Economic Inquiry

PARTY AFFILIATION AND PUBLIC SPENDING: EVIDENCE FROM U.S. GOVERNORS

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This paper investigates whether the party affiliation of governors (Democrat or Republican) has an impact on the allocation of state expenditures. Exploiting gubernatorial election results from 1960 to 2012 and a Regression Discontinuity Design (RDD), we find that Democratic governors allocate a larger share of their budget to health/hospitals and education sectors. We find no significant impact of the political party of governors on total spending, only on the allocation of funds. The results are robust to a wide range of controls and model specifications. (*JEL* D72, H75, H72)

I. INTRODUCTION

Some major cuts to state education and health budgets have been widely discussed in the news. For example, in 2011, Pennsylvania's Republican governor proposed slashing the state's higher education funding by hundreds of millions of dollars. In 2015, Illinois' Republican governor decided to cut $300 million from the health care system. Louisiana's Republican governor's 2015 budget plan proposed offsetting a $1.6 billion funding shortfall largely through budget cuts to education. These cuts are generally associated with Republican governors. It is commonly believed that Democrats are more likely than Republicans to support social policies, increase government involvement, and spend a higher share of their budget on key sectors such as education and health.

Despite the above anecdotal evidence, the literature is ambiguous as to whether party affiliation of governors (Democratic vs. Republican) matters regarding allocation of public expenditures. Inconsistent results regarding the impact of party affiliation on budgetary decisions are often due to a failure to address endogeneity concerns or small sample of years, which yields imprecise estimates. In this paper, we use a Regression Discontinuity Design (RDD) to investigate the causal impact of the party affiliation of governors on distributive budgetary decisions over key sectors (education, health/hospitals, public safety, social welfare and we combine the other sectors). We match gubernatorial election data with state government finance data from the U.S. Census Bureau for 1960–2012.

Our results support the existence of gubernatorial partisan differences over budgetary decisions. We find that under Democratic governors, the share of spending on education, health/hospitals, and public safety sectors is, respectively 2.4, 4.9 and 3.8% higher and there is a decrease in the other sectors (−2.3%). Other sectors are combined as follow: highway, natural resources, parks and recreation, interest on general debt, and governmental administration. We find no significant impact of political party of governors on total spending, only on the allocation of funds. This is important because the literature documents benefits to higher funding to education and health (e.g., Barro 1991; Cellini, Ferreira, and Rothstein 2010; Gupta, Verhoeven, and Tiongson 2002; Martin et al. 2012). Results are robust to different RD specifications, controls, and robustness checks.

The rest of the paper is organized as follows: Section II discusses the role of governors and reviews the literature; Section III presents the methodology; Section IV discusses the data and descriptive analysis; Section V presents the main

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ABBREVIATIONS

ICPSR: Inter-university Consortium for Political and Social Research
RD: Regression Discontinuity
RDD: Regression Discontinuity Design

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results, heterogeneity, and sensitivity analysis; and Section VI concludes.

II. ROLE OF GOVERNORS AND RELATED LITERATURE

A. *Role of Governors*

Governors have a high degree of autonomy in the administration of their state. As head of the executive branch the governor prepares and administers the budget, sets policies, recommends legislation, signs laws, and appoints department heads. Governors can veto bills, which gives them considerable control over policies. In all but seven states, governors have the power to use a line-item veto on appropriations bills; this gives the governor the authority to reject part of a bill passed by the legislature that involves taxing or spending. In some states, the governor has additional roles, such as commander-in-chief of the National Guard, and has partial or absolute power to commute or pardon criminal sentences.

B. *Related Literature*

Our paper contributes to a growing literature on the impact of partisan allegiance (Democratic vs. Republican) on economic outcomes at the state level. Besley and Case (1995) find a positive and significant impact of Democratic lame duck governors on income taxes, workers' compensation benefits and spending during 1950–1986.[1] In another study, they show that the unified effect of a Democratic governor and Democrats controlling both the upper and lower houses of the legislature has a positive impact on total taxes, income taxes, total spending, and family assistance (Besley and Case 2003). Ansolabehere and Snyder (2006) find that the party in power allocates more funds towards counties that provide them with the strongest electoral support. Leigh (2008) investigates the gubernatorial partisan impact on numerous policy settings, economic and social outcomes during the period 1941–2001. He finds few differences between Democratic and Republican governors' outcomes and no impact on state spending. He finds a slightly higher minimum wage, lower post-tax inequality, and unemployment rate under Democratic governors. Joshi (2015), using an RDD, finds no impact of gubernatorial partisanship on health expenditures during the 1991–2009 period. Fredriksson, Wang, and Warren (2013), using an RDD, investigate the effect of gubernatorial party affiliation on tax policies from 1970 to 2007; they find that the impact is dependent on whether the governor is a lame duck or eligible for re-election. While re-electable Democrats tend to increase income taxes, lame duck Democrats tend to decrease them. Beland (2015) and Beland and Unel (2015a), using RDD, find that minorities such as blacks and immigrants have better labor-market outcomes under Democratic rather than Republican governors.[2]

There are other studies investigating the partisan impact at other levels of government in the United States and in other countries. By example, Ferreira and Gyourko (2009), using an RDD, find no significant party affiliation impact of the mayor on the size of city government, spending, and crime rate. Lee, Moretti, and Butler (2004), using an RDD, find that party affiliation has a large impact on a legislator's voting behavior. Berry, Burden, and Howell (2010) study the impact of the President on the distribution of federal funds. They find that districts and counties receive more federal outlays when legislators in the president's party represent them. Albouy (2013) studies the impact of partisan allegiance in Congress on allocation of funds. He finds that members of Congress in the majority receive greater federal grants. Pettersson-Lidbom (2008), using an RDD, finds a positive party effect of left-wing government on spending and taxation using Swedish local government data.

Our paper contributes to the literature by investigating the causal impact of party affiliation of the governor on distributive budgetary decisions over key sectors using RDD and the long time period of 1960–2012.

III. RD METHODOLOGY

Following Lee (2001, 2008), we use an RDD to investigate whether the party affiliation of the governor (Democratic vs. Republican) has a causal impact on the allocation of state spending. Endogeneity concerns surrounding election outcomes come from factors such as labor-market conditions, voter characteristics,

1. Lame duck governors are those who are in their last term and are facing binding term limits. In other words, lame duck governors cannot run for another term.

2. Other studies at the U.S. gubernatorial level study the impact of political parties on tax code reform (Ash 2015), on unionized workers (Beland and Unel 2015b), and on pollution (Beland and Boucher 2015).

quality of candidates, the resources available for campaigns, and other unmeasured characteristics of states and candidates that would bias estimates of the impact of the party allegiance of governors. These factors can influence who wins the election. Lee (2001, 2008) demonstrates that looking at close elections provides quasi-random variation in winners and allows for the identification of causal effects of political parties. Similar methodology is used in papers such as Lee, Moretti, and Butler (2004), Pettersson-Lidbom (2008), Ferreira and Gyourko (2009, 2014), and Beland (2015). We use a parametric RDD approach as our primary specification. We estimate:

$$(1)\quad Y_{st} = \beta_0 + \beta_1 D_{st} + f\left(MOV_{st}\right) + \mu_s + \delta_t + \varepsilon_{st}.$$

Y_{st} represents the share of state spending on different budgetary sectors at state s and year t. We use the share of expenditure as our outcome variable to reflect policy choices of governors over the allocation of the state government budget. We consider the following sectors: education, health/hospital, public safety, social welfare, and we combine the other sectors.[3] We also present results for outcome: log of total expenditures in the state. D_{st} takes value of one if the winner of the election at state s and year t is a Democrat and zero if the winner is a Republican. β_1 is the coefficient of interest which shows the effect of the Democratic governor on the share of state spending in the above sectors. MOV_{st} represents the margin of victory of the elected governor at the most recent election. Elections are held in November and the elected governor takes office the following January. Considering a term length of 4 years, political affiliation and margin of victory of the elected governor are used for the consecutive 4 years after taking the office. Margin of victory is the difference between the percentage of the vote cast for the winner and the candidate who finished second. Zero defines the cutoff point of the margin of victory and it takes positive values if the winner is a Democrat and negative values if the winner is a Republican. We estimate the party affiliation impact of the governor on the state spending controlling for the margin of victory, using a second order polynomial: $f(MOV_{st})$. Separate polynomials are being fit to separate sides of the equation. X_{st} represents time-varying controls used in some specifications regarding states' demographic and political characteristics. Demographic characteristics include population, and whether the state is located in the south. Political characteristics include majority of Democrats in the state legislature (House and Senate), re-electability and gender of the governor.[4] μ_s and δ_t are state and year fixed effects. Standard errors are clustered at the state level to account for potential serial correlation within a state over time. Following Lee and Lemieux (2014), we also present different polynomials (linear, cubic and quartic polynomials) and local-linear RDD.

IV. DATA AND DESCRIPTIVE STATISTICS

A. Data

The U.S. Census Bureau provides a data set called *State Government Finances* which presents a comprehensive annual summary of state governments expenditures; data are available from 1960 to 2012. We use variables of state government spending on education, health/hospitals, public safety, social welfare, and group all others. Other sectors group as follow: highway, natural resources and parks and recreation, interest on general debt, and governmental administration.

Gubernatorial election data come from two main sources: Inter-university Consortium for Political and Social Research (ICPSR) 7757 (1995) files called *Candidate and Constituency Statistics of Elections in the United States* for elections prior to 1990, and the Atlas of U.S. Presidential Elections (Leip 2015) for post-1990 elections. We only keep elections where the political party of the elected governor is either a Democrat or Republican.[5] Variables taken from

3. Other sectors group as follow: Highway, natural resources, parks and recreation, interest on general debt, and governmental administration. We combine them under *Other sectors* for brevity, all have individually nonpositive coefficients. A description of those sectors is available here: http://www.census.gov/govs/state/definitions.html

4. Upper house and lower house majority are two dummies illustrating whether the majority of the state legislators in the senate or house are Democrat or Republican. Values of one indicate that the majority of the state legislators is Democrat and values of zero show that the majority is Republican. Both majority is a dummy variable getting value of one if the majority of both upper house and lower house are Democrats and zero otherwise.

5. There are 40 observations in our sample where the elected governors are neither Democrat nor Republican. We exclude these observations from the sample. There are some cases in which the governor changed mid-term. It can happen in three conditions including: death, resignation, or impeachment of the governor. In these cases, the lieutenant governor or the executive officer of a state who is next in rank to a governor takes the governor's place. We kept observations where the new governor has the same political party as the previous

TABLE 1
Number of Gubernatorial Elections and Years in Office

	1960–2012	1960–1979	1980–2000	2001–2012
Years in Office				
All governors	2,343	865	930	548
Democratic governor	1,269	514	481	274
Republican governor	1,074	351	449	274
Percentage Democratic governor	54	59	51	50
Number of Elections				
All elections	660	268	247	145
Democratic governor elected	365	157	136	72
Republican governor elected	295	111	111	73
Percentage Democratic governor	52	56	50	50

Notes: Years in office and number of elections won for Democrats and Republicans by sub-intervals of years. Sources: ICPSR 7757 (1995) and Leip (2015).

these sources are the political party of the winner and the margin of victory. As described above, the margin of victory is the difference between the percentage of vote cast for the winner and the candidate who finished second. It takes positive values if a Democrat won and negative values otherwise. We also include other characteristics of elections and other level of government. As mentioned above, we control in some specifications, for which party controls the state house and senate, gender of the governor, and re-electability. These data come from Klarner's political data site at Indiana State University.[6]

B. Descriptive Statistics

In our sample, there are 2,343 years in office which includes 1,269 years (54%) governed by Democrats. Table 1 shows the number of years governed by either a Republican or Democratic governor and the number of elections where either a Democratic or Republican governor was elected by a sub-interval of years. It shows that Democratic governors are slightly more frequently in power than Republicans over this period.

Table 2 shows the number of elected governors by margin of victory (5%, 10%, and 15%). There are 1,025 years in office at the margin of victory of 10%, 519 of which are governed by Democrats. At the margin of victory of 5 percentage points there are 540 years in office and Democratic governors are in office for 257 of them. Table 2 provides evidence that the number of Democratic and Republican governors are balanced for close elections. We discuss this more formally in the Sensitivity/Validity of RDD section. Table 2 also presents the probability of switching party in power for close elections (i.e., $p(R_{t+1}|D_t)$ and $(D_{t+1}|R_t)$). Table 2 shows that for close elections, those probabilities are very close to 50% in both cases.

TABLE 2
Numbers of Years in Office at Different Values of Margin of Victory

Years in Office	Margin of Victory 5%	Margin of Victory 10%	Margin of Victory 15%
All governors	540	1025	1425
Democratic governor	257	519	706
Republican governor	283	506	719
$p(R_{t+1}\|D_t)$	0.52	0.52	0.50
$p(D_{t+1}\|R_t)$	0.48	0.48	0.50

Notes: Margin of victory is the difference between the percentage of vote cast for the winner and the candidate who finished second. Small values of margin of victory are representative of close elections. This table shows the balance of the number of Democratic and Republican governors at different values of margin of victory.

Sources: ICPSR 7757 (1995), Leip (2015), and U.S. Census Bureau.

Table A1 shows summary statistics regarding the share of spending on education, health/hospitals, public safety, social welfare and other sectors and reports that the average spending is respectively 33, 6, 3, 15, and 42% of the state budget.[7]

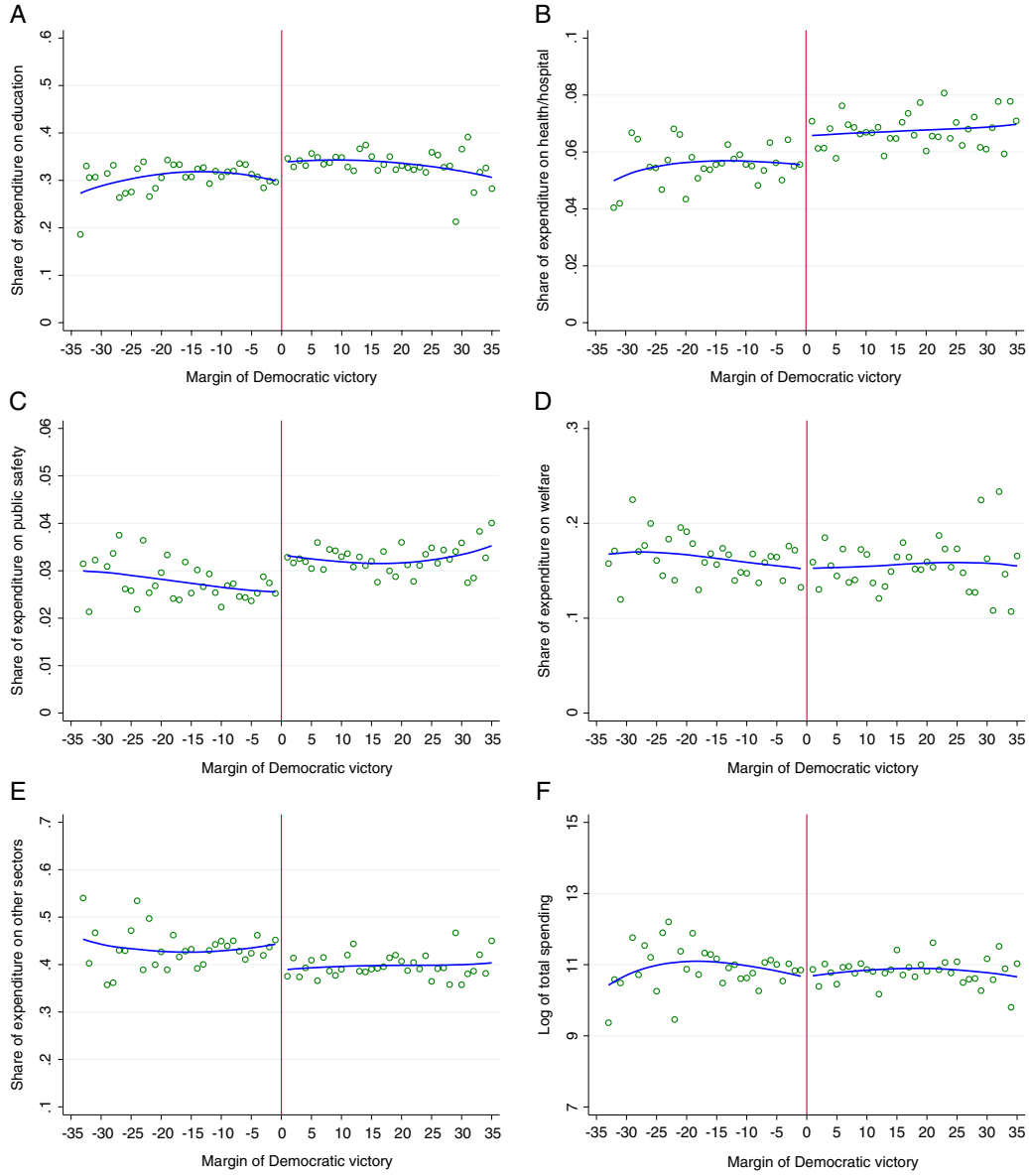
one using the margin of victory of the previous governor as they are usually elected on the same ticket. We dropped observations where the new governor is from a different political party than the previous one.

6. Data are available at: http://klarnerpolitics.com/kp-dataset-page.html

7. Table A.2 presents descriptive statistics by political party break-up (Democrats vs Republicans). It shows a higher share of spending on education and health/hospital when Democratic governors are in power.

FIGURE 1

Margin of Victory and Share of Spending on Education (A), Health/Hospital (B), Share of Spending on Public Safety (C), Share of Spending on Social Welfare (D), Share of Spending on Others (E), and Log of Total Spending (F)



C. Graphical Evidence

As is customary in RDD analysis, we next turn to graphical evidence. Figure 1 presents the discontinuity at 0% of the margin of victory. Each dot in these graphs represents the average of the outcome variable at state *s* and year *t*, grouped by margin of victory intervals. The vertical axis measures share of state spending and horizontal axis indicates margin of victory. The solid line shows the fitted values. Figure 1 shows a higher share of state government expenditure on education, health/hospitals, and public safety

when Democratic governors are in office. There is no discontinuity on the share of spending on social welfare and the share of spending is lower for the other sectors. The graphs suggest that some money is shifted from the other sectors to the education, health/hospitals, and public safety sectors under Democratic governors. The following section estimates these effects precisely (Figure 2).[8]

V. RESULTS

A. *Main Results*

Table 3 presents results using the RDD specification. The first row shows the party affiliation impact of the governor using a quadratic polynomial without inclusion of any control variables. Table 3 shows that shares of spending on education and health/hospitals are significantly higher under Democratic governors by 2.6% and 4.3%, respectively. Public safety spending is also significantly higher by 3.6%. Table 3 shows that there is no difference over the budgetary decision on social welfare between Democrats and Republicans, and the share of spending on the other sectors is 2.1% lower under Democratic governors.

The second row of Table 3 investigates the sensitivity of the results to the inclusion of control variables. In a valid RDD, the estimated party affiliation impact of the governor should not be sensitive to adding control variables. Results are robust to adding different control variables. These results also show that Democratic governors spend a significantly higher share of the budget on education (+2.4%), health/hospitals (+4.9%), and public safety sectors (+3.8%); and less on the other sectors (−2.3%).[9]

B. *Sensitivity/Validity of RDD*

We next undertake several sensitivity checks to examine the validity of our RDD estimates. The main idea behind the RDD is that states with margin of victory just below the cutoff are good comparisons to those just above. In other words, states where Democrats barely win are similar to states where Republicans barely win. In a valid RDD, all variables determined prior to the assignment variable are independent of the treatment status (Lee and Lemieux 2014). In other words, political party of the governor does not have any effect on predetermined demographic and political characteristics of the states and governors. This is investigated in Table A3 by regressing the political party of the governor using specification (1) on the control variables: population, majority of Democrats in the upper and lower houses, whether the governor is female. Results show that party affiliation of the governor has no effect on these variables. Table A4 presents mean and standard deviation of the control variables for each party affiliation. Table A4 shows they are in most cases similar and not statistically different. Table A5 shows that the means of the control variables under close election datasets are statistically indifferent from the means of the control variables for the entire dataset. This suggests that close elections represent fairly well the entire dataset.

Another central assumption for a valid RDD is continuity of the assignment variable around the cutoff point. The most common way to verify this assumption is the McCrary test (2008). The density should be smooth around the cutoff point indicating the balance of the number of Democratic and Republican governors. Random variation around the cutoff point is due to the agents' inability to precisely control the assignment variable near the cutoff point (Lee 2008). Figure 3 exhibits the McCrary test and verifies the balance of the assignment variable around the threshold; there is no unusual jump.[10]

Following Lee and Lemieux (2014), we explore the sensitivity of the results to using different orders of polynomial. Panel A of Table A6 presents results for linear, cubic, and quartic polynomials. Results using different polynomials are qualitatively the same as Table 3.

Panel B of Table A6 shows nonparametric estimations for the party effect of the governor on different sectors of the state budget using optimal bandwidth procedures of Calonico, Cattaneo, and Titiunik (2014) and Imbens and Kalyanaraman (2012). Results are qualitatively the same as Table 3. The similarity of the estimates across parametric and nonparametric methods is a sign

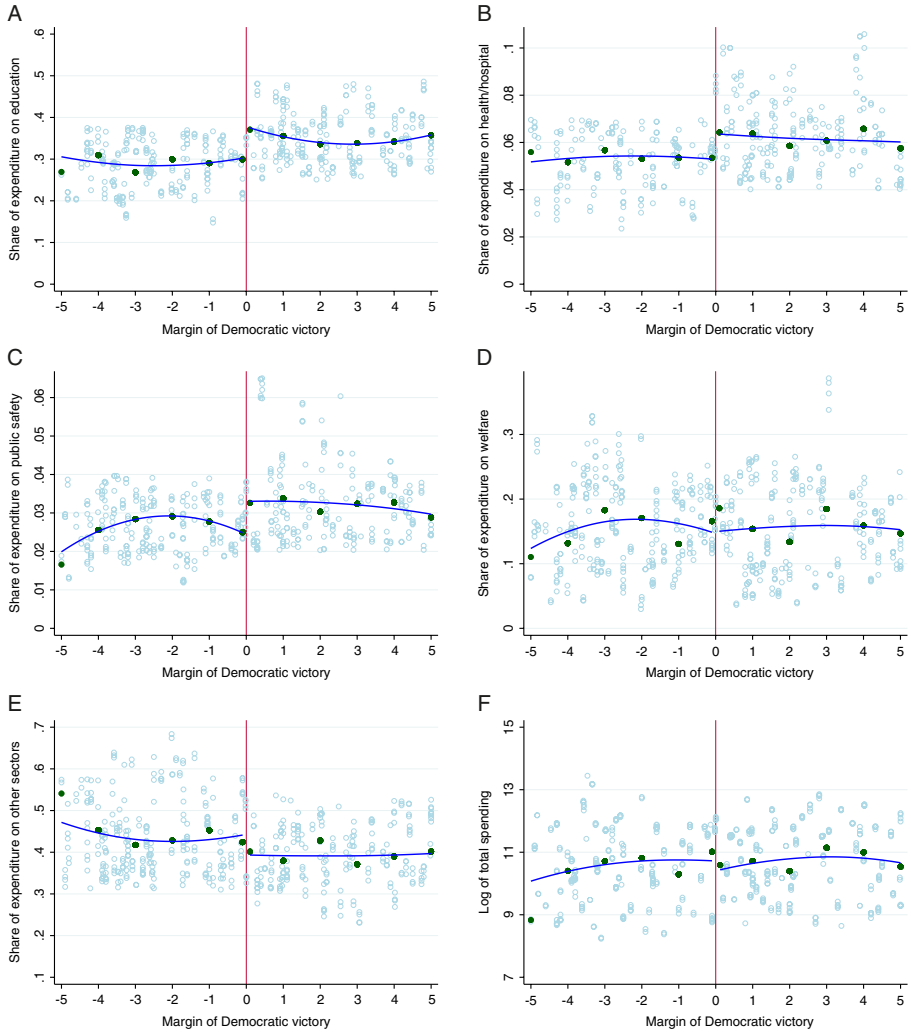
8. Figure 2 presents RD graphs for margin of victory for highly contested elections (−5% to +5%). It presents observations, predicted values, and fitted polynomials. Figure 2 also points to the same conclusion as Figure 1. There is an increase in the share of spending on education and health/hospital and a decrease in other sectors.

9. Tables also present multiple hypothesis testing à la Benjamini and Hochberg (1995) and the results hold.

10. We also investigate whether campaign spending is different for close elections. It could be that the winning party is the one who spent the most, even for close elections (Caughey and Sekhon 2011). Using campaign data from Jensen and Beyle (2003), we find no evidence for this.

FIGURE 2

Margin of Victory (−5% to +5%) and Share of Spending on Education (A), Health/Hospital (B), Share of Spending on Public Safety (C), Share of Spending on Social Welfare (D), Share of Spending on Others (E), and Log of Total Spending (F)



Note: It presents observations, predicted values and fitted polynomials.

of the unbiased estimate. Table A7 presents results for parametric regression discontinuity for different close elections (bandwidths of 3, 5, 10, 12, and 15 are included). Results are once again robust.[11]

One possible concern regarding the discontinuity of the outcome variable is that the jump in the shares of spending across sectors is a phenomenon independent from the political party of the governor. In other words, it could be the case that states with higher preference for education and health/hospitals are more likely to elect a Democratic governor, even for close elections, which could bias the estimated impact. In order to address this issue, we run a placebo RDD test to investigate the party effect on previous term spending, which is presented in Table A8. Results do not show any significant results for

11. The precision is better for larger bandwidths as expected given the optimal bandwidth by IK and CCT are rather large.

TABLE 3
Regression Discontinuity Estimates for Total Spending and Share of Spending by Sectors

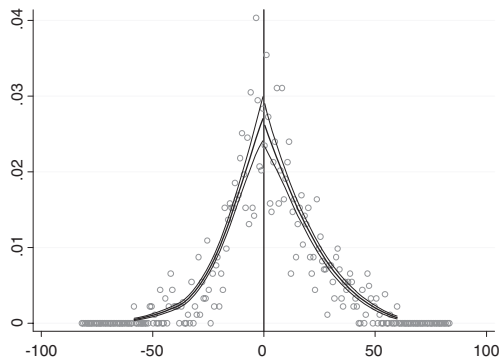
	(1) Total Spending	(2) Education	(3) Health/Hospital	(4) Public Safety	(5) Social Welfare	(6) Other
Democratic Governor	0.0004	0.0264**	0.0434**	0.0360*	−0.0157	−0.0217**
(no control)	(0.0034)	(0.0108)	(0.0206)	(0.0187)	(0.0217)	(0.009)
Single Hypothesis p value	0.911	0.015	0.036	0.061	0.470	0.019
Multiple Hypothesis p value	0.911	0.057	0.072	0.092	0.564	0.057
Democratic Governor	−0.0014	0.0235**	0.0488**	0.0384*	−0.0177	−0.0233**
(with controls)	(0.0036)	(0.0109)	(0.0218)	(0.0193)	(0.0211)	(0.0096)
Single Hypothesis p value	0.694	0.033	0.026	0.053	0.400	0.019
Multiple Hypothesis p value	0.694	0.066	0.066	0.080	0.480	0.066

Notes: Outcome variables are the share of spending on education, health/hospitals, public safety, social welfare, and other sectors as well as log of total spending. The number of observations is 2,343. Control variables are the population and personal income of the states, dummy whether the majority of the state legislators in the Senate or House are Democrats or Republicans. We also add a dummy for governors being lame duck or female. We also include a dummy for south, if the state is located in the south region. Standard errors are in parentheses and are clustered at the state level. Benjamini and Hochberg (1995) multiple hypothesis testing is presented.

*$p < 0.10$, **$p < 0.05$, ***$p < .01$.

Sources: ICPSR 7757 (1995), Leip (2015), and U.S. Census Bureau.

FIGURE 3
McCrary Density of Margin of Victory



outcomes in the term before the election. This imbues confidence that the results are not due to long term trends.

These numerous robustness checks provide confidence in the RDD and that party allegiance of governors does indeed play a role in allocating state spending. It presents evidence that Democratic governors increase state spending on education, health/hospitals, and public safety.

C. Potential Heterogeneity of the Effect

We next investigate the heterogeneity of the impact. The Democratic Party has some conservative members whose political views are similar to their Republican counterparts, and they are generally from southern states. Results presented in Table 4 show that southern states are not statistically different from nonsouthern states. Tables 5 present RD estimates for lame-duck and re-electable governors, respectively. Table 5 shows that both re-electable governors and lame-duck governors spend a higher share of the budget on education, health/hospitals and less on other sectors. Table 5 also shows that lame-duck Democratic governors spend significantly more on education and public safety and less on other sectors than re-electable Democratic governors. Table 6 investigates the dynamics of spending within a term. Table 6 points out that the impact of Democratic governors is similar in a term. Table A9 presents results for the heterogeneity of the effect if Democrats hold other office. Panel A presents RD estimates for an interaction term for Democratic governors and Democrats being president, Panel B presents RD estimates for an interaction term for Democratic governors and Democrats controlling both houses, panel C presents RD estimates using both the interaction terms of panel A and B in the same specification. Table A9 shows that there is no significant difference in the allocation of spending of Democratic governors when the president is a Democrat (Panel A) and when the Democrats control both houses (Panel B). This holds also when both interactions are included in Panel C. The total spending is however significantly higher for Democratic governors when the president is Democrat (Panel A and C).

TABLE 4

Regression Discontinuity Estimates for Total Spending and Share of Spending by Sectors: Southern vs Non-Southern Governors

	(1) Total Spending	(2) Education	(3) Health/ Hospital	(4) Public Safety	(5) Social Welfare	(6) Other
Democratic Governor	−0.0006	0.0187**	0.0521**	0.0359**	−0.0201	−0.0213**
	(0.0041)	(0.0092)	(0.0254)	(0.0178)	(0.0230)	(0.0101)
Single Hypothesis p value	0.876	0.043	0.041	0.044	0.382	0.041
Multiple Hypothesis p value	0.876	0.066	0.066	0.066	0.458	0.066
Democratic Governor × Southern states	−0.0027	0.0166	−0.0205	0.0086	0.0082	−0.0069
	(0.0046)	(0.0106)	(0.0322)	(0.0278)	(0.0361)	(0.0128)
Single Hypothesis p value	0.558	0.117	0.525	0.758	0.821	0.595
Multiple Hypothesis p value	0.821	0.702	0.821	0.821	0.821	0.821

Notes: Outcome variables are the share of spending on education, health/hospitals, public safety, social welfare, and other sectors as well as log of total spending. The number of observations is 2,343. Non-Southern states are the states that are not located in the south region. Standard errors are in parentheses and are clustered at the state level. Control variables are the same as Table 3. Benjamini and Hochberg (1995) multiple hypothesis testing is presented.

*$p < .10$, **$p < .05$, ***$p < .01$.

Sources: ICPSR 7757 (1995), Leip (2015), and U.S. Census Bureau.

TABLE 5

Regression Discontinuity Estimates for Total Spending and Share of Spending by Sectors: Lame-duck vs Re-electable Governors

	(1) Total Spending	(2) Education	(3) Health/ Hospital	(4) Public Safety	(5) Social Welfare	(6) Other
Democratic Governor	−0.0022	0.0198**	0.0425**	0.0284**	−0.0172	−0.0175*
	(0.0038)	(0.0096)	(0.0201)	(0.0128)	(0.0217)	(0.0072)
Single Hypothesis p value	0.579	0.045	0.035	0.027	0.428	0.016
Multiple Hypothesis p value	0.579	0.068	0.068	0.068	0.514	0.068
Democratic Governor × **Lame duck**	0.0033	0.0289***	−0.0034	0.0388**	0.0069	−0.0182**
	(0.0048)	(0.0107)	(0.0266)	(0.0193)	(0.0275)	(0.0088)
Single Hypothesis p value	0.491	0.01	0.898	0.045	0.803	0.039
Multiple Hypothesis p value	0.737	0.06	0.898	0.09	0.898	0.09

Notes: Outcome variables are the share of spending on education, health/hospitals, public safety, social welfare, and other sectors as well as log of total spending. The number of observations is 2,343. Lame-duck governors are the governors who are in their last term and are not eligible for re-election. Standard errors are in parentheses and are clustered at the state level. Control variables are the same as Table 3. Benjamini and Hochberg (1995) multiple hypothesis testing is presented.

*$p < .10$, **$p < .05$, ***$p < .01$.

Sources: ICPSR 7757 (1995), Leip (2015), and U.S. Census Bureau.

TABLE 6

Regression Discontinuity Estimates for Total Spending & Share of Spending by Sectors: First 2 Years in Office vs Last 2 Years in Office

	(1) Total Spending	(2) Education	(3) Health/ Hospital	(4) Public Safety	(5) Social Welfare	(6) Other
Democratic Governor	−0.0034	0.0233**	0.0543**	0.0430*	−0.0218	−0.0242**
	(0.0043)	(0.0094)	(0.0229)	(0.0218)	(0.0225)	(0.0105)
Single Hypothesis p value	0.426	0.013	0.018	0.055	0.334	0.026
Multiple Hypothesis p value	0.426	0.052	0.052	0.083	0.401	0.052
Democratic Governor × **Last two years**	0.0042	0.0003	−0.0174	−0.0097	0.0090	0.0017
	(0.0036)	(0.0089)	(0.0168)	(0.0120)	(0.0181)	(0.0067)
Single Hypothesis p value	0.247	0.977	0.303	0.422	0.620	0.797
Multiple Hypothesis p value	0.844	0.977	0.844	0.844	0.93	0.956

Notes: Outcome variables are the share of spending on education, health/hospitals, public safety, social welfare, and other sectors as well as log of total spending. The number of observations is 2,343. Last two years is a dummy variable taking value of one if the governor is in his or her last two years in the office. Standard errors are in parentheses and are clustered at the state level. Control variables are the same as Table 3. Benjamini and Hochberg (1995) multiple hypothesis testing is presented.

*$p < .10$, **$p < .05$, ***$p < .01$.

Sources: ICPSR 7757 (1995), Leip (2015), and U.S. Census Bureau.

VI. CONCLUSION

This paper investigates the partisan impact of the governor on budgetary spending. The importance of this paper lies in using RDD and the long period from 1960 to 2012 to investigate partisan differences in budgetary decisions at the state level. Using an RDD, we overcome the endogeneity problem due to voters' preferences, state economic and demographic characteristics. We find that shares of spending on education and health/hospitals are respectively about 2.4 and 4.9 percentage points higher under Democratic governors. We find no significant impact of political party of governors on total spending, only on the allocation of funds.

Our analysis suggests that party affiliation has a significant impact on allocation of spending. Our results support political difference between political parties and reject the median voter theorem for allocation of spending. The results on allocation of funds are important because higher spending on education and health/hospitals can have considerable benefits (e.g., Barro 1991; Cellini, Ferreira, and Rothstein 2010; Gupta, Verhoeven, and Tiongson 2002; Martin et al. 2012). Our results are consistent and robust to using a wide range of controls and RD specifications. Future research should investigate if the additional money for health and education has further implications for the state.

APPENDIX

TABLE A1
Summary Statistics

Variables	***M***	***SD***
Total spending	10.819	1.134
Share of spending on Education	0.331	0.068
Share of spending on Health/Hospital	0.060	0.019
Share of spending on Public Safety	0.030	0.011
Share of spending on Social Welfare	0.160	0.065
Share of spending on Other	0.419	0.090

Notes: Summary statistics of outcome variables including share of spending on education, health/hospitals, public safety, social welfare, and other sectors as well as log of total spending. The number of observations is 2,343.
Sources: ICPSR 7757 (1995), Leip (2015), and U.S. Census Bureau.

TABLE A2
Summary Statistics for Party Switch

	$D_{t+1}\|R_t$		$R_{t+1}\|D_t$		$D_{t+1}\|D_t$		$R_{t+1}\|R_t$	
Variables	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***
Total spending	10.711	1.149	10.98	1.079	10.655	1.182	10.848	1.239
Share of spending on Education	0.339	0.064	0.319	0.077	0.345	0.061	0.306	0.066
Share of spending on Health/Hospital	0.068	0.018	0.054	0.015	0.064	0.016	0.055	0.013
Share of spending on Public Safety	0.031	0.009	0.029	0.008	0.033	0.012	0.028	0.008
Share of spending on Social Welfare	0.164	0.069	0.169	0.065	0.158	0.062	0.160	0.071
Share of spending on Other	0.398	0.079	0.429	0.070	0.400	0.075	0.451	0.094

Notes: Summary statistics of outcome variables including share of spending on education, health/hospitals, public safety, social welfare, and other sectors as well as log of total spending when party switches.
Sources: ICPSR 7757 (1995), Leip (2015), and U.S. Census Bureau.

TABLE A3
Robustness Check: Regression Discontinuity Estimates for Predetermined Characteristics of the States and Governors

Outcome Variables	(1) Linear Polynomials	(2) Quadratic Polynomials	(3) Cubic Polynomials	(4) Quartic Polynomials
Log Personal income	0.0283	0.0143	0.0183	0.0205
(million $)	(0.0199)	(0.0141)	(0.0223)	(0.0222)
Log of Population	0.00296	0.00695	−0.00186	−0.00330
	(0.0125)	(0.0126)	(0.0179)	(0.0163)
Upper house majority	0.0423	0.0241	0.0426	0.0139
	(0.0292)	(0.0301)	(0.0310)	(0.0399)
Lower house majority	0.0071	−0.0082	−0.0006	−0.0197
	(0.0359)	(0.0369)	(0.0400)	(0.0416)
Both houses majority	0.0028	−0.0080	0.0051	−0.0152
	(0.0349)	(0.0349)	(0.0357)	(0.0427)
Female governor	0.0397	0.0422	0.0410	0.0410
	(0.0246)	(0.0256)	(0.0278)	(0.0292)

Notes: In this table, control variables regarding state characteristics (i.e., demographic and political characteristics of the states) are used as outcome variables. The explanatory variable is gubernatorial party of the governor. The number of observations is 2,343. Standard errors are in parentheses and are clustered at the state level.

$^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$.

Sources: ICPSR 7757 (1995), Leip (2015), and U.S. Census Bureau.

TABLE A4
Summary Statistics—Democratic vs Republican Governors at Margin of victory of 5%

	Democratic Governor		Republican Governor		Difference	
Variables	***M***	***SD***	***M***	***SD***	**Diff**	***SD***
Log Personal income (million $)	5.853	1.183	6.037	1.22364	−0.184	.104
Log of Population	7.937	1.098	8.112	1.073	−0.176	.093
House majority Democrat	0.610	0.407	0.629	0.382	−0.019	.034
Senate majority Democrat	0.603	0.425	0.586	0.381	0.0169	.034
Majority Democrat both houses	0.660	0.413	0.672	0.366	−0.012	.033
Female governor	0.074	0.174	0.052	0.145	0.022	.014

Notes: Summary statistics of control variables including log of population and personal income of the states, dummy variable whether majority of the state legislators in the Senate or House or both houses are Democrats or Republicans, and a dummy variable whether the governor is female.

Sources: ICPSR 7757 (1995), Leip (2015), and U.S. Census Bureau.

TABLE A5
Summary Statistics—Whole Sample vs Margin of Victory of 5%

	Whole Sample		Margin of Victory (5%)		Difference	
Variables	***M***	***SD***	***M***	***SD***	**Diff**	***SD***
Log Personal income (million $)	6.001	1.130	5.925	1.221	0.076	.055
Log of Population	8.065	1.027	8.015	1.080	0.050	.05
House majority Democrat	0.633	0.346	0.613	0.323	0.021	.016
Senate majority Democrat	0.602	0.353	0.597	0.328	0.006	.017
Majority Democrat both houses	0.693	0.331	0.674	0.313	0.019	.016
Female governor	0.052	0.145	0.067	0.125	−0.016	.007

Notes: Summary statistics of control variables including log of population and personal income of the states, dummy variable whether majority of the state legislators in the Senate or House or both houses are Democrats or Republicans, and a dummy variable whether the governor is female.

Sources: ICPSR 7757 (1995), Leip (2015), and U.S. Census Bureau.

TABLE A6
RD Estimates for Total Spending and Share of Spending Using Different Order of Polynomials and Optimal Bandwidth Procedures

	(1) Total Spending	(2) Education	(3) Health/ Hospital	(4) Public Safety	(5) Social Welfare	(6) Other
Panel A						
Democratic Governor	0.0007	0.0230**	0.0498**	0.0329	−0.0148	−0.0244***
Linear polynomials	(0.0026)	(0.0086)	(0.0218)	(0.0197)	(0.0236)	(0.0081)
Democratic Governor	−0.0009	0.0295***	0.0490*	0.0276	−0.00919	−0.0303**
Cubic polynomials	(0.0036)	(0.0107)	(0.0284)	(0.0199)	(0.0258)	(0.0116)
Democratic Governor	−0.0006	0.0276**	0.0549*	0.0381*	−0.00956	−0.0309**
Quartic polynomials	(0.0037)	(0.0105)	(0.0274)	(0.0223)	(0.0260)	(0.0115)
Panel B						
Democratic Governor	−0.0015	0.0251**	0.0693**	0.0451**	0.0169	−0.0311**
IK bandwidth	(0.0047)	(0.0110)	(0.0330)	(0.0200)	(0.0379)	(0.0137)
	BW = 12.033	BW = 13.032	BW = 12.076	BW = 15.201	BW = 7.520	BW = 9.437
Democratic Governor	−0.0016	0.0250**	0.0876**	0.0403**	0.0229	−0.0295**
CCT bandwidth	(0.0046)	(0.0103)	(0.0411)	(0.0203)	(0.0295)	(0.0110)
	BW = 14.28	BW = 14.260	BW = 9.414	BW = 14.776	BW = 11.914	BW = 17.728

Notes: Outcome variables are the share of spending on education, health/hospitals, public safety, social welfare, and other sectors as well as log of total spending. The number of observations is 2,343 for Panel A. The controls are the same as Table 3. Panel B use optimal bandwidth procedures of Calonico, Cattaneo, and Titiunik (2014), and Imbens and Kalyanaraman (2012). There are 1,222 and 1,367 observations for IK and CCT optimal bandwidth for RD estimates for Education. Number of observations for RD estimated for Health/Hospitals using bandwidth of IK and CCT are 1,181 and 943 respectively. Number of observations for Public Spending using bandwidth of IK and CCT are 1,433 and 1,396, respectively and 815 and 1,222 for Social Welfare and 976 and 1,597 for Other. Standard errors are in parentheses and are clustered at the state level.

*$p < .10$, **$p < .05$, ***$p < .01$.

Sources: ICPSR 7757 (1995), Leip (2015) and U.S. Census Bureau.

TABLE A7
Regression Discontinuity Estimations for Shares of Spending & Total Spending Using Small Bandwidth

	(1) Total Spending	(2) Education	(3) Health/ Hospital	(4) Public Safety	(5) Social Welfare	(6) Other
Democratic Governor	0.0017	0.0361*	0.0889*	0.0393	−0.0788*	−0.025
BW = 3	(0.0130)	(0.0263)	(0.0500)	(0.0334)	(0.052)	(0.019)
Democratic Governor	−0.0027	0.0272*	0.0701**	0.0223	−0.0469	−0.0207*
BW = 5	(0.0080)	(0.0164)	(0.0339)	(0.0237)	(0.0293)	(0.0124)
Democratic Governor	0.0032	0.0237*	0.0671**	0.0214	0.0280	−0.0324**
BW = 10	(0.0052)	(0.0133)	(0.0267)	(0.0185)	(0.0217)	(0.0140)
Democratic Governor	0.0015	0.0236**	0.0640***	0.0325**	0.0229	−0.0338**
BW = 12	(0.0046)	(0.0117)	(0.0228)	(0.0159)	(0.0208)	(0.013)
Democratic Governor	0.0010	0.0267**	0.0734***	0.0444*	0.0003	−0.0275**
BW = 15	(0.0043)	(0.0110)	(0.0207)	(0.0240)	(0.0192)	(0.013)

Notes: Outcome variables are the share of spending on education, health/hospitals, public safety, social welfare, and other sectors as well as log of total spending. Number of observations for RD estimated using bandwidths of 3, 5, 8, 12, and 15 are 338, 540, 843, 1,222, and 1,425 respectively. Standard errors are in parentheses and are clustered at the state level.

*$p < .10$, **$p < .05$, ***$p < .01$.

Sources: ICPSR 7757 (1995), Leip (2015), and U.S. Census Bureau.

TABLE A8
Placebo RD Test: Regression Discontinuity Estimates on Outcome Variables at Previous Term

	(1) Total Spending	(2) Education	(3) Health/ Hospital	(4) Public Safety	(5) Social Welfare	(6) Other
Democratic Governor	−0.0208	−0.0029	−0.0047	0.0215	−0.0152	0.00152
Linear polynomials	(0.0231)	(0.0121)	(0.0266)	(0.0230)	(0.0251)	(0.0092)
Democratic Governor	−0.0401	−0.0093	−0.0036	0.0153	0.0067	0.0011

TABLE A8
Continued

	(1) Total Spending	(2) Education	(3) Health/ Hospital	(4) Public Safety	(5) Social Welfare	(6) Other
Quadratic polynomials	(0.0316)	(0.0139)	(0.0297)	(0.0236)	(0.0242)	(0.0107)
Democratic Governor	−0.0275	−0.0131	0.00210	0.0180	−0.0007	0.0034
Cubic polynomials	(0.0327)	(0.0156)	(0.0357)	(0.0250)	(0.0250)	(0.0126)
Democratic Governor	−0.0337	−0.0230	0.0098	0.0224	0.0152	0.0043
Quartic polynomials	(0.0401)	(0.0162)	(0.0345)	(0.0287)	(0.0285)	(0.0129)

Notes: Outcome variables are the share of spending on education, health/hospitals, public safety, social welfare, and other sectors as well as log of total spending. The number of observations is 2,343. The controls are the same as table 3. In all specifications, state and year fixed effects are included. Standard errors are in parentheses and are clustered at the state level.

*$p < .10$, **$p < .05$, ***$p < .01$.

Sources: ICPSR 7757 (1995), Leip (2015), and U.S. Census Bureau.

TABLE A9
Regression Discontinuity Estimates for Total Spending and Share of Spending by Sectors: Heterogeneity of the Effect, if Democrats Are in Power in Other Office

	(1) Total Spending	(2) Education	(3) Health/ Hospital	(4) Public Safety	(5) Social Welfare	(6) Other
Panel A						
Democratic Governor	−0.0051	0.0204**	0.0513***	0.0365***	0.00345	−0.0256***
	(0.0039)	(0.0086)	(0.0162)	(0.0130)	(0.0173)	(0.0072)
Democratic Governor × Democratic President	0.0137***	0.0148	−0.0396	−0.0011	−0.0476	0.0097
	(0.0043)	(0.0141)	(0.0280)	(0.0267)	(0.0345)	(0.0125)
Panel B						
Democratic Governor	−0.0010	0.0293***	0.0384*	0.0398***	−0.0234	−0.0272***
	(0.0041)	(0.0090)	(0.0182)	(0.0140)	(0.0191)	(0.0072)
Democratic Governor × Majority Democrat both houses	0.0026	−0.00453	0.0121	−0.0092	0.0159	0.0098
	(0.0041)	(0.0169)	(0.0418)	(0.0229)	(0.0315)	(0.0136)
Panel C						
Democratic Governor	−0.0071	0.0232**	0.0451**	0.0403***	−0.00301	−0.0319***
	(0.0047)	(0.0098)	(0.0196)	(0.0151)	(0.0201)	(0.0080)
Democratic Governor × Democratic President	0.0140***	0.0142	−0.0384	−0.0012	−0.0470	0.0108
	(0.0044)	(0.0142)	(0.0274)	(0.0260)	(0.0346)	(0.0127)
Democratic Governor × Majority Democrat both Houses	0.0035	−0.00362	0.00966	−0.0093	0.0129	0.0106
	(0.0041)	(0.0167)	(0.0424)	(0.0230)	(0.0314)	(0.0136)

Notes: Outcome variables are the share of spending on education, health and hospitals, public safety, social welfare, and other sectors as well as log of total spending. The number of observations is 2,343. This table investigate heterogeneity of the effect of Democratic governors if Democrats are in power in other office. In all specifications, state and year fixed effects are included. Control variables are the same as Table 3.

*$p < .10$, **$p < .05$, ***$p < .01$.

Sources: ICPSR 7757 (1995), Leip (2015), and U.S. Census Bureau.

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