Unpaved Road Ahead: The Consequences of Election Cycles for Capital Expenditures

Jan H. Pierskalla

The Ohio State University

pierskalla.4@osu.edu

Audrey Sacks

The World Bank

asacks@worldbank.org

May 31, 2017

Abstract

      Canonical political budget cycle theories predict an increase in visible government expenditures in election years due to signaling by incumbents. We identify the presence of an alternative election-related distortion of government budgets—a drop in capital expenditures—that applies in low capacity and weak governance settings. In election years, the increase in scrutiny and distraction of politicians and bureaucrats decreases the ability of governments to facilitate complicated capital investments. We test this argument by exploiting the exogenous phasing-in and timing of local direct elections in Indonesian districts and detailed data on local budget compositions to document the existence of meaningful reductions in capital expenditures in election years. This effect is mediated by the status of incumbents. While safe incumbents who are running for re-election can avoid this particular type of distortion, elections with embattled incumbents or without incumbents running for re-election exhibit much stronger effects.

Keywords: Political Budget Cycles, Capital Expenditures, Infrastructure, Elections, Corruption, Decentralization

Short Title: Election Cycles and Capital Expenditures

---

1 Introduction

An established literature on political business and budget cycles warns that electoral incentives can distort public expenditures in ways that potentially divert resources away from public goods provision (Franzese 2002; Khemani 2004; Saez and Sinha 2010). Importantly, many existing models of electoral budget cycles show that election years should be associated with *increases* in (visible) expenditures, since incumbents wish to demonstrate their ability to voters (Rogoff 1990).[2]

In this paper we document a different form of political distortion that is tied to the election schedule and highly relevant to local governments in developing democracies. We argue that capital expenditures suffer in election years, due to a temporary decline in the political and administrative effort deployed by elected officials and key civil servants. Local governments in low income countries often struggle to successfully complete capital investment projects due to a lack of capacity, a shortage of skilled staff, the absence of strong institutional procedures for planning and procurement, and political interference and corruption. These challenges can be mitigated by the effective collaboration of elected officials and key civil servants.

We argue that it is particularly unlikely that politicians and civil servants will exert the necessary effort in executing capital investment projects in election years. First, political leaders are preoccupied by campaigning and lack the time and resources to shepherd complicated investment projects through the budgeting and implementation process. Lame-duck incumbents in particular lack the necessary control over local parliament and the bureaucracy to facilitate capital expenditures in election years. Second, electoral periods create an environment of heightened attention and scrutiny that makes politicians and civil servants less willing to engage in investment projects. Due to electoral scrutiny and media attention,

---

[2]A smaller subset of papers also discusses reductions in government expenditures or economic activity in election years. We engage these arguments in the next section.

it is more difficult for dishonest politicians and local bureaucrats to engage in rent seeking associated with the procurement of capital investments. Simultaneously, honest politicians and local bureaucrats are unwilling to implement capital investments because they risk becoming the undeserving target of politically motivated corruption investigations.

We test this theoretical prediction empirically in the context of local elections in Indonesia. This is useful for two reasons. First, the Indonesian case allows us to leverage a natural experiment—the exogenous phasing-in of direct elections in Indonesian districts—to identify the causal effect of election years on capital expenditures. Providing strong but narrow evidence from a single context is an important way to contribute to a larger research program (Samii 2016). Second, Indonesia is an important case to study the relationship between local elections and capital and infrastructure projects. Across the developing world, improving infrastructure is a core challenge for governments; the UN Development Programme singled it out as one of the new Sustainable Development Goals (UNDP 2015). Like many other developing countries, Indonesia has suffered from lower growth rates due to chronic underinvestment (p.81 World Bank 2014). Despite the heightened need for better infrastructure, the Indonesian government, at all levels, only spent about 2.4% of the country's GDP on infrastructure between 2008 and 2011, down from 3.3% in 1995–97. The government is also struggling to implement planned expenditures. Recent estimates suggest that only 39% of planned national-level capital expenditures for 2015 had been realized by October (Sipahutar 2015). Local governments deserve some of the blame for low capital expenditures. Since the transition to democracy in 1999 and a massive decentralization reform in 2001, the bulk of capital and infrastructure expenditures (39% in 2010–11) is now under the purview of elected local governments (p.84 World Bank 2014). Our argument and analysis helps to shed light on local governments' low levels of capital and infrastructure expenditures.

We test our argument by establishing the causal effect of election years on shifts in economic expenditure categories in Indonesia. In election years, we find clear evidence that

districts shift budgetary expenditure profiles. Total expenditures fall, which is largely driven by a 2–3 percentage point drop in capital expenditures, which represents a substantial distortion of the public planning process, while personnel and goods expenditures remain largely unchanged. Using sectoral expenditure categories, we further show that this drop in capital expenditures is concentrated in infrastructure projects. We further trace the mechanism by testing for heterogeneous effects, using information on candidates' incumbency status. We show that the reduction in capital expenditures is driven by election years in which incumbents are not seeking re-election. This supports the notion that incumbent control, political and administrative effort are hugely important for successful capital investment projects.

While our results are specific to the Indonesian context, we believe that three context conditions speak to the generalizability of our findings. First, the general lack of capacity and the weak governance environment makes local governments in Indonesia particularly prone to disruptions in capital investments due to political distortions. Second, we study local elections in which information asymmetries that drive standard political budget cycle arguments are likely to be muted and a minimum amount of public scrutiny exists with respect to corruption. Third, we argue that the strong incumbents can avoid disruptions to capital expenditures during election years. Hence, we believe our argument is relevant for local elections in other cases with weak governance structures, a minimum amount of public interest in corruption, and the absence of strong incumbency advantages (e.g, cases like India, Brazil, Nigeria or the Philippines).

This study makes at least two noteworthy contributions. First, it enhances our understanding of the politics of capital and infrastructure investments. In many developing countries, creating basic infrastructure is essential for delivering public services and facilitating the development process. Therefore, identifying the economic and political bottlenecks that inhibit infrastructure improvements is an important task. This paper helps identify when and how elections can help or hinder such investments. Second, the study extends and adds to existing research on political budget cycles. We propose a distinct type of elec-

toral distortion that lowers capital expenditures in election years. Traditional budget cycle arguments typically focus on the *increase* of visible expenditures in election years to signal the quality of *incumbents*. Our theory posits an entirely different mechanism that relies on the inability to realize complicated expenditure projects in elections years and applies in particular to non-incumbent races. This adds important nuance to our understanding of electoral budget cycles in developing democracies.

2   Elections, Budget Cycles, and Capital Expenditures

A large body of work on electoral business and budget cycles provides theoretical reasons and empirical evidence that elections can induce distortionary policy patterns (Franzese 2002). Early models assume that office-seeking politicians use macroeconomic policy to stimulate the economy during elections (Nordhaus 1975). While evidence of such election-induced business cycles is fairly weak, budgetary manipulation for electoral gains represents an important alternative policy lever. Rogoff (1990) provides the standard theoretical account of electoral budget manipulation. Voters, due to asymmetric information, are unable to directly observe candidates' quality and have to rely on indirect signals to inform their vote choice. Hence, incumbents increase expenditures, especially expenditures that are visible to voters or have immediate impacts, at the expense of expenditures with longer-term rewards or increased debt in order to signal competency to voters. A similar logic builds on the insights of the clientelism literature: Incumbents will increase targetable expenditures, e.g., personnel expenditures, in election years in order to buy votes and sustain clientelistic exchange relationships (Hanusch and Keefer 2013; Magaloni, Diaz-Cayeros, and Estevez 2007).

Several studies provide empirical evidence of the existence of such electoral budget cycles, especially in developing countries (Kohno and Nishizawa 1990; Limosani and Navarra 2001; Schuknecht 1996). Extending the basic budget cycle model, studies have also begun to investigate the factors that amplify or reduce distortionary expenditures – e.g., the size

of resource rents and media penetration (Vergne 2009) or rents associated with holding office (Shi and Svensson 2006).

A smaller subset of studies posits that election cycles can also be associated with reduced economic activity.[3] Drops in economic output may occur via delayed exchange rate devaluations (Stein and Streb 2004), changes to bond spreads and interest rates (Block and Vaaler 2004), reductions in private capital expenditures (Canes-Wrone and Park 2012) or ill-timed austerity policy (Kaplan 2013). We add to this strain of the literature by developing another mechanism that links election years to drops in capital expenditures.

Importantly, the existing literature on political budget cycles relies on three assumptions. First, it largely focuses on the behavior of incumbents and has less to say about elections in which incumbents choose not to run. A growing literature on elections in the developing world has argued for the existence of an incumbency disadvantage (Klasnja 2015), which suggests that many elections may feature no or weak incumbents. Second, canonical budget cycle models assume that incumbents have a substantial degree of control over the budget. This ignores the weakness of governance structures and lack of capacity in many developing countries, which curtail the ability of local governments to manipulate or even consistently realize expenditure projects. Last, the majority of studies analyzes national-level elections.[4] In contrast, local politicians have fewer incentives to use expenditures as a signaling device, because information asymmetries are less severe. A large literature on decentralization has argued that local elections are beneficial due to the increased information voters have about local candidates and the improved knowledge local governments have about citizens' preferences (Bardhan 2002).[5]

---

[3]E.g., Remmer (1993) offers evidence for this in the context of Latin America.

[4]Notable exceptions that study local elections are Drazen and Eslava (2010), Veiga and Veiga (2006), Khemani (2004), Saez and Sinha (2010).

[5]Candidates might be more likely to rely on patronage expenditures to win votes in local elections, but that is a distinct mechanism from the standard signaling argument put forward by Rogoff (1990). We engage this alternative, patronage-based budget cycle argument further below and in our empirical tests.

We believe that these three assumptions do not always apply in the context of developing countries' elections. In fact, we argue that for many local elections in the developing world an alternative mechanism exists that links election years to *lower* expenditures. Election periods can be associated with reduced expenditures, specifically capital expenditures, because local politicians and bureaucrats have incentives to neglect and delay capital expenditure projects.

Different types of local government expenditures are malleable to varying degrees and require different levels of attention and effort by local politicians and civil servants to be realized. For example, once the initial hiring process has been concluded, personnel expenditures are largely recurring and do not require much additional planning and management. Hiring might also be heavily constrained by government rules, which makes it difficult to rapidly increase or decrease expenditures from one year to the next. For example, in Indonesia the hiring of some civil servants by local governments is heavily constrained by central government quotas. This hinders local governments in Indonesia from easily adjusting levels of patronage hiring in election years, as suggested by models of clientelistic election cycles (Hanusch and Keefer 2013).[6]

By comparison, capital expenditures can be more variable year-to-year and require more ongoing management by local government. Successful local government capital investments projects require careful planning, budgetary approval, procurement, implementation and monitoring. Completing this challenging process requires coordination among locally elected leaders, which in Indonesia include the district head and local parliament, and local bureaucrats, generating pervasive principal-agent problems. Moreover, nearly all capital investments require coordination across government departments (i.e., between the Departments

---

[6]To be clear, we are not arguing that there is no election-related patronage hiring in Indonesia or the presence of widespread vote buying. In fact, there is good evidence that local governments engage, e.g., in patronage hiring of contract teachers in election years, but this is financed by special central government transfers that are not part of local budgets (AUTHORS 2016). Other forms of clientelistic exchange can also be financed by the private fiscal resources of candidates. Taken together, this means that Indonesian elections are an extraordinarily useful case to observe our proposed mechanism at work and identify it in the data.

of Public Works and Education for the school construction) and may involve coordination with neighboring districts or higher levels of government. Managing these principal-agent and coordination problems requires careful attention and political support at all stages, especially if the institutions that govern budgetary processes are weak. In an environment of low capacity, lack of experience and oversight, local leaders have to leverage their political capital including their public goodwill, personal networks, and skills, and offer deals in order to successfully manage this process. During election years, district heads are less likely to exert the necessary effort to navigate such a complex process and exert control over bureaucrats charged with the implementation of infrastructure projects. District heads have to divert some of their time, attention, and political capital toward winning the election and away from actual governing. While incumbents running for re-election are distracted, lame-duck incumbents simply lack the necessary influence to sustain capital expenditure projects, because powerful allies in the bureaucracy will withhold support until the post-election period.

Local district heads and bureaucrats are also less likely to sustain standard expenditure levels in election years due to the increased scrutiny and monitoring that occurs in election years. This is for two reasons. First, capital investments, such as building new roads, are excellent opportunities for patronage and rent seeking. Public procurement offers many opportunities for corruption via false invoicing, rigged bidding, and kickbacks (OECD 2007). This is certainly true in Indonesia, where public procurement is considered "one of the most corruption-riden sectors" in the country (Freedom House 2012). Of the 196 cases reviewed by Indonesia's Corruption Eradication Commission (KPK) between 2004 and 2010, 86 dealt with bribery and graft related to the procurement of goods and services and each of these cases resulted in a conviction (Lewis-Faupel et al. 2014; Parlina 2011; Onishi 2009). According to the 2009 Enterprise Survey of 1,444 firms in Indonesia, 38.1 percent of respondents who had attempted to secure a government contract in the previous year indicated that firms with characteristics similar to theirs make informal payments or give gifts to public officials to secure such contracts (World Bank and International Finance Corporation 2009).

A study by Olken (2007) suggests that roughly 24% of local funds from a special transfer, community-driven development program, in Indonesian villages for new capital projects procured by communities, rather than private contractors, disappeared through corruption. This estimate is likely to be significantly lower than what would be observed in a district capital investment project as the former involves significantly more community oversight than the latter. Such patterns are common across the developing world.[7]

Given the prevalence of corruption in capital expenditure projects, local politicians and bureaucrats might be reluctant to engage in the most intense forms of rent seeking during election years. Elections increase media and public attention on politicians and bureaucrats. In competitive elections, opposition candidates have an incentive to reveal examples of public corruption that took place under an incumbent's leadership. This increased scrutiny heightens the risk of discovery and punishment, limiting the enthusiasm of local politicians to approve patronage-ridden capital expenditures and civil servants' willingness to execute planned expenditures.

In Indonesia, while corruption by bureaucrats and politicians is widespread and most offenses have in the past gone unpunished, over the last decade corruption scandals have been widely reported and increasingly prosecuted by various state agencies. From 2003 to 2014, one-third of all corruption cases handled by KPK involved subnational officials. The Ministry of Home Affairs has reported that nationally, 309 governors and local district heads have broken the law. Specific data on corruption allegations for district heads in the province of East Java show that 45% have been reported for corruption, 22% officially investigated, and 10% prosecuted.[8] This combination of widespread corruption and increasing domestic and

---

[7]There might be variation in the degree of rent-seeking opportunities across specific capital investment projects. It is unclear how this translates into biasing potential election year effects. Socially desirable capital investments like schools might be under less scrutiny by voters, because they are expected to generate public goods. Voters might also punish politicians more for corruption allegations in such projects. These mechanisms work at cross-purposes in amplifying or muting the effects of elections.

[8]Based on World Bank data and authors' calculations.

international pressure to combat graft is quite common in the developing world. While the increased pressure of election years limits rent-seeking behavior and thus reflects a disciplining effect of elections, it simultaneously limits the amount of realized capital expenditures.[9]

The growing commitment to prosecuting corrupt practices, combined with the heightened scrutiny during elections, also generates a second unintended side effect. Honest bureaucrats and politicians are just as reluctant as their corrupt counterparts to pursue large-scale capital investment projects due to fears of being unfairly investigated. Political and bureaucratic rivals can use corruption allegations, which become especially potent during heated electoral campaigns, to tarnish honest politicians and civil servants. Media reports from Indonesia suggest that many civil servants are afraid of being accused of corruption (Fabi and Kapoor 2015) and prefer not to serve on local tender committees, which are responsible for conducting public procurement procedures on behalf of the government's technical departments.[10] A 2003 change in procurement regulations, intended to limit opportunities for corruption, has created complex rules that are difficult to follow, especially for under-resourced local bureaucracies, and has engendered new forms of corruption (Tidey 2012; Buehler 2012). Given the complexity of these new regulations, proactive prosecutors and investigators can easily gather sufficient evidence for an initial accusation, which, even if unproven, can be useful fodder in an election campaign. Efforts to avoid such accusations have resulted in massive delays in infrastructure projects, which has caused the government to miss its target of realized expenditures.[11] Hence, increased scrutiny of capital expenditures during election

---

[9]In fact, local citizens often prefer a road built with kickbacks to no road at all (Albanna 2015).

[10]There have been reports of cases in which the police have visited officials immediately after their names have been proposed as tender board members but prior to procurement meetings.(Buehler 2012; Lewis and Oosterman 2009).

[11]While spending varies at the subnational level, the majority of subnational governments in Indonesia are also saving substantial amounts of national-level transfers. Much of these reserves are amassed inadvertently and in an ad hoc manner due to inflexible budget rules, weak capacity, and an overzealous anti-corruption agenda that has increased the reluctance of local government officials to participate in tender committees (Lewis and Oosterman 2009)

years might disproportionally affect the amount of realized expenditures, either because local governments are hesitant to approve large-scale expenditures or because implementation is delayed.[12]

This fear of justified or unjustified corruption allegations is particularly salient during elections years. Until election uncertainty has been resolved, local bureaucrats might be unwilling to engage in graft via capital expenditures or take on complicated investment projects if political leadership is unable to protect them.

Taking together, these two factors—district heads' inability or unwillingness to exert effort and deploy political capital and civil servants' fear of corruption allegations—will reduce capital expenditures in election years:

H1: Election years are associated with a reduction in capital expenditures.

If the effect described in H1 is driven by politicians' lack of incentives to protect civil servants and shepherd capital expenditure projects through the political process, the effect on capital expenditures should vary depending on whether an incumbent is running for re-election and the degree of competition. We posit that the election-year effect on capital expenditures should be strongest for elections which feature: no incumbent running (scenario 1); an incumbent running with meaningful electoral competition (scenario 2); and a strong incumbent running with very little or no competition (scenario 3).

In the first scenario (elections without an incumbent), lame duck incumbents have little political capital and leverage they could use to pressure civil servants to sustain standard levels of capital expenditures. In turn, local bureaucrats who worry that outgoing incumbents have little power to protect them are likely to delay capital investment projects until elections conclude. Civil servants' uncertainty is compounded by the fact that in Indonesia a change

[12]Local politicians might also have an incentive to delay capital expenditures in election years: they need to repay powerful campaign donors after the election. In Indonesian local elections, many candidates rely heavily on the support of wealthy entrepreneurs to finance their campaigns; To fund legitimate campaign activities as well as clientelistic vote buying, many candidates for district head office accumulate large debts that need to be repaid via public contracts after the election (Mietzner 2007).

in the district head office typically leads to substantial turnover in top civil service positions. In the lead-up to elections, central advisory staff to the outgoing district head are typically preparing their exit into other job opportunities at the expense of completing routine office tasks.

In the second scenario (elections with a weak incumbent), local governments should experience a dip in capital expenditures, but to a lesser extent than in the first scenario. In the third scenario (elections with a strong incumbent), incumbents have established control and influence over the bureaucracy and do not have to expend a lot of political capital and attention on the campaign. In this context, civil servants can be reasonably confident that they will be protected in the post-election period and consequently, will continue to execute tasks including those related to capital investment. To summarize, we expect to observe the following:

H2: The effect of election years on capital expenditures will be strongest in elections with no or weak incumbents.

3 Empirical Strategy

We test our argument in the context of local elections in Indonesia. This has two important advantages. First, we can rely on high-quality budgetary data from Indonesian district governments to distinguish capital, personnel, and goods expenditures. Second, we can exploit the staggered introduction and subsequent exogenously determined timing of local elections for causal identification.

3.1 Indonesian Context

During President Suharto's rule of Indonesia from 1965 to 1998, public policies were largely formulated and implemented by a highly centralized political apparatus that faced no real

electoral accountability.[13] Under this system, large-scale investments in infrastructure took place, in roads, ports, and airports as well as a massive expansion of schools across the archipelago (Duflo 2001), underpinning Indonesia's high growth rate (p.2 Davidson 2015).

After Suharto's fall in 1998—in the wake of the Asian financial crisis—Indonesia embarked on a dual project of democratization and decentralization, termed *reformasi* (Crouch 2010). Indonesia relocated essential government responsibilities to the district level, paired with a system of revenue sharing and regional redistribution (World Bank 2003). In 1999 citizens elected representatives to national, provincial, and district parliaments. Starting in 2001, local legislatures had the right to authorize the budget and vote on local laws and regulations. Local district heads (*bupati* or *walikota*) were given important agenda-setting powers with respect to government spending, thus increasing the importance of district head elections. Importantly, district governments in Indonesia now shoulder the largest share of expenditures for infrastructure investment (World Bank 2014), making them key players in the construction of roads, bridges, schools, hospitals, and other public infrastructure. District government expenditures are financed largely through shared revenue allocations and block grants by the central government, while their local taxation authority remains fairly limited (Lewis 2005).[14] This newfound role for local governments in capital investments, especially in the infrastructure sector, is particularly important, because the Asian financial crisis dramatically reduced private capital inflows and severely limited investments in infrastructure in the first half of the 2000s (Davidson 2015).[15]

---

[13]While provincial and district governments existed and elections formally took place, all candidates were vetted and approved by the central Ministry of Home Affairs, leaving no room for local discretion or democratic accountability.

[14]The vast majority of district funds come from general transfers and natural resource revenues; only about 7% of district revenue is earmarked by the central government for specific expenditures.

[15]In a study of Indonesia's toll roads, Davidson (2015) details the regulatory hurdles the Indonesian government faces in road construction. In particular, the (in)ability to purchase private land for infrastructure projects has produced massive delays in implementation. This difficulty is particularly burdensome when national projects require the action of local politicians responsible for land acquisitions, who in turn also have to appease a disaffected local electorate.

Local legislatures elected district heads from 1999 to 2004. Since 2005 district heads have been elected directly by the populace. This electoral reform (i.e., the shift from indirect to direct elections) was driven by a general impression of elite collusion and a lack of transparency and accountability in the indirect elections. In the indirect election system, district head candidates had to be nominated by parties or coalitions of parties represented in local parliament, which often led to the selling of party nominations and votes to rich local candidates (Buehler 2010). While candidates are still required to secure party nominations in the current system,[16] bargaining in the legislature has been replaced by competitive general voting. This institutional change has created a vibrant, albeit still elite-dominated, local electoral process (Erb and Sulistiyanto 2009).

Previous research has investigated the effects of decentralization and elections on district-level public expenditures in Indonesia. Kis-Katos and Schulze (2014) focus on administrative overspending and find that neither district splitting nor the introduction of direct elections has meaningfully reduced the high levels of wasteful administrative expenditures. Nor do local elections seem to have substantive effects on sectoral investments in education, health care, or physical infrastructure (Kis-Katos and Sjahrir 2014). Skoufias et al. (2014) document that four years after the introduction of direct elections, no improvements in human development outcomes have been realized. Yet, at least in the area of health, per capita expenditures have increased in the wake of direct district head elections (Skoufias et al. 2014). With regards to political budget cycles, Sjahrir, Kis-Katos, and Schulze (2013) show that discretionary administrative expenditures increase in election years, while Skoufias et al. (2014) find some evidence that sectoral or functional expenditures increase in election years. We go beyond these findings by studying in detail the effect of the electoral calendar on capital expenditures and then exploring the specific mechanism.

Importantly for the analysis, the indirect (1999–2004) and direct (2005 onwards) elec-

---

[16]Independent candidates are allowed, but the regulatory and financial burden is seen as prohibitively high.

tion of district heads was not phased in uniformly (see Table 1 in the Appendix). In an attempt to smooth the parallel processes of decentralization and democratization, local district heads appointed under President Suharto before 1999 were allowed to finish their terms and were replaced only consecutively between 1999 and 2004. Replacements of appointed district heads took place at the end of the original term or after recusals from office due to health reasons or no-confidence votes. The exogenously determined schedule of district head replacements was maintained for direct elections between 2005 and 2009. We assert that the timing of the district head elections was exogenous and unrelated to observable or unobservable district characteristics because the timing of the appointments under the Suharto dictatorship followed an unrelated logic. Since the regime collapsed suddenly in the wake of the Asian financial crisis, it is unlikely that district-level appointments were made in anticipation of future competitive elections. This intuition is borne out in the data. Using district-level data on a number of covariates, we show that most observable variables are balanced in their means and distributions across districts with and without elections in 2005 (see Table 3 in the Appendix for details). Several papers have identified this phasing in of local elections as a powerful natural experiment that offers credible causal identification (Burgess et al. 2012; Skoufias et al. 2014).

3.2 Data

To test for the presence of electoral budget cycles, we use detailed district budgetary data for all districts from 2001 to 2012. The information on district budgets was provided by the Indonesian Ministry of Finance and has been harmonized by the World Bank Jakarta office. The data break down local budgets according to economic and sectoral areas. We analyze both types of classifications, but focus more heavily on economic expenditures. The economic classification further categorizes total expenditures across all sectors into capital expenditures, expenditures for goods and services, or personnel expenditures.

Figure 1 shows yearly box plots for the distribution of total, capital, goods, and personnel expenditure per capita (logged) across all districts for 2001–12. The box plots indicate extreme cross-sectional variation across districts that does not abate in the observed time period. The Appendix includes yearly box plots for the raw distribution of per capita expenditures, as well as expenditure shares and figures illustrating the average district budget composition over time (Sections 4–6) .

[FIGURE 1 ABOUT HERE]

Indonesia's decentralization process dramatically changed the number and size of districts during the study period. To allow for maximum data coverage, we include all districts until they split. After a split, we assign new district codes to the "mother" and "daughter" districts and treat them as separate entities. This creates an unbalanced panel in terms of the entry and exit of units.[17]

3.3 Model Specification

We begin our analysis of budget cycles with a standard fixed-effects panel model:

$$y_{it} = \alpha_i + \gamma_t + \delta^{t-1} \cdot D_{it-1} + \delta \cdot D_{it} + \delta^{t+1} \cdot D_{it+1} + \beta' \mathbf{x}_{it-1} + \epsilon_{it}. \tag{1}$$

We model per capita expenditures or the expenditure share y_{it} in district i and year t as a function of time-varying control variables $\mathbf{x}_{it-1}$, district fixed effects α_i, and year effects

---

[17]We excluded 2011 and 2012 from the main analysis because several of our indicators, including the service delivery variables, come from the Susenas, Indonesia's National Socio-Economic Survey. In 2011, the Indonesian Central Bureau of Statistics changed from using a two- to a three-stage sampling method. It also switched to using population weights from the 2010 population census for sampling procedures and changed from implementing one annual survey to four quarterly surveys. These changes suggest caution in comparing data collected before and after 2010. As a robustness check, we repeat our analysis including data from 2011 and 2012 by leaving the affected variables out of our models. This does not affect our findings.

γ_t. Our dependent variables include logged total expenditures per capita, logged capital expenditures per capita, logged goods expenditures per capita, logged personnel expenditures per capita, and the respective budgetary shares for each category. The variable D_{it} is a binary indicator of whether year t is an election year for district i. We include both a lag and a lead of this indicator to trace the political budget cycle around the election date. The δ coefficients will inform us of the presence of electoral budget cycles. Causal identification of the effect is plausible for three reasons. First, the timing of direct elections followed a pre-determined, exogenous schedule and is a plausible natural experiment. Second, the inclusion of district and year fixed effects controls for any unobserved time-invariant confounders at the district level, or common shocks to expenditures in specific years (e.g., due to national-level policy changes). Third, the inclusion of time-varying covariates accounts for any remaining observable confounders. We account for any lasting effects of democratic accountability by including a dummy variable for the presence of a directly elected district head. Moreover, we control for whether an election features a sitting incumbent running for re-election. We also control for the effective number of parties, the local vote share of the former ruling party Golkar, and the former main opposition party PDI-P (Indonesian Democratic Party of Struggle) in the legislative elections in 1999 and 2004 to account for political dynamics in district legislatures. We also include an index measure of the quality of local public services provision (based on data for sanitation, clean water, enrollment rates, births attended by skilled staff, and the quality of roads) to map the local ability to deliver public goods.[18] This index also captures the stock of available service delivery infrastructure and measures the need for additional capital expenditures. To account for overall fiscal resources, we include total district revenue per capita and natural resource revenue per capita.[19] General socio-

---

[18]We first standardize all variables and then create a simple additive index. Each of these services is under the jurisdiction of local governments (Lewis, McCulloch, and Sacks 2015). Within Indonesia, the relationship between fiscal transfers and service delivery is not straightforward. While the central government tends to transfer more fiscal resources to districts with weak service delivery, these revenues are associated with deteriorating outcomes in districts with particularly poor service delivery (Lewis 2014).

[19]The is no debt issuance of district governments in Indonesia.

economic characteristics are controlled for by a Gini index of inequality,[20] the share of the local population below the poverty line, GDP per capita levels, and population size.[21] All control variables were lagged by one year to avoid direct simultaneity. We cluster standard errors at the district level to allow for arbitrary serial correlation and heteroskedasticity. Summary statistics for all variables are reported in Section 2 of the Appendix.

4   Results

Table 1 presents our main results for the electoral cycle variables (a complete table is available in Section 7 of the Appendix). We find clear evidence of an election year effect. First, Model (1) indicates a statistically significant drop in overall expenditures in election years. This drop is driven by a reduction in capital expenditures, as shown by Model (2). Goods and personnel expenditures stay largely the same, as the effect of election years cannot be distinguished from zero at the 5% level. This change in budgetary priorities is also reflected in the budgetary shares of each category. While the share of capital expenditures drops by about 2.3 percentage points, personnel expenditures increase by 1.9 percentage points relative to the total budget. Note that the increase in the personnel expenditure share largely reflects a mechanical increase, due to the drop in the overall budget and capital expenditures, and does not represent an actual increase in hiring of civil servants. These results do not follow the classic pattern predicted by a Rogoff-style budget cycle argument, nor to they conform to a simply logic of clientelism during elections (e.g., Magaloni, Diaz-Cayeros, and Estevez 2007; Hanusch and Keefer 2013). We do not observe any real increase in any expenditure category—visible government consumption as in the Rogoff model or increased patronage hiring. We only observe a decrease in capital expenditures, consistent with our argument.

---

[20]Based on consumption data from the Susenas.

[21]Extremely skewed measures were log transformed.

Given the mean level of capital expenditures of approximately 27%, this is also a substantively meaningful effect. To put the distortionary loss of capital expenditures due to election years into perspective, we calculate the total loss (i.e., if districts had maintained their normal expenditure levels in election years) over the 2005–12 period as 4–12% of Indonesia's total subnational health expenditures for 2012.[22]

[TABLE 1 ABOUT HERE]

To further ascertain the robustness of our findings, we implement a series of additional tests. First, we repeat the analysis in Table 1 and include lagged expenditures (per capita and shares) as additional controls, which does not change our main finding (see Section 9 in the Appendix). Second, we estimate the same set of regressions using observations from non-splitting districts and splitting districts before the year of the split, which does not change our main results (Appendix Section 14). We also estimate a set of placebo regressions. For example, we test whether noteworthy shifts in revenue occurred in election years. If changes in revenue are found to be tied to election years, then the local electoral cycle is unlikely to be the driving force, because transfers are determined at the central government level. We distinguish between total transfers, total transfers excluding natural resource revenue, DAU transfers, earmarked DAK transfers,[23] natural resource revenue, and own source revenue (see Section 11 in the Appendix). We find that election years have no discernible effect on the total amount of available fiscal resources for district governments.[24] Earmarked DAK transfers, which are used for some capital expenditure projects, seem to increase in election

[22]We use average levels of capital expenditures for all districts that did not have elections in each year as our counterfactual baseline. We then apply the confidence band of our estimated shift in the capital expenditure share and sum the total loss.

[23]DAU (*Dana Alokasi Umum* are general transfers, whereas DAK (*Dana Alokasi Khusus* are earmarked transfers for specific projects.

[24]Own source revenue declines, but it typically constitutes less than 5% of total revenue, and is generally not substantively important. This is also consistent with our mechanism of a temporary decline in administrative effort.

years (significant at the 10% level). This suggests that we are potentially underestimating the true effect of election years. Also note that district governments have no ability to debt finance expenditures, due to restrictions imposed by the central government. Section 17 in the Appendix shows models in which we control for central government expenditures at the local level, which might act as substitutes for local capital expenditures. Including this additional control does not affect our findings. Since our time frame covers the full set of initial direct elections and a number of second elections, we are also able to test whether these budget cycle effects are largely driven by the fact that elections were newly introduced. To that end, we repeat the estimation of the models in Table 1, but include an interaction term between the election year dummy and a new dummy variable indicating whether the current election belonged to the second wave. We do not find any evidence that budget cycles abate or intensify in the second round of direct elections (see Section 13 in the Appendix). We also estimate our models using a set of election cycle dummies covering the full five years of each cycle, without affecting our findings (see Section 15 in the Appendix).

Next, we break the budget down into 12 expenditure sectors (e.g., administration, infrastructure, education, etc.) and test for election cycle effects. Table 2 presents the results for expenditure shares as dependent variables. Of the 12 expenditure categories, only two show a significant election year effect at the 5% level. Both infrastructure and social expenditure shares become smaller in election years, the latter amounting to only a 0.2% change. The overall reduction in capital expenditures is largely driven by a shift in infrastructure expenditures.[25] This makes sense, because in Indonesia infrastructure expenditures are largely classified as capital expenditures (roughly 79%). Section 10 in the Appendix includes a table for per capita expenditures, which replicates the substantive findings of Table 2. For the years 2001–2008 we obtained additional data that breaks out expenditures in 11 of the 12

---

[25]Note that there is no measurable increase in other areas to offset the reduction in the infrastructure expenditure share, likely because the relative increase is distributed across so many other categories.

categories into capital, personnel, and goods expenditures.[26] In Section 18 of the Appendix we present results for these even more fine-grained categories.[27] We find that in election years capital expenditures in education, health, infrastructure, and the social sector suffer.[28] In contrast, there are no clear effects on goods expenditures in any of the 11 sectors. Personnel expenditures also remain unchanged in 10 of 11 sectors, but are found to increase in the tourism sector. Overall, this confirms our initial findings.

[TABLE 2 ABOUT HERE]

Another challenge, which is not directly addressed in the fixed-effects model, is the compositional nature of budget shares. Modeling individual expenditure shares via ordinary least squares (OLS) disregards the fact that shares are bounded between zero and one and changes in one category affect the other. This can produce impossible predicted values, non-normal errors, heteroskedasticity, and non-linear effects. The compositional nature of budgetary data requires a specific modeling approach. We address this challenge by using Dirichlet regression models, which were developed explicitly for compositional data.[29] We model the means for each budget category as:

$$\mu_{jit} = \delta_j^{t-1} \cdot D_{it-1} + \delta_j \cdot D_{it} + \delta_j^{t+1} \cdot D_{it+1} + \beta_{\mathbf{j}}' \mathbf{x}_{it} + t_j. \tag{2}$$

The mean parameter μ_{jit} for budget category j in district i and year t is a function of our set of election year dummies and control variables.[30] The parameter δ informs the degree to

---

[26]There is little information available on the composition of expenditures in religious affairs.

[27]Note that data coverage is not perfect for this already limited sample and results should be considered with caution.

[28]Statistically significant at the 5% or 10% level. Given the decomposition of the budget into very narrow categories it is very difficult to discern clear patterns.

[29]Estimation was implemented using the dirifit package in STATA. More detail on the Dirichlet regression can be found in Section 16 of the Appendix.

[30]We also include a cubic time polynomial to allow for trends in budgetary allocations. Section 16 in the

which election years changed budgetary compositions in a meaningful way.

[FIGURE 2 ABOUT HERE]

Panel (a) confirms that pre-election years have no statistically significant effects on the functional composition of budget expenditures. During election years, we observe a decrease in the capital expenditure share of about 1.5 percentage points and a commensurate increase the the share of personnel expenditures (Panel (b)). Note that the latter does not represent an actual increase in hiring, given our findings on total and personnel expenditures per capita in the prior section. Importantly, the Dirichlet regression reveals that this change in expenditures is not permanent, but is reversed in the post-election year budget (see Panel (c)).

To test H2 we are also interested in understanding variation in the strength of budget cycles. H2 suggests that the effect of election years on capital expenditures might be muted when incumbents are running for re-election. Table 3 presents results for our main models with an additional interaction term between the election year dummy and our incumbency variable. Looking at both per capita capital expenditures and the share of capital expenditures, we find statistically significant effects for election year, the incumbent term, and the interaction effect. The marginal effect of an election when the incumbent is not running for re-election is -0.027 with a 95% confidence interval of $[-0.04, -0.015]$. In contrast, for elections in which the incumbent is running for re-election, the effect is only -0.001 with a 95% confidence interval of $[-0.023, 0.021]$. In other words, for incumbents there is no (or only a weakly statistically discernible) effect, suggesting that their firmer control over the bureaucracy and political process allows them to avoid reductions in capital expenditures.[31]

Appendix also reports results for an extended model with additional control variables.

[31] As an alternative, we also calculate the vote share of the election winner in the last election and include an interaction with the election year dummy. Districts that are run by district heads who dominated the last election are more likely to have considerable political capital, and thus should be able to control capital expenditures. Note that this analysis does not distinguish between incumbents that are running for re-election

21

[TABLE 3 ABOUT HERE]

4.1 Boundary Conditions and Generalizability

While our empirical evidence speaks directly to the Indonesian case, we believe our argument is likely to also apply to other, similar cases including India, Nigeria, Philippines and Brazil. Specifically, we argue that three context conditions delineate the boundary conditions for our proposed mechanism: Uneven government capacity and a weak governance environment, local elections with a minimum degree of public scrutiny, and weak incumbency.

First, our argument rests on the notion that capital expenditures require the collaborative efforts of civil servants and district heads. This means that small disruptions in a fragile governance environment can disproportionately affect the level of realized capital expenditures. Such weak and vulnerable governance structures are particularly common at the local government level in low to middle income countries. While bureaucracies in high income countries are likely to continue government 'as normal' in election years, even without the support of local mayors, this is less true of local governments in poorer countries. This lack of institutional resilience and capacity is compounded by the fact that local bureaucracies in developing countries are increasingly saddled with regulatory requirements that are inspired by Western standards. This form of institutional mimicry can be harmful to the operation of government (Pritchett, Woolcock, and Andrews 2013).

Second, standard political budget cycle arguments rely on the notion that incumbents have to signal their quality via increased expenditures that bolster consumption due to an information asymmetry. While this is also true about local elections, information asymme-

---

or elections with lame duck incumbents—due to high levels of missing data on the vote share variable we are unable to limit our analysis to incumbents running for re-election only. Despite prior vote share being a fairly noisy proxy, we find essentially the same results (see Section 8 in the Appendix). Election years in districts with a sitting incumbent who dominated the last election (at the 75th percentile of the vote share variable) experience an average reduction in the capital expenditure share of 0.7 percentage points with a 95% CI of $[-0.023, 0.099]$, whereas district heads who barely won the election (at the 25th percentile of the vote share variable) experience a reduction of 2 percentage points with a 95% CI of $[-0.036, -0.005]$.

tries are likely to be smaller. The decentralization literature has forcefully argued that local elections are likely to feature better information available to candidates and voters (Bardhan 2002). Moreover, our mechanism is contingent upon minimal public scrutiny and oversight. Institutional actors that generate this type of scrutiny may include anti-corruption organizations, media, and civil society organizations. In governance environments without minimal public scrutiny, incumbents and civil servants are likely to engage in various forms of rent seeking throughout the electoral cycle. In these contexts, out-going leaders who do not fear any repercussions may try to reap as much profit as possible before leaving office. Where there is a minimum amount of scrutiny, incumbents and civil servants will be cautious about engaging in projects that will attract the attention of oversight institutions, the media, or other civil society actors, in election years.[32]

Third, we argue and show that the drop in capital expenditures should be largest in cases without sitting incumbents running for re-election. Cases with very strong incumbency advantages (e.g., the U.S.) might be less likely to fit our theoretical scenario. Consistent with the growing literature on incumbency disadvantage in developing countries (Klasnja 2015), our findings are relevant for many low and middle income democracies.

To summarize, incumbents running for re-election that control an effective and experienced bureaucracy can effectively use increases in expenditures to signal competency to voters—especially when information asymmetries are large, like in national elections. In contrast, local elections in weak governance environments without strong incumbency advantages are more susceptible to generate disruptions to capital expenditures in election years.

---

[32]Note that this assumption does not say anything about, how free or unbiased the media are. This assumption only requires that media exists, even ones controlled by private or opposition interests that can put political pressure on incumbents.

5 Conclusion

This paper extends our understanding of budget cycles in developing democracies. While existing research has argued that governments *increase* expenditures in election years, we argue that, under specific circumstances, local politicians and their implementing bureaucracies will *reduce* capital expenditures in election years. Local politicians and civil servants are less likely to exert the necessary effort to realize capital investment projects in election years, because they have to focus on running their political campaigns and cannot credibly promise protection to civil servants. Similarly, capital expenditure projects will suffer because heightened scrutiny in election years limits rent-seeking opportunities for corrupt officials and generates fears of false accusations and negative media reports for their honest counterparts.

Leveraging a natural experiment from the Indonesian context, we establish the presence of such a budgetary shift in capital expenditures. We find that election years reduce capital expenditures by roughly 2–3 percentage points, a 10% reduction in average expenditure levels. The total estimated amount lost to capital expenditures is equivalent to between 4% and 12% of Indonesia's total subnational health expenditures for 2012. This finding is robust to complementary estimation approaches, additional control variables, and placebo tests. We also provide additional evidence that the effect varies with the strength of the incumbent. We find that the effect is strongest in elections in which weak or no incumbents are running.

These findings provide useful insights for several debates. First, they enrich the large literature on political budget cycles by providing an example of reductions in important expenditures in election years. Moreover, our empirical analysis adds to the much smaller literature on budget cycles that relies on subnational data and provides credible causal identification. Our argument and findings also add to the broader literature on the benefits of electoral accountability. While most theoretical and empirical work suggests that electoral

24

accountability improves public goods and services provision, our work identifies an important caveat. While elections might improve public goods provision in some contexts, they can also introduce unintended distortions to the policy-making process that disrupt long-term planning for infrastructure investments. Our case indicates that this phenomenon is likely to be relevant for local elections in settings with low government capacity and weak governance structures, in which incumbents do not enjoy substantial political advantages. Finally, this also speaks to debates on Indonesian politics, which have analyzed the role of local direct elections in accountability relationships (Erb and Sulistiyanto 2009; Buehler 2010). Our results raise some doubts about the effectiveness of local elections in improving accountability relationships unconditionally. Our findings suggest that local elections only play a useful role in improving services delivery and avoiding distortionary cuts to capital expenditures under the right conditions. Governance reforms should focus on providing district heads, local legislatures, and civil servants the right incentives to abstain from budgetary manipulations. For example, the spread of e-procurement for capital expenditures might make implementation easier and limit the distortionary effects of election years.

Acknowledgments

References

Albanna, Huda. 2015. "Corruption: A necessary evil for infrastructure development?" *The Jakarta Post*, March.

Bardhan, Pranab. 2002. "Decentralization of Governance and Development." *Journal of Economic Perspectives* 16 (4): 185–205.

Block, Steven, and Paul Vaaler. 2004. "The price of democracy: sovereign risk ratings, bond spreads and political business cycles in developing countries." *Journal of International Money and Finance* 23 (6): 917–946.

Buehler, Michael. 2010. "Decentralisation and Local Democracy in Indonesia: The Marginalisation of the Public Sphere." In *Problems of Democratisation in Indonesia. Elections, Institutions and Society*, edited by Edward Aspinall and Marcus Mietzner. ISEAS.

———. 2012. "Public Procurement Reform in Indonesian Provinces and Districts: The Historical Institutional Context and Lessons Learned from Analytical Work."

Burgess, Robin, Matthew Hansen, Benjamin A. Olken, Peter Potapov, and Stefanie Sieber. 2012. "The Political Economy of Deforestation in the Tropics*." *The Quarterly Journal of Economics* 127 (4): 1707–1754 (November).

Canes-Wrone, Brandice, and Jee-Kwang Park. 2012. "Electoral Business Cycles in OECD Countries." *American Political Science Review* 106 (01): 103–122 (February).

Crouch, Harold. 2010. *Political Reform in Indonesia after Soeharto*. ISEAS.

Davidson, Jamie S. 2015. *Indonesia's Changing Political Economy. Governing Roads*. Cambridge University Press.

Drazen, Allan, and Marcela Eslava. 2010. "Electoral manipulation via voter-friendly spending: Theory and evidence." *Journal of Development Economics* 92 (1): 39–52 (May).

Duflo, Esther. 2001. "Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence from an Unusual Policy Experiment." *American Economic Review* 91 (4): 795–813.

Erb, Maribeth, and Priyambudi Sulistiyanto, eds. 2009. *Deepening Democracy in Indonesia? Direct Elections for Local Leaders (Pilkada)*. ISEAS.

Fabi, Randy, and Kanupriya Kapoor. 2015. "Pain but no gain – Indonesia's corruption crackdown." *Reuters*, December.

Franzese, Robert. 2002. "Electoral and Partisan Cycles in Economic Policies and Outcomes." *Annual Review of Political Science* 5:369–421.

Freedom House. 2012. Indonesia. Countries at the Crossroads.

Hanusch, Marek, and Philip Keefer. 2013, October. "Promises, Promises: Vote-Buying and the Electoral Mobilization Strategies of Non-Credible Politicians." World bank policy research working paper.

Kaplan, Stephen B. 2013. *Globalization and Austerity Politics in Latin America*. Cambridge University Press.

Khemani, Stuti. 2004. "Political cycles in a developing economy: effect of elections in the Indian States." *Journal of Development Economics* 73:125–154.

Kis-Katos, Bambang Suharnoko Sjahrir Krisztina, and Günter Schulze. 2014. "Administrative Overspending in Indonesian Districts: The Role of Local Politics." *World Development* 59 (July): 166–183. University of Freiburg Department of International Economic Policy Discussion Paper Series Nr.24.

Kis-Katos, Krisztina, and Bambang Suharnoko Sjahrir. 2014, January. "The Impact of Fiscal and Political Decentralization on Local Public Investments in Indonesia." IZA DP No.7884.

Klasnja, Marko. 2015. "Corruption and the Incumbency Disadvantage: Theory and Evidence." *The Journal of Politics* 77 (4): 928–942.

Kohno, Masaru, and Yoshitaka Nishizawa. 1990. "A Study of the Electoral Business Cycle in Japan: Elections and Government Spending on Public Construction." *Comparative Politics* 22 (2): 151–166.

Lewis, Blane D. 2005. "Indonesian Local Government Spending, Taxing and Saving: An Explanation of Pre- and Post-decentralization Fiscal Outcomes." *Asian Economic Journal* 19:291–317.

———. 2014, August. "Local Government Proliferation and Public Service Delivery: Causes and Consequences." Working Paper.

Lewis, Blane D., Neil McCulloch, and Audrey Sacks. 2015. "Measuring Local Government Service Delivery Performance: Challenges and (PARTIAL) Solutions in Indonesia." *Journal of International Development*, May, n/a–n/a.

Lewis, Blane D., and André Oosterman. 2009. "The Impact of Decentralization on Subnational Government Fiscal Slack in Indonesia." *Public Budgeting & Finance* 29 (2): 27–47 (June).

Lewis-Faupel, Sean, Yusuf Neggers, Benjamin A Olken, and Rohini Pande. 2014. "Can electronic procurement improve infrastructure provision? evidence from public works in india and indonesia." Technical Report, National Bureau of Economic Research.

Limosani, Michele, and Pietro Navarra. 2001. "Local Pork-Barrel Politics in National Pre-Election Dates: The Case of Italy." *Public Choice* 106 (3-4): 317–326.

Magaloni, Beatriz, Alberto Diaz-Cayeros, and Federico Estevez. 2007. "Clientelism and portfolio diversification: a model of electoral investment with applications to Mexico." In *Patrons, Clients, and Policies. Democratic Accountability and Political Competition*, edited by Herbert Kitschelt and Steven I. Wilkinson. Cambridge Univ Press.

Mietzner, Marcus. 2007. "Party-Financing in Post-Soeharto Indonesia: Between State Subsidies and Corruption." *Contemporary Southeast Asia* 29 (2): 238–263.

Nordhaus, William D. 1975. "The Political Business Cycle." *Review of Economic Studies* 42:169–190.

OECD. 2007. "Bribery in Public Procurement. Methods, Actors and Counter-Measures." Technical Report, OECD.

Olken, Benjamin. 2007. "Monitoring Corruption: Evidence from a Field Experiment in Indonesia." *Journal of Political Economy* 115 (2): 200–249.

Onishi, Norimitsu. 2009. "Corruption fighters rouse resistance in Indonesia." *The New York Times.*

Parlina, Ina. 2011. "Graft Cases Show Need for Procurement Law: Activists." *The Jakarta Post.*

Pritchett, Lant, Michael Woolcock, and Matt Andrews. 2013. "Looking Like a State: Techniques of Persistent Failure in State Capability for Implementation." *The Journal of Development Studies* 49 (1): 1–18 (January).

Remmer, Karen L. 1993. "The Political Economy of Elections in Latin America, 1980-1991." *The American Political Science Review* 87 (2): 393–407 (June).

Rogoff, Kenneth. 1990. "Equilibrium Political Business Cycles." *American Economic Review* 80:21–36.

Saez, Lawrence, and Aseema Sinha. 2010. "Political Cycles, Political Institutions and Public Expenditure in India, 1980-2000." *British Journal of Political Science* 40, no. 1.

Samii, Cyrus. 2016. "Causal Empiricism in Quantitative Research." *The Journal of Politics* 78 (3): 941–955 (May).

Schuknecht, Ludger. 1996. "Political Business Cycles and Fiscal Policies in Developing Countries." *Kyklos* 49 (2): 155–170.

Shi, Min, and Jakob Svensson. 2006. "Political budget cycles: Do they differ across countries and why?" *Journal of Public Economics* 90:1367–1389.

Sipahutar, Tassia. 2015. "Govt vows to speed up spending." *The Jakarta Post*, November.

Sjahrir, Bambang Suharnoko, Krisztina Kis-Katos, and Günter Schulze. 2013. "Political budget cycles in Indonesia at the district level." *Economics Letters* 120 (2): 342–345.

Skoufias, Emmanuel, Ambar Narayan, Basab Dasgupta, and Kai Kaiser. 2014, February. *Electoral Accountability and Local Government Spending in Indonesia*. Published: World Bank Policy Research Working Paper 5614.

Stein, Ernesto, and Jorge Streb. 2004. "Elections and the timing of devaluations." *Journal of International Economics* 63 (1): 119–145.

Tidey, Sylvia. 2012. "New rules, new forms of corruption." *Inside Indonesia*, vol. 108.

UNDP. 2015. "Introducing the 2030 Agenda for Sustainable Development." Technical Report, United Nations Development Programme.

Veiga, Linda Gonçalves, and Francisco José Veiga. 2006. "Political business cycles at the municipal level." *Public Choice* 131 (1-2): 45–64 (December).

Vergne, Clémence. 2009. "Democracy, elections and allocation of public expenditures in developing countries." *European Journal of Political Economy* 25 (1): 63–77 (March).

World Bank. 2003, June. *Decentralizing Indonesia. A Regional Public Expenditure Review*. Published: World Bank Report.

———. 2014. "Indonesia: Avoiding The Trap." Development Policy Review, The World Bank.

World Bank and International Finance Corporation. 2009. "Enterprise Surveys: Indonesia Country Profile." Technical Report.
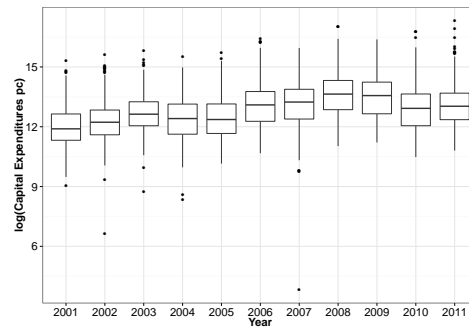
Author Biographies

JAN H. PIERSKALLA is an Assistant Professor at the Ohio State University, Columbus, OH 43215
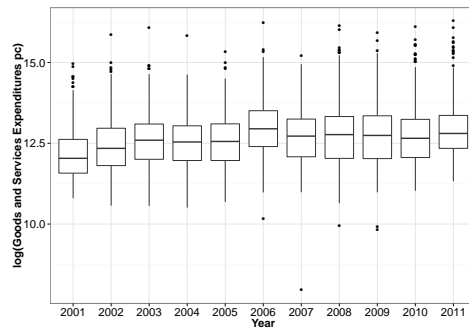
AUDREY SACKS is a Social Development Specialist at the World Bank, Jakarta, Indonesia
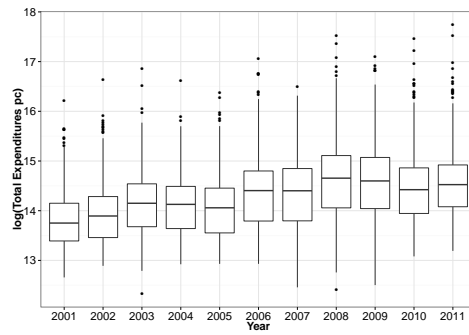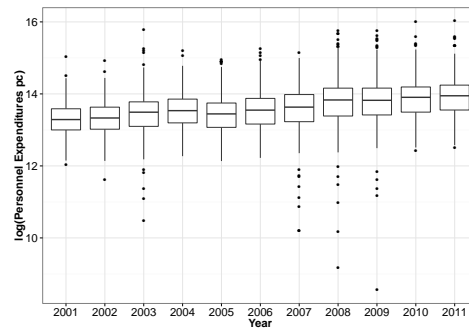
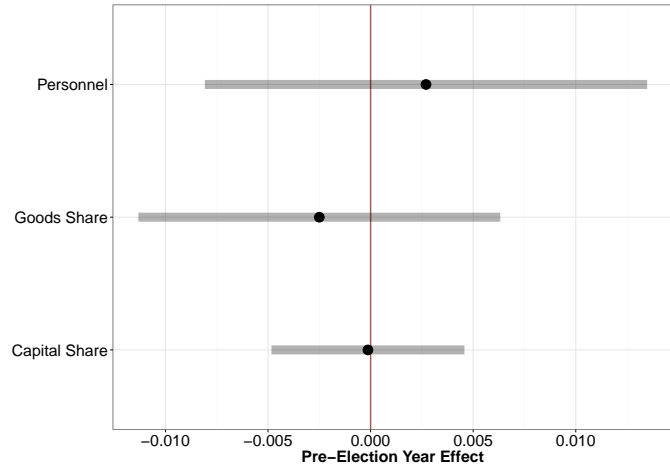(a) Total Expenditures

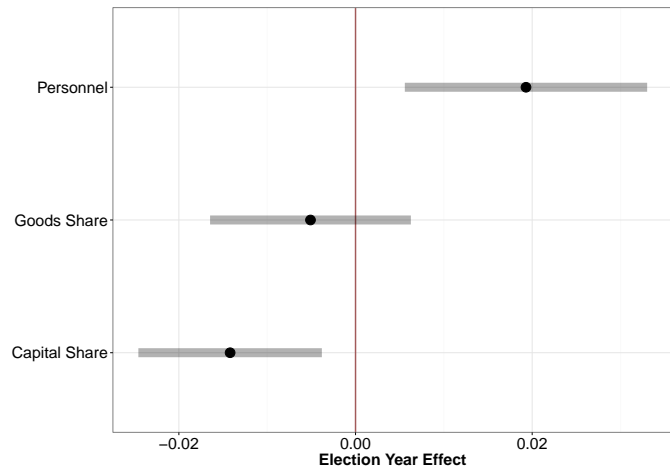(b) Capital Expenditures

(c) Goods Expenditures
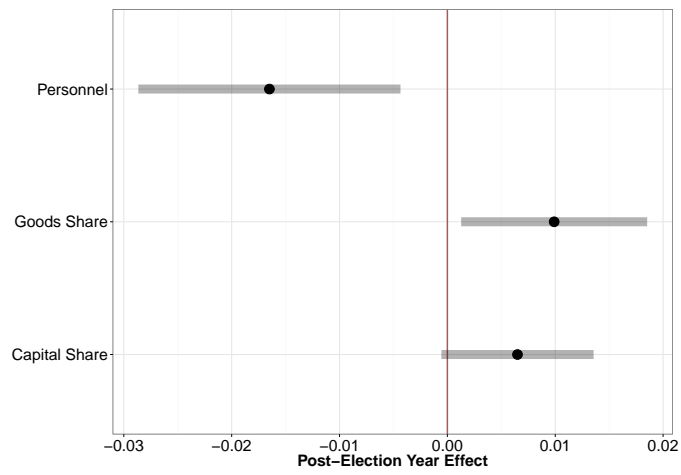
(d) Personnel Expenditures

Figure 1: Box plots for Expenditure Types by Year

(a) Pre-Election Year

(b) Election Year

(c) Post-Election Year

Figure 2: Simulated Effects for Dirichlet Regression Model

	(1) log(Total Exp pc)	(2) log(Capital pc)	(3) log(Goods pc)	(4) log(Personnel pc)	(5) Capital Share	(6) Goods Share	(7) Personnel Share
Pre-Election Year	-0.0204$^+$	-0.00731	-0.0229	-0.0213	0.00195	-0.0000976	-0.00185
	(0.0122)	(0.0270)	(0.0170)	(0.0225)	(0.00501)	(0.00302)	(0.00486)
Election Year	-0.0437***	-0.136***	-0.0213	-0.000448	-0.0231***	0.00375	0.0193**
	(0.0125)	(0.0338)	(0.0213)	(0.0195)	(0.00577)	(0.00357)	(0.00590)
Post-Election	-0.00448	0.0161	0.0197	0.0120	-0.00447	0.00236	0.00211
	(0.0130)	(0.0290)	(0.0183)	(0.0247)	(0.00529)	(0.00273)	(0.00536)
District FE	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓
District Controls	✓	✓	✓	✓	✓	✓	✓
Observations	2522	2524	2525	2535	2522	2522	2522
Adjusted R^2	0.420	0.446	0.147	0.199	0.486	0.331	0.453
F	78.68	83.41	28.18	85.48	78.79	32.24	96.09

Clustered standard errors in parentheses

$^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 1: Budget Cycles, FE-OLS

	(1) Admin	(2) Econ	(3) Edu	(4) Env	(5) Health	(6) House	(7) Infra	(8) Law	(9) Rel	(10) Social	(11) Tour	(12) Agri
Pre-Election Year	0.00186	0.00109	0.00233	-0.00181	-0.000206	0.000818	-0.00641	0.000879*	-0.0000156	-0.00142*	-0.000287	0.00316*
	(0.0104)	(0.00133)	(0.00756)	(0.00185)	(0.00195)	(0.00349)	(0.00624)	(0.000353)	(0.000325)	(0.000701)	(0.000659)	(0.00152)
Election Year	0.00759	0.00236	0.0170	-0.00216	-0.00124	0.00196	-0.0266**	0.000602	-0.000276	-0.00230*	0.0000389	0.00307^{+}
	(0.0163)	(0.00188)	(0.0110)	(0.00297)	(0.00307)	(0.00455)	(0.00892)	(0.000451)	(0.000458)	(0.00110)	(0.00104)	(0.00169)
Post-Election	-0.0201^{+}	0.00147	0.0129	-0.00281	0.00337	0.00106	0.00146	-0.000262	0.000351	0.000166	-0.0000465	0.00242^{+}
	(0.0118)	(0.00135)	(0.00853)	(0.00204)	(0.00265)	(0.00395)	(0.00856)	(0.000629)	(0.000353)	(0.000787)	(0.000550)	(0.00138)
District FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
District Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1791	1791	1791	1791	1791	1791	1791	1791	1791	1791	1791	1791
Adjusted R^2	0.186	0.059	0.100	0.030	0.260	0.071	0.214	0.599	0.152	0.024	0.048	0.063
F	15.20	4.405	7.012	3.108	20.15	3.879	13.95	.	.	3.014	3.009	4.902

Clustered Standard errors in parentheses

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2: Budget Cycles, FE-OLS, Sectoral Expenditure Categories

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	log(Total Exp pc)	log(Capital pc)	log(Goods pc)	log(Personnel pc)	Capital Share	Goods Share	Personnel Share
Pre-Election Year	-0.0195	0.000517	-0.0210	-0.0238	0.00318	0.000279	-0.00346
	(0.0123)	(0.0271)	(0.0171)	(0.0228)	(0.00506)	(0.00305)	(0.00491)
Election Year	-0.0470***	-0.165***	-0.0281	0.00872	-0.0275***	0.00238	0.0252***
	(0.0134)	(0.0357)	(0.0227)	(0.0197)	(0.00595)	(0.00387)	(0.00618)
Post-Election	-0.00393	0.0209	0.0208	0.0105	-0.00371	0.00259	0.00113
	(0.0130)	(0.0291)	(0.0184)	(0.0249)	(0.00531)	(0.00275)	(0.00536)
Incumbent	-0.00999	-0.0894^{+}	-0.0541*	0.0537*	-0.0141	-0.0102*	0.0243**
	(0.0178)	(0.0527)	(0.0259)	(0.0220)	(0.00868)	(0.00468)	(0.00764)
Incumbent × Election Year	0.0197	0.170*	0.0406	-0.0552^{+}	0.0270*	0.00822	-0.0352***
	(0.0255)	(0.0659)	(0.0373)	(0.0314)	(0.0112)	(0.00668)	(0.0102)
District FE	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓
District Controls	✓	✓	✓	✓	✓	✓	✓
Observations	2522	2524	2525	2535	2522	2522	2522
Adjusted R^2	0.420	0.448	0.147	0.199	0.487	0.331	0.455
F	75.95	80.64	27.38	81.52	76.59	31.02	94.06

Clustered standard errors in parentheses
$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3: Budget Cycles, FE-OLS, Incumbency