(A)political Constituency Development Funds: Evidence from Pakistan

Rabia Malik*

Abstract

Most of the distributive politics literature focuses on how incumbent politicians allocate development resources in the absence of spending rules, and on the politicization of rules when they do determine distribution. What is less clear is whether politically-neutral spending rules lead to neutral spending. Using new data on a long-running federal development fund and elections from Pakistan in a regression discontinuity design, I show strong evidence that the ruling party manipulated fund distribution to disproportionately benefit its co-partisans and punish the weakest opposition. Considering various factors, partisan bias is the most plausible explanation. These findings are important not only because the purpose of rules-based funds is to prevent politicized distribution but also because they have implications for development patterns and for using such funds to address questions about legislator effort and patronage patterns within constituencies, which requires assuming that legislators do receive their share of funds in the first place.

*I thank Scott Abramson, Sergio Ascencio, Matt Blackwell, Casey Crisman-Cox, Andy Harris, Gretchen Helmke, Phil Keefer, Bethany Lacina, Alex Lee, Mona Lyne, Beatriz Magaloni, Jack Paine, Bing Powell, Brad Smith, Jeff Timmons, Svanhildur Thorvaldsdottir, participants at the University of Rochester Comparative Politics Workshop, the annual meeting of the Midwest Political Science Association (2015), the annual meeting of the American Political Science Association (2015), and three anonymous reviewers for helpful suggestions and comments.

1 Introduction

Most development spending is politically-motivated and, in all countries, incumbent politicians make decisions about its allocation. Consequently, a large literature studies the political factors that determine this allocation. To avoid *all* distributive spending being politically-skewed, most countries have set aside a portion of their budget for "formula- or rules-based" fund distribution.[1] While some scholars have focused on the politics of how these formulas or rules are established, it has generally been assumed that once they are in place, they are automatically followed. Furthermore, cases where politically neutral rules—that is, rules under which fund distribution is not driven by constituency or legislator specific political factors—are usually not analyzed either. As a result, whether neutral spending rules lead to neutral spending is not a question that has garnered much attention in the literature.

This question is, however, important, to address for several reasons. First, the motivation for countries in apportioning a part of their budget for rule-based spending is precisely to prevent politicized spending - is that primary goal always achieved? Second, there is a rapidly growing literature that focuses on how various rules-based development funds are spent by the politicians who have the money at their disposal for their constituencies. Such analyses are essentially the second step in the chain, since they implicitly assume that when there are rules in place for distributing resources, individual politicians necessarily receive their promised share. Finally, if there are discrepancies between the rules and actual distribution, what factors determine them?

In part, this is a difficult issue to address empirically because most rules-based spending is not neutral, as has been extensively discussed in the literature

[1]'Rules-based' and 'formula-based' are used interchangeably in the paper.

(Boadway and Shah, 2007; Banful, 2011). In other words, the rules themselves are politicized, and often complicated. However, I address this question using data from Pakistan, which had an 'equal distribution' constituency development fund (CDF) that ran from 1988 to 2013, allocating the same amount of money to each federal legislator for undertaking small development projects in his or her constituency. The format of this fund allows me to directly investigate whether neutral rules led to neutral spending, which is not possible to study in many contexts.

Using a regression discontinuity design (RDD) in conjunction with the first comprehensive dataset on this CDF, I show strong evidence that ruling party legislators were highly advantaged in terms of receiving these development resources and, conversely, opposition legislators were highly disadvantaged, especially within the close races that the RDD focuses on. On average, closely elected opposition legislators' allocation from the CDF was at least 25 percentage points lower in the more conservative estimates, with this difference being up to 80 percentage points in some specifications. This discontinuity translates to about 2.5 million (and 8 million, respectively) Pakistani Rupees (PKR) fewer from a fund that distributed up to 10 million PKR per legislator annually.[2] I also take in to account other potentially relevant factors, such as legislator quality and experience, ideology of the party in power, electoral competitiveness and turnout, timing of elections, and electoral constituency fixed characteristics, and find that partisan bias is the most consistent and plausible explanation for the findings.

Though the fund is overall a relatively small part of the budget, as is the case with most formula-based development funds, it is nonetheless important for political credit-claiming at the level of the individual legislator, since it is one

[2] 10 million PKR is roughly equivalent to 100,000 USD. Note that the nominal GDP per capita in Pakistan was lower than 1500 USD in 2015.

of the few sources of project funding that can be associated directly with the specific legislator who undertook each project for her constituents.[3] In addition, these findings are potentially informative for a much broader set of countries. Formula-based spending, when not publicly released or audited by independent third parties, may have discrepancies between rules and spending, as Timmons and Broid (2013) find in the case of Mexico. Though developing countries, especially those like Pakistan that have weak institutions and centralized control over such funds, are perhaps more likely to have low transparency and low audits of such spending, that does not necessarily imply that formula-based spending is neutral elsewhere, and this becomes an empirical question that merits investigation, in particular for reasons mentioned above.

My findings, therefore, build on and extend the existing distributive politics literature by focusing on a different aspect of development spending that pertains to formula-based politically-neutral distribution rules. Empirically, much of the distributive politics literature relies on associative evidence; my paper also contributes in this regard by providing causal evidence of partisan bias in the distribution of development funds. In addition, I focus on the domestic politics of a strategically important yet understudied country, building on a small but growing literature on the electoral politics of Pakistan (e.g., Afzal (2014)). Finally, the results have potential implications for how we think about electoral competition and long-term development patterns, which I discuss after presenting the main findings.

The paper proceeds by discussing why rules-based spending is an important

[3]For FY 2012-2013, which is the last year of the fund that this paper will use data on, its total amount was slightly under one percent of the total amount allocated to development spending in the federal budget (DAWN, 2012). Despite the small percentage, however, the unique credit-claiming opportunities such funding provides, as well as other features that are useful from a research design perspective, make it suitable to answer the questions of interest here, as is discussed in detail further along in the paper.

subset of distributive politics that should garner more empirical attention in the literature. I then outline the political context and specific development fund in Pakistan to establish its relevance as a suitable case for addressing the question at hand before introducing the data and research design. Next, the main results are presented and potential mechanisms for distortion discussed before delving in to competing and complementary mechanisms. The last section concludes.

2 Formula-based Development Funds

There is a rich literature studying the influence of political factors, especially partisan bias, on distributive spending of all sorts. Though the extent of political factors driving development resource allocation varies across countries, in most contexts such spending is inherently political. For instance, though developed countries tend to have lower partisan bias on average (Levitt and Poterba, 1999; Balla et al., 2002; Solé-Ollé and Sorribas-Navarro, 2008; Berry, Burden and Howell, 2010; Albouy, 2013), there are still some differences, especially within specific sectors, administrations or political parties (Lee, 2003; Ansolabehere and Snyder, 2006; Lazarus, 2010). Politically-skewed spending is, in general, much higher in developing countries (Schady, 2000; Khemani, 2003; Arulampalam et al., 2009; Keefer and Khemani, 2009), especially where political power does not alternate frequently, such as under hegemonic regimes (e.g., Mexico under the PRI (Magaloni, 2006) and India soon after independence (Rodden and Wilkinson, 2004)), or when democratic institutions are still emerging, as was the case in Portugal (Veiga and Pinho, 2007) and Italy (Golden and Picci, 2008).

In the last few decades, many countries, both developing and developed, have therefore dedicated some part of their budgets for rules-based or formula-based spending, in part to reduce politically-skewed development spending. Some have done so in the form of Constituency Development Funds (CDFs), where a specific portion of the national budget is channeled directly to the constituencies of Members of Parliament (MPs), and the funds are to be spent on local development projects (Tshangana, 2010). Almost twenty countries, primarily in Asia and Africa, have CDFs. In some cases, they apportion the same amount of resources to each constituency; India and Pakistan have had such funds. Others, such as Ghana, South Africa, Kenya and Nigeria, have CDFs based on formula-based resource allocation mechanisms (Banful, 2011).

Other countries have constructed formulas for transfers between different levels of government outside of CDFs, based on various factors such as population, population density, economic capacity, literacy rates, poverty et cetera. This includes many OECD countries that disburse portions of their budgets through 'mandatory' grants (Bergvall et al., 2006) as well as various developing countries, including Mexico (Timmons and Broid, 2013), Colombia, and Morocco, among others (Boadway and Shah, 2007).

For such formula- or rules-based funds, there are primarily two components that have received most of the attention in the literature, based on two stages of their operation: first, how the rules have been constructed; second, how the funds are then spent. What has received considerably less attention is the middle step of whether formula-based funds, especially those constructed on a politically neutral basis, so to speak, are actually disbursed based on the formulas.

Some scholars have looked at whether formula-based funds are also politically skewed, since that goes against the main motivation for establishing them. They often find that the rules and indicators for determining these distribution formulas are chosen in ways that produce politically desirable patterns of transfers (Boadway and Shah, 2007; Banful, 2011).

Other scholars have focused on the second stage, studying how individual politicians spend their share of resources when they come from a rules-based fund, especially in the case of CDFs. Despite being relatively small portions of the overall development budget, these funds are useful from a research standpoint in part because they allow analsis of individual MPs' political motivations as they provide MPs with high degrees of authority over the projects initiated (Tsubura, 2013). Recent literature has studied how MPs distribute development projects *within* their constituencies in Kenya (Harris and Posner, 2019) and India (Jensenius and Chhibber, 2016), as well as how they spend more development funds close to elections and when they win by small electoral margins in the same two countries (Keefer and Khemani, 2009; Pal and Das, 2010; Gutiérrez-Romero, 2013; Blair, 2017).

Though understanding the role of politics in both these stages of rules-based funds is important, one question that remains is whether such funds are in fact disbursed as intended. In one of the very few papers that addresses a similar question, Timmons and Broid (2013) find that, in the case of Mexico, there are some discrepancies between the formulas that dictate inter-governmental transfers and the actual allocation, though only some parties exhibit partisan biases in this regard. There are several reasons this is a relevant question to ask. First, it is inherently interesting in cases where the allocation formula is relatively politically neutral, that is, when each MP is 'allowed' to use the same amount of resources for her constituency. Second, in order to answer questions about MPs' efforts in spending such funds, the timing of this spending, their preferences in who to reward within their constituencies et cetera, it is necessary to first ensure that such funds are, in fact, distributed to the MPs as intended. Finally, if part of the motivation for having rules-based development funds is reducing the role of politics in some portion of development spending then it is important, in and of itself, to analyze whether constructing such funds is sufficient to achieve that.

At the same time, as is true in Mexico, it is difficult to study rules-based funds because the formulas are often obscure and complicated, and there is little data available on how the resources are distributed on the ground. In addition, there are always confounding factors that may also affect an MP's ability to receive and spend her share of a formula-based resource, such as her effort and experience, the chain of fund distribution, variation in local government capacity et cetera. That is, even if there are discrepancies in how a rules-based fund is distributed in reality, identifying partisan effects and disentangling them from other political and non-political factors is not empirically straightforward.

2.1 Pakistani Politics and CDFs

Pakistan is a good case for identifying potential partisan effects on the distribution of politically-neutral funds, for two sets of reasons. First, Pakistani politics provide relevant scope conditions for the ruling party—that is, the political party that controls the center—to be able to influence the distribution of even such a fund. Second, the set up of its rules-based fund makes it likely that any observed discrepancies in the distribution rules and reality are caused by political considerations rather than other factors. I discuss both of these in turn.

Pakistan's regime and government instability, both of which have been constant features of its politics since the country's creation in 1947, have further exacerbated its problems of low political transparency. Perhaps in part due to this, the CDF I study did not have third party or independent audits, nor was information on its spending released publicly, as happens in certain other developing countries, including Brazil in the former case, and India in the latter (Ferraz and Finan, 2008; Pal and Das, 2010). Consequently, it becomes easier for the ruling party to inordinately influence fund distribution despite the official rules.

The data for this paper come from the only development fund in Pakistan that provided, theoretically at least, equal development resources to each federal legislator (known as a Member of the National Assembly or MNA).[4] MNAs serve in the Lower House (National Assembly) of the bicameral *Majlis-e-Shoora* (Parliament), such that 272 of the 342 are elected directly by voters at least every five years, in single-member districts with plurality electoral rules.[5] Though this Constituency Development Fund (CDF) had different names under different governments,[6] it was allocated in the federal budget each year from 1985 to 2013 when the national legislature existed.[7] Interestingly, the fund was first introduced by General Zia-ul-Haq's non-democratic regime, following his 1977 military coup. He initiated the fund following the 1985 'party-less' elections held under his tenure (Tshangana, 2010). While the exact motivation behind its initiation is not documented, it is likely that the fund was created to indirectly strengthen the center even further by giving non-party legislators more individual power, thereby reducing the regional strength of existing political parties. Nonetheless, the non-democratic origins of this fund perhaps explain its seemingly politically-neutral set up in the sense that individual legislators and their party affiliations et cetera were ostensibly unrelated

[4]Due to access constraints, the empirical section uses data from the province of Punjab; I discuss implications of this after the main results.

[5]This number was increased from 207 before the 2002 elections. The remaining 70 seats are reserved for women and minorities (60 and 10, respectively), which are allocated to parties on a proportional basis after elections to the direct seats have already been held. These 70 MNAs are not linked to specific electoral constituencies, and were not part of this CDF. The empirical analysis therefore focuses on the 272 directly-elected MNAs.

[6]When the Pakistan People's Party (PPP) was in power, the *People's Works Programme* was the federal fund that provided these development resources. The Pakistan Muslim League - Nawaz (PML-N) governments called it the *Tameer-e-Watan Programme*, while the Pakistan Muslim League - Quaid (PML-Q) government called it the *Tameer-e-Pakistan Programme* and *Tameer-e-Watan Programme* in different years.

[7]When first introduced in 1985, the fund promised PKR 5 million annually to each MNA, which was increased to PKR 10 million in the early 2000s. PKR 10 million is roughly equivalent to USD 100,000 in 2016.

to fund distribution.

Though this CDF makes up a fairly small portion of the overall development budget, it is nonetheless important because it is one of the rare sources of development spending that lets individual legislators credibly claim credit for specific projects, which is a meaningful component of legislators' reelection strategies (Lee, 2003; Blair, 2017). The credit-claiming link is further strengthened by these projects having to be infrastructural. I conducted in-depth interviews with MNAs and senior officials at the Ministry of Local Government and Rural Development, which had been in charge of running this particular fund, to better understand its procedures since these details are not otherwise available.[8] MNAs all repeatedly spoke about prioritizing projects based on their constituents' preferences, with an overwhelming majority of projects being small "farm to market" roads that help connect communities, especially in rural areas, to the main roads. Both ruling and opposition MNAs mentioned identical sectors and preferences, implying that differential fund distribution is unlikely due to different types of spending priorities.

The nature of these projects makes it easier for legislators to link specific undertakings to themselves and, thus, credibly claim credit from their constituents. In India, a similar CDF (the MPLADS) includes construction of a plaque to honor the legislator who initiated a specific project (Blair, 2017). Though Pakistan does not have compulsory plaques, this indicates the relevance of such projects in terms of linking legislators to their constituents, and there are certainly instances in Pakistan where a legislator gets similar recognition. For instance, one

[8]Interviews and data collection were done over a total of 5 months during 2013 and 2014. The 15 interviewed politicians represented the 5 biggest political parties and belonged to 10 (out of 35) different administrative districts of Punjab. 5 of the MNAs were retired while the others were serving at least a second term in the national legislature. The interviewees differed in whether they had, when elected, belonged to the largest party, the main opposition party, a smaller coalition party, or a smaller opposition party.

of the interviewed legislators described a large project he undertook that involved construction of a hostel block in a women's college in a large city of Pakistan; he mentioned that the hostel block was subsequently named after him.[9] Such instances naturally help with claiming credit and reaping long-term electoral benefits.

In addition to this credit-claiming, the process of applying for projects through this fund required very little effort on the part of each legislator, unlike similar CDFs in other countries. This came up repeatedly in interviews with not just the politicians but also the bureaucrats. Each MNA annually submitted a prioritized list of projects for her constituency to the (now defunct) Ministry of Local Government and Rural Development, which forwarded all lists to the federal Planning and Works Department for cost estimates. Upon receiving estimates, the Ministry approved the maximum possible projects for each legislator, and subsequently released funds accordingly. Thus, identifying the projects and prioritizing them each year was the only effort required from the MNAs at the application stage. Ministry officials repeatedly corroborated this by saying that almost all legislators submitted more projects each year than could be funded, implying that everyone was—at least on average—applying for more than 100% worth of their fund share.

In an ideal world, one would have data on each MNA's project applications as well as subsequent cost estimates, project approvals, and fund release. However, obtaining even the data that I do use (on fund disbursement) was near impossible, with the Ministry very reluctant to share any information. In fact the claim was that records of legislators' applications were not consolidated in the first place.[10]

[9]This respondent belongs to one of the long-standing religious parties in Pakistan and has served multiple terms, first as a provincial legislator and then as a federal one.

[10]Getting the data that I use here was an uphill task, and came after many weeks of trying to convince the relevant bureaucrats to release the information purely for academic purposes. Their precise hesitation is unclear but was likely a case of each person trying to protect themselves since there is always a fear that such information can be spun a certain way and shared with the media, thereby getting some individual bureaucrat in to trouble with his superiors. Given the

However, given the ease of applying for projects, it is very unlikely that a low fund allocation reflects low requests, on average. News coverage from Pakistan corroborates the hypothesis that constituency development funds are distributed by the ruling party for strategic purposes rather than based on the allocation rules; even though the particular CDF I use data on was ended in 2013, in recent years, governments have distributed 'one-off' CDFs exclusively to constituencies with a ruling party MNA (Yasin, 2017). Nonetheless, I return to this question of legislator effort in the empirical section.

A final relevant feature of this CDF was that it came under the purview of a single federal ministry. In many contexts, a differential allocation of development resources could partly be driven by differences in local government and bureaucracy capacity. In this case, however, the processing of project proposals and release of funds for all MNAs was controlled by one federal ministry. And, in fact, since the fund was controlled by a federal ministry, that also made it easier for the ruling party to have influence, both formal and informal, over how it operated. For one, the ruling party had almost complete control over who was appointed as Minister. Second, since the bureaucracy in Pakistan is heavily politicized and often faces major re-shuffling when the government changes, officials in charge of processing these funds were easier to influence for the ruling party elite than would be the case in countries where the bureaucracy is better insulated from political interference.I discuss specific ways in which the actual release of funds was likely hindered on the ground for non-ruling party members, especially for the weaker opposition MNAs, after presenting the main results.

Based on the specifics of the CDF outlined above, I expect the ruling party to have high incentives and opportunity to distort its actual distribution along

---

difficulty in obtaining even the records that I did, I do the best with the data that I was able to get.

partisan lines, despite the allocation rules being 'politically neutral.' The next section empirically tests this hypothesis.

3 Data and Methods

3.1 Research Design

In order to precisely estimate the effect of being a ruling party legislator on development fund allocation, I use a regression discontinuity design (RDD). The biggest advantage of this design is that it resolves the identification problem where the amount of development funds released to a legislator is endogenous to constituency and legislator characteristics. My empirical approach builds on a growing strand of research in political science that focuses on close elections (e.g., Lee (2008), Eggers and Hainmueller (2009), Asher and Novosad (2013), and Hall (2015)). Identification of the RD estimate relies on the continuity of potential outcomes across the treatment threshold (Lee, 2008; de la Cuesta and Imai, 2016).[11] Here, that requires that any difference in the release of development funds between constituencies where a ruling party candidate "barely won" and constituencies where a ruling party candidate "barely lost" (that is, where any opposition party candidate "barely won") must be due to the difference in their treatment status, rather than any other factor. If this continuity assumption is plausible, I can systematically compare the fund allocation between these two types of constituencies to measure the treatment effect of being a legislator from the ruling party.[12]

[11]See Lee and Lemieux (2010) for a comprehensive overview of the assumptions and requirements for implementing an RD design.

[12]Some recent scholarship has disputed the validity of this assumption in existing empirical literature (Caughey and Sekhon, 2011), whereas subsequent analyses have shown that the validity of the discontinuity design still holds for many close election scenarios (Eggers et al., 2015; de la Cuesta and Imai, 2016). In the case of this analysis, I present results from formal density tests, based on McCrary (2008), in Appendix A.3.1, and find no significant discontinuity in the density of the forcing variable (explained in the next section).

A fundamental consideration that stems from this continuity assumption is that there must not be 'sorting' close to the cutoff: In very close races, candidates must not have perfect control over the outcome of the election. For violation to occur, candidates must not only know that the election will be exceedingly close but also have the resources and ability to manipulate voting in that narrow time period such that the outcome is affected to their benefit. In a country with frequent elections and government changes, and a lack of systematic political polls, it is arguably very difficult for even parties themselves to accurately predict which constituencies will have the tightest races. Even if candidates could somehow discern which races will be closest, based on past experience for instance, it is plausible that only those who are already in power will have access to the resources needed to try to manipulate votes. Balance tests, presented in Appendix A.3.2, verify that bare winners from ruling versus opposition parties are not different in any meaningful way. Continuity tests of the forcing variable are outlined in subsequent sections.

3.2 Data

The outcome of interest is how much of the allotted development fund was actually released to each legislator in a given year, and the unit of analysis is electoral constituency-year.[13] Due to data limitations, I use information from all national constituencies (also known as 'electoral districts' in Pakistan) that fall within the province of Punjab for the democratic years between 1991 and 2013.[14,15]

[13] I am grateful to the Secretary of the Cabinet Division (in 2014) for granting me access to the relevant constituency-level data.

[14] Though I was only granted access to data from Punjab, which is 1 of 4 provinces in Pakistan, it accounts for over half (148 of 272) of the country's national constituencies. In future work, it would be interesting to investigate whether the empirical patterns I find in Punjab hold elsewhere, where the relationship between the center and provinces is not necessarily as close.

[15] Thus, the data used are from 1991-1998 and 2008-2013. The only exception is the fiscal year starting in 1997 where no money wasand allocated to anyone due to budget constraints; this

The dependent variable, *Fund Access %*, is calculated as the percentage of the total possible allocation that was actually released to each constituency, with the total being PKR 5 million or PKR 10 million, depending on the year. Summary statistics are in Table 1. The maximum allocation for *Fund Access %* is much higher than 100% due to cases where some legislators were given more than the official amount allowed. Though such 'outliers' are relevant because they are likely observed for political reasons, the following results are nonetheless robust to forcibly recoding them as 100%, or using Pakistani Rupee (PKR) amounts as the dependent variable. (See Tables A1 and A2 in Appendix A.1.)[16]

Table 1: Descriptive Statistics

Variable	Median	Mean	St. Dev.	Min	Max
RD Main Variables:					
Fund Access %	81	83.078	75.449	0.000	366
Margin of Victory	0.040	0.041	0.176	−0.463	0.653
Ruling Party Legislator	1	0.631	0.483	0	1
Other Covariates:					
Previous MNA	0	0.470	0.499	0	1
Previous MNA Terms	0	0.706	0.929	0	5
Federal Minister	0	0.084	0.277	0	1
Federal Minister Imp.	0	0.035	0.183	0	1
Election Year	1993	1998	7.637	1990	2008
Turnout	47.136	47.052	7.149	26.064	66.310
# Registered Voters	271,396	279,314	48,593	158,054	429,937
# Candidates	6	6.289	3.011	2	21
Effective # Parties	2.216	2.372	0.559	1.411	7.874

Margin of Victory is the forcing variable, and is calculated for each observation from the point of view of the ruling party. Specifically:

$$\text{Margin of Victory}_{it} = \frac{\text{Votes Received}_{irt} - \text{Votes Received}_{iot}}{\text{Total Votes Cast}_{it}},$$

year is dropped from the analysis.

[16] Just under 30% of observations have *Fund Access %* higher than 100%, and only 7% are higher than 200%.

which refers to the difference between the vote share of the candidate from the ruling party r and the vote share of the highest vote-earning candidate from any other party o, in electoral district i in election year t.[17] Thus, for an electoral district where the winning candidate belongs to the ruling (opposition) party, *Margin of Victory* is positive (negative) because the vote share of the ruling party legislator is greater (lower) than the vote share of the highest vote-getter from any other party.[18]

The treatment dummy, *Ruling Party Legislator*, indicates whether a constituency's legislator belongs to the Ruling Party (1) or not (0) for each observation.[19,20] In other words, it is a function of the forcing variable since it is 1 where *Margin of Victory* is positive, and 0 where the victory margin for the ruling party is negative.

The remaining variables in Table 1 are other factors that may be associated with the fund percentage a legislator gets; they refer to politician-specific and election-specific characteristics. *Previous MNA* and *Previous MNA Terms* are dummy and count variables, respectively, that measure experience as a federal legislator.[21] Being an 'important' and well-known politician is proxied by two dummy variables, measuring whether an MNA has ever been a cabinet member (*Federal Minister*) or part of the even more exclusive group of federal ministers

[17] Party r potentially changes after each election.

[18] This variable, and all other independent variables, were hand-coded by the author. The four elections relevant here were in 1990, 1993, 1997, and 2008. As of July 2016, election results can be accessed through: http://ecp.gov.pk/GE.aspx.

[19] In Pakistan, the biggest party in the legislature after each election has always ended up holding the Prime Ministership. Only legislators from this ruling party are coded as 1 despite a few governments with small coalition partners, for two main reasons. One, important cabinet positions tend to go to the larger party's members. Two, from interviews, it was evident that legislators from the smaller coalition party were not treated the same way as those belonging to the larger coalition partner when it came to development resource access.

[20] According to bureaucrats at the Ministry, money from the fund was disbursed between October and December each year. Thus, for years with an election, the ruling party is coded based on who was in power in the last three months of that year.

[21] 1988 is the starting point election for calculating these variables because it was the first democratic election since the formation of Pakistan in its existing geographical form.

belonging to one of the most high-profile ministries (*Federal Minister Imp.*).[22] During interviews, some legislators described having an easier time getting resources for their constituencies in their second terms because they had learned how to "work the system" by then. Others, who had headed federal ministries, mentioned having no trouble accessing their share of resources even when in opposition.[23] Finally, *Turnout*, *# Registered Voters*, *# Candidates*, and *Effective # Parties* measure election characteristics at the constituency level.

4 Empirical Analysis

The dataset contains 1099 observations, a large proportion of which are close elections. Almost fifty percent of the observations have races decided within a 10% margin of victory interval, slightly over a quarter within 5%, and almost 12% have a victory margin smaller than 2.5%.

Figure 1 depicts the discontinuity in the allocation of federal development funds for close elections. For constituencies where a ruling party candidate *just* won versus those where a ruling party candidate *just* lost, there is a big visual jump in percentage of development funds released subsequently. Table 2 presents the RD estimates for this treatment effect using local linear regressions for different bandwidths (Models 1 and 2) as well as the estimate of the local average treatment effect from a cubic polynomial (Model 3), which estimates Equation 1, where β_1 is the treatment effect at the threshold. In the equation, i denotes constituency

[22] The important ministries used here are Defence, Foreign Affairs, and Finance. The variable is also coded 1 if the MNA has been Prime Minister in the past.

[23] Author interviews in Sheikhupura (June 01, 2014), Islamabad (June 14, 2014) and Lahore (June 24, 2014).

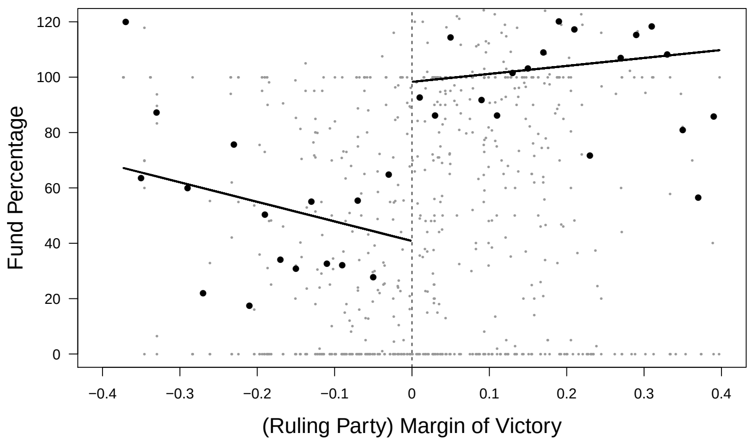

Figure 1: Effect of Ruling Party Legislator on Development Fund Access

Note: The figure was created by running separate OLS regressions on either side of the cutoff in the forcing variable. That is, *Fund Percentage* is regressed on *(Ruling Party) Margin of Victory* for negative values of *Margin of Victory* and then regressed separately for positive values of *Margin of Victory.* The OLS predicted lines are plotted. The gray dots in the background denote the raw data (N=1099) while the black dots represent the raw data aggregated and averaged in bins of length 0.02.

and t denotes the year.[24]

$$
\begin{aligned}
\text{Fund Access}_{it} = \beta_0 + \beta_1 \text{Ruling Party Legislator}_{it} + \beta_2 \text{Margin of Victory}_{it} + \\
\beta_3 \text{Ruling Party Legislator} \times \text{Margin of Victory}_{it} + \beta_4 \text{Margin of Victory}^2_{it} + \\
\beta_5 \text{Ruling Party Legislator} \times \text{Margin of Victory}^2_{it} + \beta_6 \text{Margin of Victory}^3_{it} + \\
\beta_7 \text{Ruling Party Legislator} \times \text{Margin of Victory}^3_{it} + \epsilon_{it}
\end{aligned}
\tag{1}
$$

Using both the conventional (*Standard*) and the bias-corrected (*Robust*) local linear estimation method first introduced in Calonico, Cattaneo and Titiunik (2014) for RDDs, a bandwidth of 0.05 yields substantively large, and statistically significant, discontinuity estimates of almost 54 and 79 percentage points, respectively. This estimation uses all races that were decided by a vote share

[24]Since the fund is distributed in each year whereas new elections take place periodically, for any given year, t, the *Margin of Victory*$_t$ refers to the latest election before that fiscal year of fund distribution.

Table 2: Effect of Ruling Party Legislator on Development Fund Access

	Model 1		Model 2		Model 3	
	Standard	Robust	Standard	Robust	Standard	Robust
Ruling Party Legislator	53.5***	78.5***	28.6**	25.0*	32.6***	32.6***
	(18.1)	(28.1)	(11.1)	(13.1)	(11.8)	(12.6)
N	290	290	562	562	1099	1099
RD Bandwidth	0.05	0.05	0.108	0.108	-	-
Specification	Local Linear	Local Linear	CCT	CCT	Cubic	Cubic

***p < .01; **p < .05; *p < .1
Standard errors reported in parentheses.
Note: For Models 1 and 2, standard specifications provide 'Conventional' estimates while robust specifications report 'Bias-Corrected' estimates with robust standard errors, both using the RDRobust Package in R. For Model 3, Robust reports robust standard errors, clustered at the administrative district level.
CCT uses the optimal bandwidth calculation suggested by Calonico et al. (2018).

difference of 5% or less, with 290 observations falling within this subset. Model 2 uses the optimal bandwidth calculation procedure recommended by the same authors (Calonico et al., 2018), which suggests a bandwidth of 0.108.[25] The associated discontinuity estimates are over 25 percentage points and significant. I also estimate the treatment effect using a cubic polynomial (specified in Equation 1) with appropriate interactions between different orders of the forcing and treatment variables; the discontinuity estimate (Model 3) remains over 30 percentage points and highly significant, even after clustering the standard errors by administrative district. The results are robust to various bandwidth and modeling choices, details for which can be found in Appendix A.2.

Though the continuity assumption is not directly testable, I ensure that other potential explanatory variables are balanced close to the cutoff using three different

[25]Note that the rdrobust package that implements the procedure introduced in Calonico, Cattaneo and Titiunik (2014) has undergone various updates since its introduction, which affects the calculation of the standard errors as well as the choice of optimal bandwidth. At the time of writing this paper (May 2019), I use the latest version of this package, documented in Calonico et al. (2018). Therefore, all the results and figures in this paper use the following version of the rdrobust package: 0.99.4, released on September 27, 2018 with the following documentation: `http://dirichlet.mat.puc.cl/web/packages/rdrobust/rdrobust.pdf`.

methods, in line with the existing literature; results can be found in the Appendix. First, I conduct t-tests on relevant covariates, including *Previous MNA*, *Previous MNA Terms*, *Federal Minister*, *Effective # of Parties*, *Turnout*, and *Rejected Votes* for different bandwidths, and find no evidence of imbalance (Table A4). Next, I re-run Equation 1 with these covariates as the dependent variable one by one. The insignificant treatment coefficients lend credence to the argument that the legislators observed in a narrow interval on either side of the cutoff are similar on other dimensions that could potentially affect fund access (See Table A5 in Appendix A.3.2). Finally, I also establish the irrelevance of these covariates close to the cutoff by including them as control variables in the three main RD regressions. The treatment effect remains large and statistically significant (Table A6).

Another way of ensuring continuity to the extent possible is by analyzing the continuity of the forcing variable. I do so in Appendix A.3.1 in two ways: first by plotting the density of *Ruling Party Margin of Victory* for its entire range (Figure A4), and second by conducting the tests suggested by McCrary (2008) for various different bandwidths (Figure A5).

In addition, Appendix A.4 further strengthens the findings by presenting results from two placebo tests. The first introduces 'fake cutoffs' for treatment, instead of using the actual 0% victory margin as the treatment threshold. The second test lags the dependent variable by one administration. Both approaches yield null results, finding no discontinuity.

These results indicate that it is not just winning that is important for a legislator; rather, winning and being from the ruling party is what really matters, especially in close races, as that leads to a high release of one's development fund share. Conversely, winning a close race as an opposition party legislator leads to a low allocation of funds, presumably as a 'punishment' from the ruling party, in order to hinder such legislators from consolidating their electoral support.

4.1 Election cycles and different ruling parties

Much of the existing literature on distributive politics—be it rules-based spending or otherwise—finds that incumbents spend more of their resources close to elections. The reasoning is intuitive: when one's constituents are about to go to the polls, there is higher incentive to spend on them. Blair (2017) finds that Indian MPs increase their CDF spending just before the elections, whereas Bohlken (2018) looks at the relationship between federal and state legislators in the same country, finding that the former allocate more project dollars in state-level constituencies where a co-partisan recently won.[26] Similar evidence for election cycles emerges from other developing countries (Gutiérrez-Romero, 2013). In Pakistan, where the ruling party misallocates a rules-based development fund along partisan lines, the complementary expectations would be as follows: first, this incentive to distort should be higher in election years; that is, the treatment effect should be larger. Second, perhaps overall spending is also higher in election years, regardless of party affiliation.

However, as Table 3 and Figure 2 show, that does not appear to be the case. Table 3 summarizes results from an OLS regression with an interaction term between *Ruling Party Legislator* and a dummy variable for *Election Year*.[27] The

[26] It would be interesting to analyze whether a similar phenomenon exists in the Pakistani case, though that seems less likely for a couple of reasons. First, provincial legislators (MPAs) are not involved in the fund allocation or implementation process in Pakistan so their help is not perhaps needed in the way that Bohlken (2018) finds in India. Second, unlike India, provincial and federal elections are concurrent in Pakistan, which somewhat lessens the incentive to 'reward' or 'buy support from' co-partisan provincial legislators for a coattails or reverse coattails type argument. Finally, even if a similar dynamic exists to some extent in Pakistan, analyzing which is beyond the scope of this paper, it does not affect the results presented here since my focus is on very close races and that too on the more aggregate national constituency as a whole unit rather than on provincial constituencies within those national ones.

[27] *Election Year* is coded 1 for years in which elections were actually held rather than based on when they were due to be held; the two have not usually been the same in Pakistan.

insignificant interaction indicates that the advantage of being a ruling party legislator is no higher in election years than other years. It is also interesting that overall spending is, in fact, lower in election years, contrary to what we might have expected.

Table 3: Election Cycles

	Fund Access %
Ruling Party Legislator	63.768***
	(7.423)
Margin of Victory	−29.601
	(19.246)
Election Year	−29.595***
	(8.536)
Ruling Party×Election Year	1.254
	(11.583)
Previous MNA	0.263
	(4.689)
Federal Minister	−1.911
	(8.694)
# Candidates	0.471
	(0.828)
Turnout	−0.067
	(0.383)
District FE	✓
N	1092
Adj. R-squared	0.623

***p < .01; **p < .05; *p < .1

The same pattern is also discernible from Figure 2, where the average amount allocated to all ruling party legislators and all opposition legislators is plotted for each democratic year with available data, with election years marked by gray vertical lines. A couple of things are noteworthy here. First, as mentioned earlier, there is a period of military government that is excluded from the analysis since the scope of the paper pertains to democratic political competition.[28] Second, this

[28] 1999-2002 there was no legislature at all, following a military coup by General Musharraf; there was also no CDF in this period since there was no legislature. 2002-2008 there was a period of semi-democracy, in that the General was made President following a questionable referendum, the President was given extra powers through a Constitutional Amendment, and ‘elections’ were held under his tenure (BBC World News: South Asia, 2002).

figure visually depicts that overall spending is, indeed, lower in election years. As mentioned earlier, however, no CDF money was allocated in 1997 and this year is dropped from the analysis, so this election year is not driving the negative *Election Year* base term.

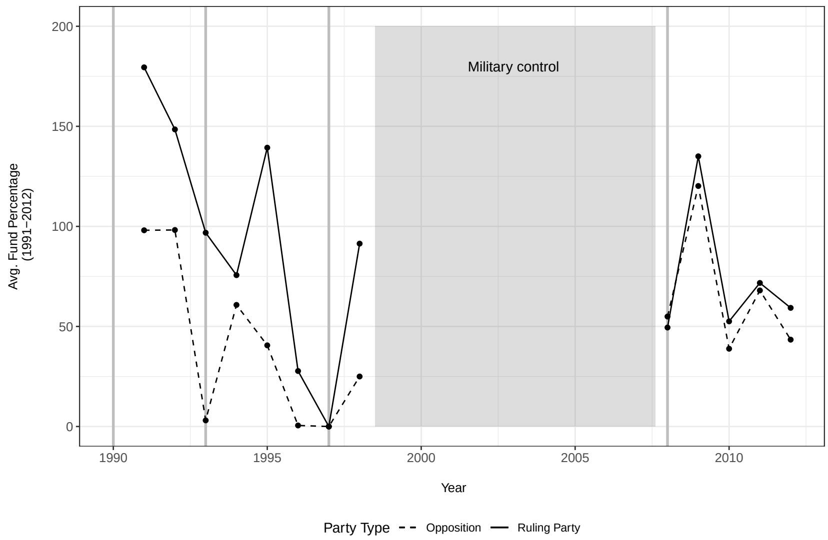

Figure 2: Access to Development Funds by Year - Raw Data

Note: The figure was created by aggregating data on the dependent variable, *Fund Percentage*, separately for Ruling Party observations and Opposition observations. The variable is aggregated for intervals of length 0.04 for the *Margin of Victory* variable. Though *Margin of Victory* theoretically ranges from 0 to 1, the x-axis is limited to the range that actually occurs in the data for both types of legislators. Elections are denoted by grey vertical lines, and occur in 1990, 1993, 1997, and 2008.

There are likely at least two reasons that help to understand this lack of election cycle in Pakistan. The main explanation for this pattern is that Pakistan has rarely had elections in years that they were due to be held, meaning that election timing is difficult to predict. The figure clearly indicates that elections have *not* been held at five year intervals in this period, and this was because of multiple governments being dismissed early on grounds of 'inability to govern.' As a result, when parties are in power, they know that they are unlikely to make it through their five year term so it is a more sensible electoral strategy to immediately start providing co-partisans with high levels of development funds while cutting off resources for the opposition. A complementary second explanation, especially when contrasting this CDF with the one in India, is that this fund is non-lapsable, which means that unused amounts can *not* be carried forward to the next fiscal year.[29] This feature is different from the Indian MPLADS fund where an individual MP can use all of her share in the last year of the administration, for instance, if she so chooses to (Blair, 2017). Therefore, even if elections were held on time in Pakistan, there is no huge incentive to 'hoard' one's share of the CDF in wait of an election year.

The overall lower spending in election years can be understood through similar channels. That is, when a government is being dismissed early, that implies a caretaker government being set up in a rush and elections being held; this process, especially when unplanned well in advance, takes up a large portion of the fiscal year, meaning that there are simply fewer months left for the relevant logistical and bureaucratic processes to take place.

Another substantively interesting question pertains to heterogeneous effects based on specific political parties. Scholars have sometimes found that differences in development fund distribution are driven by specific types of parties in power. This is true both in developed contexts (e.g., Lee (2003); Berry, Burden and Howell (2010)) as well as in developing countries with rules-based spending (Timmons and Broid, 2013), and could be driven by specific types of ideologies or differing party capacities or organization et cetera. In the case of Pakistan's CDF, I find no significant differences between the two political parties that alternated power at the center between 1991 and 2013, namely the Pakistan People's Party (PPP) and the Pakistan Muslim League Nawaz (PML-N). Table 4 presents results where I interact a dummy variable for a PML-N government with the *Ruling Party Leg-*

[29] It is unclear what happens to any unutilized money at the end of the fiscal year. Chances are that it goes in to some kind of discretionary spending by the ruling party, perhaps highlighting even more the incentive for the ruling party to cut off opposition access to the CDF.

islator dummy. The insignificant interaction coefficient indicates that there is no significant difference associated with being a ruling party legislator under a PML-N government versus a PPP government. Especially with the data being from Punjab, we might expect stronger effects of being a ruling party legislator under PML-N governments since Punjab has traditionally been a PML-N stronghold whereas PPP is primarily rooted in the province of Sindh. This expectation may be even stronger if party alignment between national and provincial legislators also matters for fund distribution, as Bohlken (2018) finds in India for instance. As can be seen, however, that is not the case here.

Having more than one ruling party in the dataset—and in fact having both parties hold power at the center twice each—allows me to conclude that the treatment effect of being a ruling party legislator is a 'general' phenomenon in the case of Pakistan rather than a finding driven by one particular political party. Either party, when in power, engages in similar levels of distortionary behavior.

4.2 How does this distortion occur?

The discussion so far has pertained to development funds being disbursed to ruling party legislators at much higher rates than opposition legislators, particularly in the close races that the RD utilizes. This finding is robust and extends to both parties that have held federal power. How exactly might the ruling party be accomplishing this on the ground? That is, what are the possible mechanisms by which the party in power reduces fund allocation for the opposition?

Ideally, one would also know what projects each legislator initially applied for, have cost estimates for each, know how many projects were subsequently approved, which of those projects were funded, when the funding was released, and what the official reason was for the remainder not being approved or not being funded.

Table 4: Different Ruling Parties

	Fund Access %
Ruling Party Legislator	61.249***
	(7.134)
PML Government	54.780***
	(11.864)
Ruling Party×PML Govt	6.122
	(13.323)
Margin of Victory	−93.691***
	(19.275)
Previous MNA	−2.307
	(4.497)
Federal Minister	−2.667
	(8.285)
# Candidates	0.935
	(0.790)
Turnout	0.200
	(0.367)
District FE	✓
N	1092
Adj. R-squared	0.657

***p < .01; **p < .05; *p < .1

Unfortunately, however, such data is not only impossible to get, it is quite likely that it is not even compiled by the government and relevant authorities. However, the interviews as well as the process of applying for projects through this fund help shed light on what the most plausible mechanisms for this distributive distortion were.

It is important to note, as mentioned earlier, that the CDF's operation was heavily centralized under the federal government, making it easy for the ruling party to have a lot of control over each stage. That is, the Ministry that dealt with project approval and subsequent fund release was a federal one. Similarly, the main department that worked with the Ministry, estimated project costs, and then dealt with project execution was also a federal government department, called PWD (*Planning and Works Department*). Given that bureaucracies in Pakistan are not independent and are, in fact, heavily politicized, with major reshuffling after each election, it is quite plausible that the PWD could also influence what happened on the ground at various stages.

With these conditions making it likely that the ruling party could affect how funds were distributed, even more so because this CDF did not have any third party audits or annual public release of projects, the interviews I conducted help understand how this was practically done within the system. The main mechanism was through unnecessary and prohibitively long delays at various stages, especially in the project approval and fund release phases. The latter stage was mentioned by every interviewee who had been an opposition legislator, while the former was mentioned by most.[30]

There are at least two reasons that the release of funds, which was the same thing as the start of project implementation practically, was the stage most conducive for delays. First, perhaps rejecting project proposals outright was not as simple because there were very few guidelines dictating what projects could or could not be proposed; the only real requirement was that they had to be infrastructural. Similarly, rejecting projects because the cost estimate was higher than necessary was also implausible because these estimates were done by a government department, the PWD, rather than through legislators. Thus, the actual release of funds was a feasible stage for interference from a logistical standpoint.

The second reason is that this was a stage where the Ministry and PWD both had an inordinate amount of control and where causing delays was easier in that there are many seemingly plausible 'excuses' that can be made for a delay in fund release, ranging from contractor unavailability and contractor inefficiency to blaming bureaucratic red-tape and procedures. Undoubtedly, this control was also

[30]The only exception to this was one politician who had served as a Federal Minister multiple times under multiple administrations, and he had mentioned never having trouble getting his share of funds released, both when he was in the ruling coalition and when he was an opposition member.

made stronger by the fact that the fund money was never physically released to the legislator herself. Rather, PWD would be in charge of finalizing a contractor and executing the project.

Most interviewees talked about how their projects would often have delayed approval but *would* mostly get approved. However, the Ministry's "delay tactics" would be at play at the last "hurdle" of having funds released subsequently, and since fund money did not carry forward from one year to the next, even several months delay could be sufficient to ensure that a given project was never executed. Many opposition interviewees specifically talked about personal connections being important in getting funds released if you were not from the ruling party, and stated that it would require endless trips to the PWD and Ministry and countless arguments. Especially if personal connections mattered, marginally-elected opposition legislators were most likely to be adversely affected, which was also corroborated through the interviews.

Therefore, the picture that emerges is one where being part of the opposition meant facing unnecessary delays in project approval and fund release. As one legislator bluntly put it, "Now, the ruling party is not letting any development happen in our constituencies...the problem with our politicians is that, when they are in government, they politically victimize the opposition and don't allow any development in their areas."[31]

A potential concern may be whether legislator effort explains some of the observed variation; perhaps ruling party legislators applied for even more projects or chased down the PWD bureaucrats more. This is not a sufficient explanation for the results for several reasons. First, even though ruling party legislators probably knew they were more likely to get their projects approved, if they did apply for

[31] Author interview with opposition party legislator (#015) in Sangjani, near Islamabad, in June 2014.

300% of funds, for instance, while opposition legislators only applied for 150%, the logic is still the same. In other words, even if opposition legislators applied for somewhat fewer projects than ruling party ones, they did so because they knew that their funds would not be released rather than because they were putting in a lower level of effort.

However, even that potential explanation is not satisfactory because applying for projects was so low cost in its initial phases, as described earlier. As is well-established in the literature, marginally-elected legislators need to work harder and be more responsive to build on their narrow margin of support (Ward and John, 1999; Rodden and Wilkinson, 2004; Berry, Burden and Howell, 2010). Therefore, especially for legislators elected by small margins, the need to work harder for their constituencies far outweighs the meager effort required in applying for projects through this CDF. Furthermore, if opposition legislators nonetheless sometimes applied for amounts greater than 100% but still lower, on average, than what ruling party legislators applied for, then we would expect that to be most likely in opposition strongholds, where legislators do not need to work as hard to maintain their electoral margin, as is found in other similar contexts (Keefer and Khemani, 2009). As the next section shows, however, that is not the case; in fact, opposition and ruling party strongholds get similar funds. Finally, controlling for legislator experience and conducting balance tests for the RD all also indicate that the differential allocation of resources is not driven by differences in legislator effort; rather, this was systematic distortion in how development funds were distributed in ways outlined here.

4.3 Implications for development

The paper's main findings are identified by focusing on close electoral races. Though descriptive, moving beyond the observations close to the cutoff highlights some interesting patterns with potentially important implications. Figure 3 summarizes the raw data, aggregating the dependent variable for each 0.04 interval of *Margin of Victory* and plotting it separately for ruling and opposition legislators. As it shows, for close races—that is, those with small margins of victory—there is a big difference in fund allocation depending on party, as was reflected in the RD estimates. However, as we move towards less competitive races, the distribution of resources becomes quite similar for both types of legislators.

Though this could of course be driven by various factors, such as legislative experience or more skilled MNAs in opposition strongholds, the descriptive trend may nonetheless have important implications, especially if electoral competition is somewhat stable over time. That is, if strongholds have reasonable access to resources regardless of who controls them, then such constituencies are likely to see relatively sustained development over time. In stark contrast, if swing districts sometimes have very high and sometimes very low access to their share of development funds, depending on whether the legislator is from the ruling party or not, this high variance can lead to inefficient development in the most competitive constituencies. This trend may be further exacerbated by high government instability and the fact that no party has held control at the center for two consecutive administrations.

This pattern also highlights an interesting mechanism through which national politics can affect local development. That is, voters in a competitive constituency may be satisfied with their legislator and vote her in to office again but if her party does not control the center, she will not be able to contribute to local development.

Similarly, voters may be dissatisfied with a 'poor performing' legislator whose poor performance is, in reality, driven by his party not controlling the center rather than his own lack of hard work. Though this discussion is speculative and further analysis beyond the scope of this paper, the trend in the data merits systematic analysis and has potentially important implications for thinking about development, especially because it points in a different direction from the traditional association between electoral competition and 'good' outcomes in democracies.

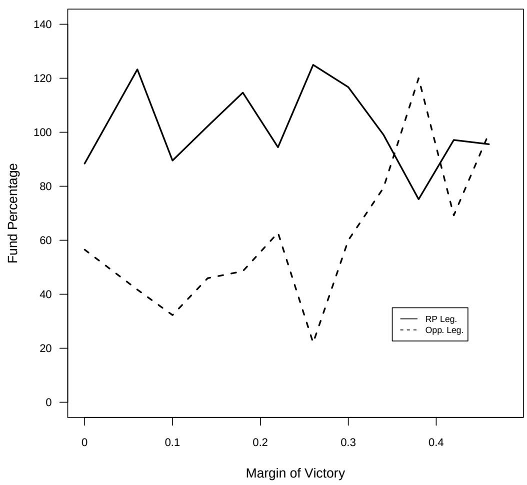

Figure 3: Access to Development Funds - Raw Data

Note: The figure was created by aggregating data on the dependent variable, *Fund Percentage*, separately for Ruling Party observations and Opposition observations. The variable is aggregated for intervals of length 0.04 for the *Margin of Victory* variable. Though *Margin of Victory* theoretically ranges from 0 to 1, the x-axis is limited to the range that actually occurs in the data for both types of legislators.

5 Conclusion

This paper has addressed the question of how development funds are distributed in contexts where their allocation rules are politically neutral. That is, do politically neutral rules lead to politically neutral spending? This is an important question because most of the distributive politics literature has studied how incumbent politicians distribute resources in the absence of spending rules, and how such rules, when they do exist, are politicized. What has received considerably less attention is the question of what happens when spending rules are constructed and are politically neutral. In part, this lack of attention is perhaps driven by the assumption that spending must also be politically neutral in such cases. However, as I show using data from Pakistan, that is not necessarily true.

Introducing a new dataset on federal development resource allocation, I have shown with a regression discontinuity design that winning is not sufficient for a federal legislator to be allocated his fair share of resources; rather, being a winning legislator from the ruling party is essential, especially in closely contested electoral districts. Specifically, I find a local average treatment effect of at least 25 percentage points (and up to almost 80 percentage points for some specifications), which is robust to a variety of bandwidths and specifications. Controlling for other potentially relevant factors, such as legislator quality and experience, as well as various electoral characteristics of the constituencies, does not diminish the main findings. Similarly, the results are not driven by any particular party, and cannot be explained exclusively by the timing of elections.

Beyond the importance outlined above, the paper makes an empirical contribution by causally identifying the effect of being a ruling party legislator on development fund allocation; most relevant scholarship has focused on associative evidence thus far. In addition, the findings are relevant for a growing literature that uses data on such rules-based spending to address more nuanced questions regarding legislators' spending preferences and incentives *within* their constituencies; such studies address issues of legislator effort, election cycles in spending, the distribution of pork within constituencies, and so on. However, using rules-based funds to answer such questions necessitates assuming that such funds are distributed in the manner that they are set up. Though Pakistan is certainly a country where such manipulation is plausible given the structure of the CDF as well as its low transparency and unstable governance, such scope conditions are not unique to this one case. Many developing countries have similar political features, and most countries have at least some portion of their budgets allocated through formula-based funds. Finally, the findings have broad potential implications for thinking about development patterns as well as about the various ways in which national and local politics interact.

References

Afzal, Madiha. 2014. "Do barriers to candidacy reduce political competition? Evidence from a bachelor's degree requirement for legislators in Pakistan." *Public Choice* 161(1-2):51–72.

Albouy, David. 2013. "Partisan representation in Congress and the geographic distribution of Federal funds." *Review of Economics and Statistics* 95(1):127–141.

Ansolabehere, Stephen and James M Snyder. 2006. "Party Control of State Government and the Distribution of Public Expenditures." *The Scandinavian Journal of Economics* 108(4):547–569.

Arulampalam, Wiji, Sugato Dasgupta, Amrita Dhillon and Bhaskar Dutta. 2009. "Electoral goals and center-state transfers: A theoretical model and empirical evidence from India." *Journal of Development Economics* 88(1):103–119.

Asher, Sam and Paul Novosad. 2013. "Politics and Local Economic Growth:

Evidence from India." *Cambridge, MA: Harvard University, unpublished* .
URL: *http://www.dartmouth.edu/ novosad/asher-novosad-politicians.pdf*

Balla, Steven J, Eric D Lawrence, Forrest Maltzman and Lee Sigelman. 2002. "Partisanship, blame avoidance, and the distribution of legislative pork." *American Journal of Political Science* pp. 515–525.

Banful, Afua Branoah. 2011. "Do formula-based intergovernmental transfer mechanisms eliminate politically motivated targeting? Evidence from Ghana." *Journal of Development Economics* 96(2):380–390.

BBC World News: South Asia. 2002. "Musharraf wins huge backing.". Accessed on: July 15, 2015.

Bergvall, Daniel, Claire Charbit, Dirk-Jan Kraan and Olaf Merk. 2006. "Intergovernmental Transfers and Decentralised Public Spending." *OECD Journal on Budgeting* 5(4):111–158.

Berry, Christopher R, Barry C Burden and William G Howell. 2010. "The president and the Distribution of Federal Spending." *American Political Science Review* 104(04):783–799.

Blair, Harry. 2017. "Constituency Development Funds in India." *Economic & Political Weekly* 52(31):99.

Boadway, Robin W and Anwar Shah. 2007. *Intergovernmental fiscal transfers: principles and practices.* World Bank Publications.
URL: *https://openknowledge.worldbank.org/handle/10986/7171*

Bohlken, Anjali Thomas. 2018. "Targeting Ordinary Voters or Political Elites? Why Pork Is Distributed Along Partisan Lines in India." *American Journal of Political Science* 62(4):796–812.

Calonico, Sebastian, Matias D. Cattaneo, Max H. Farrell and Rocio Titiunik. 2018. "Package 'rdrobust'." *R reference manual* pp. 1–17.

Calonico, Sebastian, Matias D Cattaneo and Rocio Titiunik. 2014. "Robust Nonparametric Confidence Intervals for Regression-Discontinuity Designs." *Econometrica* 82(6):2295–2326.

Caughey, Devin and Jasjeet S Sekhon. 2011. "Elections and the Regression Discontinuity Design: Lessons from Close U.S. House Races, 1942–2008." *Political Analysis* 19(4):385–408.

DAWN. 2012. "Pakistan Fiscal Budget 2012-2013.".
URL: *https://www.dawn.com/news/722849*

de la Cuesta, Brandon and Kosuke Imai. 2016. "Misunderstandings about the Regression Discontinuity Design in the Study of Close Elections." *Annual Review of Political Science* 19.

Eggers, Andrew C, Anthony Fowler, Jens Hainmueller, Andrew B Hall and James M Snyder. 2015. "On the Validity of the Regression Discontinuity Design for Estimating Electoral Effects: New Evidence from over 40,000 Close Races." *American Journal of Political Science* 59(1):259–274.

Eggers, Andrew C and Jens Hainmueller. 2009. "MPs for sale? Returns to office in postwar British politics." *American Political Science Review* 103(04):513–533.

Ferraz, Claudio and Frederico Finan. 2008. "Exposing corrupt politcians: the effects of Brazil's publicly released audits on electoral outcomes." *Quarterly Journal of Economics* 123:703–745.

Golden, Miriam A and Lucio Picci. 2008. "Pork-Barrel Politics in Postwar Italy, 1953–94." *American Journal of Political Science* 52(2):268–289.

Gutiérrez-Romero, Roxana. 2013. "Decentralisation, Accountability and the 2007 MP Elections in Kenya." *The Journal of Development Studies* 49(1):72–94.

Hall, Andrew B. 2015. "What Happens When Extremists Win Primaries?" *American Political Science Review* 109(01):18–42.

Harris, J Andrew and Daniel N Posner. 2019. "(Under What Conditions) Do Politicians Reward Their Supporters? Evidence from Kenya's Constituencies Development Fund." *American Political Science Review* 113(1):123–139.

Jensenius, Francesca R. and Pradeep Chhibber. 2016. "Privileging one's own? Voting patterns and politicized spending in India." *Working Paper* .

Keefer, Philip and Stuti Khemani. 2009. "When do legislators pass on pork? The role of political parties in determining legislator effort." *American Political Science Review* 103(01):99–112.

Khemani, Stuti. 2003. *Partisan politics and intergovernmental transfers in India.* Vol. 3016 World Bank Publications.

Lazarus, Jeffrey. 2010. "Giving the people what they want? The distribution of earmarks in the US House of Representatives." *American Journal of Political Science* 54(2):338–353.

Lee, David S. 2008. "Randomized experiments from non-random selection in US House elections." *Journal of Econometrics* 142(2):675–697.

Lee, David S. and Thomas Lemieux. 2010. "Regression Discontinuity Designs in Economics." *Journal of Economic Literature* 48:281–355.

Lee, Frances E. 2003. "Geographic politics in the US House of Representatives:

Coalition building and distribution of benefits." *American Journal of Political Science* 47(4):714–728.

Levitt, Steven D and James M Poterba. 1999. "Congressional distributive politics and state economic performance." *Public Choice* 99(1-2):185–216.

Magaloni, Beatriz. 2006. *Voting for Autocracy: Hegemonic Party Survival and Its Demise in Mexico.* Cambridge University Press Cambridge.

McCrary, Justin. 2008. "Manipulation of the running variable in the regression discontinuity design: A density test." *Journal of Econometrics* 142(2):698–714.

Meyersson, Erik. 2014. "Islamic Rule and the Empowerment of the Poor and Pious." *Econometrica* 82(1):229–269.

Pal, Rupayan and Aparajita Das. 2010. "A Scrutiny of the MP-LADs in india: Who is it For?" *Economic and Political Weekly* pp. 63–68.

Rodden, Jonathan and Steven Wilkinson. 2004. "The shifting political economy of redistribution in the Indian federation." *Unpublished Paper* .
URL: *http://web.mit.edu/jrodden/www/materials/rodden.wilkinson.isnie2004.pdf*

Schady, Norbert Rüdiger. 2000. *Picking the poor: indicators for geographic targeting in Peru.* Vol. 2477 World Bank Publications.

Solé-Ollé, Albert and Pilar Sorribas-Navarro. 2008. "The effects of partisan alignment on the allocation of intergovernmental transfers. Differences-in-differences estimates for Spain." *Journal of Public Economics* 92(12):2302–2319.

Timmons, Jeffrey F and Daniel Broid. 2013. "The Political Economy of Municipal Transfers: Evidence from Mexico." *Publius: The Journal of Federalism* 43(4):551–579.

Tshangana, Alison Hickey. 2010. "Constituency development funds: scoping paper." *Cell* 83(280):2759.

Tsubura, Machiko. 2013. "The Politics of Constituency Development Funds (CDFs) in Comparative Perspective.".

Veiga, Linda Gonçalves and Maria Manuel Pinho. 2007. "The political economy of intergovernmental grants: Evidence from a maturing democracy." *Public Choice* 133(3-4):457–477.

Ward, Hugh and Peter John. 1999. "Targeting benefits for electoral gain: Constituency marginality and the distribution of grants to English local authorities." *Political Studies* 47(1):32–52.

Yasin, Aamir. 2017. "Each NA constituency gets Rs200m development funds.".
URL: *https://www.dawn.com/news/1309955*