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Technocracy for the People? The Impact of Government-Imposed Democratic Innovations on Governance and Citizen Well-Being

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Abstract

Despite participatory institutions' increasing ubiquity, we know little about their effects on governance and well-being. What we do know comes largely from Brazil, where positive outcomes have been attributed to civil society's role in implementation. Often, however, participatory institutions are imposed by national governments, with little civil society engagement. In these cases, scholars have argued, participatory institutions are unlikely to improve governance and well-being, as civil society is not present to unlock the institutions' potential. We test this proposition in Peru, the first country featuring government mandated participatory institutions for all subnational governments. We find, surprisingly, that Peru's participatory budgeting process increased pro-poor spending and improved citizen's quality of life. We attribute these outcomes to reduced information asymmetries, made possible by the central role played by an influential and autonomous

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government agency. We employ a unique panel dataset, as well as an original survey and extensive interviews with government and civil society actors.

Keywords
participation, participatory institutions, citizen well-being, governance, Peru

When does democratic innovation improve governance and citizen well-being?[1] A wealth of literature has shown that democracy leads to better public goods provision and improved citizen well-being (Acemoglu and Robinson, 2006; Lake and Baum, 2001; Sen, 1999). However, the majority of these studies have focused on representative democratic institutions. They ignore the explosion of participatory democratic institutions, which engage millions of ordinary citizens and civil society organizations in local public policy decisions around the world. Most of these experiences emerge after local governments and civil society organizations form partnerships to innovate and set up participatory institutions (PIs). At the same time, dozens of countries around the world have passed national legislation that mandate large-scale PIs to complement existing representative democratic institutions. For example, as part of national efforts to deepen democracy, elected officials in Kenya, the Philippines, and Colombia codified a commitment to participatory democracy in new constitutions and passed laws to set up participatory councils, planning, and budgeting systems in local governments.

Although few studies systematically examine the socioeconomic and political effects of PIs, the small number that do highlight the importance of local-level elected officials and civil society organizations in activating the potential of PIs to improve the quality of governance and citizen well-being. These studies are mostly limited to Brazil, a country where PIs were adopted voluntarily by willing sub-national governments or at the behest of well-organized civil society actors. Yet PIs are increasingly implemented in a top-down manner, imposed by national governments with much less bottom-up pressure from or participation by civil society. To date, we know very little about whether these government-imposed PIs can improve political and social outcomes, thus calling into question the generalizability of previous research establishing a positive link between PIs on the one hand, and governance and well-being on the other.

In this article, we argue that active promotion by civil society actors or local elected officials may not be necessary for PIs to have a positive effect on governance and well-being. If championed and implemented by an influential and politically autonomous government agency with the capacity to set institutional rules meant to mitigate clientelism and corruption, even PIs imposed from above may, over time, reduce information asymmetries and

reshape government spending. These shifts are then reflected in government spending priorities, and, ultimately, improved citizen well-being.

Employing a mixed-method case study of Peru, we find that government-imposed PIs can reallocate municipal spending toward pro-poor initiatives, and, in turn, improve well-being. We examine the impact of PIs on well-being and municipal spending patterns using quantitative and qualitative data. We first assess the state of the literature on PIs' social and political impacts, from which we develop a set of theoretical expectations about the relationship between government-imposed PIs on the one hand, and governance and citizen well-being on the other. We then empirically test several hypotheses derived from these expectations, employing a unique panel dataset from Peru between 2005 and 2015. In turn, we explore our proposed causal mechanisms—reduced information asymmetries made possible by the guiding role played by Peru's powerful Ministry of Economics and Finance—based on extensive interviews, an original survey of local government officials, and deep case knowledge of PI adoption and implementation in Peru. We conclude by discussing the paper's key contributions and avenues for future research.

Democracy, Governance, and Citizen Well-Being

It is well-known that democratic competition and civil/political rights promote government responsiveness to citizen needs (Dahl, 1971; Przeworski, 1999; Schmitter and Terry, 1991). Without the discipline imposed by electoral competition and freedom of expression, politicians have few incentives to heed the wishes of their constituents. Moreover, scholars have pointed out that representative democracy improves public goods provision (de Mesquita et al., 2003; Lake and Baum, 2001), particularly in education (Brown & Hunter, 2004) and infrastructure (Biser and Edwards, 2012; Deacon, 2009), but also by increasing total public spending (Brown & Hunter, 2004; Huber et al., 2008). In turn, representative democracy can also translate to lower infant mortality rates (Gerring et al., 2015; Wang et al., 2019), and higher life expectancy (Besley and Kudamatsu, 2006).

Despite the many benefits of representative democracy on government responsiveness and citizen well-being, citizens are increasingly dissatisfied with democracies that emerged in the wave of democratization that occurred during the 1980s and 1990s (Foa et al., 2020). O'Donnell (1998), when discussing the shortcomings of democratization in the Global South, concludes: "Elections…occur only periodically, and their effectiveness at securing vertical accountability is unclear, especially given the inchoate party systems, high voter and party volatility, poorly defined issues, and sudden policy reversals that prevail in most new polyarchies" (113). As a result, decades of representative democratic governance in Latin America, Africa,

Eastern Europe, and elsewhere have done comparatively little to address debilitating corruption, inequality, and social exclusion.

In response to persistent crises of democracy and governance, policymakers around the world have set up myriad participatory institutions (PIs)—defined as formal institutions that engage citizens in public policy decision-making in an ongoing or sustained way. Some examples include citizen councils (e.g., Venezuela and Ecuador), national development planning systems (e.g., Colombia and Guatemala), village councils (e.g., India and Uganda), participatory development planning (e.g., Indonesia and Bolivia), and participatory budgeting (e.g., Peru and Brazil). Despite their increasing ubiquity, our understanding about how PIs affect governance and well-being remains limited.

Existing literature suggests that there is a positive link between PIs and key political and social outcomes. Early work on participatory budgeting in Brazil by the World Bank (2008), for example, found that the presence of PIs in a given municipality was associated with lower poverty rates and increased access to basic services such as piped water and sewerage. A later study by Boulding and Wampler (2010) found that adoption of participatory budgeting led to higher spending on health and education programs, and work by Touchton and Wampler (2014) presented even more robust results: their analysis indicates that participatory budgeting in Brazil lead to "increases in health care spending, increases in civil society organizations, and decreases in infant mortality rates" (1442). Finally, examining a wider range of PIs (specifically local-level policy councils in Brazil), Wampler et al. (2019) similarly find that the presence of PIs is negatively associated with infant/maternal mortality rates.[2]

Importantly, both the World Bank (2008) study and Touchton and Wampler (2014) find that the effects of PIs strengthen as the institutions become more entrenched over time. Wampler et al. (2019) find that, in addition to the longevity of PIs, the quality of the process itself, defined as broader participation, expanded deliberation, and embedding the institution in ongoing policy-making venues, also play meaningful roles in improving citizen well-being.

The findings from studies of Brazil, however, may not be generalizable to other contexts. While Brazil offers an excellent opportunity to conduct large-scale statistical analyses of PIs and their effects—PIs have a comparatively long track record in Brazil, and the Brazilian government is one of only a few countries that have collected fine-grained, sub-national longitudinal data on PIs[3]—Brazil's sub-national governments designed and adopted PIs in response to pressure from well-organized civil society actors and local-level officials who were excited about engaging the public in government (Abers, 2000; Avritzer and Navarro, 2003; Baiocchi, 2005; Wampler and Goldfrank, 2022). By contrast, in an increasingly large number of contexts, PIs are

imposed from above by national governments, with only limited support from civil society or elected officials (McNulty and No, 2021).

The Effects of Government Imposed PIs on Governance and Citizen Well-Being

Much existing scholarship suggests that government-imposed PIs are less likely to have positive effects on governance and citizen well-being compared to PIs implemented from the bottom-up. Previous studies have found, for instance, that a strong and active civil society during PI implementation is needed to activate PIs' potential and generate positive outcomes such as increased participation, inclusion, and government spending on inequality-reducing programs (Baiocchi, 2005; Baiocchi and Ganuza, 2017; Goldfrank, 2011; Mansuri and Rao, 2012; McNulty, 2019; Saguin, 2018; Speer, 2012; Wampler et al., 2019). When civil society is unengaged in PI implementation, community participation is lower (Fedozzi, 2004; Melgar, 2014; Nylen, 2002; Wampler et al., 2021), inequalities between privileged and marginalized groups are exacerbated (Gilman, 2016; Mansuri and Rao, 2012), and excluded communities lack an effective, independent advocate before the government (Wampler, 2008). When civil society and reform-minded elected officials are not prominent in the implementation process, then, many scholars assume that the link in the chain connecting PIs to positive social and political outcomes is weakened, thereby reducing PIs' likelihood of success in improving those outcomes. A number of systematic studies have drawn similarly pessimistic conclusions about the institutions' potential (Grillos, 2017; Jaramillo and Alcázar, 2013; Saguin, 2018; Wampler et al., 2021).

Yet not all scholars share this negative view. Ryan (2021), for instance, in a comparative study of dozens of municipal participatory budgeting processes around the world, finds only limited evidence that leadership by committed elected officials is necessary for PI success (at least in the short-term), and no evidence that strong civil society engagement during implementation is required (147). Similarly, Beuermann and Maria (2014) find that government-imposed PIs in Russia—when provided with effective technical assistance to ensure implementation—improved government responsiveness and satisfaction with public services, though only in areas where decentralization had already occurred.

Building on these works, we offer a two-part theory to account for the possibility that PIs may improve governance and well-being in the absence of civil society or political champions. First, many of the works that stress the importance of strong civil society advocacy in PI implementation focus on highly ambitious outcomes. Roberts (1998) argues that PIs' objective is nothing less than a structural transformation of political institutions "…from hierarchical forms of elitist or bureaucratic control to forms of popular self-

determination by means of more direct participation in the decision-making process" (30). It may very well be the case that using PIs to effect transformative reform of political institutions that empowers traditionally excluded groups to hold meaningful seats at the decision-making table requires strong bottom-up pressure from civil society as well as active support from ideologically committed elected officials.

Yet many PIs have more limited—though still important—objectives, ranging from shifts in local government spending patterns toward pro-poor infrastructure projects to incremental improvements in local government corruption and accountability. In cases where more measured goals exist, we argue that PIs can be successful under a substantially wider range of conditions. In these contexts, PIs do not need to enjoy meaningful leverage over government decision-making, as long as they provide a consistent site of government-citizen interaction. Civil society is important to the process in these cases—in that organizations send representatives to meetings and propose projects—but it is not necessary that the *civil society sector* is well organized and active, nor that civil society play an important role in promoting PI implementation.

What underlying factors might explain how PIs can succeed in improving outcomes when they are limited to the role of facilitating government-citizen interactions? Accounts of the causal mechanisms connecting PIs with improved political and social outcomes stress PIs' importance for increasing information-sharing between government and civil society actors. As Gonçalves (2014) explains in the case of participatory budgeting: "…the information channels opened by participatory budgeting might serve as a useful tool for identifying what citizens…saw as expenditure priorities" (100). Similarly, Touchton and Wampler (2014) explain that PIs can ease "the burden of sharing information and…allow CSO leaders and citizens to send signals (political preferences) to public officials" (1444). These conclusions are consistent with a broader body of scholarship that highlights the positive role played by increased information-sharing about government decision-making in improving governance and well-being (Björkman and Svensson, 2009; Grossman and Michelitch, 2018).

In turn, Wampler et al. (2021) argue that increased information sharing through PIs changes individual-level attitudes and behaviors, which then generate community-level outcomes like higher levels of pro-poor spending and improved citizen well-being. The learning process is twofold: participants learn about budgets and democratic practices, which allow them to better communicate their needs while elected officials can seek input that helps them better target programs and projects. Building on Wampler et al. (2021), we argue that as long as PIs are at least minimally implemented to ensure at least marginal increases in government-citizen information-sharing, they have the capacity to improve governance and well-being—even as they fall far short of

more ambitious goals related to empowerment and structural transformation envisioned by many.

What are the conditions required for basic PI implementation? Active promotion by civil society organizations and elected officials can play a critical role in ensuring local governments implement PIs, carry them out over time, and attract involvement from citizens and civil society organizations. That said, following Beuermann and Maria (2014), we argue that, in the absence of these conditions, when PI implementation enjoys sufficient support from the national government to ensure basic implementation, PIs can have positive effects on a range of important outcomes. In particular, government technocrats, particularly those from an influential and politically autonomous agency, can play a similar role to the part played by civil society organizations or ideologically committed elected officials in cases of bottom-up implementation.

Our theory dovetails nicely with scholarship on bureaucracies that finds "islands of excellence" can exist in contexts otherwise characterized by high levels of corruption and low state capacity (Bersch et al., 2013; Schneider, 1992). Islands of excellence are typically those agencies critical to countries' economic performance or geostrategic success, such as finance ministries, central banks, and foreign ministries. Given their strategic role in economic development or geopolitics, these agencies receive unusually high levels of funding and are deliberately shielded from political/patronage pressures faced by most government agencies. We argue that "islands of excellence" have the prestige, political autonomy, and administrative capacity needed to guarantee PI implementation. Since islands of excellence are respected for their technical expertise and are considered vital to countries' economic or diplomatic success, they often wield significant political leverage (Dargent, 2015). This gives them the power to push for the adoption of laws with political consequences and enforcement mechanisms that might be impossible to pass otherwise. In turn, these agencies' political autonomy enables them to enforce institutional rules that mitigate partisan cooptation of government programs. Finally, since they are not hobbled by insufficient funding, islands of excellence enjoy the administrative capacity needed to assist with program implementation and monitoring.

How do powerful and politically autonomous government agencies substitute for the role of civil society organizations and elected officials in the promotion of PIs? First, islands of excellence can affect implementation by relying on their power and prestige to incentivize local government compliance with laws mandating PIs, and by providing local governments the technical assistance they need to implement PIs. Next, islands of excellence can induce widespread community participation by requiring that significant local budgetary allocations are made through PIs, in addition to leveraging their positive public reputation to increase citizens' trust in PIs. Similarly,

where autonomous civil society is generally considered essential for ensuring that the voices of average citizens are prioritized over partisan interests, islands of excellence can require local governments to implement PIs in a manner that mitigates partisan cooptation.

Our theory suggests that when government-imposed PIs are implemented at a basic level, they have the capacity to improve, if not dramatically transform, a range of outcomes related to governance and citizen well-being over time. This occurs, we argue, because PIs reduce information asymmetries. To test the effects of government-imposed PIs on governance and well-being, we explore two primary outcomes that are likely to be improved because of PI-induced reductions in government-citizen information asymmetries: 1) the responsiveness of government spending to community needs and 2) indicators of citizen well-being that are likely to be associated with improvements in government responsiveness.

First, with respect to government responsiveness, following World Bank project evaluation studies in Brazil and Peru (2008, 2010) as well as Touchton and Wampler (2014), we focus our attention on the relationship between PIs and government spending targeted to the poor. PIs—particularly those in the Global South—are typically established to address deficiencies in poor communities' access to basic services (Baiocchi and Ganuza, 2017; Fung and Wright, 2003; Mansuri and Rao, 2012; Touchton and Wampler, 2014; Wampler, 2007). Therefore, if PIs are associated with increased spending on projects that serve the poor, we can conclude that they increase government responsiveness to the constituencies they are meant to serve. Based on our assumption that government-imposed PIs increase government responsiveness to the poor, we expect that:

Pro-Poor Spending Hypothesis: Government-Imposed PIs Will Increase Municipal Spending on Pro-Poor Projects

Following Doumbia (2019, p. 1762), we define pro-poor projects as government programs that reduce poverty or inequality or improve the living standards of the poor. Our operationalization of pro-poor projects includes a) education projects, b) health projects, and c) basic infrastructure projects (electricity, water or sewage projects). We include education and health projects, because previous scholarship has found that increased spending in these areas is associated with reduced income inequality and poverty (Lustig, 2015; Mosley et al., 2004). In turn, since the poor are much more likely than others in society to lack access to basic infrastructure services such as electricity, water, or sanitation (Kanagawa and Nakata, 2008), increased spending in these areas is likely to benefit the poor.

In turn, since previous scholarship has found that PIs' effects depend on the degree of fiscal control offered to PIs (Goldfrank, 2011; Handlin, 2016; Ryan, 2021),

we focus our analysis on the percent of local-government budgets allocated through PIs—rather than the mere presence or absence of the institutions. If PI budgets are small as a proportion of total spending, high levels of pro-poor project prioritization in PIs will have little impact on governments' overall spending on pro-poor projects. By contrast, when PI budgets share of total spending increases, PIs are more likely to reshape municipal spending patterns. To test whether PIs affect pro-poor spending, we derive the following hypothesis:

> **H1:** As the value of PI budgets increase as a share of total municipal investment spending, the share of municipal spending directed to pro-poor projects will increase.

Even if PIs shift municipal spending priorities toward pro-poor projects, poor governance may weaken the link between pro-poor spending and citizen well-being (Baldacci et al., 2008). Poor governance facilitates corruption and inhibits accountability, thereby undermining the efficiency of pro-poor government spending and decreasing the impact of pro-poor spending (Mauro, 1998; Rajkumar and Swaroop, 2008). Since most cases of government-imposed PIs have been implemented in contexts of relatively high corruption and weak accountability (McNulty, 2019), it is critical to examine the relationship between government-imposed PIs and the well-being outcomes we expect to be facilitated by pro-poor spending. While the link between government responsiveness and citizen well-being may be weakened in contexts of poor governance, we do not expect it to be severed entirely. As long, that is, as government-imposed PIs are implemented to a sufficient degree, they can meaningfully reduce government-citizen information asymmetries. As a result, we expect that:

Citizen Well-Being Hypothesis: Government-Imposed PIs Will Improve Citizen Well-Being

Following previous studies assessing the effects of PIs on citizen well-being in Brazil, we focus our analysis on indicators of health, education, and income (Boulding and Wampler, 2010; Touchton and Wampler, 2014; Wampler et al., 2019). Specifically, like Boulding and Wampler (2010), we operationalize citizen well-being by examining life expectancy, rates of high-school graduation, average years of education, and per-capita income. We also examine a composite variable capturing overall citizen well-being (specific variables described below).[4] We anticipate that:

> **H2a:** An increase in the value of PI budgets as a share of total municipal investment spending will improve short-term citizen well-being.

H2b: An increase in the value of projects approved by PIs in a given thematic area will improve short-term citizen well-being in that area. We expect, for example, that increased pro-poor spending in the area of education will improve high-school graduation rates and years of education because the pro-poor spending is specifically targeted toward this outcome.

Finally, previous studies have found that PIs require a significant "maturation phase" before their effects on citizen well-being can be observed (Lavalle et al., 2016; Touchton and Wampler, 2014; Wampler and Touchton, 2019). We test for this possibility by exploring whether the longevity of PIs, rather than their quality, has an impact on citizen well-being.

H2c: As the number of years a municipality has implemented PIs increases, citizen well-being will improve.

Government Imposed PIs in Peru

We focus our empirical analysis on one of the most common forms of PIs, Participatory Budgeting (PB). PB has experienced a surge in numbers since it began in the late 1980s in Brazil, reaching over 11,000 cities globally by 2019 (Dias et al., 2019; Shah, 2007; Wampler et al., 2021). PB is an annual process through which residents are invited to participate in deliberations and vote on investment spending in sub-national governments. PB advocates argue that the process can engage citizens in new ways, strengthen democracy, improve transparency and accountability in public budgets, and lead to better decision making about limited resources.

We examine the effects of PB in Peru for two primary reasons. First, as we detail below, the national government imposed PB in Peru on municipalities and implemented the program without significant support from either local government or civil society actors. In this sense, Peruvian PB contrasts sharply with Brazil, where grassroots civil society actors working with local governments essentially designed the process. Second, as the first country to pass a national law mandating PB in all sub-national (district, municipal, provincial, and regional) governments, Peru offers the longest panel data for exploring the effects of government imposed PB processes.

The national law emerged after a ten-year experience of Alberto Fujimori's authoritarian rule, a regime characterized by the gradual concentration of power in the executive, corruption, and the lack of transparency. After Fujimori fled the country in 2000, democratic reformers grappled with how to address deep-rooted problems with corruption and transparency. A powerful advocate of PB within the Ministry of Economics and Finance (MEF) began to work with allies in Congress to first pilot a PB program in several newly empowered regions of the country, then mandate PB by law. Thus, in 2003,

Peru's national government passed the world's first Participatory Budgeting Law (Law 28,056) as part of a comprehensive decentralization reform.

The law mandates that all sub-national governments undertake participatory budgeting annually to determine their investment spending. PB is a four-part process engaging "participating agents" (representatives from civil society organizations and government officials) to participate in a series of workshops that explain the budget then solicit project proposals. Proposals are scored by a technical team and presented to participating agents at a final prioritization meeting where participants review, discuss, and approve the final list of projects and then elect an oversight committee.

The law states that investment budgets should be developed in this participatory process; however, it does not state how much of that budget must be included. Thus, sub-national officials have discretionary power over the percentage of the investment budget that will be determined through PB meetings. Once a proposal makes it to the list of approved projects, there is a long process to follow before the public works project is funded and executed. This means that there is often a gap between the number of approved and executed projects. This paper focuses on approved projects and executed projects, not the proposed projects, in an attempt to capture the projects that have made it through the multiple steps toward completion.

Data

To explore the governance and well-being outcomes associated with government-imposed PIs, we employ a mixed-method approach. For our quantitative analysis, we built a panel dataset of PB, municipal spending, citizen well-being, and electoral outcomes at the district level between 2005 and 2015. The dataset draws on three sources. To capture variation in PB experiences and municipal spending by service over time, we employ data from the Peruvian National Registry of Municipalities (RENAMU), which provides yearly district-level data on the number, value, and thematic focus of approved PB projects (including electricity/water/sewage, transportation/communications, and education).[5] The dataset also provides detailed information for each district's yearly spending on investment projects, as well as the number, value and thematic focus of projects each district government spent money on in a given year. Finally, we use data from RENAMU to construct a set of time-varying district-level variables that we employ as controls in our analysis. To capture citizen well-being, we utilize the United Nations Development Project's (UNDP) human development index (HDI), which offers district-level data capturing life expectancy, educational attainment,[6] and per capita family income between 2007 and 2015. Finally, for our electoral variables we employ municipal elections data between 2002 and 2014 from the Peruvian National Election Commission (JNE).

In turn, to explore our proposed causal mechanisms connecting PB and different governance and well-being indicators, we turn to qualitative data from the authors' combined fieldwork over almost twenty years in Peru, with hundreds of interviews with government officials, scholars, civil society activists, and participating agents. Interview data from 2003, 2004, 2007, 2010, 2015, 2017, and 2022 allow us to follow the PB process over time. We selected interviewees using snowball sampling and by contacting registered participants using forms that were uploaded to the government's database. Interviews followed the open-ended semi-structured format and tended to last between 1-2 hours. Finally, to supplement our interview evidence, we draw upon data from an original survey of nearly 140 local-level Peruvian bureaucrats involved in the PB process from 24 of 26 regions conducted in early 2022.

Variables

Our quantitative analysis includes two sets of dependent variables: municipal spending by service area and HDI measures. Indicators for municipal spending by service area are constructed by dividing the value of all projects each district funded across a range of service areas by the total value of municipal investment spending. Indicators for HDI are the UNDP's composite human development index, as well as their variables for district-level average life expectancy, the percent of the population aged 18 and above that has completed secondary education, the average number of years of formal education (ages 25 and above), and per-capita household income.

We employ two primary independent variables. The first, following (Jaramillo and Alcázar, 2013) is "PB Intensity." This variable captures the relative value of PB budgets as a share of all municipal investment spending.[7] The share of infrastructure projects allocated through PB varies widely, but the median PB process allocates a value equal to 34% of all municipal investment spending in a given year. To construct our measure of PB intensity, we simply divide the value of projects approved through the PB process in a given year by the value of all investment projects subsequently executed over the following year. This allows us to capture the percentage of investment spending determined via the PB process, and is an effective measure of the relative strength of PB in a given district-year.[8] We also construct variables capturing the value of approved PB projects in each of the thematic areas discussed above divided by the value of all municipal investment spending. Our second primary independent variable captures the cumulative number of years local governments reported carrying out a PB process in their district.

Since our methodological approach does not require us to control for time-invariant district or year characteristics, we only include relevant controls capturing time-varying, within district characteristics. First, we include a

control for district population size since population density is associated with higher state capacity (Hanson, 2015; Herbst, 2000), an important predictor of both service provision and effective PIs (Wampler et al., 2019). Second, we include a variable capturing per-capita district spending in order to account for over-time changes in district budgets associated with greater fiscal flexibility and more robust PB processes (Mayka, 2019; Wampler et al., 2019).

Relatedly, poverty is likely to be associated with both lower levels of citizen well-being and weaker PB processes, as marginalized communities are typically less politically engaged, and have fewer resources to influence government decision-making than more affluent communities (Verba, Schlozman and Brady, 1995). To address this possibility, and because annual district level poverty estimates are not available, we include a control for the per capita number of recipients of a program called "Vaso de Leche," which offers assistance to children and pregnant mothers, and is proportioned based on rates of tuberculosis and poverty. Next, one of the most robust findings in the literature on PIs is that civil society density is positively associated with participation. Areas with higher levels of social capital can more effectively overcome collective action problems (Fedozzi, 2004; Melgar, 2014; Nylen, 2002), potentially leading to more robust PIs. We control for over-time changes in civil society organization by including a variable capturing the per capita number of civil society organizations reported by RENAMU for each district-year (the only existing measurement of this variable).

Finally, electoral dynamics are likely to shape both PB and municipal spending/citizen well-being trends. Since close elections generate higher levels of political engagement (McDonald and Tolbert, 2012), and more responsive politicians (Binzer Hobolt and Klemmensen, 2008; Griffin, 2006), it may be that areas with high levels of political competition have more robust PIs. As a result, we include a control variable measuring the difference in vote share between the first and second-place finishers in the most recent municipal elections. Similarly, before the abolition of immediate mayoral reelection in 2015, there was a widespread perception in Peru that second-term mayors were more corrupt than first-term mayors since they learn how to abuse their office effectively during their first term (Klašnja and Titiunik, 2017). If this were true, we would expect incumbent mayors to be less responsive than first-term mayors. To address this possibility, we include a variable assessing whether mayors had been reelected in the previous election cycle. Summary statistics of all the variables employed in our analyses are provided in Appendix A.

Models

Our primary specification is given by:

$$Y_{it} = \alpha + \beta_1 PB_{it} + \beta_2 controls_{it} + \gamma_i + \theta_t + \mu_{it}$$

where i denotes districts and t denotes years; Y represents the value of the dependent variable for the ith district in the tth year; α represents a vector of constants; γ_i denotes unobserved, time-invariant within-district variation; θ_t denotes unobserved, time-invariant, within-year variation; and μ_{it} denotes district-year residuals. As mentioned above, we also include control variables for population size, per capita municipal spending, civil society density, per capita *Vaso de Leche* recipients, competitiveness of elections and immediate mayoral reelection to account for potential biased introduced by time-varying, within-municipality characteristics. As a robustness check to address potential endogeneity, we also run models including lagged dependent variables. The disadvantage of this approach, in addition to reducing our sample size, is that it introduces a form of bias known as Nickell's bias (see Nickell, 1981). To ensure this bias does not affect our results, we also run robustness checks using the Arellano–Bover/Blundell–Bond "system" generalized method of moments (GMM) estimator with two lags of the dependent variable (Arellano and Bover, 1995; Blundell and Bond, 1998).[9] This approach, designed specifically for data with many panels and few time periods, allows us to instrument for our dependent variables using lags of the independent and control variables.

Testing the Effects of Participatory Budgeting in Peru on Government Spending and Citizen Well-Being

Consistent with the literature on Brazil, we find that higher intensity PB processes are associated with greater municipal spending on pro-poor projects (H1, see Table 1).[10] PB intensity is positive and significant ($p < 0.01$) for each of the three types of pro-poor municipal spending (education, electricity/water/sewage, and health) across all three model specifications. As shown in Appendix C, these results are substantially unchanged when we restrict the dataset to exclude high values of PB intensity, and we exclude areas with high levels of mining activity. The effect of mining activity is important to assess because communities with large mines have much larger budgets due to what is called the mining canon, a fund that channels national revenues back into communities that are affected by mining activities. These tests suggest that is it unlikely that the relatively small number of districts where an unusually large portion of investment spending is allocated through PB are driving our results. Finally, since we include a control for total municipal spending per capita, it is unlikely that our results are driven by an increase in municipal budgets over time.[11]

The magnitude of these effects is quite large (see Figure 1). For instance, moving from a district with no PB process to one with the highest possible PB

Table 1. Effects of PB Intensity on Pro-Poor Spending.

	Basic Models			Lagged DV Models			System GMM Models		
	(1) Educ.	(2) Elect./Wat./Sew.	(3) Health	(4) Educ.	(5) Elect./Wat./Sew.	(6) Health	(7) Educ.	(8) Elect./Wat./Sew.	(9) Health
PB Intensity	.019*** (.003)	.020*** (.003)	.010*** (.001)	.025*** (.003)	.025*** (.004)	.012*** (.002)	.038*** (.005)	.027*** (.006)	.016*** (.002)
Observations	20,211	20,211	20,211	18,355	18,355	18,355	16,510	16,510	16,510
Prob > chi2	.000	.000	.000	.000	.000	.000	.000	.000	.000

Note: Cluster-Robust Standard errors in parentheses. Full results reported in Appendix B.
$+p < 0.1$, $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

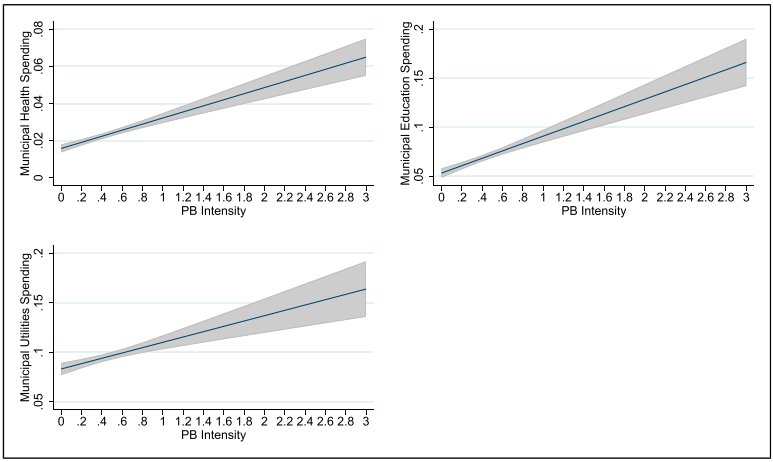

Figure 1. Marginal Effects of PB Intensity on Municipal Investment Spending. Graphs Plot System GMM Models.

intensity is associated with increases in municipal investment spending on health (1.6% to 6.5%), education (5.3% to 16.7%), and projects related to electricity, water, and sewage (8.3% to 16.9%). In other words, increasing the share of municipal investment spending allocated through the PB process can substantially reshape municipal spending patterns. These results offer strong evidence in support of H1, suggesting that government imposed PB is, in fact, effective in improving government responsiveness to citizen preferences.

PB's capacity to redirect municipal resources to pro-poor projects suggests that it may be useful for addressing inequality and reducing poverty, but it does not demonstrate whether PB's impact on government spending patterns translates to improving the lives of ordinary citizens. To explore this, we turn to an analysis of Hypothesis 2. Tables 2 and 3 present the results of our analyses testing the short-term effects of PB on citizen well-being (Hypotheses 2a and 2b). We do not observe a clear positive short-term relationship between PB budgets and citizen well-being. While all of the PB coefficients in Table 2 are positive in the baseline and lagged DV models (models 1–10), in three of the GMM models, the coefficients are negative and statistically significant (models 11, 12, and 15). These volatile results suggest that our baseline and lagged DV estimates are biased, and that PB intensity does not impact overall human development or per capita income. The coefficients for secondary education and average education are positive across all three model specifications, but do not consistently reach the .05 threshold of statistical significance. Thus, these results offer suggestive evidence that PB intensity may positively impact short-term educational outcomes, but we do not find evidence that it affects any other well-being outcomes.

Table 2. Effects of PB Intensity on Citizen Well-Being.

	Basic Models					Lagged DV Models					System GMM Models				
	(1) Idh	(2) Life Exp.	(3) Sec. Ed.	(4) Avg. Ed.	(5) Avg. Inc.	(6) Idh	(7) Life Exp.	(8) Sec. Ed.	(9) Avg. Ed.	(10) Avg. Inc.	(11) Idh	(12) Life Exp.	(13) Sec. Ed.	(14) Avg. Ed.	(15) Avg. Inc.
PB intensity	.003	.198	.843+	.089*	2.229	.003	.175+	.816*	.079+	1.885	−.010**	−.281+	1.351*	.133**	−29.589***
	(.003)	(.117)	(.430)	(.037)	(3.953)	(.003)	(.089)	(.327)	(.037)	(4.204)	(.003)	(.151)	(.576)	(.040)	(5.414)
Observations	20,211	20,211	20,211	20,211	20,211	18,355	18,355	18,355	18,355	18,355	16,510	16,510	16,510	16,510	16,510
Prob > chi2	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Note: Cluster-Robust Standard errors in parentheses. Full results reported in Appendix B.
+$p < 0.1$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table 3. Effects of PB Projects by Area on Citizen Well-Being.

	Basic Models				Lagged DV Models				System GMM Models			
	(1) Life Exp.	(2) Life Exp.	(3) Sec. Ed.	(4) Avg. Ed.	(5) Life Exp.	(6) Life Exp.	(7) Sec. Ed.	(8) Avg. Ed.	(9) Life Exp.	(10) Life Exp.	(11) Sec. Ed.	(12) Avg. Ed.
Elect./Wat./Sew. Share PB	.703 (.421)				.413 (.407)				−1.042* (.462)			
Health share PB		−.160 (.524)				−.110 (.628)				−1.339 (.831)		
Education share PB			−1.695 (2.269)	−.205 (.278)			−1.460 (1.998)	−.238 (.258)			1.601 (2.364)	.089 (.241)
Observations	20,211	20,211	20,211	20,211	18,355	18,355	18,355	18,355	16,510	16,510	16,510	16,510
Prob > chi2	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Note: Cluster-Robust Standard errors in parentheses. Full results reported in Appendix B.
+$p < 0.1$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

In Table 3, we analyze the relationship between approved PB projects (as a share of municipal investment spending) in three thematic areas (electricity/water/sewage projects, health projects, and education projects) and three citizen well-being outcomes (life expectancy, secondary education, and average years of education) (H2b). Similar to Table 2, the results in Table 3 do not suggest a clear relationship between PB budgets and citizen well-being. The only statistically significant PB budget coefficients (in model 9) suggest a negative relationship between increased spending on basic services and life expectancy, but this result is not consistent with the other two model specifications for the electricity, water, and sewage projects variable. In sum, contrary to our expectations, we find little evidence that the value of approved PB projects in a given thematic area and short-term citizen well-being outcomes in related areas.

Finally, in Table 4, we present our analysis of Hypothesis 2c, which tests whether PB longevity affects citizen well-being. Specifically, is the number of years a district has carried out PB (ranging from 0 to 11) associated with improved citizen well-being? Consistent with our expectations, we find that the coefficient for PB longevity is positive and statistically significant at the .05 level across all 3 model specifications for both overall human development (models 1, 6, and 11) and per capita income (models 5, 10, and 15). The coefficients for life expectancy are positive across all the specifications, though only reach statistical significance in the system GMM model (model 12). By contrast, the coefficients for educations are not consistent across model specifications, and do not suggest any clear relationship between PB longevity and educational outcomes. This may be a result of the fact that projects designed to increase high school graduation rates and overall levels of educational attainment take longer to yield effects than projects geared toward increasing life expectancy or income levels.

To address the possibility that districts with no PB experience or those with unusually extensive experience with PB might be driving the results, we rerun our analyses excluding districts with no years of PB experience and those with 11 years of PB experience. We also run models using a binary independent variable where 0 = below average number of PB years (6.2) and 1 = above average PB years. The results, included in Appendix C, are consistent with the results of our primary models. Finally, in order to account for the possibility that our estimates reflect secular improvements in human development indicators during the 2000s and 2010s, in addition to including over time district income and poverty controls in all of our models and reporting system GMM estimates of our models testing Hypothesis 2c (which include lagged first differences of the dependent variables), we also run models (reported in Appendix C) including over-time year trends rather than year fixed effects. These adjustments do not change our results.

Table 4. Effects of PB Cumulative Years on Citizen Well-Being.

	Basic Models					Lagged DV Models					System GMM Models				
	(1) Idh	(2) Life Exp.	(3) Sec. Ed.	(4) Avg. Ed.	(5) Avg. Inc.	(6) Idh	(6) Life Exp.	(7) Sec. Ed.	(8) Avg. Ed.	(9) Avg. Inc.	(10) Idh	(11) Life Exp.	(12) Sec. Ed.	(13) Avg. Ed.	(14) Avg. Inc.
PB cumulative years	.004*	.043	.097	.059*	8.924**	.003*	.045	.062	.042*	6.703*	.011***	.318***	−.315*	−.007	29.034***
	(.002)	(.073)	(.312)	(.023)	(2.529)	(.001)	(.071)	(.288)	(.021)	(2.487)	(.001)	(.029)	(.134)	(.010)	(1.446)
Observations	20,211	20,211	20,211	20,211	20,211	18,355	18,355	18,355	18,355	18,355	16,510	16,510	16,510	16,510	16,510
Prob > chi2	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Note: Cluster-Robust Standard errors in parentheses. Full results reported in Appendix B.
+$p < 0.1$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Regarding the substantive impact of these effects, Figure 2 shows that moving from a district that has never carried out PB to one that has carried out PB 11 times is associated with an increase from .258 to .382 on the overall human development index. To put this into context, the average Peruvian district saw its human development index score increase from .273 to .379 between 2007 and 2015 (a 28% increase). We see similarly meaningful effects for income, where moving from 0 to 11 years of PB is associated with an increase in per capita monthly family incomes from 155 to 474 Soles. In sum, these results offer the first econometric evidence to date that government-imposed PIs have the capacity to meaningfully improve citizen well-being over time.

Discussion

A summary of our findings is presented in Table 5. We find that high-intensity PIs lead to substantial reallocations of municipal spending toward pro-poor projects (H1), and, most importantly, that when PIs are implemented over an extended period, they improve aggregate human development and increase per capita municipal incomes (H2c). However, PIs' effects on well-being require a maturation period to appear: we find no evidence that PIs have short-term impacts on citizen well-being (H2a and H2b).

Overall, our findings suggest a positive relationship between government-imposed PIs on the one hand, and pro-poor municipal spending and citizen well-being on the other, with one important qualification: improvements in well-being require a maturation period. These results largely support recent work in Brazil, but contradict some of the existing studies of PIs in Peru that find no evidence of an effect of PIs on the quality of government service

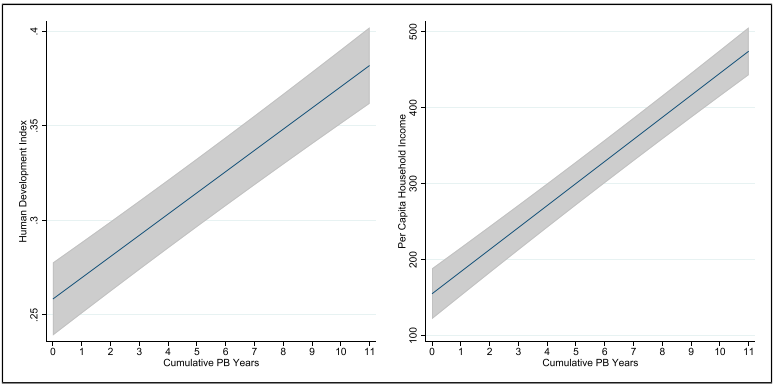

Figure 2. Marginal Effects of Cumulative PB Years on Citizen Well-Being. Graphs Plot System GMM Models.

Table 5. Summary of Results.

Hypothesis	*Description*	*Supported?*
H1	Increase in PB budget >> Increase in muni. spending on pro-poor projects	YES
H2a	Increase in PB budget >> Short-term change in citizen well-being	NO
H2b	Increase in value of approved PB projects in thematic area >> Short-term change in citizen well-being	NO
H2c	Increase in years PB carried out >> Change in citizen well-being	YES

provision (Jaramillo and Alcázar, 2013; Jaramillo and Wright, 2015). These previous studies did not test the impact of PB on citizen well-being, but they would not have expected to see a positive effect on the human development index absent a relationship between PB and the quality of service provision. The discrepancy between our findings and these previous studies is likely a consequence of our capacity to leverage data for a much larger number of districts (1840 compared to around 200–500 districts) over a longer period.

How Do PIs Improve Responsiveness and Well-Being in Peru?

We argue that the positive effects of PIs on responsiveness and well-being documented above are a consequence of increased information-sharing between government and civil society, made possible by the leadership of a powerful technocratic agency (the MEF) that compensated for a lack of active support from civil society or local-level elected officials. We address each of these in turn.

PIs Reduce Information Asymmetries and Change Attitudes

Dozens of interview respondents stressed the value of PB in increasing community knowledge about government activities and reducing information asymmetries between the government and civil society during meetings. One participating agent from the Lions Club in Cuzco mentioned that as early as 2005, he noted a difference in the way civil society in his region interacted with government officials. “Civil society is more active and interested in oversight now. People understand the budget process. After many decades of corrupt spending, this is a good change.” Similarly, a government official in Cajamarca noted that the forums led to a “good exchange of ideas that helped create future alliances,” and a prominent civil society activist from Lima noted

in 2007, "Look, at a minimum everyone and their brother knows how public budgets work now." The power of this process became very clear during an interview with a housewife in a middle-class district in Lima. She became active in PB when her neighborhood association wanted to get funds to clean up their local park. She started attending meetings as the president of her association, and slowly learned about how budgetary decisions were made. After a couple of years, she asked a friend to show her how to look up budgets on the districts' website. She started noticing discrepancies in what she heard in forums and the website, which encouraged her to speak up more, monitor government spending, and take a class at a local university to learn about public administration. When we met in 2017, she had started participating in national events about transparency and oversight to convince others to stay equally vigilant. This woman's experience demonstrates PIs' considerable potential to improve information sharing and spur accountability.

PB not only improves citizens' access to information, but also increases elected officials' understanding of community needs. For example, in a 2022 interview in Villa Maria del Triunfo, a local government official said that "The local leaders really understand the process. The whole process allows [officials] to know what the community needs." PB's capacity to improve government officials' understanding of community needs was also stressed in our 2022 opt-in, web-based survey of nearly 140 PB participants—mostly local government officials (123/147) representing 24 of Peru's 26 regions (using public records from the MEF website to obtain their contact information). Respondents offered detailed information about their experience in open-ended responses to a prompt asking them to state their opinions of PB in their own words.

One respondent described PB as a "Space that allows one to understand the problems of the community, identify potential, and prioritize public budget investment to generate changes in the community." Another respondent explained that PB was a process in which "the local government has to learn about the needs of the population from the perspective of the people themselves, and…prioritize solutions to those problems." Similarly, nearly 40% of respondents reported that local government officials use new information they obtain about community needs through PB to adjust municipal spending patterns.

Finally, our interview data suggests that, by learning about the intricacies of budgeting in participatory spaces and sharing information, participants and officials can shift priorities to focus on improving the lives of people living in poor areas. As one participant from Cajamarca, a farming area of Peru, noted in an interview, "One year we had more money and we made the decision as participating agents to give to the poorest areas of the region." Another leader from Ilo, in Southern Peru, saw similar outcomes after a few years. "The first

two years people would fight over the funds, but soon, we saw people in wealthier areas agreeing to forgo their projects to give funds to poorer areas."

While the evidence we have presented about the role of information-sharing in Peruvian PB is robust, it contradicts the expectations of many scholars who assume that PIs' capacity to improve outcomes depends on active promotion of PIs by civil society or committed local government. These scholars assume that when PB lacks sufficiently diverse community perspectives its potential to reduce information asymmetries will be limited. Thus, since PB in Peru was imposed from above by the government, and since Peruvian politicians and civil society actors alike have offered scant support to PB (López Ricci, 2014; McNulty, 2019; Prodescentralización, 2016), many scholars would not expect information-sharing to be the primary mechanism through which Peruvian PIs improve governance and well-being.

Technocrats as Surrogate

How, then, can we explain why this causal mechanism is responsible for PIs' impact on governance and well-being in Peru, despite the fact that PIs were imposed from the government with little pressure from civil society or local government officials? We argue that, in the absence of an engaged civil society sector or committed elected officials, information-sharing must be induced by a proactive and powerful government agency, in this case, Peru's Ministry of Economics and Finance (MEF).

Thanks principally to the central part it played in combatting hyperinflation and in stabilizing Peru's shattered economy during the 1990s, the MEF was a highly influential and autonomous government agency by the time the national PB law emerged (Dargent, 2015, 90). Indeed, as Dargent (2015, 99) describes, since the 1990s, "an annual poll has ranked the minister of economics among the ten most powerful individuals in the country, showing the importance these officials gained during this market reform period [beginning in the 1990s]." The MEF's exceptional status gave it sufficient influence to implement a range of important financial monitoring and oversight mechanisms. The MEF was one of only a small number of bureaucratic "islands of excellence"—enjoying high levels of administrative capacity and political autonomy—in Peru during the period when PB was established (Newman et al., 2007, 69). The MEF's exceptional status gave it sufficient influence and autonomy to implement a range of important financial monitoring and oversight mechanisms. This occurred despite opposition from President Alejandro Toledo—who complained that such programs unduly tied the government's hands and limited its capacity to fulfill electoral promises (Dargent, 2015, 102).

The MEF's power and prestige enabled it to serve several critical roles during the process of PB adoption and implementation. First, the agency's

reputation as a steward of fiscal responsibility and good governance gave it substantial credibility within the Peruvian congress (McNulty, 2011, 71). This credibility allowed the MEF—responsible for drafting the 2003 law—to frame PB in Congressional debates "as a technical process, spearheaded by a powerful institution, that did not threaten the power of elected officials" (McNulty, 2011, 71). While the potentially serious distributional/political consequences of Peru's PB design would likely have posed insuperable political obstacles in the hands of less-trusted champions, MEF support ensured the final PB law included a range of important elements that incentivized implementation by local governments. In particular, the MEF's advocacy ensured that national government transfers to subnational governments would be conditional on demonstrating that the PB process was carried out each year. This conditionality—unique among countries with government-imposed PIs—substantially increased the costs of non-compliance by sub-national governments.

In turn, the MEF designed PB in a way that limited the extent to which PB processes could be hijacked by partisan co-optation or corruption. As (McNulty 2011, 45) explains: "…the process is meant to be orderly and technical. The design [crafted by the MEF] reduces possibilities for manipulating the process, corrupt practices, or the government's co-optation of the [participating] organizations." Not surprisingly, then, just 15% of respondents in our online survey of participating agents reported that the PB technical team in their district would only approve projects proposed by the mayor, while over twice as many (37%) reported that their mayor respects the list of projects approved through PB. Finally, the MEF further incentivized accountable spending by including a range of monitoring and oversight mechanisms in the program's design—such as establishing vigilance committees to evaluate the implementation of projects and creating a public portal where any citizen can view the results of PB in their municipality.

The MEF's prestige has also been critical in ensuring effective PB implementation at the local level, as its involvement sends a strong signal to subnational government officials that public spending practices need to be cleaned up. Interviewees talked frequently about the power of the MEF and its role as a technocratic, non-partisan agency that oversees the PB process. As one civil society activist told us, when talking about PB, "I mean, the MEF is practically its own branch of government." Similarly, two Peruvian economists who follow PB carefully explained that "By having the MEF involved with PB implementation, it signals to local officials that they better behave." This sentiment was also reflected in our online survey of participating agents. The survey included a series of questions asking respondents to relate their knowledge of the MEF's role in PB implementation in their district. As shown in Figure 3, a majority of respondents (56%) identified the MEF's influence or prestige as a factor in explaining PB implementation, with 44% reporting that

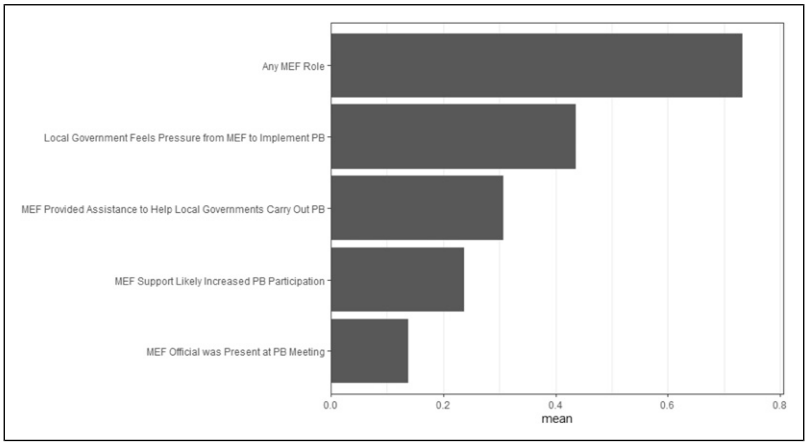

Figure 3. Participating Agent Perceptions of MEF Role in PB Implementation. Authors' calculations, based on an original survey of 137 participating agents in Peru's participatory budgeting process. "Any MEF Role" is a composite variable indicating the share of respondents who answered yes to any of the four MEF-related questions.

their local government felt pressure from the MEF to implement PB and 24% reporting that MEF sponsorship of PB likely increased rates of participation.

Finally, by overseeing PB implementation and providing regular guidance to subnational governments regarding the specifics of the process, the MEF further helped ensure that PB would be implemented across Peru. Every single year, the MEF sends a "rule" (norma) to local government officials with a timeline and instructions. Later, officials must update the government portal with data about participation and approved projects. These small acts of support further help explain why the process takes place year after year and has accumulated effects. That said, our survey results also suggest that on the ground support for PB is limited, with 31% of respondents reporting that their districts received assistance from the MEF to carry out PB, and 14% reporting that MEF officials had been physically present at PB meetings over the years. Thus, while over 70% of respondents reported that the MEF played a meaningful role of some kind in PB implementation, the MEF's power to shape the formal requirements and conditionalities of the PB process, in addition to its prestige, were more important than any hands-on training or technical assistance.

Conclusion

Using a unique panel dataset of 1840 Peruvian municipalities between 2005 and 2015, this paper advances our understanding of how democratic innovation can improve governance and citizen well-being in local governments. We demonstrate that PIs can improve government responsiveness and citizen well-being even when they are mandated by the national government, rather than voluntarily adopted by municipal leaders and civil society organizations. Specifically, government-imposed PIs have the capacity to shift local government spending toward pro-poor initiatives, and, over time, to improve citizen well-being. Moreover, we have used a wealth of interview and survey data to show that a key mechanism driving our results is increased information-sharing between government and civil society actors. In turn, we show that in the absence of strong advocacy by civil society organizations or local government officials, information-sharing can be facilitated through the leadership of a powerful national government agency.

The paper makes two important contributions. First, to our knowledge it is the only study to date that has systematically established a causal relationship between government-imposed PIs and citizen well-being at the local level. This is an important finding, because the few studies that consider this question suggest that PIs are impactful when they are voluntarily adopted but not when they are mandated by the national government (Goldfrank, 2011; McNulty, 2011). If, as we have shown, government-imposed PIs can yield similarly positive effects on pro-poor spending and ultimately citizen well-being, there is considerable reason for optimism about the political and social efficacy of large-scale PIs. This is especially important as a growing majority of these institutions are legislated from above.

Second, contrary to the expectations of many previous scholars but consistent with studies such as Ryan (2021) and Beuermann and Maria (2014), we find that the active participation of civil society in PI implementation is not necessary for PIs to generate positive political and social impacts. We suggest, instead, that powerful government technocrats can effectively serve as surrogates for civil society, taking on key roles typically played by civil society actors or ideologically committed local government officials that facilitate effective information-sharing between government and civil society. This finding is of critical importance, as it suggests that concerted interventions by politically autonomous government agencies can unlock PIs' potential despite resistance from elected officials and weak support from civil society. In other words, the political and social contexts in which PIs are implemented may pose fewer obstacles to the institutions' success than previously thought. Consequently, our findings suggest that recent analyses highlighting the limitations of PIs as tools for improving democratic governance should be tempered (Baiocchi and Ganuza, 2017; McNulty, 2019; Rhodes-Purdy, 2017a).

There are strong reasons to believe that our results should travel to contexts outside of Peru. As a country with a relatively weak civil society and weak advocacy of PIs by local-level political leaders, low state capacity and high levels of poverty and inequality, Peru is a context where PIs face considerable obstacles to success. Peru is clearly a least-likely case for observing positive effects of PIs. Given this, there is little reason to conclude that PIs cannot yield similar results in equally challenging contexts, especially in Latin America and Africa. When we combine similar findings from a most-likely case, Brazil, it seems highly likely that PIs are generating positive changes in the lives of millions of people around the world. Yet PIs may face unique challenges in improving governance and well-being in authoritarian or semi-authoritarian contexts where mechanisms of vertical and horizontal accountability are weak, and where PIs serve principally to consolidate authoritarian control (Handlin, 2016; Nylen, 2014; Rhodes-Purdy, 2017b). As a consequence, further research is needed to investigate the generalizability of our findings across regime type.

Further research is also needed to probe the role of technocrats as potential surrogates for generating the positive effects that in other cases stem from the leading role played by civil society in PI implementation. Countries such as the Dominican Republic and South Korea, where PIs were also implemented on a large-scale based primarily on the advocacy of technocrats would be particularly fruitful places to explore this question in greater detail.

Ultimately, we are only in the early stages of understanding the long-run impacts of PIs in general, and government-imposed PIs in particular. Additional data collection efforts are already underway to test the subnational effects of government-imposed PIs in new contexts, which will eventually offer us a clearer picture of which design features and contextual factors are most important in moderating the effects we document here, as well as the scope conditions of those effects.

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. Replication materials and code can be found at Abbott, McNulty, and McKiernan (2023).
2. Gonçalves (2014) draw similar conclusions.
3. see (Wampler and Goldfrank 2022, ch. 3) for a summary of this literature.
4. Two other common measures of well-being employed by previous studies are infant mortality and poverty rates. Unfortunately, data limitations made it impossible for us to include these indicators in our analysis.
5. Note that these categories were provided by RENAMU.
6. For Peru, the HDI includes two measures of educational attainment, one capturing the percent of the population that has completed secondary education, and the other capturing the average number of years of education completed by Peruvians above the age of 25.
7. Note that PB processes in Peru can only prioritize spending related to new municipal investment spending.
8. See Appendix A for a further description.
9. Autocorrelation tests indicate the need for 2 lags of the dependent variable to account for serial correlation in the first-differenced errors.
10. Note that the tables only present the coefficients for our main independent variables. The coefficients for all control variables are reported in Appendix B.
11. To address the possibility that any of our indicators of pro-poor spending may be capturing benefits that accrue to middle- or upper-class Peruvians rather than the poor, in the appendix, we also estimate these models only among rural districts, where increased spending across any of our pro-poor measures would necessarily impact poor residents. This procedure does not change our results.

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