The Specter of Instability:

Fragile Democracy and Distributive Politics in Pakistan*

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Abstract

Politicians often manipulate political resources for their own electoral gain. When and how they do so, however, is widely debated in both comparative and American politics, with existing literature focusing primarily on stable democracies. In this paper, I contribute to the growing literature, arguing that, in unstable democracies, the specter of regime instability shortens politicians' time horizons and incentivizes higher levels of distortion than we see in stable systems. Using a new dataset on federal development resource allocation in Pakistan and implementing a regression discontinuity design, I show that governing parties distort access to resources to benefit their own party members and to punish the opposition. I find no empirical support for alternative explanations based on legislator experience, party ideology, and economic need, and also provide evidence that it is, in fact, the threat of democratic breakdown that primarily drives the high levels of distortion in Pakistan.

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> "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."
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> Author interview with opposition party legislator near Islamabad, Pakistan, in 2014.

1 Introduction

Politicians often manipulate the distribution of resources for their own electoral gain. However, the distributive politics literature has long debated when, how, and to what extent this manipulation occurs. Most existing work focuses on stable democracies, where one of two patterns usually emerge. In systems with well-established institutions and frequent power alternation at the center, the governing party is constrained in how much it will advantage its co-partisans with better access to development resources (Lee, 2003; Lazarus, 2010; Albouy, 2013). Or, we see countries where low political competition makes an uneven distribution of resources between ruling and opposition party members easier to implement for the party in power (Khemani, 2003; Rodden and Wilkinson, 2004; Magaloni, 2006; Veiga and Pinho, 2007). The existing literature, however, does not speak to how this process might operate in the wide range of developing countries that are emergent or unconsolidated democracies.

I begin to address this gap by arguing that regime instability shortens incumbent politicians' time horizons, which encourages higher levels of resource manipulation in unstable democracies than what is observed in stable systems. This incentive is even greater when competition is high because the strategic distribution of resources for electoral purposes becomes more important. The basic intuition underlying the argument is straightforward: when the probability of democratic breakdown is high, it leads politicians to heavily discount the future. As a result, future costs of retaliation from the opposition become less relevant the higher the probability of democratic institutions breaking down

is. I further clarify the proposed logic through a simple formal model of two political parties operating in an unstable democracy.

Using the first comprehensive dataset on two decades of national elections and federal development spending in Pakistan, I show that ruling party legislators are highly advantaged in terms of access to development resources. The data was all collected during fieldwork in Pakistan, and I use it within a regression discontinuity design to find strong evidence that, when compared with opposition legislators, ruling party legislators have, on average, at least 30 percentage points greater access to federal development resources each year. This translates to about 3 million Pakistani Rupees (PKR) more from a fund that allocates up to 10 million PKR per legislator annually.[1] I show that this effect is robust to controlling for a variety of other potentially relevant factors, such as legislator quality and experience, ideology of party in power, electoral competitiveness and turnout, and electoral constituency fixed characteristics.

Regime instability is difficult to measure, particularly in a country where it is arguably high most of the time. However, I also provide preliminary evidence for the proposed mechanism using three different ways of distinguishing between high and low instability years. Using the semi-democratic administration that was 'elected' under a military regime, the democratically elected government that came to power right after General Pervez Musharraf stepped down in 2008, and the International Country Risk Guide's measure for military involvement in government, I split the data in to 'high' versus 'low' instability years. This distinction allows me to show, in a linear framework, that even though ruling party legislators always receive higher levels of benefits than opposition legislators, this difference is significantly bigger in high instability years.

Furthermore, I discuss — and subsequently rule out — several possible alternative

[1] 10 million PKR is roughly equivalent to 100,000 USD. Though this may sound like a small amount in the American context, for a country where the nominal GDP per capita was lower than 1500 USD in 2015, even this amount can make a big difference. Additionally, as I discuss later in the paper, since it is the only fund that allocates money directly to federal legislators, it is relevant for understanding credit-claiming incentives regardless of the absolute monetary amounts.

explanations for the main findings assuming a stable democratic system. The first relates to the quality and political experience of the representatives themselves, since those putting in more effort or who know the 'system' better might have greater ability to extract resources from the federal government. Second, I consider explanations based on economic need, or on redistributive preferences varying between different ruling parties. Finally, I discuss the possibility of election cycles being the main mechanism driving the politicization of development fund distribution, because perhaps the temptation to distort resource allocation primarily exists only close to elections. I address these potential explanations empirically, to the extent that is possible with limited data, and find that none of them sufficiently explains the patterns observed in the data.

Pakistan is not unique in its alternation between democracy and autocracy. Countries such as Argentina, Ghana, Nigeria and Turkey also come to mind in this regard. However, Pakistan is particularly well-suited to explore distributive politics in unstable democracies, given the regular cycles between democratic and military regimes. At the same time, the findings here are broadly relevant to a much larger set of developing countries where the specter of political instability affects daily politics.

2 Distributive Politics in Democracies

Because they are used by incumbents to build and consolidate electoral support, the incentive to distort the distribution of federal funds to legislators exists in most countries. However, theoretical work on the distribution of pork in stable democracies, much of which stems from the American politics context, indicates that the 'repeated game' nature of politics prevents blatant manipulation by the ruling party. Shepsle and Weingast (1981) explain "universalism" in pork distribution through individual Congressmen being uncertain whether they will be part of a minimum winning coalition required for project approval, which leads to them voting 'yes' on other legislators' proposed projects as well

to ensure pork access for themselves.

More recently, this cooperation in resource allocation has also been explained in terms of "blame avoidance," such that the majority party does not withhold earmarked funds entirely from the opposition because it would attract a lot of criticism that the governing party would rather avoid (Balla et al., 2002). Thus, in both instances, the repeated interaction of politicians — with one another and with voters — appears important. Those in power today know that they may not be in the future, so allowing opposition legislators access to 'reasonable' shares of pork today is insurance for tomorrow, if they fail to stay in power. Naturally, such expectations mostly emerge in stable democratic systems.

Largely in line with such theoretical scholarship, the bulk of the empirical literature on developed countries, on average, finds little to no manipulation based on which party holds power at any given level of government (Levitt and Poterba, 1999; Balla et al., 2002; Solé-Ollé and Sorribas-Navarro, 2008; Berry, Burden and Howell, 2010; Albouy, 2013). Of course larger differences are sometimes found (Ansolabehere and Snyder, 2006; Lazarus, 2010), but these are often within specific sectors, or limited to single administrations or a particular party being in power (Lee, 2003), making it difficult to disentangle partisan effects from what any ruling party would do in that position (Berry, Burden and Howell, 2010, p.784).

On the other hand, larger differences are commonly observed in many developing countries, often in the context of clientelism. Though such occurrences are perhaps not surprising, the exact mechanisms that allowing these more egregious distortions are widely debated. From the factors discussed above, it appears that low costs of distorted resource allocation or low expectations of power alternation may help understand why ruling party members are advantaged to much greater extents in certain systems.[2]

[2]See Golden and Min (2013) for a comprehensive overview of the empirical literature on distributive politics from outside the United States, especially regarding why there are a wide range of findings.

The cost of punishment is plausibly low in emerging democracies because of low transparency. When Portugal was a new democracy, for instance, the central government distributed grants strategically among municipalities, giving more where mayors were affiliated with the ruling party in the central government. In part, this was possible due to low transparency in the process of grants distribution in these early years (Veiga and Pinho, 2007). Golden and Picci (2008) have a similar argument and finding from Italy in the post-war period. In a similar, though broader, vein, perhaps systems that are rife with corruption and clientelistic politics are also more likely to experience such patterns of resource distribution; when everyone engages in the same distortionary behavior, it may be less costly because voters have no alternatives available to them. Partly as a result, pork distribution in much of the developing world advantages ruling party members to a greater extent than what is usually seen in the American context (Schady, 2000; Khemani, 2003; Arulampalam et al., 2009; Keefer and Khemani, 2009).

In addition, the party in power arguably expects to remain in power for the foreseeable future in relatively hegemonic or one-party dominant systems, which reduces the likelihood of retaliatory behavior from the opposition. This pattern is seen, for instance, in Mexico under the *Partido Revolucionario Institucional* (PRI) during the late 1980s and early 1990s, where districts supporting the PRI were much greater beneficiaries of development spending than districts where the opposition had a stronger showing (Magaloni, 2006). Similarly, during the first few decades after India became independent, the Indian National Congress (INC) largely dominated the political sphere; Rodden and Wilkinson (2004) find that districts supporting the INC benefited from more development grants but this relationship gradually changed as the political landscape became more competitive.

2.1 Resource Manipulation in Unstable Democracies

Another way in which the repeated interaction can be affected is when political institutions are unstable, and politicians and citizens expect democracy to break down at some point in the future. The literature currently does not address how institutional instability might affect the behavior of incumbent politicians in terms of resource distribution. I begin to fill this gap by arguing that, under certain circumstances, the threat of regime change can lead to a situation where those in power have both the incentive and the ability to manipulate resource distribution to benefit their party members and to hurt the opposition.

The logic for such a mechanism is straightforward. If a regime breakdown results in resource distribution occurring in a different way — such as a particular source of funding being canceled, or being controlled by a different entity, as is the case under military governments, for instance — then the likelihood of retaliation from an elected opposition becomes a less 'threatening' possibility. Consequently, politicians' time horizons become shorter under the specter of instability, and they are more likely to distort access to resources to a greater extent than in stable systems.[3]

To establish this mechanism systematically, we can think of a simple political system with two main political parties (i and j) that have symmetric interests. A development resource, $r = [0, 1]$, is divided between the parties (and then distributed among their legislators) according to exogenous pre-determined rules that are meant to allow an equitable distribution of the fund. However, the party that is in power after an election (Party i wins with probability $w_i \in (0, 1)$) can choose whether to follow the rules or

[3]A possible concern could be why politicians care about electoral incentives if democracy is not expected to last in the long term. However, even a high probability of regime breakdown is not 1 right up until the actual breakdown. Thus, there is always some positive probability of democratic elections, even if this probability is lower than in a stable system. Second, it is also plausible that corrupt politicians end up utilizing at least a portion of these resources for their personal gain, rather than honestly spending everything on their constituency. If that is even partly the case, the incentive to distort does not decrease even when regime breakdown is very likely.

not. That is, the winning party can either cooperate and, thus, stick to the mandated allocation of resources (which results in $U_i = r_i$ and $U_j = 1 - r_i$) or choose to manipulate the fund and keep more than its fair share for its own party members, such that $r_i' > r_i$. Any such distortion entails a higher payoff in the given time period but also has two pitfalls. One, it realizes a (common) public cost ($c \in [0, 1]$), similar to the criticism and backlash discussed in the blame avoidance hypothesis in developed democracies.[4] Second, it incurs retaliation. Specifically, assume that both parties play a grim-trigger strategy such that manipulation by Party i in any time period leads to Party j always distorting in a similar manner in all those future time periods where Party j is in power and, thus, gets to decide the resource allocation.

To consider the simplest form of this interaction, which is sufficient for explicating the basic logic proposed here, let $r_i' = 1$. That is, if i wins and decides to manipulate, it does so by keeping everything for its own party members. Then, for the given parameters and a common discount factor $\delta \in (0, 1)$, Party i should always cooperate as long as Inequality 1 holds (more details on the payoffs can be found in Appendix A):

$$\delta \geq \frac{w_i(1 - r_i) - c}{(1 - r_i)(1 - w_i)} \tag{1}$$

Thus, as long as δ or c are reasonably high, and w_i is reasonably low — all of which are true in stable, competitive democracies — excessive manipulation is unlikely to occur, and i will choose to cooperate in each period.

Now, think of δ explicitly as the probability of playing the same game in the next time period. That is, let it correspond to the probability of the current democratic institutions surviving in their present form in the next time period. For stable systems, δ is always very close to 1, if not actually 1. Accordingly, $1 - \delta$ is the probability of an

[4]Of course, this cost could, in reality, be low in developing countries where the public may not care about transparency as much as citizens do in developed democracies.

institutional breakdown, such as a regime change. In the case of a country like Pakistan, this breakdown could be a situation where the military takes over, for instance. More generally, any switch from democracy to autocracy would be a similar regime breakdown. As long as the change implies that the resource distribution game ends entirely or will now be played according to some different set of rules, manipulation by 'breaking the rules' becomes more likely. Considering Inequality 1 again, the range for which the inequality holds is now much smaller in situations where political parties believe that an institutional breakdown is likely to occur. Specifically, for almost any given set of parameters, there will always exist a δ low enough that it is rational for party i to set $r_i' = 1$ in equilibrium.[5]

The broader implication that emerges from this formalization is that, in political environments with a lot of uncertainty and instability, politicians tend to make resource allocation decisions based on shorter term considerations than they would otherwise. Consequently, which party a legislator is affiliated with becomes unduly important for accessing development resources, leading to the central hypothesis of the paper: in unstable democracies, ruling party legislators, on average, get higher access to development funds than legislators belonging to the opposition party. Alternative explanations for this difference between ruling and opposition legislators are discussed following the main empirical results.

3 Regime Instability and Development Funds in Pakistan

Since its creation as an independent country in 1947, in years that it has been democratic, Pakistan has been a parliamentary democracy with the Prime Minister as the head of

[5]The exception to this will occur only when $c > w_i(1 - r_i)$, in which case all $\delta \in (0, 1)$ will satisfy Inequality 1. However, in developing countries, c is arguably low most of the time in any case, so this constraint is unlikely to be violated frequently.

government and the President the ceremonial head of state.[6] The *Majlis-e-Shoora* (Parliament) consists of a bicameral legislature with the National Assembly and Senate as the Lower House and Upper House, respectively. The 342 Members of the National Assembly (MNAs) serve five year terms; of these, 272 MNAs are directly elected in single-member districts with plurality electoral rules.[7]

Pakistan has experienced frequent regime changes, primarily in the form of military coups followed by military rule, such that the total number of years spent under democratic and non-democratic rule are quite similar. The regime instability is also evidenced in cross-country studies. For instance, between 1950 and 1990, Pakistan went through four regime transitions according to Przeworski et al. (2000). Extending their criteria to subsequent years brings this total to six, putting Pakistan's regime instability second only to Argentina (Przeworski et al., 2000, p.59-69).

In Pakistan, each of the changes from democracy to autocracy have occurred with a military dictator taking control in a coup d'état. After several years of completely autocratic rule where there was no Parliament in place, each of them held "elections" to the legislature and allowed a government to form, usually amending the Constitution or holding a (questionable) referendum to make themselves president at that point. (See, for instance, p27-28 of Noman (1990) for the 1960 referendum, and *Musharraf wins huge backing* (BBC World News: South Asia, 2002) for the 2002 referendum.) Despite having held elections, no one considers the country to be a fully functioning democracy during such years.

Given how involved the military has historically been in Pakistani politics and the

[6]The exception to this was from 1959 to 1969 when General Ayub Khan was the President of Pakistan after having taken over in a military coup. A new constitution in 1962 turned the country to a Presidential democracy but this was changed once again in the 1973 constitution, which is still in place today.

[7]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. Here, I focus on the MNAs who are elected directly since the fund I am studying allocates money just to them, and only they can directly claim credit for development projects brought to their constituency because both the fund and the representatives operate at the same level.

regularity with which democratic institutions have been interrupted, it is fair to say that incumbent political parties know that the probability of such a breakdown happening again is much higher than it is in most other countries. (That is, there is a low δ.)[8] For instance, one MNA candidly remarked to me during an interview, "You see, in the war between democracy and the military in Pakistan, the military will always win."[9] This pessimistic sentiment no doubt reflects years of regime instability and repeated military takeovers.

For the proposed mechanism to work, it is also important for the regime change to represent a clean break in the game of redistribution. Without a parliament, that automatically holds. Even after "elections" under military dictators, the regime is semi-democratic at best and the political party coming to power is not one that pre-existed the military regime in that same form.[10] The subsequent compositions of the government and legislature are very different from before, making it much less likely that the party that had been in power before the institutional breakdown would be retaliated against even if it had previously distorted access to funds. And even when the country eventually returns to democracy — that is, once the military leader steps down from the presidency — the composition of the political parties has changed enough, and for a long enough period of time, that it is essentially like starting a new game of political resource distribution.

[8] In 2014, I was sitting among half a dozen MNAs in the Pakistani Parliament, while these politicians informally chatted among themselves about how the military would be taking over within the next few months. In fact, they discussed this amidst much laughter because, for them, the regular interruption of democracy by the military seems to be a foregone conclusion.

[9] Translated from author's Urdu interview with a federal legislator in Islamabad (June 2014).

[10] For instance, under General Zia, elections were held on a party-less basis, after all political parties were banned. The 2002 elections saw the emergence of a new political party, Pakistan Muslim League - Quaid (PML-Q), which was informally referred to as the "King's Party" because it was common belief that it had the backing of General Musharraf and his military government (Cohen, 2004, p.131).

4 Data and Methods

4.1 Constituency Development Funds in Pakistan

The political incentives to manipulate the distribution of pork are particularly strong when legislators are directly linked to the projects, since these are precisely the projects where the most credit-claiming can credibly occur (Lee, 2003, p.714). Thus, the empirical section of this paper uses data on the only federal development fund in Pakistan that grants, at least on paper, annual access to equal amounts of development funds to each MNA.[11] Though the exact name of this fund has varied under different governments,[12] it has been allocated in the federal budget every year from 1985 to 2013 in which the national legislature existed.[13] Not only has comprehensive data on this fund not, to my knowledge, been used in empirical research before, there are three specific features of the fund and its operation that make it particularly suitable for the arguments and research design adopted here, and that help to rule out various alternative explanations.

Low legislator effort to apply: Unlike similar Constituency Development Funds (CDFs) in other developing countries, such as India (Keefer and Khemani, 2009) and Kenya (Gutiérrez-Romero, 2013), the cost of applying for projects through this fund is very low for individual legislators. Thus, differences in legislator effort cannot explain systematic variation in the distribution of the fund. Given the dearth of information about

[11] 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.

[12] When the Pakistan People's Party (PPP) has been in power, the *People's Works Programme* is the federal fund that provides these development resources. The Pakistan Muslim League - Nawaz (PML-N) governments have 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.

[13] The fund was introduced in 1985 by the military government of General Zia-ul-Haq, after party-less elections. In 2013, it was canceled as part of a larger Supreme Court ruling against all discretionary funds due to prominent corruption charges emerging against the government that ended its tenure in 2013.

the fund's emergence and operation, I conducted interviews with current and retired MNAs in 2013 and 2014, and with senior officials at the Ministry of Local Government and Rural Development, which was in charge of running the fund.[14] They all summarized the application process in similar words. Each year, all MNAs are asked to submit a prioritized list of projects that they want undertaken in their constituency to the Ministry, which forwards all lists to the federal Planning and Works Department (PWD) for cost estimations. Upon receiving cost estimates, the Ministry then approves, and subsequently releases funds for, the maximum possible projects for each legislator. Thus, identifying the projects and prioritizing them each year is the only effort required from the MNAs, which is a simple and quick task. The Ministry officials further corroborated this sentiment by claiming that almost all legislators submit lists each year with more projects identified than could be funded, thereby indicating that a low allocation for a particular legislator does not, on average, reflect a lack of project requests.

Clear credit-claiming opportunities: The CDF provides clear opportunity to associate projects with the individual legislator rather than the central government. This association is important for legislators to be able to claim credit from their constituents. Interviewees clearly indicated the relevance of such considerations in deciding which projects to apply for, by discussing the importance of directly responding to their constituents' needs and priorities. Furthermore, these projects are also easily discernible from larger initiatives undertaken by central or provincial governments, because the latter tend to be much more extensive, both financially and geographically, often spanning multiple electoral districts and promoted through billboards explicitly 'thanking' the province's

[14]Interviews and data collection were executed in Pakistan (primarily in Lahore and Islamabad) over a total of 5 months during 2013 and 2014. The 15 interviewed politicians together represent the 5 biggest political parties and belong 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.

Chief Minister or country's Prime Minister. By contrast, projects introduced through this fund are self-contained within an electoral district and easy to associate with the specific legislator.

Equal access, under one ministry: Differential access could also be due to local government offices having varying levels of efficiency. In this case, however, the processing of project proposals and release of funds for all MNAs is controlled by a single federal ministry: the Ministry of Local Government and Rural Development. And, in fact, since the fund is controlled by a federal ministry, that also makes it easier for the ruling party to have influence, both formal and informal, over how it operates. For one, the ruling party has almost complete control over who is appointed as Minister. Second, since the bureaucracy in Pakistan is heavily politicized and often faces major shuffling when the government changes, officials who are in charge of processing these funds are easier to manipulate for the ruling party elite than would be the case in countries where the bureaucracy is better insulated from political interference.

Finally, each legislator, and hence each electoral district, is allowed the exact same amount of development funds. Thus, the current level of development or population of a constituency are not supposed to be determinants of how much money it gets, so 'constituency need' is not a confounding factor. And, because of this equal access structure, we also have a clear sense of what an 'undistorted' distribution of resources would look like.

4.2 Research Design

In order to identify and precisely estimate the treatment effect of being a ruling party legislator on access to development funds, I use a regression discontinuity design (RDD). This approach is in line with a growing strand of political science literature that focuses

on close elections, including, among others, 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).[15] Here, that assumption requires that any difference in access to development funds between districts where a ruling party legislator "barely won" and districts where a ruling party legislative candidate "barely lost" (that is, where any opposition party legislator "barely won") must be due to the difference in their treatment status, rather than any other factor. If this continuity assumption holds, we can systematically compare the fund allocation between these two types of districts to measure the treatment effect of being a legislator from the ruling party.[16]

A fundamental consideration, stemming from the continuity assumption, requires that there be no 'sorting' close to the cutoff. In other words, in very close races, candidates must not have perfect control over the outcome of the election. For such violation to occur, candidates must have the ability to not only know with a great deal of certainty that the election will be very close but also have the resources to then manipulate voting in that narrow time period such that the outcome is affected to their benefit. In a country with frequent elections, frequent government changes and a lack of systematic political surveys and polls, it is arguably very difficult for even political parties themselves to accurately predict which electoral districts are likely to have the tightest races. Furthermore, even if candidates could somehow discern which districts will have extremely close races, 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 in any way. Balance

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

[16]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 a formal density test, based on McCrary (2008), in Appendix B.3.1, and find that there is no significant discontinuity in the density of the forcing variable (explained in the next section).

tests, presented in Appendix B.3.2, verify that bare winners from ruling versus opposition parties are not different in any meaningful way.

4.3 Data

The outcome of interest in all main regressions measures how much of the allotted development fund each legislator actually got access to in each year, and the unit of analysis is electoral constituency-year.[17] 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, from the democratic years between 1991 and 2013.[18] Specifically, I use data from the country's democratic years within this period because the theory refers to how political parties behave under conditions of unstable democracy.[19]

The dependent variable, *Fund Access %*, is calculated as the percentage of the total possible allocation that was actually released to each constituency – that is, PKR 5 million or PKR 10 million, depending on the year. Summary statistics are provided 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 by the federal budget. 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 rupee amounts instead of percentages as the dependent variable; results for these can be found in Tables 8 and 9 in Appendix B.1.[20]

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

[18] 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. Furthermore, in terms of the questions addressed here, the patterns emerging in Punjab should be indicative of the other provinces as well.

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

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

Table 1: RD 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	14	13.163	4.421	2	19
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:

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

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.[21] Thus, for an electoral district where the winning candidate belongs to the ruling party, *Margin of Victory* is positive because the vote share of the ruling party legislator is greater than the vote share of the highest vote-getter from any other party. Similarly, this variable has a negative value where a ruling party candidate lost the race.[22]

[21]Party r potentially changes after each election.

[22]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:

The treatment dummy, *Ruling Party Legislator*, indicates whether an electoral district's legislator belongs to the Ruling Party (1) or not (0) for each observation.[23,24] 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 rest of the variables in Table 1 are other factors that may, overall, be associated with how much fund access a particular legislator gets, and 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.[25] In a similar vein, 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 belonging to one of the most high-profile ministries (*Federal Minister Imp.*).[26] 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.[27] Finally, *Turnout*, *# Registered Voters* and *Effective # Parties* measure election characteristics at the constituency level.

http://ecp.gov.pk/GE.aspx.

[23]In Pakistan, the biggest party in the legislature after each election has always ended up holding the Prime Ministership. Thus, 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.

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

[25]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.

[26]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.

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

5 Empirical Analysis

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

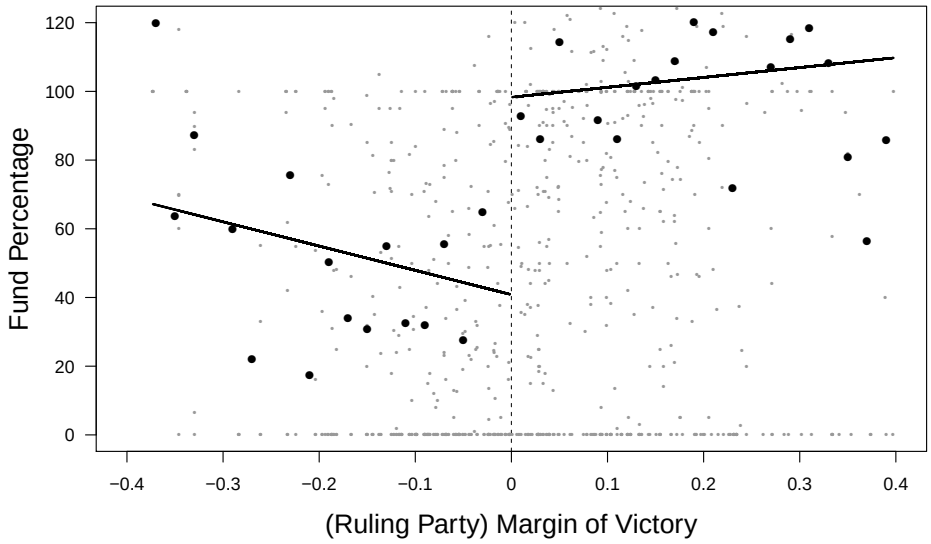

Figure 1: Effect of Ruling Party Legislator on Development Fund Access

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=1044) while the black dots represent the raw data aggregated and averaged in bins of length 0.02.

Figure 1 visualizes the discontinuity in the allocation of federal development funds for close elections. For electoral districts where a ruling party legislator *just* won versus those where a ruling party legislator *just* lost, there is a big 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 2, where β_1 is the treatment effect at the threshold. In the equation, i denotes electoral district and t denotes the year.[28]

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

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***	33.9***	30.9**	32.6**	32.6**
	(19.4)	(29.0)	(11.4)	(13.4)	(11.8)	(12.6)
N	290	290	656	656	1099	1099
RD Bandwidth	0.05	0.05	0.132	0.132	-	-
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, Cattaneo and Titiunik (2014).

Using both the conventional local linear and the bias-corrected estimation method introduced in Calonico, Cattaneo and Titiunik (2014), 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 difference of 5% or less, with 290 observations falling within this subset. Model 2 in Table 2 uses the optimal bandwidth calculation procedure recommended by the same authors (Calonico, Cattaneo and Titiunik, N.d.), which suggests a bandwidth of 0.132.

[28]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.

The associated discontinuity estimate is approximately 31 percentage points and highly significant, even when correcting for bias. Similarly, as is standard in the applied RDD literature, I also estimate the treatment effect using a cubic polynomial with appropriate interactions between different orders of the forcing and treatment variables, as specified in Equation 2. The discontinuity estimate is still over 30 percentage points and highly significant (Model 3), which remains the case after calculating the robust standard errors clustered by administrative district. Furthermore, considering different bandwidths, including using the procedure recommended by Imbens and Kalyanaraman (2011) and trying different orders of the polynomial equation, to test the robustness of the RD estimate does not affect the quantity of interest in any meaningful way; results can be found in Table 10 and Figure 2 in Appendix B.2.

Though the continuity assumption is not directly testable, a standard approach in the RD literature is to ensure that other potential explanatory variables are 'balanced' close to the cutoff. I do this in three ways; results can be found in Appendix B.3.2. First, I conduct t-tests on the four relevant covariates, namely *Previous MNA*, *Previous MNA Terms*, *Federal Minister* and *Effective Number of Parties*, for different bandwidths, and find no evidence of imbalance, as is shown in Table 11. Next, I run Equation 2 but with the outcome of interest being a different covariate each time. The treatment effect not being significant in these specifications lends 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 12 in Appendix B.3.2). Finally, I also establish the irrelevance of these other 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, as shown in Table 13.

Appendix B.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 threshold for treatment. The second test lags the dependent variable by one administration. Both approaches yield null results, finding no discontinuity.

These results and additional checks 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, as that leads to higher access to one's development fund share. Conversely, winning a close race as an opposition party legislator leads to low fund access, presumably as a 'punishment' from the ruling party, in order to hinder such legislators from consolidating their electoral support.

6 Measuring Instability in Pakistan

Having established a robust finding for the division of development funds between the ruling and opposition parties in Pakistan, this section delves deeper in to the proposed mechanism based on the expectation of regime instability. This expectation affects the degree to which incumbent politicians will distort access to resources, such that higher instability is expected to be associated with higher levels of distortion, and vice versa. Measuring instability is difficult, since there is no one factor that can clearly account for its likelihood, especially in a country where the threat of a military takeover is almost always high. Nonetheless, I tackle this issue within a linear framework, using three complementary ways of measuring instability to distinguish between high and low instability years.

First, I consider the administration in my dataset that was democratically elected immediately after a military leader left office. The 2008 election was widely touted as Pakistan's "return to democracy" once General Musharraf stepped down as President. Given that the military had just restored power to a democratically elected government after 9 years under Musharraf, the likelihood of the military intervening again right after that was arguably quite low. Thus, *Post Military* is a dummy variable coded 1 for the

democratic administration that came to power in 2008. As Model 4 in Table 3 indicates, the advantage associated with being a ruling party legislator was significantly lower during this period than in other years. Calculating the coefficient on *Ruling Party Legislator* in this administration shows that the benefit is still positive and highly significant, but is substantively much smaller (21.6 percentage points versus 89.2) and is significantly different from other administrations.[29]

Next, I differentiate between the "semi-democratic" administration that was "elected" under General Musharraf, leading to a newly formed party, the Pakistan Muslim League - Quaid (PML-Q), coming to power, and all other years. Since PML-Q was widely considered to be in power because the military government wanted it that way rather than as a result of free and fair elections, the regime at the time was stable as well. That is another period of low instability with results summarized in Model 5 in Table 3. As before, the benefit associated with being a ruling party legislator is still significant but much lower, with a coefficient of 14.2 percentage points instead of 63 percentage points.

The last way I measure low instability years is by using the ICRG's "Military in Politics" variable, which measures the "military's involvement" in the country's political affairs. This continuous measure does not fluctuate a great deal over time within any country, so I use it to construct a dummy variable, *Low Instability*, which is coded 1 for years where the military's involvement in Pakistani politics is lower than the mean for those years, and 0 when it is higher. The results from this specification are in Model 6 in Table 3, and point in the same direction as the two previous measures of instability, such that the distortion that benefits the ruling party's members is significantly lower in years of low instability, with a coefficient of 47 percentage points instead of 70.

Together, these results indicate preliminary evidence that years of low regime instability are significantly different, on average, from those where instability is discernibly

[29]It is interesting to note that this difference in the 2008 administration cannot simply be explained by the party in power, because this was the third time the PPP was in government in the dataset and, as shown in the next section, both parties behave similarly when in power.

higher, despite the difficulty in precisely measuring a concept as nebulous as instability. In periods where democratic institutions are relatively likely to last in to the next time period, even though ruling party legislators still benefit from higher resource access, the extent of distortion is much lower than years where it is more likely that democracy will not survive for much longer.

Table 3: Regime Instability and Distributive Politics

	Fund Access %		
	Model 4	**Model 5**	**Model 6**
Ruling Party Legislator	89.244***	63.018***	69.890***
	(7.820)	(5.747)	(12.885)
Margin of Victory	−23.475	−24.444*	−23.036
	(19.585)	(14.711)	(17.739)
Post Military	24.565***		
	(7.741)		
Ruling Party×Post Mil.	−67.630***		
	(9.951)		
Semi-democracy		−23.167***	
		(5.780)	
Ruling Party×Semi Dem.		−48.775***	
		(7.136)	
Low Instability			−60.590***
			(11.906)
Ruling Party×Low Inst.			−22.779*
			(13.581)
Previous MNA	−0.545	2.697	1.380
	(4.642)	(3.624)	(4.314)
Federal Minister	−5.381	1.744	−6.392
	(8.625)	(6.202)	(7.994)
# Candidates	1.922**	0.455	0.681
	(0.868)	(0.640)	(0.762)
Turnout	0.600	−0.008	−1.293***
	(0.392)	(0.294)	(0.362)
District FE	✓	✓	✓
N	1092	1710	1092
Adj. R-squared	0.633	0.581	0.681

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

7 Alternative Explanations for Patterns of Distribution

Perhaps the discrimination in resource allocation observed thus far can instead be explained by other political or economic factors. Of course, given the research design and balance tests in Section 5, even if other factors are relevant, they should not affect the RD results, given the assumptions of that approach. This section nonetheless considers four other possible explanations: variation in legislator quality and experience, differences in redistributive preferences of the ruling parties, differences in economic need of the electoral constituencies, and the timing of elections.

7.1 Legislator Quality

Patterns of distributive politics might reflect the quality and effort of the elected representatives themselves. Vulnerable politicians, for instance, often make greater effort to bring development projects home compared to those winning by larger margins, who do not need to work as hard to build electoral support (Ward and John, 1999; Rodden and Wilkinson, 2004; Keefer and Khemani, 2009; Berry, Burden and Howell, 2010). Similarly, the literature sometimes finds that districts or states with more experienced legislators are associated with better 'outcomes' of some sort, including attracting more funding, experiencing higher growth rates et cetera (Levitt and Poterba, 1999). This could occur because with increased time in office comes a better understanding of the system, how to work within it to extract resources for one's home constituency, development of more established contacts within the government that could help with project approval, and so on.

If the ruling party systematically has more experienced or more hard-working legislators, the differential access we observe could be driven by differences in legislators between

parties rather than due to political motivations. This mechanism is unlikely the primary explanation for my results because two main political parties have alternated power at the federal level, so unless the experienced legislators are only part of each party when that party also holds national power, this should be an insufficient explanation. I also take this in to account empirically in two ways. First, as outlined earlier, variables measuring legislator experience are balanced in the RD specifications, which implies that they are not different in any meaningful way. Similarly, controlling for legislator experience does not affect the treatment effect in the RD (See Tables 11 and 13 in Appendix B.3.2.)

Second, Table 4 presents results from OLS regressions, with the same dependent variable, *Fund Access %*, as before, but including measures for legislators' previous experience and political importance. The first thing to note is that across all six specifications, *Ruling Party Legislator* remains positive and highly significant, with a substantively very large effect. Thus, controlling for whether a legislator has been a federal legislator before, both measured as a dummy, or as the number of previous terms served, does not reduce the explanatory power of being a ruling party legislator. In fact, both measures of previous experience are either insignificant or in the opposite direction, as is the case in Models 9 and 12, which include legislator fixed effects to account for differences between individual legislators. Similarly, having been a member of a governing cabinet does not seem to matter in the Pakistani context, even if one has held a high profile ministry, such as Finance or Defence or Foreign Affairs. These findings are consistent when including district, year, and legislator fixed effects.

Table 4: Legislator Quality

	Fund Access %					
	Model 7	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
Ruling Party Leg.	63.969***	50.524***	115.672***	62.514***	50.481***	110.675***
	(7.144)	(6.100)	(13.477)	(7.190)	(6.130)	(13.460)
Margin of Victory	−21.223	−28.182	−77.777**	−16.220	−25.058	−71.779**
	(19.278)	(18.414)	(35.927)	(19.327)	(18.591)	(35.600)
Previous MNA	0.865	0.761	−29.375***			
	(4.660)	(3.934)	(8.828)			
Federal Minister	−2.816	−4.593	−15.302			
	(8.780)	(7.402)	(26.163)			
Previous MNA Terms				−2.546	0.249	−17.144***
				(2.485)	(2.126)	(4.012)
Federal Minister Imp.				−18.910	−14.394	−11.163
				(12.635)	(10.683)	(22.204)
District FE	✓	✓		✓	✓	
Year FE		✓			✓	
Legislator FE			✓			✓
N	1099	1099	1099	1099	1099	1099
Adj. R-squared	0.614	0.730	0.693	0.615	0.731	0.695

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

7.2 Economic Factors

Another possibility is that economic considerations or differences explain the main results. Perhaps districts where the winning candidate is a member of the ruling party tend to be poorer, which leads to higher access to development spending. Though the fund is not supposed to condition allocation on such factors, a conservative way to still take this in to account is by controlling for economic differences between constituencies. However, since constituencies are not administrative units in Pakistan, there are no data available on economic variables at this level. Thus, I address this concern in an even stricter way by using constituency-level fixed effects. The results, presented in Table 5, show that *Ruling Party Legislator* remains positive and highly significant.[30]

[30]Mass redistricting in 2002 increased the total number of national constituencies from 205 to 272, making it impossible to precisely map pre-2002 constituency labels on to post-2002 boundaries. Also, in some sense, the post-2002 constituencies *should* be treated as new units as the altered boundaries may have affected the comparability of the constituency over time. Thus, I take the conservative approach here and treat the post-2002 constituencies as separate constituencies.

Table 5: Redistribution Preferences

	Fund Access %
	Model 13
Ruling Party Legislator	52.733***
	(11.637)
Margin of Victory	179.448***
	(37.610)
Previous MNA	15.610**
	(7.001)
Federal Minister	−9.487
	(15.969)
# Candidates	6.930***
	(2.141)
Turnout	8.127***
	(1.035)
Constituency FE	✓
N	1092
Adj. R-squared	0.695

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

7.3 Party Ideology

Another concern emerges from ideological differences between parties that have held federal power. Left-leaning parties may emphasize redistribution more. In line with that, even though political parties in Pakistan do not usually have clear ideological positions on many issues, of the two parties that have held power at the center, the Pakistan People's Party (PPP) is widely considered more left-leaning and socialist-oriented than the Pakistan Muslim League Nawaz (PML-N), especially on economic issues.[31] The results could be driven by the two parties having different attitudes towards redistribution. If that is the case, we expect to see a difference in access to development funds for legislators who win under a PPP government versus those who serve under a PML-N government, such that the former should be associated with significantly smaller, or even no, deviation from the rules. However, as the two models in Table 6 indicate, that is not the case. Though the coefficient on the interaction between *Ruling Party Legislator* and *PML Government*

[31]The PPP's center-left position is also evidenced through its original populist slogan from the 1970s of *"Roti, Kapra aur Makaan,"* which translates to "Bread, Clothes, and a House."

is positive, its magnitude is very small and, more importantly, is not statistically distinguishable from *Ruling Party Legislator* in administrations that are headed by the PPP. Therefore, ideological differences between the two big parties cannot account for the findings, nor are the main results driven by any single party in Pakistan; either party, when in power, engages in distortionary behavior.

Table 6: Party Ideology

	Fund Access %	
	Model 14	**Model 15**
Ruling Party Legislator	61.249***	52.927***
	(7.134)	(12.853)
PML Government	54.780***	56.550***
	(11.864)	(14.888)
Ruling Party×PML Govt	6.122	0.539
	(13.323)	(18.906)
Margin of Victory	−93.691***	58.859
	(19.275)	(38.930)
Previous MNA	−2.307	7.438
	(4.497)	(6.834)
Federal Minister	−2.667	5.218
	(8.285)	(15.440)
# Candidates	0.935	0.164
	(0.790)	(2.210)
Turnout	0.200	6.667***
	(0.367)	(1.009)
Constituency FE		✓
District FE	✓	
N	1092	1092
Adj. R-squared	0.657	0.695

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

7.4 Election Cycles

Finally, I address the possibility that the timing of elections primarily drives the politicization of development fund distribution. Maybe the ruling party engages in distortionary behavior only close to elections in explicit vote-buying attempts. In general, that should be less likely as the primary explanation because the fund is processed by bureaucrats, who should not be influenced by the timing of political events. However, given the high

politicization of the Pakistani bureaucracy, it is conceivable that the ruling party can also affect which years more money is released in. If the timing of elections is relevant, we should see the greatest benefits associated with ruling party legislators in election years compared to other years. The results presented in Table 7 address this possibility, interacting an *Election Year* dummy with the *Ruling Party Legislator* dummy.[32] As the results show, both without (Model 16) and with district fixed effects (Model 17), ruling party legislators do not benefit inordinately in election years, making it unlikely that there is a pure vote-buying explanation based on election cycles.

Table 7: Election Cycles

	Fund Access %	
	Model 16	**Model 17**
Ruling Party Legislator	59.458***	63.768***
	(7.062)	(7.423)
Margin of Victory	−35.895**	−29.601
	(18.255)	(19.246)
Election Year	−29.335***	−29.595***
	(8.718)	(8.536)
Ruling Party×Election Year	−3.781	1.254
	(11.785)	(11.583)
Previous MNA	1.339	0.263
	(4.522)	(4.689)
Federal Minister	3.269	−1.911
	(7.923)	(8.694)
# Candidates	0.718	0.471
	(0.759)	(0.828)
Turnout	0.180	−0.067
	(0.313)	(0.383)
District FE		✓
N	1092	1092
Adj. R-squared	0.127	0.623

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

[32] *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.

8 Conclusion

In this paper, I have shown that incumbent political parties in unstable democracies distort the distribution of development resources such that legislators belonging to the ruling party benefit from much higher access to their share of funds than opposition legislators. Using Pakistan as a representative case, I also developed a new mechanism that can help to understand why we might see such distributive patterns in countries that are mired in regime instability over long periods of time and that have somehow failed to make the transition from emergent democracies to stable ones.

A new dataset on federal development resource allocation and a regression discontinuity design together show that winning is not sufficient for a federal legislator to access 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 30 percentage points (and up to almost 80 percentage points for some specifications), which is robust to a variety of bandwidths and specifications. I also provide associative evidence of the proposed mechanism by comparing the effect of being a ruling party legislator in years of high versus low instability. In line with the argument, I find that low instability periods are associated with significantly smaller additional benefits than years of higher instability.

I also empirically address a variety of alternative explanations for the pattern of resource distribution seen in Pakistan. Controlling for other potentially relevant factors, such as legislator quality and experience, or economic need 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.

Overall, the arguments and findings from this paper are relevant to the literature on distributive politics in at least three important ways. First, existing models of distributive politics, whether they focus on well-functioning democracies or on clientelistic ones,

do not consider how institutional instability can also lead to the ruling party distorting development funds. Second, the paper makes an empirical contribution by causally identifying the effect of being a ruling party legislator; most scholarship in distributive politics has focused on associative evidence thus far. Additionally, the paper introduces new data on an important country whose domestic politics are poorly understood.

Finally, these findings leave open questions for future research. Do similar patterns of distribution emerge in other countries that have experienced multiple regime changes from democracy to autocracy, and back? Countries like Turkey, Ghana and Argentina have all gone through multiple periods in their political history that are broadly comparable, for instance. And, more generally, are these large differences in resource access driven by all ruling and opposition districts, or are there discernible patterns within? Answering this question will also bring closer the strand of literature that focuses on the advantage of being affiliated with the ruling party to that which is interested in the core-swing debate in distributive politics.

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A Resource Manipulation in an Unstable Democracy

Payoffs for Inequality 1

As explained in the main text, the two parties, i and j, have symmetric interests and decide if they will choose to redistribute federal resources according to the pre-determined rules, thus allocating r_i and $1 - r_i$ respectively (if i wins). Alternatively, i can decide to 'distort' and set $r_i' = 1$, thus giving 0 to j, in the extreme case of manipulation. After policies are chosen, elections occur and policy control is realized accordingly. That leads to payoffs being realized and then, with probability δ, the same game is played again. Since parties play a grim-trigger strategy, if i chooses to set $r_i' = 1$ today, whenever j wins an election in any subsequent time period, it will always do the same for its own party. Party i wins with probability $w_i \in (0, 1)$ and defecting incurs a public cost, $c \in [0, 1]$ Therefore, in each time period, there are four possible payoff outcomes, from the point of view of Party i (since parties are symmetric, the same could be done for Party j):

1. Both i and j choose to cooperate: $EU_i = w_i r_i + (1 - w_i)(1 - r_i)$
2. i chooses to defect and j chooses to cooperate: $EU_i = w_i(1) + (1 - w_i)(1 - r_i) - c$
3. i chooses to cooperate and j chooses to defect: $EU_i = w_i r_i + (1 - w_i)(0)$
4. Both i and j choose to defect: $EU_i = w_i(1) + (1 - w)(0) - c$

Then, if the game starts off in (Cooperate, Cooperate) at time t, both parties will always play that in equilibrium as long as:

$$\frac{1}{(1-\delta)}[w_i r_i + (1 - w_i)(1 - r_i)] \geq w_i(1) + (1 - w_i)(1 - r_i) - c + \delta\frac{(w_i - c)}{(1-\delta)}$$

That is, in any given time period, if the summation over the expected utilities for coop-

erating in all future time periods is at least weakly greater than the sum of the expected utility of defecting today plus the sum over all future time periods with a grim-trigger strategy played by both parties, then no party has an incentive to defect. Simplifying the expression above in terms of δ yields Inequality 1 from the main text:

$$\delta \geq \frac{w_i(1 - r_i) - c}{(1 - r_i)(1 - w_i)}$$

B Additional Empirical Results

B.1 Alternative Dependent Variable Measurements

Table 1 in the main paper indicated that there are some observations where *Fund Access %* is greater than 100%. Since these indicate cases where more money was allocated than was 'allowed,' including these observations in the analysis is important for studying political motivations for resource distribution. However, this section presents two sets of robustness checks on the dependent variable. First, I recode the allocations that are greater than 100% to 100%, which artificially constrains the dependent variable to be within the official bounds of the development fund. Table 8 replicates the three main RD specifications from the paper; only one out of the six coefficients loses significance and that too with a p-value of just over 0.1. The treatment effect is, unsurprisingly, smaller in size but substantively still meaningful, ranging from 1.5 million PKR a year to almost 4.5 million PKR a year. The latter, for instance, is about half the size of the total fund, and hence represents a sizable amount.

The second 'alternative measurement' of the dependent variable involves using the actual rupee amounts for each observation, rather than the percentage of fund allocation, with results summarized in Table 9. Though this way of measuring the dependent variable is perhaps 'unfair' because it involves comparing observations where the maximum

Table 8: Constraining Dependent Variable to 100%

	Standard	Robust	Standard	Robust	Standard	Robust
Ruling Party Legislator	28.1**	43.6**	17.7**	15.2	20.4***	20.4**
	(12.8)	(18.8)	(7.97)	(9.34)	(6.81)	(8.46)
N	290	290	656	656	1099	1099
RD Bandwidth	0.05	0.05	0.109	0.109	-	-
Specification	Local Linear	Local Linear	CCT	CCT	Cubic	Cubic

***p < .01; **p < .05; *p < .1
Standard errors reported in parentheses.
Note: In columns 1 and 3, standard specifications provide 'Conventional' estimates while robust specifications in columns 2 and 4 report 'Bias-Corrected' estimates with robust standard errors; all four use the RDRobust Package in R. For the last pair of columns, Robust reports robust standard errors, clustered at the administrative district level.
CCT uses the optimal bandwidth calculation suggested by Calonico, Cattaneo and Titiunik (2014).

possible allocation in rupees was different, the average effect still remains. Interestingly, the substantive sizes of the coefficients across all six specifications are quite similar to Table 8, with the increased access to development resources for a *Ruling Party Legislator* varying from approximately 1.8 million PKR to an advantage of over 4 million PKR. Thus, these two results together further ensure that the main findings of the paper are not driven by the choice of specifying the dependent variable as a percentage of the total possible allocation that was actually granted.

Table 9: Dependent Variable in Pakistani Rupees (Millions)

	Standard	Robust	Standard	Robust	Standard	Robust
Ruling Party Legislator	2.55**	4.04**	2.36***	2.25**	1.79**	1.79***
	(1.22)	(1.66)	(0.80)	(0.94)	(0.81)	(0.50)
N	290	290	656	656	1099	1099
RD Bandwidth	0.05	0.05	0.129	0.129	-	-
Specification	Local Linear	Local Linear	CCT	CCT	Cubic	Cubic

***p < .01; **p < .05; *p < .1
Standard errors reported in parentheses.
Note: In columns 1 and 3, standard specifications provide 'Conventional' estimates while robust specifications in columns 2 and 4 report 'Bias-Corrected' estimates with robust standard errors; all four use the RDRobust Package in R. For the last pair of columns, Robust reports robust standard errors, clustered at the year level.
CCT uses the optimal bandwidth calculation suggested by Calonico, Cattaneo and Titiunik (2014).

B.2 RD Estimate Robustness

As Figure 2 indicates, a range of different bandwidths can be defined for the local linear regression and the LATE remains large and statistically significant for virtually the entire range.[33] Similarly, the treatment effect is positive and significant when using a quadratic or quartic polynomial specification instead of the cubic specification used in the main results, as can be seen from Table 10.

Table 10: RD Robustness Estimates with Different Bandwidths

RD Estimate	Std Error	Bandwidth	N	Specification
29.1**	14.6	0.079	425	IK
43.1***	9.27	-	1099	Quadratic
29.6**	14.4	-	1099	Quartic

***p < .01; **p < .05; *p < .1
Note: Each row represents a separate local-linear regression.
IK specification calculates the optimal bandwidth as suggested by Imbens and Kalyanaraman (2011).

[33]There are some marginal cases between a bandwidth of 0.075 and 0.105 but these are all significant with a 90% confidence interval.

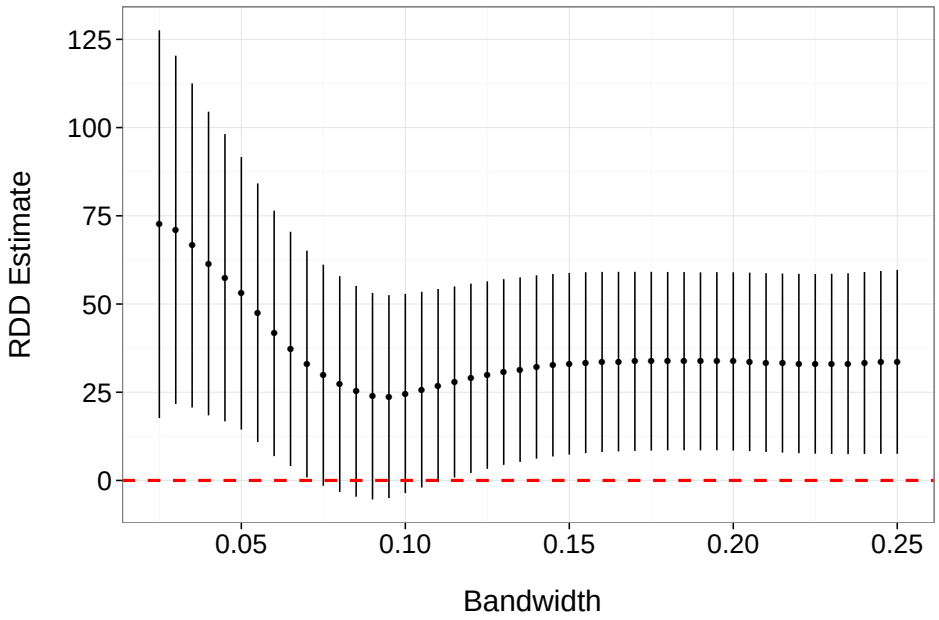

Figure 2: RD Estimate with Different Bandwidths

B.3 Continuity and Sorting Tests

B.3.1 McCrary Test for Density of Forcing Variable

Figure 3 shows the density of the forcing variable for the bandwidth used in the main analysis (0.05). This test yields a p-value of 0.35, implying there is no significant difference in the density of the forcing variable on either side of the cutoff. This result increases the plausibility of the assertion that there is no evidence of strategic sorting in close electoral races. A McCrary test for a bandwidth of 0.132 (as found optimal using the CCT procedure in the main analysis) is not significant at conventional levels either.[34]

[34]For this bandwidth, the test calculates a p-value of 0.06. The slight difference in density for this bandwidth can be explained by the fact that there are more observations where a ruling party candidate wins than observations where a ruling party candidate finishes in second place (because ruling party candidates also come in third, fourth, fifth place et cetera). Consequently, the slightly higher density to the right side of the cutoff does not indicate any systematic 'sorting' by legislators and, hence, is not cause for concern here.

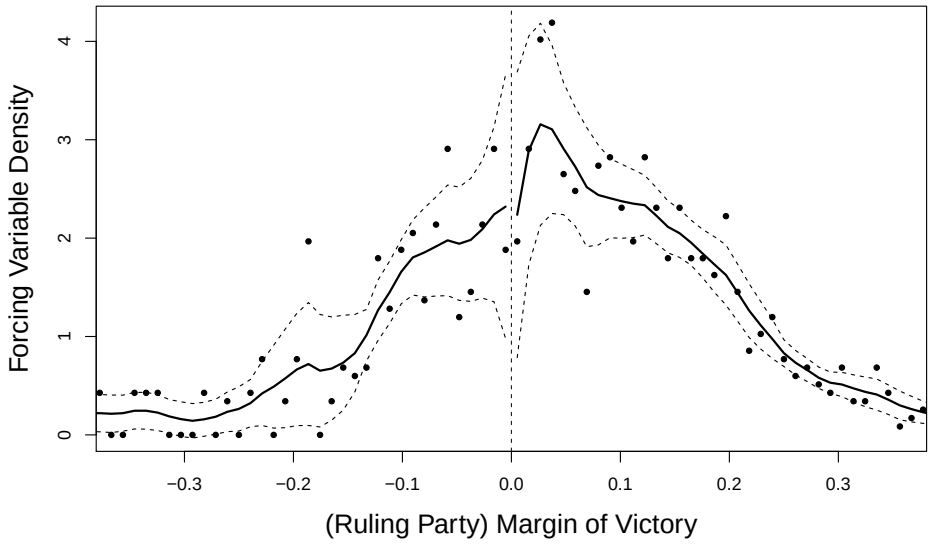

Figure 3: Density of Forcing Variable (Ruling Party Margin of Victory) for Bandwidth=0.05

B.3.2 Covariate Tests

a. T-Tests for Balance

Table 11 presents difference-of-mean tests for observable covariates close to the cutoff, for the two bandwidths from the main analysis. The only times where the t-test is significant at conventional levels is for *Previous MNA* and *Previous MNA Terms*, both with a bandwidth of 0.132. However, even here, the means are in the opposite direction of what we would expect when considering the hypothesis that those with more experience are better able to access resources. It is the case that the less experienced MNAs are, in fact, more likely to be to the right side of the *Margin of Victory* cutoff, which means that they are more likely to be in the treatment group. If anything, I would expect these less experienced legislators to get lower fund access, not higher, so the expectation biases against my results, rather than in favour of them.

Table 11: Difference-of-mean tests on covariates

Variable	Mean (left of cutoff)	Mean (right of cutoff)	Bandwidth	N
Previous MNA	0.55	0.46	0.05	290
Previous MNA Terms	0.84	0.66	0.05	290
Federal Minister	0.02	0.05	0.05	290
Effective # Parties	2.47	2.52	0.05	290
Previous MNA	*0.62*	*0.41*	0.132	656
Previous MNA Terms	*1.04*	*0.55*	0.132	656
Federal Minister	0.08	0.09	0.132	656
Effective # Parties	*2.58*	*2.45*	0.132	656

Italicized means are significantly different with $p \leq 0.05$
Note: The bandwidths for this comparison are chosen based on the main empirical analysis.

b. Covariates as Outcomes

Another way to evaluate the balance of covariates is by trying to find the effect of being a ruling party legislator on observable covariates near the cutoff. In other words, does being a ruling party legislator make it more likely that you are also more experienced or a better-known politician? If so, perhaps there are important differences right above and below the cutoff that could explain the treatment effects. To show that this is not the case, Table 12 presents results from the same cubic polynomial specification as Equation 2, except the outcome of interest is a different covariate in each regression. In support of the arguments made throughout the chapter, I find no evidence of ruling party legislators being different from opposition legislators on observable covariates.

c. Irrelevance of Covariates

Another robustness check I conduct to verify the strength of the empirical results cal-

Table 12: Covariates as Outcomes

Dependent Variable	Coefficient on *Ruling Party Legislator*	Std Error
Previous MNA	0.06	0.08
Previous MNA Terms	0.13	0.15
Federal Minister	0.06	0.16
Effective # Parties	0.03	0.09

$^{***}p < .01$; $^{**}p < .05$; $^{*}p < .1$

Note: Each row presents the RDD estimate from a separate linear regression. The specifications used are the same as Equation 2, except the outcome of interest is as indicated in the first column of the table.

culates the RD estimate, as before, but also controls for observable covariates in each case. As Table 13 indicates, the discontinuity estimate remains large and statistically significant for various specifications, lending credence to the assertion that the covariates are irrelevant to the discontinuity within the required bandwidth.

Table 13: RD estimates controlling for covariates

RD Estimate	Std Error	Bandwidth	N	Specification
46.2^{***}	18.9	0.050	290	Local linear
30.5^{***}	11.8	0.132	656	Local linear/CCT
32.4^{**}	11.8	-	1099	Cubic

$^{***}p < .01$; $^{**}p < .05$; $^{*}p < .1$

Note: Each row represents a separate regression. Local linear/CCT runs a local linear regression (with triangular kernel) for the optimal bandwidth calculated using the procedure from Calonico, Cattaneo and Titiunik (2014). Covariates included in each regression are: *Previous MNA*, *Previous MNA Terms*, *Federal Minister*, and *Effective # of Parties*.

B.4 RD Placebo Tests

I further establish the robustness and relevance of the main results here by presenting two different kinds of placebo tests. First, Table 14 presents 'treatment effect' estimates from local linear regressions using bandwidths selected by the same procedure as before. However, the cutoff is varied at equal intervals for the entire range of the forcing variable. In other words, the threshold for being treated is changed systematically, allowing observations to count as 'treated' if the *Margin of Victory* was -0.3 (instead of 0), -0.2, -0.1, and so on. The idea here is that if the discontinuity observed in the fund allocation data occurs "randomly," we expect to see similar jumps in the dependent variable for other levels of the victory margin. As can be seen, however, none of the estimates are significant. Thus, it is not the case that there are clear jumps in fund distribution; rather, it is the closest races where winning legislators belong to either the ruling party or an opposition party that incentivize strategic allocation by the ruling party.

Table 14: RD estimates for the effect of being a Ruling Party Legislator using 'fake' cutoffs for treatment threshold

RD Estimate	Std Error	Cutoff	Bandwidth	N
59.2	93.6	-0.3	0.09	43
9.3	30.1	-0.2	0.11	146
-9.1	14.7	-0.1	0.10	325
-12.2	15.3	0.1	0.16	768
-19.7	17.0	0.2	0.17	623
17.4	26.3	0.3	0.09	191
-13.5	46.2	0.4	0.13	130

$^{***}p < .01$; $^{**}p < .05$; $^{*}p < .1$
Note: Each row represents a separate local-linear regression. Optimal bandwidths are calculated using the same procedure as the main specifications, based on Calonico, Cattaneo and Titiunik (2014). The estimates are bias-corrected with robust standard errors.

A second placebo test to show further evidence of intentional fund manipulation is

conducted by lagging the dependent variable by one administration. That is, each year's development fund allocation is 'explained' using the next period's election results. This test helps to verify that the discontinuity discussed here is not a random occurrence. Table 15 presents discontinuity estimates from 0.05 and 0.132 bandwidths (bandwidths taken from main analysis) and the optimal bandwidth calculation, similar to before. The results confirm no discontinuity in this case. This can also be seen from Figure 4, which is similar to the original RD plot shown in Figure 1 but uses the lagged dependent variable on the y-axis.

Table 15: RD estimates for the effect of being a Ruling Party Legislator on Development Fund Access in the previous administration

	RDD Estimate		
Ruling Party Legislator	-27.2	21.4	32.2
	(48.5)	(34.3)	(32.1)
N	68	154	136
RD Bandwidth	0.05	0.132	0.11
Specification	Local Linear	Local Linear	CCT

$^{***}p < .01$; $^{**}p < .05$; $^{*}p < .1$
Standard errors reported in parentheses.
Note: Results reported have bias-corrected estimates and robust standard errors.
CCT uses the optimal bandwidth calculation suggested by Calonico, Cattaneo and Titiunik (2014).

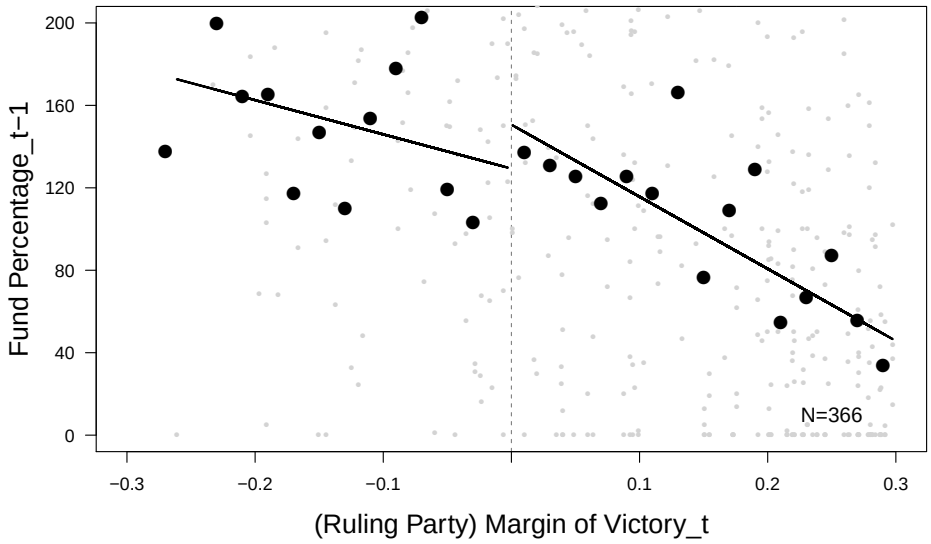

Figure 4: Lagged Dependent Variable: No Discontinuity