

ORIGINAL ARTICLE

# When legislators don't bring home the pork: the case of Philippine Senators

Nico Ravanilla<sup>1\*</sup>  and Allen Hicken<sup>2</sup>

<sup>1</sup>School of Global Policy & Strategy, University of California San Diego, La Jolla, USA and <sup>2</sup>Department of Political Science, University of Michigan, Ann Arbor, USA

\*Corresponding author. Email: [nravanilla@ucsd.edu](mailto:nravanilla@ucsd.edu)

(Received 21 May 2021; revised 1 December 2021; accepted 15 March 2022; first published online 16 September 2022)

## Abstract

Research in legislative politics suggests that the desire to get reelected encourages legislators to “bring home the pork”—by delivering electorally rewarding, targeted spending. This is particularly true where the electoral system encourages incumbents to cultivate a personal vote. We analyze how Philippine Senators spend their Constituency Development Fund (CDF) and using the staggered elections to identify variation in reelection status, we show that senatorial reelectionists do not always bring home the pork. Because Philippine Senators are elected by plurality-at-large voting by the national electorate, they tend to spend their CDF allotments closer to elections but avoid allocating them disproportionately to their local strongholds. These findings illustrate how electoral rules can deter targeted spending but lead legislators to find alternative ways to build a personal vote.

**Keywords:** Comparative politics; developing countries; political behavior

## 1. Introduction

How legislators respond to electoral pressures has been the subject of much interest among scholars of legislative politics. One of the earliest and enduring explanations is Mayhew's—that the desire to get reelected encourages legislators to build a personal vote—the part of the vote that is based on candidate characteristics or record (Mayhew, 1974; Cain et al., 1987). There are many mechanisms for building a personal vote. When it comes to fiscal legislative particularism (pork), building a personal vote has typically meant that legislators standing in election are more likely to “bring home the pork” to their district constituencies. The underpinning assumption is that targeting pork to a narrow constituency is electorally rewarding. But, is targeted pork provision always a useful strategy for legislators seeking to cultivate a personal vote? Under what conditions might such a strategy be costly?

In this article, we seek to broaden our understanding of when and how legislators use pork to build a personal vote. The core suggestion is that when legislators face electoral pressures, the desire to build a personal vote does not necessarily imply that they will use pork to target narrow constituencies even where resources for targeted pork are readily available. We argue that legislators face a trade-off: They desire to use available pork to signal ability and reward core constituencies, but they need to minimize the adverse effects of targeting sub-national constituencies. Namely, politicians who target pork to narrow constituencies risk losing the support voters from other areas who are excluded. We demonstrate that when bringing home the pork is electorally costly, legislators find other non-targeted ways to use pork to signal ability. Specifically, the timing of non-targeted pork allocations becomes a way for legislators to signal their capability to voters.

© The Author(s), 2022. Published by Cambridge University Press on behalf of the European Political Science Association. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (<https://creativecommons.org/licenses/by/4.0/>), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

We analyze the case of Senators in the Philippines to gain new insights into the link between electoral pressures and the incentive to bring home the pork. Unlike in most democracies (including the US) where Senators have subnational (e.g., statewide) constituencies, Members of the Senate in the Philippines are elected by plurality-at-large voting from a single multi-seat constituency encompassing the entire national electorate. Because of the national nature of their election, Philippine Senators have to respond to a much broader constituency than is typical for members of the legislature. At the same time, Senators still face enormous pressures to develop their own personal networks of support. The Senate is elected using the Multiple Non-transferable Vote system (MNTV)—candidates compete directly with both partisan opponents and other candidates from their own party. Where party labels are weak (as they are in the Philippines), MNTV tends to produce strong incentives to cultivate a personal vote (Hicken, 2009). More on this below.

In addition to these personal vote incentives, Senators have ready access to pork which they could use to build up personal networks of support. Historically they have been entitled to annual lump sum appropriations from the Constituency Development Fund (CDF)—a type of fiscal legislative particularism common in many developing democracies that allocates budgetary resources directly to individual legislators to spend on public works and services of their choosing. Hence, CDF is a prime example of pork—discretionary spending uniquely attributed to legislator's effort and with benefits intended for legislator's constituents.

We examine whether Philippine Senators who are standing in elections use CDF differently than their non-reelectionist counterparts and we find that they do. In particular, we find robust evidence that they substantially increase efforts to utilize CDF as elections approach. However, we find no evidence that they are more prone to target CDF spending to narrow constituencies captured in a variety of measures. In fact, quite the opposite, we find that only Senators who are not facing reelection are willing to make significant use of targeted pork. This runs counter to the standard reelectionist story which focuses on incentives to cultivate a personal vote, but is completely consistent with our theoretical expectations drawn from the institutional arrangements in the Philippines, and with a broader literature which focuses on the breadth/narrowness of a politician's constituency.

Our research contributes to scholarship on legislative politics in three ways. First, we improve on the econometric strategy for identifying the effect of electoral pressures on the supply of fiscal legislative particularism. The extant literature has typically only indirectly tested the effect of reelection incentives on public spending by comparing last-termers to those who can still run for reelection, with the prediction that last-termers are less likely to inflate spending. Scholars have exploited both across-politician variation (Besley and Case, 1995) and within-politician variation (Aidt and Shvets, 2012) in term-limit status to detect a "last-termer effect." However, many of these studies face the problem of finding a source of variation in electoral pressures that is exogenous to legislator characteristics and the political environment. In this article, we directly test a "reelectionist effect" by exploiting the exogenous variation in reelection status arising from the constitutional design of senate elections in the Philippines. The law stipulates that all Senators serve six-year terms but that half be elected on a staggered basis every three years, allowing us to compare the behavior of Senators in their last three years in office and who are up for reelection, to those in their first half of the term.

The idea of using staggered elections to identify variation in reelection status, by itself, is not novel in the literature, and there are many countries with staggered legislative elections (Shepsle et al., 2009; Fukumoto and Matsuo, 2015). But two unusual features of the Senate in the Philippines allow us to avoid some of the challenges associated with the study of pork barreling in other legislative contexts. First, Philippine Senators are all elected from the same single national district. This eliminates the selection bias concern that those who stand for reelection face systematically different electoral environments than those that do not stand.<sup>1</sup> Second, Senators each

<sup>1</sup>See Keefer and Khemani (2009) and Primo and Snyder (2010) for more on the selection bias concern.

receive the same amount of pork barrel resources, by law. This enables us to isolate the effect of standing for reelection, while holding pork resources constant. Our dataset covers four election cycles, allowing sufficient variation in reelection status among Senators.

Second, this research adds to an important and growing research agenda in legislative politics that seeks to understand how electoral pressures change the behavior of legislators. Scholars have shown that as election approaches, legislators undertake more casework for individual constituents (Cain et al., 1987; Heitshusen et al., 2005), take different positions on roll call votes (Shapiro et al., 1990; Bernstein, 1991; Ahuja, 1994), travel back to home state more often (Fenno, 1982) and therefore show up in the chamber less often (Fukumoto and Matsuo, 2015), and increase the number of co-sponsored legislation (Campbell, 1982). Here, we demonstrate that electoral pressures encourage legislators to use pork to build a personal vote by changing the timing of pork utilization but not by targeting pork to narrow constituencies or parochial interests.

Third, our work contributes to the literature on the ways in which institutions can shape the capacity and incentives of politicians to use pork. Similar to the work on the pork in the US Congress, those working on pork in the Philippines have largely focused on the incentives and behavior of members of the House of Representatives (Atkinson et al., 2015; Ravanilla, 2021). We seek to expand our understanding of distributive spending in the Philippines by turning our attention to the under-studied Senate.<sup>2</sup> We argue that given the differences in institutional incentives Senators should use pork differently from their House counterparts. This despite the fact that both Senators and Congressmen have access to an abundance of pork resources.

In the next section we review the extant literature linking electoral pressures with the supply of fiscal legislative particularism and generate our hypotheses. In Section 3 we discuss the specific CDF (senatorial pork) program in the Philippines. We discuss our econometric strategy and identification in Section 4. Then we present the results and analysis in Section 5. We conclude with a discussion of the broader public policy implications of how electoral pressures impact the supply of fiscal legislative particularism.

## 2. Electoral pressures, the personal vote, and the incentive to “bring home the pork”

Much of the literature takes as a point of departure the existing understanding of legislative behavior—that legislators are goal-oriented. The proximate goal is to gain reelection, and to be reelected, legislators expend effort on cultivating personal votes. The extent to which legislators need to cultivate a personal vote, of course, varies by the nature of the electoral system (Carey and Shugart, 1995; Shugart, 2005). Notwithstanding, legislators who need to cultivate personal votes can employ a variety of mechanisms.

Where the executive has budgetary authority and the sole right to introduce “money bills” (i.e., bills with spending element), legislators engage in extra-legislative mechanisms to build a personal vote. These include dealing with constituency casework, holding meetings with individual constituents, attending local party meetings, and attending other functions in their constituency. This is true, for example, in the case of British MPs that have no opportunity to generate fiscal particularism for their districts (Cain et al., 1987). But where legislators have the option to engage in fiscal legislative particularism (pork), the standard prediction is that legislators will “bring home the pork”—secure pork spending projects or earmarks from national/federal budget for a narrow constituency. This is with good reason. Legislators use pork to build reputations when it is a more credible and less costly signal to voters compared to electoral promises (Bueno de Mesquita et al., 2003; Robinson and Torvik, 2005; Keefer and Vlaicu, 2008; Robinson and Verdier, 2013). They also use it to convince voters that they are of high ability when voters cannot easily observe but can infer ability from pork provision (Ashworth and

<sup>2</sup>For similar approaches in the US context see e.g., Shepsle et al. (2009); Lazarus and Steigerwalt (2009); Chen (2010); for Japan see Nemoto and Shugart (2013).

Mesquita, 2006). The incentives to target pork to narrow constituencies increase with the incentives to cultivate a personal vote (Samuels, 1999; Golden, 2003; Catalinac, 2016).

The theoretical prediction that legislators facing electoral pressures will “bring home the pork” assumes that such behavior is free of electoral costs or at least brings more benefits than costs. In fact, the seminal works on pork barreling assume that bringing home the pork confers electoral benefits—not costs—because legislators need only cater to their district constituencies to win elections, at the same time that the tax burden is diffused across the entire national electorate (Ferejohn, 1974; Weingast et al., 1981). But what if legislators had the ability to use pork but only at a (electoral) cost? How then would legislators use pork to build a personal vote? The contribution of this research is in recognizing that as legislators facing reelection decide how to use pork—when electoral costs enter their objective function—then bringing home the pork may no longer be the preferred strategy. We demonstrate that where pork is available, legislators will find other ways to use it to build a personal vote. We focus on the case of Philippine Senators because it is illustrative of this broader theoretical point.

### 2.1 Insights from Philippine Senators

Intuition suggests that Philippine Senators up for reelection would rely on whatever mechanisms are available and effective in an effort to build a personal vote and differentiate themselves from other senatorial candidates. As discussed above, we know from existing studies that pork can help candidates boost their credibility and signal their ability to voters. We expect this to hold for reelectionist Senators as it does for any candidate for a legislative post, and there are reasons to expect that senatorial candidates face particularly strong incentives to use pork.

The Philippine Senate consists of 24 seats. Senators sit for six-year terms with half of the seats up for reelection every three years. Senators are elected from a single national constituency, using MNTV. To be specific, voters can vote for up to 12 senatorial candidates and the top 12 vote-getters are awarded seats. While MNTV does not generate as strong an incentive to cultivate a personal vote as where voters possess a single vote and must choose between candidates from the same party (*a la* SNTV), it does tend to undermine the value of party label and encourage candidates to develop personalized networks of support that are independent of party (Carey and Shugart, 1995; Hicken, 2009). Candidates for Senate, by necessity, compete with as many as 11 co-partisans and this intra-party competition means that relying primarily on party labels as a campaign tool is a poor strategy. (The ephemeral nature of Philippine political parties and the weakness of partisan ties further undermines any incentive to rely on party-focused strategies.) The most successful candidates are those that are able to develop or capitalize on large national followings. (Hence the penchant in Filipino politics for celebrity Senators.) Given the incentives to place personality before party, we expect that pork would be an appealing tool for sitting Senators as they seek to set themselves apart from their competitors.

The pork that is available to Philippine Senators has had a number of labels over the years, but for the period under study here it was formally known as Constituency Development Fund (CDF). CDF is a type of fiscal legislative particularism that has been adopted in many other developing countries including India, Kenya, Pakistan, and Sierra Leone. CDFs allocate budgetary resources directly to individual legislators to spend on public works and services of their choosing. We describe in the next section the specific CDF program in the Philippines. For now, we focus on how Senators might use CDF to build a personal vote.

Unlike Members of the (Lower) House of Representatives, whose constituencies are geographically small, Senators must compete for votes on a nation-wide basis. Given a budget constraint—the cap on the amount of annual CDF appropriations—Senators cannot possibly target pork to enough subnational constituencies to secure reelection. To the extent they are going to target pork to narrow constituencies or parochial interests, they must make a choice between those who receive funds and those who do not. They may target a subnational constituency that they

care about but only at the expense of disadvantaging other constituencies, and this carries with it electoral risk. Namely, for every vote a Senator secures through the deployment of targeted pork, they risk losing the votes of those who are not the recipients of such largess.

Thus, senatorial reelectionists face a trade-off. They desire to use the available pork to signal ability and perhaps reward core constituencies but they need to minimize the adverse effects of targeting sub-national constituencies.<sup>3</sup> How might senators maximizing the probability of reelection respond to this change in the calculus of pork politics?

This trade-off doesn't necessarily mean that Senators must avoid pork altogether. If Senators find the risk of targeting pork to local bailiwicks too high, there are still other ways to use pork to build a personal vote. One possibility is to channel pork funds away from subnational constituencies and, instead, direct them to programmatic spending by government agencies. Even if funds are spent on programmatic projects, senators can still claim credit for the release of funds from their CDF allotments, thereby achieving the goal of signaling ability while avoiding the electoral backlash of targeted spending. Indeed, some Philippine Senators report the detailed breakdown of the releases of CDF released through national government agencies (NGAs) as well as local government units (LGUs), which is consistent with the notion that they still seek to claim credit for how they use the CDF, even when there is no obvious subnational targeting involved.<sup>4</sup>

Alternatively, they may choose to "pass on the pork" and, instead, expend effort in non-fiscal legislative mechanisms to build a personal vote. (The expression "pass on the pork" is coined by Keefer and Khemani (2009) for when legislators forego the use of their CDF allotments.) As we discuss in the next section, legislators need to exert effort to release the funds from their CDF allotments. They may find it more electorally rewarding to expend efforts, instead, on extra-legislative parochialism (constituency service) for building a personal vote. For example, they may choose to travel across the country to attend public meetings and other speaking engagements, they may concentrate efforts to author and pass national legislation, or they may champion a popular reform. We would also expect Senators facing reelection to behave differently from those who have just begun their six-year terms. Research in the American context has found that Senators work to skew appropriations toward the end of their terms (Shepsle et al., 2009). We expect a similar dynamic in the Philippines. In non-election years, the risks and effort involved in using pork can outweigh the potential benefits. It is also the case that unspent appropriations can be carried over from year to year during the term of a Senate. As a result, we expect that Senators will often opt to forgo pork spending in non-election years and instead bank those pork funds for deployment when the Senator is facing reelection.

Our argument relies on two implicit assumptions. First, that voters from different parts of the country can obtain information on pork projects in other parts of the country (or that politicians believe that they can obtain that information). Second, that voters are prone to punish candidates who engage in targeted distribution in areas outside of their own. What evidence is there in support of these assumptions? The case that voters could plausibly learn of the pork distribution patterns of candidates is straightforward. While the award criteria and details of targeted pork barrel projects can be hard to come by, the amount and target/recipient of this funding is publicly available. In fact, candidates often post such information on their campaign websites, sometimes noting how they have worked to assist voters and communities across the Philippines. In addition, there is a free and active media in the Philippines, and the use (and abuse) of the pork barrel is a favorite subject for investigative journalists, with regular stories throughout the electoral cycle.

<sup>3</sup>Nemoto and Shugart (2013) draw a similar distinction between personal vote versus local/narrow targeting in their analysis of elections to the national tier of the Japanese House of Counselors. Like their counterparts in the Philippines, Japanese Counselors are elected from national districts. Nemoto and Shugart (2013) find that under SNTV, which produces incentives similar to those of the MNTV, parties nominate candidates with strong personal vote-earning attributes, but avoid candidates who rely on narrow/local bases of support.

<sup>4</sup>See for example Sen. Bongbong Marcos' website, <http://www.bongbongmarcos.com/projects/>, or Sen. Chiz Escudero's website, <http://www.chizescudero.com/index.php/pda-fund/summary>.

Senators, with their high-profile positions, are particularly attractive targets for such expos. Finally, incumbents can expect their opponents (including those from their own party) to be quick to point out any patterns of favoritism or biased distribution.

Direct evidence that voters are prone to punish Senate candidates who rely too heavily on targeted distribution is harder to come by. One can imagine an experiment designed to systematically evaluate this assumption, but such an experiment is beyond the scope of this paper. However, we contend the assumption is plausible. *Ceteris paribus*, when evaluating two candidates, one of whom has engaged in targeted spending that overlooked a voter's locale and one of whom has pursued non-targeted distribution, voters should prefer the second, absent expectations that their locale is likely to be included in future targeted spending. Indeed, in interviews with voters we have heard them express a reluctance to support candidates who have reputations for favoring a region that is not the voter's own. We've also heard similar sentiments from candidates. In an interview with the authors one Senator emphasized that Senate campaigns were different from the campaigns for the House or for Provincial Governor. Rather than building a geographic base of personal support through the targeted distribution of pork (which he dubbed a "ground war"), Senate campaigns involved cultivating a national following through the broad distribution of resources (an "air war" in his colorful parlance). According to him, giving resources to one area just risked alienating voters in other parts of the country if you couldn't provide the same resources to them.<sup>5</sup>

If our assumptions hold, we expect Senators to be wary about relying on the targeted distribution of pork. Our argument complicates the common claim in the literature of a link between electoral pressures, incentives to cultivate a personal vote, and the narrow targeting of pork. However, the logic of our argument certainly resonates with a broader literature on the ways in which institutions shape incumbent incentives to pursue non-targeted versus targeted transfers. One theme running through this literature is that the relative appeal of and reliance on programmatic vis-a-vis narrow, targeted spending (pork) is a function of the nature of politicians'/ parties' constituencies and their need to cultivate a personal vote. Single member district plurality systems (SMDP), where politicians need to cultivate a personal vote and also represent relatively small geographic constituencies, tend to favor the distribution of pork (e.g., local public goods). By contrast, where legislators are elected via closed party lists using proportional representation (CLPR) the preference is for more programmatic spending and less targeted transfers (Lizzeri and Persico, 2001; Milesi-Ferretti et al., 2002; Golden and Min, 2013).<sup>6</sup>

In most of this literature the empirical context is wealthy democracies and the key distinction is between CLPR and SMDP electoral systems. The Philippines Senate is thus doubly interesting. First, it presents an opportunity to explore the effects of political institutions on the incentives to provide targeted pork within a developing democracy. Second, it allows us to explore these dynamics within a different type of electoral system, national MNTV, where there are strong incentives to cultivate a personal vote, as under SMDP, but where candidates are elected from broad, national constituencies. This provides an opportunity for us to disentangle the effects of two distinct features of the electoral system that are often bundled together—the incentives to cultivate personal vote and the size or breadth of a politician's constituency.

Incentives to cultivate a party vote and relatively broad constituencies go hand-in-hand in CLPR, while the personal vote and narrow constituencies generally come as a package under SMDP. The choice between broad programmatic goods or targeted goods that the existing literature describes as a theoretical/analytical trade-off across electoral systems (CLPR versus SMDP) exists as an empirical reality for Senators in the Philippines. To reiterate, Senators face a keen

<sup>5</sup>Interview with Senator, May 2013, Sorsogon, Philippines

<sup>6</sup>Though see Catalinac and Montinola (2021) for an analysis of when targeted distribution can occur under CLPR. A related literature finds that government spending is greater under proportional representation due to the fragmented nature of the party system and governing coalitions (Bawn and Rosenbluth, 2006; Persson et al., 2007)

need to build a personal network of support, but also need to mobilize enough voters to win in a nationwide contest. The targeted distribution of the pork is a useful tool to build links between candidates and narrow sub-national constituencies and to signal ability. However, targeted voters are not enough to carry the day given a national electorate, and targeting a small number of constituencies at the expense of the others risks an electoral backlash from voters in overlooked locales.

In light of the preceding discussion we have two sets of hypotheses:

**H1:** Senators seeking reelection will be more likely draw on the pork barrel than Senators not up for reelection.

That reelectionists would increase efforts to utilize pork as election approaches is consistent what Weingast et al. (1981) refer to as the “what have you done for me lately” (WHYDFML) principle, in which reelection-conscious politicians engage in greater spending as reelections kick into high gear (see also Patty and Weber, 2006; Shepsle et al., 2009).<sup>7</sup>

Our second set of hypotheses relates to the incentives of reelectionists to use targeted pork vis-a-vis non-reelectionists. On the one hand we might expect Senators of all types to be equally wary of the risks of targeted pork, those facing electoral competition and those who are not. If that is the case the higher usage of pork by reelectionists should not translate into more targeting, but we should see no difference between the two groups in terms of level of targeting (H2a). On the other hand, we might expect Senators facing reelection to be even more risk averse, with a heightened reluctance to be seen as favoring certain constituencies in the run up to the election (H2b). We test both of these competing hypotheses.

**H2a:** Senators seeking reelection should be no more likely than non-reelectionists to use pork in a targeted manner.

**H2b:** Senators seeking reelection should be less likely than non-reelectionists to use pork in a targeted manner.

In summary, we argue that senatorial reelectionists will use pork as part of an effort to build a personal vote, but will be cautious about doing so in a way that might expose them to accusations of favoritism. Note, we do not claim that reelectionists will completely eschew targeted pork. There may be circumstances where some targeting is advantageous—for example, when a candidate has especially strong ties to a particular region. However, we argue that they will be keenly aware of the risk to doing so and will strike a balance between using pork to signal ability or cultivate core constituencies and limiting electoral backlash from differential targeting of pork.

Before we empirically test our hypotheses, we first discuss the specific type of fiscal legislative particularism or pork available to Philippine Senators—the Constituency Development Fund or CDF—and how we operationalize the mechanisms by which CDF would be used to build a personal vote.

### 3. The Constituency Development Fund

Because legislator effort to supply fiscal legislative particularism is not directly observable, previous studies have relied on proxies such as committee membership or number of “money bills” produced (Shiller, 1995; Stratmann and Baur, 2002; Wawro, 2002); subjective self- or third-party assessments (Heitshusen et al., 2005); or from estimates of total pork barrel spending or actual

<sup>7</sup>See also the literature on political budget cycles (Alt and Lassen, 2006; Alt and Rose, 2009; Aidt and Mooney, 2014).

pork barrel project outcomes (Besley and Case, 1995; Aidt and Shvets, 2012). However, these measures are not only products of individual legislator efforts but also of many other institutional and political influences. In our research, we use data on the Constituency Development Fund (CDF), which meets the two conditions of the ideal proxy for fiscal legislative particularism: that the measure be uniquely attributed to the legislator's effort, and that it be associated with benefits that flow uniquely to the legislator's constituents (which, in the case of Philippine Senators, is the entire national electorate) (Keefer and Khemani, 2009).

### 3.1 The Philippine CDF program

There are two categories of spending under the Philippine CDF program: (1) the Priority Development Assistance Funds (PDAF), and (2) the Department of Public Works and Highways–Congressional Allocations (DPWH–CA). These are budgetary resources with an “equal sharing” provision, over which legislators exercise the “power of the purse.” Even though the release of CDF follows a set budgetary procedure, legislators have the authority to specify the projects to be funded.<sup>8</sup>

PDAF is a lump sum appropriation used either to augment the funds of national government agencies and government-owned corporations, or to support the priority development programs, both infrastructure and non-infrastructure projects (or pro-poor priority projects), of local government units.

DPWH–CA, on the other hand, is used for “hard” (or infrastructure) projects only, such as roads, bridges, and school and hospital buildings. These projects involve high-level financing and are highly visible to constituents. Funds under this category are released only through the Department of Public Works and Highways but legislators specify the recipient subnational constituency.

For the years covered in our study, each Senator is allocated PHP200 million (roughly USD4.6 million) for CDF annually, under the General Appropriations Act (GAA). Although senators have the power of the purse, actual fund releases require navigating bureaucratic red tape and hence require effort in their part (see Appendix 1 for a summary of the procedures of fund release of CDFs). Again, unspent appropriations accumulate over the term of a Senator.

### 3.2 Using CDF to build a personal vote

The prior section established that Senators have the *ability* to use government resources to improve their electoral chances—one of the two conditions for political budget cycles to emerge as identified by Alt and Rose (2009). What about the second condition? Do they have the *incentive* to do so? The answer is yes—access to pork-barrel funds is a key resource for many Senators as they seek to distinguish themselves from other candidates.

As previously discussed Senators facing electoral pressures can use CDF to build a personal vote in a variety of ways. They can “bring home the pork,” that is, target subnational constituencies, or, they can channel CDF to programmatic pursuits through national government agencies while taking credit for it. Additionally, Senators can choose to “pass on the pork” in years when they are not standing in election and increase the utilization of pork in years when they are. To test our hypotheses, we operationalize how Philippine Senators would use CDF to build a

<sup>8</sup>In fact, jurisprudence supports legislators' “power of the purse” over CDF. In the case of Philippine Constitution Association vs. Enriquez, *et al.* (G.R. No. 113105, August 19, 1994), the Supreme Court ruled that the power of the purse vested in Congress “includes the power to specify the project or activity to be funded under the appropriation law.” This ruling has been reaffirmed in Sarmiento, *et al.* vs. The Treasurer of the Philippines, *et al.* (G.R. No. 125680 and 126313, September 4, 2001). However, in November 2013, the Supreme Court declared this “power of the purse” unconstitutional (G.R. No. 208566, 208493, and 209251), and the release of CDF has been suspended since.

personal vote into four dependent variables of interest and we create these measures for total CDF (PDAF + DPWH–CA), for PDAF, and for DPWH–CA.

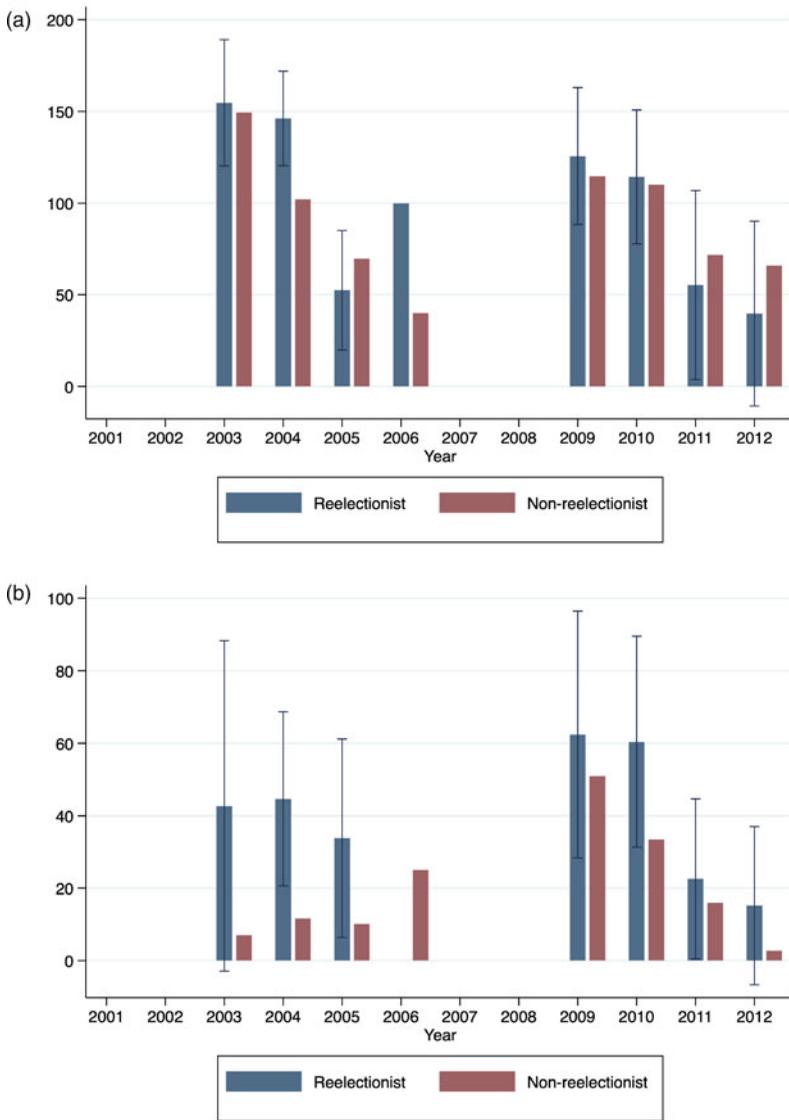
The first dependent variable is *pork\_utilization<sub>it</sub>*, which is the total CDF actually released to Senator *i* in year *t* as a fraction of Senator *i*'s CDF allocation in the same year. We hypothesize that pork utilization will be higher for a senator standing in election than for a senator not standing in election (H1).

The other three dependent variables speak to the propensity of Senators to “bring home the pork.” While we expect that reelectionist Senators will make more use of the pork-barrel, we expect them to avoid the risk of targeting pork to narrow geographic constituencies. One way to gauge the extent to which Senators bring home the pork is by examining the mix of targeted versus non-targeted CDF releases from Senator *i*'s CDF allocation in year *t*. The CDF dataset details whether funds were released for priority development programs, both infrastructure and non-infra projects, to Local Government Units (LGUs) such as provinces, municipalities, and cities (which we classify as targeted spending), or, for programmatic spending of National Government Agencies (NGAs) including government-owned corporations (which we call non-targeted spending). We create the dependent variable, *pork\_mix<sub>it</sub>*, which is the ratio of targeted CDF releases to total CDF releases. Because targeted spending is the complement of non-targeted spending, this variable also captures the propensity of Senators to allocate CDF on programmatic spending. We test the competing hypotheses that all Senators will be wary of the risks associated with targeted pork-barrelling and thus the mix of pork will not differ between a senator standing in election and a senator not standing in election (H2a) or that reelectionists will be more wary of the risks and will be less likely to target their home province (H2b).

Figure 1 illustrates how senators by reelectionist status allocate their CDF to targeted and non-targeted spending across the years for which data are available. There is some suggestive evidence that reelectionists are more likely to allocate funds to non-targeted spending, and no more likely to allocate funds to targeted spending in any given year.

Another way by which Senators could bring home the pork is by favoring their core constituents from their home province. To capture this, we create a variable, *pork\_homeprov<sub>it</sub>*, which is the ratio of CDF releases to Senator *i*'s home province in year *t* to total targeted CDF releases. Again, we test competing hypotheses: either that this variable will not differ between a senator standing in election and a senator not standing in election (H2a) or that reelectionists will be less likely to target their home province (H2b).

Finally, to “bring home the pork” might not necessarily imply that Senators would particularly favor their home province. It is possible that they would favor another subnational constituency for some reason (e.g., they would favor Metro Manila, being the most densely populated region of the country, or, alternatively, they would favor certain localities where there are swing voters). Capturing these possibilities in a single dependent variable presents a non-trivial challenge to researchers because Senatorial candidates have multiple and varied reasons for targeting pork to some narrow constituencies. We address the problem by constructing a variable that we call *pork\_hhi<sub>it</sub>*. Rather than anticipating which subnational constituency will each Senator favor, we describe a Senator's choice in terms of the spread of targeted spending across all localities. We capture this spread by constructing the Herfindahl–Hirschman Index (HHI) (Hirschman, 1964) of targeted CDF releases. HHI is a statistical measure of concentration. This index ranges from  $1/n$  to 1 ( $n$  being the number of subnational constituencies), and the higher the value of this index, the more concentrated or narrow the targeting of CDF, which means the Senator is favoring fewer subnational constituencies. Thus, without knowing which subnational constituencies are favored and for what reasons, this variable allows us to capture, in a general way, Senators' propensity to “bring home the pork.” Again, our competing hypotheses are that reelection Senators will be less likely to target (H2b), or, alternatively, there will be no difference between Senators standing and not standing for reelection—all will avoid targeting (H2a).



**Figure 1.** CDF funds (in million pesos) by Senatorial Reelectionist Status, 2001–2012. Notes: Blue (dark) bars represent Community Development Funds (CDF) utilization by reelectionist senators, and red (light) bars represent CDF utilization by non-reelectionist senators. Vertical lines represent 95 percent confidence intervals. CDF data are not available for years 2001, 2002, 2007, and 2008, and sparsely available for 2006.

In the next section, we discuss our key independent variable of interest, *reelectionist*, and explain how the institutional design of senate elections in the Philippines allows us to identify a causal effect of electoral pressures on how Senators use pork to build a personal vote.

#### 4. Econometric strategy and identification

The goal of our empirical analysis is to identify the effect of electoral pressures on how Philippine Senators use CDF to build a personal vote. For this, we need a source of plausible exogenous

variation of reelection status among Senators. Here, we explain how our independent variable, *reelectionist*, is plausibly exogenous.

We exploit the constitutional design of senate elections in the Philippines as the source of variation in reelection status of Senators. Senate elections in the Philippines are such that all 24 senators serve six-year terms, but that half of them are elected on a staggered basis every three years.<sup>9</sup> Thus, in a typical year, the variable *reelectionist* takes on a value of 0 for 12 of the senators and a value of 1 for the rest of them.

Figure 2 helps describe how this variable breaks down. The figure summarizes the reelection status of all Senators that appear in our dataset, which spans four electoral cycles (2001–2003, 2004–2006, 2007–2009, 2010–2012). Consider the electoral cycle 2001–2003. For this cycle, Senators Angara, Arroyo, Drilon, Estrada L., Flavio, Lacson, Magsaysay, Osmeña S., Pangilinan, Recto, and Villar are only just serving the first three years of their six-year term, hence, for these senators, the variable  $reelectionist_{it}$  takes on a value of 0. On the other hand, Senators Barbers, Biazon, Cayetano R., Jaworski, Legarda, Oreta, Osmeña J., and Pimentel Jr. are coded as reelectionists for these years. Senators Honasan, Ople, Revilla, and Sotto are all term-enders and are therefore considered non-reelectionists. (We also construct an indicator variable for being a term-ender for which we control in some of our econometric specifications to check the robustness of the results.)

In other contexts, estimating the “reelectionist effect” as the difference between  $E[dependent\_variable_{it}|reelectionist = 1] - E[dependent\_variable_{it}|reelectionist = 0]$  would typically yield a biased estimate. This is because a “selection effect” typically confounds the “reelectionist effect” in which Senators standing in elections are systematically different from those not standing in election, quite apart from their reelection status.

An important source of this selection bias arises from a comparison of different legislators representing different constituencies or different periods (see e.g., Besley and Case (1995)). The problem is that places or years in which the legislator is up for reelection may systematically differ from places or years in which the legislator is not standing in election quite apart from his/her reelection status. For example, it is possible that the dominance of political parties tends to diminish in districts holding elections due to electoral volatility, which could increase the incentive of the legislator in that district to cultivate a “personal vote” (Keefer and Khemani, 2009; Primo and Snyder, 2010). In this case, the “reelectionist effect” on the supply of pork could be biased away from zero because of political party considerations (distinct from the electoral pressures). In the context of Philippine Senators, this source of bias is not an issue because Senators are elected by plurality-at-large voting by the entire national electorate (i.e., MNTV), which means that both reelectionists and non-reelectionists confront the same institutional and political considerations and the same electoral constituency in any given year.

Another potential bias could also arise from a situation in which legislators share a common source of government funds and there is no cap on the amount of pork available. If legislators shared the same source of pork and reelectionists had the greater incentive to use pork funds as hypothesized, then a “reelectionist effect” would be biased away from zero, because such an increase would reflect not only the effort of the reelectionist per se, but also the decrease in pork of the non-reelectionists. From an econometric point of view, this is equivalent to a violation of the stable unit treatment value assumption (SUTVA), as the outcome of Senator  $i$  depends on the treatment (reelectionist) not only of  $i$  but also of  $j \neq i$ , which makes causal inference difficult. We circumvent this issue because there is no common pool problem in the case of CDF available to Philippine Senators. By law, all Senators receive equal amounts of annual CDF appropriations.

<sup>9</sup>Senators face a two-consecutive six-year term limit but may run again after skipping one electoral cycle. For example, Sen. Edgardo Angara, the longest serving senator to-date, served 12 years from 1986 to 1997, skipped the 1998–2000 electoral cycle, then ran again in 2001 and has since been holding office. He was forced to step down in 2013 when he hit his next term limit.

Senador	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Angara												
Aquino											1	
Arroyo												
Barbers												
Biazon												
Cayetano_A												
Cayetano_P												
Cayetano_R												
De_Castro												
Drilon												
Enrile												
Escudero												
Estrada_J												
Estrada_L												
Flavier												
Gordon												
Guingona												
Honasan												
Jaworski												
Lacson												
Lapid												
Legarda												
Lim												
Madrigal												
Magsaysay												
Marcos												
Ople												
Oreta												
Osmena_J												
Osmena_S												
Pangilinan												
Pimentel_III												
Pimentel_JR												
Recto												
Revilla												
Revilla_JR												
Roxas												
Santiago												
Sotto												
Trillanes												
Villar												
Zubiri												

**Figure 2.** Reelection status of Philippine Senators, 2001–2012. Notes: Cells shaded in light green are for “Non-reelectionists.” Cells in dark green are for “reelectionists,” and cells in orange are for last-termers. Cells in pale red are footnoted as follows. <sup>1</sup>Sen. Aquino left his post after only serving for three years in the Senate because he decided to run for the presidency in 2010. His first three years are not coded as “reelectionist” because his decision to run for presidency was not premeditated and was only brought about by the death of his mother, Ex-President Corazon Aquino, in late 2009. <sup>2</sup>Similarly, Sen. De Castro left his post after his first three years to run for the vice-presidency. His first three years are coded as “reelectionist” because his decision was premeditated. <sup>3</sup>Sen. Lim also left his post after three years to run as the City Mayor of Manila, and so his first three years are similarly coded as “reelectionist.”

This law has been on the books between 2000 and 2012 and the amount of appropriations is stable from election to election across the period of our study.

Hence, we address the ubiquitous problem in the legislative politics literature of finding a source of variation in electoral pressures that is exogenous to legislator characteristics and the political environment. The idea of using staggered elections to identify variation in reelection status,

**Table 1.** Summary statistics and balance tests

Variable	Full Sample	Non Reelectionist (NR)	Reelectionist (R)	p-values NR = R
Number of observations	160	101	59	
<b>Panel A: observables</b>				
Female (indicator)	0.15 (0.36)	0.14 (0.35)	0.17 (0.39)	0.686
Years of experience	8.34 (5.41)	8.78 (5.99)	7.59 (4.19)	0.221
Officer (indicator) <sup>a</sup>	0.17 (0.38)	0.15 (0.36)	0.20 (0.41)	0.493
Celebrity (indicator)	0.24 (0.43)	0.26 (0.44)	0.20 (0.41)	0.538
Regional following (indicator)	0.30 (0.46)	0.30 (0.46)	0.31 (0.46)	0.920
Term-ender (indicator) <sup>b</sup>	0.11 (0.31)	0.17 (0.38)	0.00 (0.00)	0.000
<b>Panel B: outcome variables</b>				
Total CDF utilization	0.54 (0.36)	0.48 (0.34)	0.63 (0.39)	0.005
Ratio of targeted to total	0.65 (0.35)	0.68 (0.36)	0.59 (0.34)	0.099
Targeted to home province <sup>c</sup>	0.19 (0.28)	0.21 (0.29)	0.16 (0.26)	0.328
Herfindahl index of targeted	0.27 (0.27)	0.26 (0.26)	0.29 (0.28)	0.539

Notes: Numbers reported are means. Numbers in parenthesis are standard deviations. P-values are for *t*-tests that the means are equal between the two groups.

<sup>a</sup>Officers include the senate president, majority floor leader, minority floor leader, and president *pro tempore*.

<sup>b</sup>All term-enders are coded as non-reelectionists.

<sup>c</sup>All funds in DPWH-CA are classified as targeted since all are infrastructure spending allocated to subnational constituencies.

by itself, is not novel in the literature (see e.g., Shepsle et al. (2009)). The novelty, as it applies in the context of the Philippines, is that staggered elections cause reelection status to differ among Senators without causing a differential change in the political environment—since they all respond to the same (national) constituency—or a differential change in their share of pork allotments—since they are all entitled to equal amounts of CDF appropriations. In short, the constitutional design of staggered *and* nation-wide senate elections, combined with the unique features of CDF, make our independent variable, *reelectionist*, plausibly exogenous.

That said, this identification strategy is not “full-proof.” Although we hold constant the unobserved characteristics of the political environment, and can account for some senator characteristics like experience (since we observe the same senators in multiple election cycles), there are still unobserved characteristics of the senators that can affect both re-election status and pork spending (e.g., campaigning effort), which could bias our simple Ordinary Least Squares (OLS) regression. Some scholars have exploited additional sources of identification (e.g., regression discontinuities based on close elections (Ferraz and Finan, 2011)). In this paper, our identification assumption is that, controlling for senator-level observables and year fixed effects, the *reelectionist* variable is as good as randomly assigned.

One way to test whether this exogeneity assumption holds is by checking balance in observable characteristics between reelectionists and non-reelectionists. Table 1 shows evidence that characteristics of Senators are, in fact, well-balanced between the reelectionist group and the non-reelectionist group.<sup>10</sup>

<sup>10</sup>The number of observations in the non-reelectionist group includes last-termers, accounting for the large differential in number of observations.

**Table 2.** Electoral pressures and pork utilization

	Total CDF			PDAF			DPWH-CA		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Reelectionist	0.15*** (0.050)	0.15*** (0.054)	0.12** (0.049)	0.12** (0.058)	0.12* (0.061)	0.13* (0.065)	0.074 (0.056)	0.084 (0.059)	0.045 (0.051)
Female = 1		0.049 (0.060)	0.040 (0.073)		0.082 (0.080)	0.096 (0.086)		-0.027 (0.079)	0.051 (0.045)
Officer = 1		0.15* (0.080)	0.12* (0.065)		0.15* (0.086)	0.15* (0.083)		0.03 (0.061)	0.00 (0.067)
Experience (years)		0.012* (0.0064)	0.018*** (0.0054)		0.023*** (0.0064)	0.022*** (0.0061)		0.01 (0.0080)	0.01 (0.0066)
Celebrity = 1		0.099* (0.052)	0.11* (0.058)		0.097 (0.066)	0.081 (0.072)		-0.0043 (0.067)	-0.022 (0.052)
Last-termer = 1		-0.057 (0.12)	-0.089 (0.11)		-0.13 (0.14)	-0.16 (0.15)		-0.0025 (0.16)	0.041 (0.11)
Constant	0.48*** (0.041)	0.33*** (0.067)	0.30*** (0.063)	0.59*** (0.049)	0.35*** (0.068)	0.35*** (0.068)	0.86*** (0.040)	0.77*** (0.10)	0.81*** (0.078)
Year fixed effects	No	No	Yes	No	No	Yes	No	No	Yes
Observations	160	160	160	159	159	159	80	80	80
R <sup>2</sup>	0.039	0.117	0.400	0.021	0.158	0.229	0.013	0.041	0.446

Note: Huber/White robust standard errors clustered at the senator level in parentheses.  
 \*\*\*p < 0.01, \*\*p < 0.05, \*p < 0.1.

To formally test our hypotheses, we run OLS regressions based on the following specification:

$$dependent\_variable_{it} = \alpha + \beta reelectionist_{it} + \mathbf{X}'\Gamma + \delta_t + \epsilon_{it} \tag{1}$$

where *i* denotes a Senator and *t* a year. *dependent\_variable<sub>it</sub>* stands for the four dependent variables that we constructed and explained in the previous section. The independent variable, *reelectionist<sub>it</sub>*, is an indicator variable that takes on a value of 1 if a senator is up for reelection in the next senatorial race, and 0 otherwise. The vector **X** is a set of controls including gender, years in office, an indicator for holding an official post (i.e., senate president, majority floor leader, minority floor leader, or president *pro tempore*), an indicator for being a celebrity Senator (i.e., was formerly a national show business or media personality), and an indicator for being a last-termer.  $\delta$  year fixed effects are included, and  $\epsilon_{it}$  is an error term. In all regressions, we report Huber/White robust standard errors clustered at the Senator level.

### 5. Results and analysis

As argued above, legislators will use pork to build a personal vote in ways that would help them signal ability and minimize the electoral costs of targeting narrow constituencies. Descriptive statistics presented in Panel B of Table 1 provide preliminary evidence in support of our hypotheses. Senatorial reelectionists are more likely to utilize CDF than their non-reelectionist counterparts (H1). Consistent with H2 they are no more likely to target CDF to their home province and they are no more likely to concentrate targeted CDF to a few subnational constituencies. This simple picture also raises the possibility that they are *less* likely to allocate CDF to targeted spending—consistent with H2b. To investigate further, Tables 2–4 present the formal tests and robustness checks of these hypotheses based on OLS regressions using Equation (1) above.

Column 1 of Table 2 presents the correlation between total CDF utilization and being a reelectionist. The coefficient estimate suggests that Philippine Senators up for reelection utilize their annual lump sum allocations 15 percentage points higher than Senators not standing in election. As shown in column 2, this estimated effect is robust to controlling for gender, an indicator for assuming an officer position (i.e., senate president, majority- or minority-floor

**Table 3.** Electoral pressures and ratio of targeted pork to total pork

	Total CDF			PDAF		
	(1)	(2)	(3)	(4)	(5)	(6)
Reelectionist	-0.090* (0.053)	-0.080 (0.054)	-0.067 (0.056)	-0.035 (0.056)	-0.028 (0.057)	-0.043 (0.063)
Female = 1		0.045 (0.079)	0.060 (0.083)		0.049 (0.053)	0.055 (0.057)
Officer = 1		0.099 (0.060)	0.091 (0.058)		0.064 (0.079)	0.055 (0.065)
Experience (years)		0.0069 (0.0060)	0.0079 (0.0061)		-0.0026 (0.0063)	0.0020 (0.0060)
Celebrity = 1		0.17** (0.069)	0.16** (0.070)		0.10 (0.074)	0.10 (0.070)
Last-termer = 1		-0.0063 (0.14)	-0.040 (0.15)		0.058 (0.13)	0.039 (0.13)
Constant	0.68*** (0.050)	0.56*** (0.088)	0.55*** (0.084)	0.50*** (0.043)	0.47*** (0.081)	0.44*** (0.085)
Year fixed effects	No	No	Yes	No	No	Yes
Observations	160	160	160	159	159	159
R <sup>2</sup>	0.015	0.084	0.145	0.002	0.028	0.111

Note: Huber/White robust standard errors clustered at the senator level in parentheses.  
 \*\*\*p < 0.01, \*\*p < 0.05, \*p < 0.1.

**Table 4.** Electoral pressures and ratio of pork to home province to total targeted pork

	Total CDF			PDAF			DPWH-CA		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Reelectionist	-0.044 (0.044)	-0.054 (0.047)	-0.058 (0.044)	-0.0010 (0.062)	0.0016 (0.067)	-0.012 (0.066)	-0.092* (0.047)	-0.11** (0.047)	-0.12** (0.047)
Female = 1		-0.11 (0.089)	-0.095 (0.086)		-0.052 (0.093)	-0.038 (0.089)		-0.14 (0.090)	-0.15 (0.096)
Officer = 1		-0.11* (0.065)	-0.10 (0.061)		-0.16*** (0.058)	-0.15*** (0.049)		-0.084 (0.079)	-0.087 (0.082)
Experience (years)		-0.0013 (0.0066)	0.00061 (0.0067)		-0.0033 (0.0062)	0.00030 (0.0058)		-0.016 (0.010)	-0.018* (0.010)
Celebrity = 1		0.0093 (0.091)	-0.011 (0.086)		0.12 (0.082)	0.11 (0.081)		-0.098 (0.12)	-0.11 (0.12)
Last-termer = 1		-0.11 (0.078)	-0.10 (0.079)		-0.060 (0.088)	-0.039 (0.096)		-0.019 (0.12)	0.018 (0.12)
Constant	0.21*** (0.044)	0.27*** (0.086)	0.25*** (0.081)	0.22*** (0.044)	0.26*** (0.093)	0.23** (0.089)	0.25*** (0.059)	0.46*** (0.14)	0.48*** (0.14)
Year fixed effects	No	No	Yes	No	No	Yes	No	No	Yes
Observations	160	160	160	159	159	159	80	80	80
R <sup>2</sup>	0.006	0.053	0.105	0.000	0.064	0.118	0.025	0.156	0.184

Note: Huber/White robust standard errors clustered at the senator level in parentheses.  
 \*\*\*p < 0.01, \*\*p < 0.05, \*p < 0.1.

leader, or president *pro tempore*), years in office, an indicator for being a celebrity, as well as an indicator for being a last-termer. Controlling for year fixed effects causes the magnitude of the coefficient estimate to drop down to 12 percentage points, however, it remains statistically significant at the 5 percent level. This estimated effect of electoral pressures on total CDF utilization is substantial: given a mean CDF utilization rate of 54 percentage points among all Senators, the estimate implies that Senators standing in elections increase efforts to utilize pork by 22 percent. This amount is substantive; it is equivalent to an additional USD552,000 of CDF funds utilized by senators whenever they are up for reelection. (The average annual CDF allocations utilized by non-reelectionists is about USD2.5 million.)

**Table 5.** Electoral pressures and Herfindahl–Hirschman Index of targeted pork

	Total CDF			PDAF			DPWH–CA		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Reelectionist	0.029 (0.047)	0.024 (0.047)	0.020 (0.045)	−0.040 (0.053)	−0.039 (0.052)	−0.048 (0.050)	0.11 (0.077)	0.097 (0.091)	0.083 (0.080)
Female = 1		−0.055 (0.064)	−0.024 (0.060)		−0.00043 (0.060)	0.027 (0.055)		−0.0094 (0.11)	−0.031 (0.11)
Officer = 1		−0.12** (0.045)	−0.10** (0.040)		−0.17*** (0.053)	−0.15*** (0.052)		−0.057 (0.10)	−0.043 (0.075)
Experience (years)		0.0057 (0.0043)	0.0091** (0.0040)		0.0018 (0.0057)	0.0052 (0.0054)		−0.0072 (0.0070)	−0.0030 (0.0079)
Celebrity = 1		0.058 (0.050)	0.031 (0.048)		0.12** (0.055)	0.095* (0.055)		−0.079 (0.083)	−0.057 (0.084)
Last-termer = 1		−0.13* (0.071)	−0.11 (0.076)		−0.10 (0.091)	−0.078 (0.098)		−0.021 (0.11)	−0.028 (0.091)
Constant	0.26*** (0.030)	0.25*** (0.069)	0.22*** (0.063)	0.30*** (0.036)	0.30*** (0.078)	0.27*** (0.076)	0.37*** (0.046)	0.47*** (0.11)	0.44*** (0.12)
Year fixed effects	No	No	Yes	No	No	Yes	No	No	Yes
Observations	160	160	160	159	159	159	80	80	80
R <sup>2</sup>	0.003	0.046	0.242	0.004	0.070	0.191	0.027	0.052	0.277

Note: Huber/White robust standard errors clustered at the senator level in parentheses.  
 \*\*\*p < 0.01, \*\*p < 0.05, \*p < 0.1.

We then look at how electoral pressures impact the utilization rates of the two subcomponents of CDF: (1) PDAF and (2) DPWH–CA. Results are reported in columns 4–6 and 7–9 of [Table 2](#), respectively. We find substantial and statistically significant effect of being a reelectionist on PDAF utilization rate; however, we find small and statistically insignificant effect on DPWH–CA utilization rate. Recall that PDAF are funds used mostly for non-infrastructure projects (labeled in the releases as “pro-poor priority development projects”) of local government units as well as to supplement the programmatic projects of government agencies. DPWH–CA are used only for infrastructure projects such as roads, bridges, and schools and hospital buildings among others. This difference could explain why we find a “reelectionist effect” in PDAF but not in DPWH–CA. Infrastructure projects are, by definition, targetable and highly visible and, consistent with hypothesis 2, reelectionists are wary of the risks involved in such targeting. In addition, DPWH–CA projects often involve high-level financing and require Senators to utilize as much of their annual allocations as possible to realize them. In contrast, most of PDAF projects need not require high-level financing, and because unutilized funds carry over from year to year within a term, Senators can afford to limit or defer PDAF utilization in years when they are not standing in election and back-load utilization in years when they are up for reelection.

Next, we turn to Senators’ propensity to “bring home the pork” when they are standing in election. As previously discussed, we construct three outcome variables to capture this behavior. In [Table 3](#) we look at the first measure—the ratio of targeted pork to total pork releases. We expected that legislators would avoid increasing their targeted spending in an election year, and so hypothesized either null results or a negative effect. Column 1 of [Table 3](#) indeed shows a negative and statistically significant effect of being a reelectionist, suggesting that Senators up for reelection are less likely to bias spending in favor of projects targeted to subnational constituencies. Put differently, senatorial reelectionists are actually more likely to divert CDF to national government agencies for programmatic spending.

The sign of the coefficient estimate is consistently negative, though statistical significance disappears once we control for observable covariates. This weak evidence suggests that Senators may actually reduce the amount of targeted spending in election years in an effort to avoid the costs of playing favorites. Looking at the PDAF subcomponent of total CDF, we do not find statistically significant effects of being a reelectionist, though we still see the negative sign across all three

specifications. (Note that, by definition, all of DPWH-CA spending is classified as targeted because they are spent on infrastructure projects of recipient subnational constituencies, hence we cannot make a similar test looking at the DPWH-CA subcomponent.)

We next analyze how Philippine Senators allocate the targeted fraction of CDF across the different subnational constituencies. We hypothesized that reelectionists will be more wary of targeting their home province or that they will behave no differently than non-reelectionists in terms of favoring their home province. We report the results in [Table 4](#).

Looking at Total CDF (columns 1–3 of [Table 4](#)), consistent with H2a we find no statistically significant effect of being a reelectionist on the amount of pork allocated to Senators' home province as a ratio of total targeted pork. Focusing on the PDAF subcomponent, we do not find any statistically significant "reelectionist effect." However, looking at the DPWH-CA subcomponent of CDF, we actually find a substantial and statistically significant *negative* effect of being a reelectionist. The negative sign is consistent with H2b and with what we find in [Table 3](#). Senators tend to reduce spending on pork targeted to their home province in an effort to avoid the electoral costs of favoring their political strongholds. Recall that DPWH-CA are funds spent on infrastructure projects that are highly visible to voters. This could explain why senatorial reelectionists are particularly mindful of not playing favorites when it comes to the allocation of DPWH-CA.

Lastly, in [Table 5](#), we look at whether Senators concentrate the allocation of CDF to a few subnational constituencies whenever they are standing in election. We use the Hirschman–Herfindahl Index of CDF to capture Senators' propensity to bring home the pork in this manner. We do not find any statistically significant effect of being a reelectionist on concentrating spending to a few provinces.

In sum, Philippine Senators facing electoral pressures use pork to build a personal vote. But they do so in ways that account for the electoral costs of targeting narrow constituencies as well as the need to signal ability. In general, Senators standing in election behave no differently than their non-reelectionist counterparts in terms of targeting subnational constituencies. If anything, we find evidence that reelectionists limit electorally costly, targeted spending. However, Senators substantially increase their efforts to utilize pork in years when they are standing in election.

## 6. Conclusion

When it comes to the effect of electoral pressures on fiscal legislative particularism (pork), the standard prediction in the literature is that legislators facing reelections will seek to "bring home the pork" to narrow constituencies or parochial interests. We subject this claim to empirical analysis in a context in which targeting narrow constituencies entailed electoral costs. We find that electoral pressures do not always cause legislators to bring home the pork. Instead, we find that when pork is available but targeting narrow constituencies has adverse electoral consequences, legislators standing in elections are averse to allocating pork to geographically targeted spending. Moreover, they allocate any such targeted spending away from their political strongholds. However, they find other ways to use pork to build a personal vote. In particular, we find that legislators pass on the pork in years when they are not standing in election and backload pork releases to when they are.

Put differently, legislators facing electoral pressures can choose *whom* to bring home the pork and *when* to do so to help them build a personal vote. The innovation of this research is in suggesting that such decisions are a consequence of the trade-off that legislators face between the desire to signal ability and the need to minimize the adverse electoral consequences of differential pork allocation.

This theoretical insight has broad implications in the production of public policy. Legislators responding to electoral pressures will use pork in varied ways to build a personal vote. Hence, policymakers desiring to improve efficiency in public spending ought to account for the factors that shape the trade-offs facing legislators. For instance, increasing the size of the legislative district may increase the electoral costs of targeting narrow constituencies, which may then lessen

the incentive of legislators to “bring home the pork.” But where pork is readily available and legislators have a lot of leeway, they may then respond by changing the timing of pork utilization. This has implications on the efficiency and welfare effects of fiscal legislative particularism, although these are beyond the scope of this research and are left for future pursuits.

**Supplementary material.** The supplementary material for this article can be found at <https://doi.org/10.1017/psrm.2022.27>.

## References

- Ahuja S (1994) Electoral status and representation in the United States Senate: does temporal proximity to election matter?. *American Politics Quarterly* **22**, 104–118.
- Aidt T and Shvets J (2012) Distributive politics and electoral incentives: evidence from seven U.S. State Legislatures. *American Economic Journal: Economic Policy* **4**, 1–29.
- Aidt TS and Mooney G (2014) Voting suffrage and the political budget cycle: evidence from the London Metropolitan Boroughs 1902–1937. *Journal of Public Economics* **112**, 53–71.
- Alt JE and Lassen DD (2006) Transparency, political polarization, and political budget cycles in OECD countries. *American Journal of Political Science* **50**, 530–550.
- Alt JE and Rose. SS (2009) Context-conditional political budget cycles. In *The Oxford handbook of comparative politics*.
- Ashworth S and Mesquita EB de (2006) Delivering the goods: legislative particularism in different electoral and institutional settings. *Journal of Politics* **68**, 168–179.
- Atkinson J, Hicken A and Ravanilla N (2015) *Building inclusive democracies in ASEAN*. Manila: Anvil chapter Pork & Typhoons: The Influence of Political Connections on Disaster Response, pp. 74–96.
- Bawn K and Rosenbluth F (2006) Short versus long coalitions: electoral accountability and the size of the public sector. *American Journal of Political Science* **50**, 251–265.
- Bernstein R (1991) Strategic shifts: safeguarding the public interest? U.S. Senators, 1971–86. *Legislative Studies Quarterly* **16**, 263–280.
- Besley T and Case A (1995) Does electoral accountability affect economic policy choices? Evidence from gubernatorial term limits. *Quarterly Journal of Economics* **110**, 769–798.
- Bueno de Mesquita B, Smith A, Siverson R and Morrow J (2003) *The Logic of Political Survival*. Cambridge, Massachusetts: MIT Press.
- Cain B, Ferejohn J and Fiorina M (1987) *The Personal Vote: Constituency Service and Electoral Independence*. Cambridge, Massachusetts: Harvard University Press.
- Campbell J (1982) Cosponsoring legislation in the U.S. Congress. *Legislative Studies Quarterly* **7**, 415–422.
- Carey J and Shugart M (1995) Incentives to cultivate a personal vote: a rank ordering of electoral formulas. *Electoral Studies* **14**, 417–439.
- Catalinac A (2016) From pork to policy: the rise of programmatic campaigning in Japanese elections. *Journal of Politics* **78**.
- Catalinac A and Montinola L (2021) Why geographically-targeted spending under closed-list proportional representation favors marginal districts. *Electoral Studies* **71**, 102329. <https://www.sciencedirect.com/science/article/pii/S0261379421000494>
- Chen J (2010) The effect of electoral geography on pork barreling in bicameral legislatures. *American Journal of Political Science* **54**, 301–322.
- Fenno Jr R (1982) *The United States Senate: A Bicameral Perspective*. Washington, D.C.: American Enterprise Institute.
- Ferejohn J (1974) *Pork Barrel Politics: Rivers and Harbors Legislation, 1947–1968*. Stanford, CA: Stanford University Press.
- Ferraz C and Finan F (2011) Electoral accountability and corruption: evidence from the audits of local governments. *American Economic Review* **101**, 1274–1311.
- Fukumoto K and Matsuo A (2015) The effects of election proximity on participatory shirking: the staggered-term chamber as a laboratory. *Legislative Studies Quarterly* **40**, 599–625.
- Golden MA (2003) Electoral connections: the effects of the personal vote on political patronage, bureaucracy and legislation in postwar Italy. *British Journal of Political Science* **33**, 189–212.
- Golden M and Min B (2013) Distributive politics around the world. *Annual Review of Political Science* **16**, 73–99.
- Heitshusen V, Young G and Wood D (2005) Electoral context and MP constituency focus in Australia, Canada, Ireland, New Zealand and the United Kingdom. *American Journal of Political Science* **49**, 32–45.
- Hicken A (2009) *Building Party Systems in Developing Democracies*. New York: Cambridge University Press.
- Hirschman A (1964) The paternity of an index. *American Economic Review* **54**, 761–62.
- Keefer P and Vlaicu R (2008) Democracy, credibility, and clientelism. *Journal of Law, Economics, and Organization* **24**, 371–406.
- Keefer P and Khemani S (2009) When do legislators pass on pork? The role of parties in determining legislator effort. *American Political Science Review* **103**, 99–112.
- Lazarus J and Steigerwalt A (2009) Different houses: the distribution of earmarks in the U.S. House and Senate. *Legislative Studies Quarterly* **34**, 347–373.
- Lizzeri A and Persico N (2001) The provision of public goods under alternative electoral incentives. *American Economic Review* **91**, 225–239.

- Mayhew D (1974) *The Electoral Connection*. New Haven, CT: Yale University Press.
- Milesi-Ferretti GM, Perotti R and Rostagno M (2002) Electoral systems and public spending. *The Quarterly Journal of Economics* 117, 609–657. <http://www.jstor.org/stable/2696437>.
- Nemoto K and Shugart M (2013) Localism and coordination under three different electoral systems: the National District of the Japanese House of Councillors. *Electoral Studies* 32, 1–22.
- Patty J and Weber R (2006) Letting the good times roll: a theory of voter inference and experimental evidence. *Public Choice* 130, 49–67.
- Persson T, Roland G and Guido T (2007) Electoral rules and government spending in parliamentary democracies. *Quarterly Journal of Political Science* 2, 155–188.
- Primo D and Snyder J Jr. (2010) Party strength, the personal vote, and government spending. *American Journal of Political Science* 54, 354–370.
- Ravanilla N (2021) Motives in Pork Distribution: Partisan Bias or Patronage?. *Working Paper—University of California San Diego*.
- Robinson J and Torvik R (2005) White elephants. *Journal of Public Economics* 89, 197–210.
- Robinson J and Verdier T (2013) The political economy of clientelism. *Scandinavian Journal of Economics* 115, 260–291.
- Samuels DJ (1999) Incentives to cultivate a party vote in candidate-centric electoral systems: evidence from Brazil. *Comparative Political Studies* 32, 487–518.
- Shapiro C, Brady D, Brody R and Ferejohn J (1990) Linking constituency opinion and senate voting scores: a hybrid explanation. *Legislative Studies Quarterly* 15, 599–621.
- Shepsle K, Houweling R Van, Abrams S and Hanson P (2009) The senate electoral cycle and bicameral appropriations politics. *American Journal of Political Science* 53, 343–359.
- Shiller W (1995) Senators as political entrepreneurs: using bill sponsorship to shape legislative agendas. *American Journal of Political Science* 39, 123–125.
- Shugart M (2005) *The politics of electoral systems*. Oxford chapter Comparative Electoral Systems Research: The Maturation of a Field and New Challenges Ahead, pp. 25–55.
- Stratmann T and Baur M (2002) Plurality rule, proportional representation, and the German Bundestag: how incentives to pork-barrel differ across electoral systems. *American Journal of Political Science* 46, 506–514.
- Wawro G (2002) Estimating dynamic panel models in political science. *Political Analysis* 10, 25–48.
- Weingast B, Shepsle K and Johnsen C (1981) The political economy of benefits and costs: a neoclassical approach to distributive politics. *Journal of Political Economy* 89, 642–664.

## Appendix A: Summary of the procedure for the release of Constituency Development Funds (CDF)

The procedures governing the identification, fund release, implementation, and reporting of projects funded under the PDAF and DPWH-CA are as follows:

1. Upon approval of the General Appropriations Act (GAA), the President, through the Department of Budget and Management (DBM), decides on the schedule of fund releases (i.e., number of tranches, amount per tranche, and the dates of release) for PDAF and DPWH-CA.
2. The legislators then prepare their respective lists of proposed projects in accordance with the menu of qualified projects spelled-out in the GAA. The lists of projects are submitted to the House Committee on Appropriations or the Senate Committee on Finance. They include the nature or description of the project, project location, fund requirement or project cost, and implementing agency.
3. The legislators' lists are then jointly endorsed to DBM by the Appropriations Chair and the Speaker in the case of the House of Representatives, and the Finance Chair and the Senate President in the case of the Senate.
4. The DBM reviews and evaluates the legislators' lists to ascertain their compliance with the project menu in the GAA. The review is conducted by the DBM Budget and Management Bureau G for the PDAF, and Budget and Management Bureau A for the DPWH-CA. Upon satisfactory compliance, the DBM Secretary issues the Special Allotment Release Order (SARO). This document obligates funds for a project to its implementing agency. SARO copies are also given to the DBM Budget Technical Services, DBM Budget and Management Bureau, DBM Regional Office, and the Commission on Audit (COA). A Notification Letter is also sent to the legislator concerned.
5. The cash allocations are subsequently released based on the national government cash program and percentage of project completion. Notice of cash allocation (NCA) is sent to the government depository bank, and Advice of Notice of Cash Allocation Issued (ANCAI) is sent to the implementing agency (copy furnished to legislator), signaling that agency can already pay its obligation with its contractor.