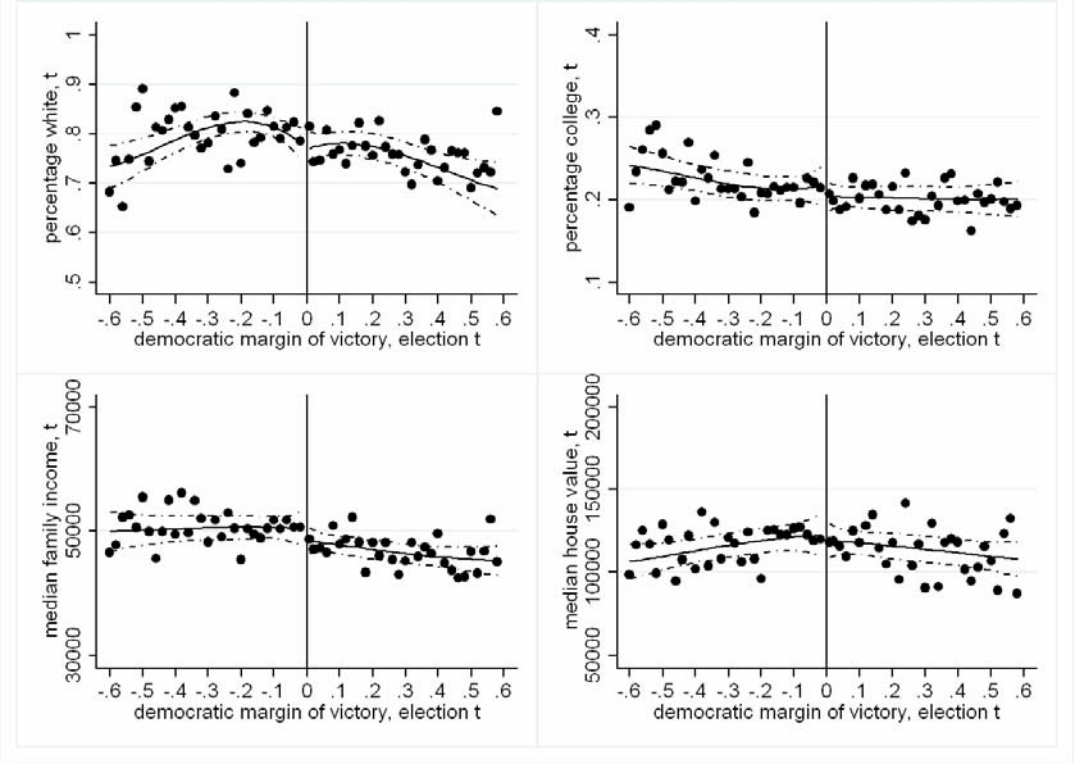

Figure 8. Validity Test II: Population and Regional Location

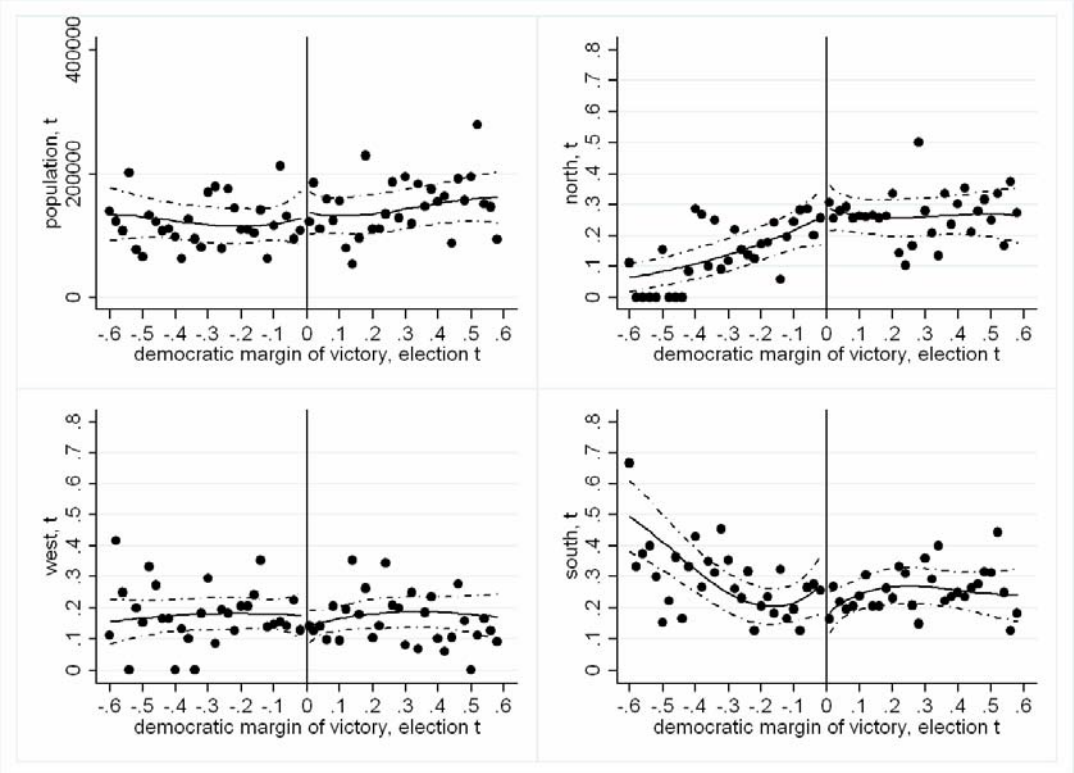

Figure 9. Validity Test III: Previous Fiscal Outcomes

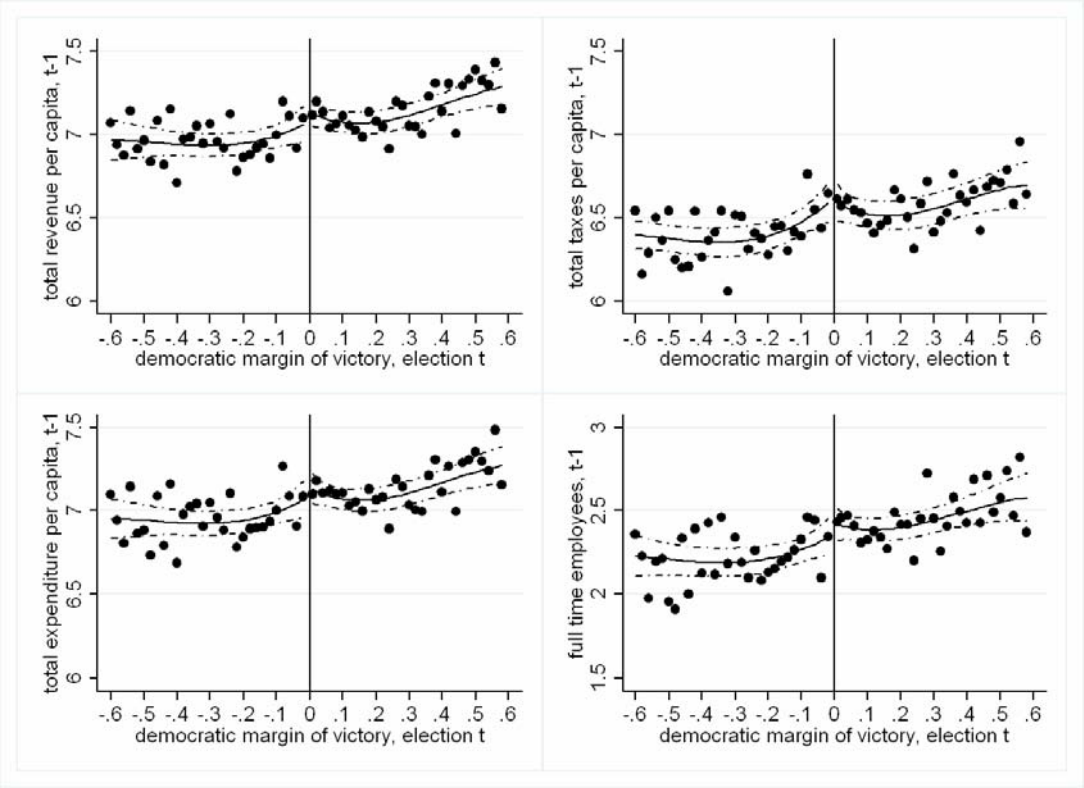

Figure 10. Validity Test IV: Previous Electoral Outcomes