(When) Do Politicians Govern Better than Bureaucrats? Evidence from a Natural Experiment in India*

Abhishek Arora[†] Siddharth George[‡] Nivedita Mantha[§]

Vijayendra Rao [¶] MR Sharan [‖]

September 2024

Abstract

We compare how politicians and bureaucrats govern. We analyse a natural experiment in Karnataka, India, which generated quasi-random variation in whether a village was governed by politicians or bureaucrats during 2020-21. Politicians are better at translating citizens' preferences into policy outcomes: public spending in politician-run villages is more aligned with citizen preferences, reflecting politicians' greater engagement with citizens. Politicians are also more responsive to citizens: they deliver more social assistance during periods of economic distress and get front-line officials to exert greater effort. On the other hand, bureaucrats are less susceptible to elite capture and perform better at specialised governance tasks that utilise their expertise. Politicians and bureaucrats perform similarly in terms of controlling corruption, internalising externalities, managing crises, and promoting local economic growth. Nevertheless, most citizens prefer to be governed by an elected leader.

JEL codes: O12, H11, H70, D72

Keywords: Politicians, Bureaucrats, Democracy, Decentralisation, Local Government, India

*We are grateful for valuable comments from seminar participants at Ashoka University, ISEC, NUS and Oxford University, and Berk Ozler. We thank the World Bank's Research Support Budget for financial support. We are also grateful for the support of Uma Mahadevan, Priyanka Mary Francis, Shilpa Nag and other colleagues in the Government of Karnataka's Rural Development Panchayati Raj Department for their feedback on the paper, data access, and for granting permission for our online and phone surveys. Manasi Rao, Sudarshan Aittreya, Aryan Koganti, and Bhoumik Mhatre provided excellent research assistance.

[†]Harvard University

[‡]National University of Singapore

[§]World Bank

[¶]Development Research Group, The World Bank

[‖]University of Maryland

1 Introduction

Governance responsibilities are often split between politicians and bureaucrats. In democracies, elected leaders usually set broad policy parameters, whereas bureaucrats implement policies and perform technocratic roles. Yet significant variation remains. For instance, while monetary policy is the purview of appointed experts in most countries, fiscal policy is made by technocrats in some countries (e.g. the US) and politicians in others (e.g. Commonwealth countries). Although several influential theories (Alesina and Tabellini, 2007, 2008) provide guidance on which tasks to assign to politicians and bureaucrats, empirical evidence on this question is limited. Indeed, a recent review paper (Besley et al., 2022) highlights the need to delineate the roles of politicians and bureaucrats.

Answering this question in a clean manner is challenging because it requires exogenous variation in whether politicians or bureaucrats manage a governance task — and it requires good performance measures for a range of such tasks. Institutional changes that reallocate governance responsibilities between politicians and bureaucrats, however, tend to be large-scale, across-the-board reforms, such as democratisation and decentralisation (or their reversal). These institutional reforms arise endogenously and are often multi-faceted. For instance, many decentralisation reforms not only expand the powers of elected leaders but also reduce the size of political units (Mookherjee et al., 2015; Narasimhan and Weaver, 2023), making it difficult to attribute impacts solely to the former.

In this paper, we compare how politicians and bureaucrats perform various governance tasks. For identification, we exploit a natural experiment in the Indian state of Karnataka that generated exogenous variation in whether villages were governed by elected politicians or appointed bureaucrats. Using rich data covering over 6,000 village governments, we compare the quality of governance in politician- and bureaucrat-run villages along several important dimensions: (i) representation of citizen preferences, (ii) responsiveness to citizen needs, (iii) elite capture, (iv) corruption, (v) implementation of specialised development projects, (i) management of projects with externalities, (vii) crisis management and (viii) local economic growth. Besides identifying which tasks are better managed by politicians and bureaucrats, our comparison also sheds light on the effects of local democracy and decentralisation.

As in the rest of India, villages in Karnataka are organised into Gram Panchayats (GPs), which are governed by an elected council.[1] For a variety of idiosyncratic historical reasons, GPs in Kar-

[1]GPs in Karnataka have (i) 2-4 villages, (ii) a population of 5000-7000; and (iii) adopt a parliamentary system where citizens elect a GP council that in turn elects the "adhyaksha" (presi-

nataka are on different electoral cycles.[2] Prior to 2020, these differences were immaterial: once a GP council completed its 5-year term, elections would soon be held to select a new council. In 2020, however, local elections were suspended due to the COVID-19 pandemic. The state government, following Karnataka law and government practice, appointed bureaucrats to govern GPs whose elected council had completed its term.[3] These bureaucrats (called GP administrators) took charge in June 2020 and governed for about 9-10 months, until elections were held and the new council took office in Mar-Apr 2021.[4] Meanwhile, in "off-cycle" GPs, where the electoral term was still in progress (and ended in 2021, 2022, 2023 or 2024), elected leaders continued to govern as usual. This situation created variation in governance regimes between June 2020 to March 2021: elected politicians governed off-cycle GPs while appointed bureaucrats governed on-cycle GPs.

We begin by assessing the validity of this natural experiment. Throughout our analysis, we compare GPs within the same block, thus leveraging only hyper-local variation.[5] We find that off-cycle GPs (whose electoral terms end in 2021-24) and on-cycle GPs (whose electoral term ended in 2020) have (i) similar geographic and demographic characteristics; (ii) similar pre-period development, public goods and governance outcomes; and (iii) parallel trends for panel data outcomes. In addition, we show that the temporary change in *de jure* authority caused *de facto* power to shift meaningfully within the GP. To test this, we surveyed Panchayat Development Officers (PDOs) — the effective COO of each GP — who manage day-to-day administration, implement government programs (e.g. the National Rural Employment Guarantee Scheme) and public works, and report to the (elected or appointed) GP leader. PDOs in off-cycle GPs were 59pp more likely to report that an elected leader is in charge and 11pp more likely to say elected leaders played a key role in COVID management, an important governance activity during this period. This evidence suggests that our natural experiment generated quasi-random variation in whether politicians or bureaucrats were in charge of a GP.

Crucially, PDOs continue to perform their usual governance tasks during the intervention pe-

dent).

[2]The most common reasons are events that caused past elections to be delayed (e.g. a flood) or moved forward (e.g. death of a leader in office). For example, if a leader died in office in the 1990s or 2000s, by-elections would be held, and the GP would be permanently off-cycle.

[3]According to Karnataka's Gram Swaraj and Panchayat Raj Act, 1993, Section 8(4), once a GP council completes its term, "The Administrative Committee or Administrator shall be deemed to be the duly constituted Grama Panchayat".

[4]While the temporary appointment of bureaucrats is not unprecedented, these administrators are usually only in charge for a short duration until elections can be held (RDPR, 1993). Due to the pandemic, there was significant uncertainty about when elections would next be held. In the neighbouring state of Tamil Nadu, GPs were governed by administrators for several years as elections were postponed multiple times.

[5]Karnataka's 6007 GPs are grouped into 240 blocks (*talukas*), which in turn fall under 31 districts.

riod. A similar (and high) share of PDOs in both elected and appointed regimes believe they played a key role in managing COVID, suggesting that the natural experiment does not change PDOs' job scope. Rather, the natural experiment changes to whom PDOs are accountable. We now proceed to compare the performance of politician- and bureaucrat-run GPs on different aspects of governance.

First, we study how well local government policy represents citizens' preferences. To measure representation, we (i) elicit citizens' preferences over which categories of public goods the GP should spend on and (ii) use detailed administrative data to capture the GP's actual expenditure allocation during the 2020-21 financial year. We find that GPs' public expenditure is correlated with citizen preferences: the average GP spends 6.3% more on a category when all citizens indicate a preference for it. However, this preference-expenditure correlation is 59% stronger in politician-run GPs. This suggests that politician-run GPs are more likely to allocate funds in line with citizen preferences.

Politicians may better represent citizen preferences because they come from the GPs they govern, while bureaucrats are from the same hobli (a revenue division consisting of 8 adjoining GPs) but seldom the same GP. However, we also observe that elected leaders engage more with citizens. Politician-run GPs hold 0.07 SD more public meetings than bureaucrat-run villages. This result is driven by elected leaders holding more general body (0.16 SD) and standing committee meetings (0.41 SD), which typically see broader citizen participation. Thus, something propels elected leaders to consult more with citizens, and these interactions may help them learn more about citizen preferences.

Second, we compare local governments' responsiveness to citizens' urgent needs. In the second half of 2020, India emerged from a crippling nationwide lockdown that caused urban job losses, triggered reverse migration from cities to villages, and increased demand for rural social protection schemes. India's largest rural social welfare program, the National Rural Employment Guarantee Scheme (NREGS), was instrumental in providing relief during these months (Afridi et al., 2022).[6] Local governments play a key role in delivering NREGS benefits, by registering beneficiaries and organising public works projects. Using a difference-in-differences (DiD) design, we show that politician-run GPs organised more NREGS work between June to Dec 2020. Elected-governed GPs provided 83 days (0.10 SD) more person-days of work and registered 1.77 more new beneficiaries each month (a 0.17 SD increase). By contrast, we see no difference in NREGS delivery in prior years, when there was no difference in governance regimes.

[6]We observe that demand for NREGA work was twice as high in 2020 as in the same calendar months in previous years.

How do politician-run GPs deliver social assistance more rapidly? Implementation of NREGS projects is often constrained by the efficiency of local bureaucrats (Chopra, 2016). We find that elected leaders are better at getting frontline GP staff (i.e. the PDO and her subordinates) to exert effort. Our bar for effort is low: we simply measure if GP staff show up to their office. We collect detailed attendance data for 170,683 local bureaucrats over a 108-week period between 2019-21. Using a DiD design, we show that GP officers have 4.1pp (0.1 SD or 10% relative to the baseline mean) higher attendance when politicians govern their GP. Thus, politicians appear to push frontline government workers to exert greater effort, enabling local government to respond more effectively to citizens' needs.

Why are politicians better at representation and responsiveness? In our context, politicians are elected, while bureaucrats are recruited via competitive exams. Elections may select leaders who are inclined towards citizen engagement; alternatively, re-election pressures may push politicians to be more attentive to citizens' demands. To test whether electoral incentives matter, we compare the performance of politician-run GPs with imminent elections against GPs where the next election is years away. These two groups of GPs show no clear difference in expenditure patterns, NREGS delivery, citizen meetings or GP staff attendance, suggesting that re-election incentives do not drive the representation and responsiveness results.

Third, we examine elite capture and corruption. As a proxy for elite capture, we measure whether GP spending is slanted towards the preferences of elites. We find that public spending correlates more strongly with the preferences of traditionally powerful groups (men, upper-caste, households in the GP's main village) than those of disadvantaged groups (women, Scheduled Castes, households in peripheral villages). For instance, spending is 62% more strongly correlated with men's preferences than women's preferences. However, these representation gaps widen when in politician-run GPs. Expenditures become even more strongly correlated with the preferences of elite groups, with limited gains for disadvantaged groups. The gender representation gap widens from 62% in bureaucrat-run GPs to 71% in politician-run GPs, and we see similar patterns for caste. Even among advantaged groups, spending in politician-run GPs only becomes more correlated with the preferences of citizens who live in the GP's main village. Thus, while elected leaders represent citizens' preferences better on average (and no group is worse represented by politicians), the representation gains accrue primarily to socially advantaged citizens in the GP's main village. These findings suggest that politicians are more susceptible than bureaucrats to elite capture.

Fourth, we investigate whether politician- or bureaucrat-run GPs are more corrupt. We measure corruption in two ways: (i) the amount of NREGS benefits received by the village head's household, as in Jeong et al. (2023); and (ii) citizens' self-reported bribes for social benefits. Using

these measures, we find no evidence that corruption is higher in politician-run GPs.

Fifth, we examine a claim often made in support of technocratic governance, namely that bureaucrats' expertise enables them to outperform politicians on specialised tasks. To understand how bureaucrats' skills affect governance quality, we identify the (i) expertise of each GP administrator and (ii) skills required by the universe of development projects ongoing in each GP. We define a bureaucrat's expertise based on her job prior to becoming GP administrator. Administrators have varying expertise since they hail from a range of departments: rural development, education, water supply, fisheries, etc. Using detailed data on all 1.4 million development projects undertaken by every GP in Karnataka, we identify the type of project and measure the speed of project implementation using dates of project milestones. We find that, on average, projects managed by politicians and bureaucrats progress at a similar pace. However, when implementing projects in their domain of expertise, bureaucrats perform significantly better: projects are 4pp (or 57%) more likely to show progress during a 6-month window than similar projects managed by politicians. This evidence suggests that bureaucrats can outperform politicians on governance tasks matched to their specific expertise.

Sixth, we compare how politicians and bureaucrats manage projects with cross-jurisdiction externalities. In many settings, politicians are elected from small jurisdictions within their polity and may value projects that narrowly target benefits to their constituents at the expense of public goods. In our context, politicians are elected from wards comprising several neighbourhoods in a village. We measure how targeted each development project is by applying natural language processing techniques to project descriptions. We predict whether each project's likely beneficiaries are particular households, a neighbourhood, or multiple localities in the GP.[7]. We find no evidence that politician-run GPs make slower progress on projects that provide diffuse benefits to a wide section of the GP. These results suggest that, at least in our context and using this measure, politicians and bureaucrats perform similarly in terms of internalising cross-jurisdiction spillovers.

Seventh, we compare how well politicians and bureaucrats manage crises. Since our natural experiment occurred during the pandemic, we compare performance on COVID management. We find that politician- and bureaucrat-run GPs have similar COVID-related outcomes over the study period: households have similar levels of COVID mortality, morbidity and self-reported economic well-being, and citizens have similar evaluations of the quality of COVID management in their GP. These findings suggest that politicians and bureaucrats perform similarly on crisis management. They also imply that the performance differences on the governance tasks discussed above are unlikely to be due to differences in COVID exposure or management.

[7]Our classification procedure is described in more detail in section A.1.3

Eighth, we compare levels of local economic growth and agricultural productivity in GPs run by politicians and bureaucrats. We use satellite-based measures of both these outcomes — night-lights to proxy growth and Normalised Difference Vegetation Index (NDVI) to proxy agricultural productivity (Asher and Novosad, 2020). Using a DiD design, we find no difference in night lights growth and agricultural output between the two regimes. While our evidence suggests that politicians and bureaucrats deliver similar local economic growth, it is possible that our natural experiment may be too short (only 9-10 months) to observe changes in aggregate outcomes.

To complement these objective measures of local economic development, we elicit citizens' subjective evaluation of the overall quality of governance in their GP. Again, we find that politician- and bureaucrat-run villages perform similarly on this score. Nevertheless, when asked whether they would prefer to be governed by elected politicians or appointed bureaucrats, 76% of citizens preferred the elected regime. During a crisis, this share decreases, consistent with Alsan et al. (2023), but a majority (68%) still prefer to be governed by an elected leader. This appears to reflect greater trust in elected leaders and a belief in the legitimacy of the democratic process—86% believe that elections are the best way to select their village leader, and 78% think elections are the only fair way to do so.

To sum up, our results indicate that politicians outperform bureaucrats on (i) citizen representation and (ii) responsiveness. On the other hand, bureaucrats are (iii) less vulnerable to elite capture and (iv) outperform politicians on specialised tasks aligned with their expertise. Bureaucrats and politicians perform similarly on (v) corruption, (vi) internalising externalities, (vii) crisis management, and (viii) delivering local economic growth.

However, two features of our natural experiment may limit the external validity of our results. First, the study occurred during COVID, which may have changed GPs' responsibilities and the behaviour of government officials. Using time-use data, we show that GPs remained focused on performing regular government functions—PDOs spent only 6 hours a week, or 10% of their time, on COVID management—and most of our findings relate to these business-as-usual governance tasks. Moreover, COVID had similar impacts on (and was managed similarly by) politician- and bureaucrat-run GPs, so it is unlikely to drive our results.

Second, GP administrators were appointed temporarily (for only 9-10 months) and might have behaved differently if their time horizon was longer. Yet short postings are features (or bugs) of many bureaucracies, especially in developing countries. For instance, the average tenure of Indian Administrative Service officers in a post is 16 months, and only 56% of district officers last more than a year in their job (Iyer and Mani, 2012). Even the fact that GP administrators

are "less local" than politicians reflects reality, since politicians often represent their hometown while bureaucrats are recruited centrally and posted to different locations.[8] Politicians and bureaucrats in our setting also vary in experience levels, as in reality, but controlling for experience does not affect our results. Thus, while permanent *in-situ* bureaucrats may indeed behave differently from those in our setting, our natural experiment reflects characteristics of bureaucrat-run local governments in India and other developing countries.

Despite the limitations and unique nature of our natural experiment, we believe it provides a rare opportunity to compare how politicians and bureaucrats govern in the same context, offering potentially generalisable insights.

Contribution to literature. Our paper relates to three literatures. First, it adds to a small body of research on task allocation within government. A few influential papers (Maskin and Tirole, 2004; Alesina and Tabellini, 2007, 2008) propose theories to guide the assignment of governance tasks to politicians and bureaucrats. These models suggest that (i) bureaucrats ought to handle technical tasks where ability is more important than effort; (ii) politicians should manage redistributive tasks, unless vested interests distort behaviour. Our findings support these predictions: bureaucrats perform better on tasks aligned with their expertise, while politicians are more responsive and better at representing citizen preferences, despite being more susceptible to elite capture. Several papers compare the performance of elected and appointed public officials on specialised tasks, such as judicial decision-making (Lim, 2013), electricity regulation (Besley and Coate, 2003), central banking (Ehrmann and Fratzscher, 2011), budget management (Whalley, 2013) and investment grant applications (Hessami, 2018).[9] These studies find that appointed officials generally make higher-quality decisions (Choi et al., 2010), whereas elected leaders are influenced by political cycles and partisan motives (Ash and MacLeod, 2021). However, these conclusions may reflect the technical nature of the governance tasks examined. To assess the canonical models and inform policy on task allocation, we need to compare elected and appointed leaders' performance on a range of tasks—reflecting the government's wide range of duties—in the same setting. To our knowledge, ours is the first paper to do this.

Second, our findings shed light on the impacts of (local) democracy. Several prominent papers examine the impacts of local democracy in autocratic and transition regimes — in China (Martinez-Bravo et al., 2022; Mu and Zhang, 2014; Wong et al., 2017), Indonesia (Martinez-

[8] The bureaucrats in our study are, if anything, "more local" than typical bureaucrats, since they are recruited from the same *hobli*, a revenue unit which consists of 8 adjoining GPs.

[9] In addition, several studies, such as Iyer and Mani (2012); Gulzar and Pasquale (2017); Nath (2016) examine how interactions between politicians and bureaucrats impact governance.

Bravo, 2014; Martinez-Bravo et al., 2017), and Chile (González et al., 2021).[10] These studies find that elected leaders improve public good provision and are less likely to enforce unpopular top-down directives (e.g. the one-child policy). Local democracy may play a different role in democratic regimes, where electoral pressures already dissuade upper-level leaders from imposing unpopular policies. Yet there is surprisingly little evidence on the effects of local democracy in democracies. We find that elected leaders engage more with citizens, better represent their preferences (especially those of elites) and are more responsive to citizens' urgent needs. Reflecting this, most citizens prefer to be governed by politicians than technocrats.

Third, our results contribute to the literature on decentralisation. In recent decades, many developing countries have devolved power to elected local governments, with mixed results (Mookherjee et al., 2015; Mansuri and Rao, 2013). Decentralisation improved public service delivery in some cases (Narasimhan and Weaver, 2023; Dahis and Szerman, 2024) but worsened it in others (Mergele and Weber, 2020), due to increased rent-seeking by elites (Jacoby et al., 2021) and negative cross-jurisdiction spillovers (Burgess et al., 2012; Lipscomb and Mobarak, 2016). These mixed findings may reflect the bundled nature of decentralisation reforms, which often shrink governance units (Lassen and Serritzlew, 2011; Blom-Hansen et al., 2014) and introduce local elections simultaneously. This makes it hard to disentangle the impacts of polity size and local democracy. An important recent paper (Narasimhan and Weaver, 2023) shows that elected leaders govern better in smaller polities. We complement this paper by studying the effects of transferring power from bureaucrats to elected leaders while maintaining polity size. Our finding that politicians perform better on tasks that involve local information and downward accountability aligns with theory (Myerson, 2021) and broadly supports the thrust toward democratic decentralisation in the developing world. However, our findings also reveal that elected leaders are more susceptible to elite capture and perform worse than bureaucrats on specialised tasks, echoing arguments by Bardhan and Mookherjee (2006) and Casey et al. (2023).

[10] This body of work also complements the cross-country analysis of Acemoglu et al. (2019).

2 Context

2.1 Local Democracy in India

Village democracy in India has a rich history (George et al., 2024), with scholars arguing that participatory and deliberative institutions existed in India before Athenian Greece (Tanwar and Kadam, 2022; Trautmann, 2023). For instance, Kautilya's Arthashastra from 200 BCE describes a decentralized system where villages were led by headmen (Venkatarangaiya and Pattabhiram, 1969). Despite this, the suitability of local democracy for India has been debated, especially since British rule. During the past two centuries, village governance institutions across the country have varied, with some villages having representative governments while others are governed primarily by groups of upper caste members implementing feudal norms (Aziz, 2000; Srinivas et al., 1960; Retzlaff et al., 1962). Thinkers like Henry Maine viewed village councils as legitimate (Maine, 1880), a sentiment that was later echoed by Mahatma Gandhi, who advocated for self-governing village communities. However, Dr B R Ambedkar, having faced caste discrimination, criticized these systems, arguing that they were undemocratic and should not be legally recognized (Ambedkar, 1948). His views, combined with the vision of India's first Prime Minister, Jawaharlal Nehru, for a bureaucratic and centralized India, obstructed the establishment of constitutionally mandated local democratic institutions after independence.

In 1992, the pendulum swung toward decentralization, with the Constitution amended to devolve power to over 250,000 local governments. Gram Panchayats (GPs), consisting of 2-4 villages, were established, and council seats were reserved for marginalized communities. These GPs have become important governance institutions, managing funds, overseeing public meetings, and implementing key development programs such as the Mahatma Gandhi National Rural Employment Guarantee Scheme.

As a result, local elections have empowered a new, more representative class of local politicians, enhancing governance at the grassroots level. GP leaders perform a variety of governance tasks. These include tasks like representing citizens' interests and responding to their needs when shocks hit, which primarily involve understanding citizens' needs and exerting effort to serve them. But they also involve more specialised governance functions like implementing development projects (e.g. construction of a tap water system), which may require specific expertise.

2.2 Rural Governance in Karnataka

Our natural experiment takes place in Karnataka, India's 8th most populous state. Like most other Indian states, most of its 64 million inhabitants (69%) live in rural areas. The state is divided into 31 districts. Each district comprises on average 8 *talukas* (or blocks), and each block comprises about 25 GPs. Most government departments will have an office in every block to provide services to GPs in that block. These block-level bureaucrats specialise in particular governance tasks (e.g. water supply) and report to senior bureaucrats in their departments.

Each GP has 2-3 local bureaucrats who report to the (elected or appointed) GP leader. This small team is led by a Panchayat Development Officer (PDO) — the effective chief operating officer of the GP. The PDO's primary responsibility is to manage the day-to-day administration of the GP — tasks like budgeting, record-keeping, benefit disbursal, maintenance of public facilities, and the implementation of government programs (e.g. the National Rural Employment Guarantee Scheme) and public works projects. To support her, each GP also has 1-2 staff responsible for cleaning and bill collection. Unlike block-level bureaucrats, the GP-level staff are generalists and tend not to have deep expertise in any governance function.

For the most part, GPs in Karnataka operate similarly to those in other states. Nevertheless, three local particularities are worth mentioning. First, Karnataka GPs follow a parliamentary system, where citizens elect council members who in turn elect an *Adhyaksha* (president) and *Up-adhyaksha* (vice-president). By contrast, some other states (e.g. Bihar) have a presidential system, where the council, president and vice-president are all directly elected. Second, Karnataka has a longer history of local democracy than many other states. Karnataka introduced local elections in the 1980s, about 10 years before the rest of India. Moreover, some regions of Karnataka experienced local democracy even during the colonial period, as the Mysore princely state (which comprises about 30% of present-day Karnataka) introduced some form of participatory local government with the Mysore Local Boards Act, 1902 (Ananth Pur and Moore, 2010).[11] We exploit this variation to test whether the effects of local democracy vary based on prior experience with participatory government. Third, under Karnataka law, bureaucrats are temporarily appointed to govern GPs where the elected council has completed its term.[12] This provision was part of Karnataka's own local government legislation in the 1980s and remained

[11] By contrast, other regions of Karnataka, which were carved out of other historical states (the British-ruled Madras Presidency and the more extractive Hyderabad princely state) only experienced local democracy in the 1980s.

[12] Karnataka's Gram Swaraj and Panchayat Raj Act, 1993, Section 8(4), states that, once a GP council completes its term, "The Administrative Committee or Administrator shall be deemed to be the duly constituted Grama Panchayat".

when the India-wide legislation was ratified in the early 1990s. It was hitherto innocuous and only ended up being consequential due to election disruptions during the COVID period.

3 Data

Our study is made possible by rich data that enable us to measure how local governments perform on a range of governance tasks. We compile three different types of data: (i) *survey data* from two large-scale surveys that we designed and fielded; (ii) *administrative data* obtained from Indian government websites or directly from Karnataka's Department of Rural Development and Panchayati Raj (RDPR); and (iii) publicly-available *satellite data*. Table A.21 summarizes the various data sources and indicates the analyses to which they contribute.

3.1 Survey data

We fielded two large-scale surveys — of PDOs and citizens. Like other COVID-era surveys, these were conducted over the phone (citizen) or online (PDO).

PDO survey. We partnered with RDPR to design and disseminate an online survey of PDOs in Sep 2021. We received 4,322 responses, a 70% completion rate. The most important questions in the PDO survey related to *de jure* and *de facto* decision-making power in the GP. To capture de jure authority, we asked whether the GP had an appointed administrator during the COVID period. To measure de facto power, we asked who took important decisions about COVID management. In addition, we also enquired about PDO's focus areas and time use. Even though our natural experiment occurred during 2020-21, table **??** shows that PDOs spend most of their time on regular governance activities and only about 11% of their working time on COVID management.

Citizen survey. We conducted a phone survey of citizens in August and September 2021. Given the challenge of drawing a representative sample during COVID, we engaged two survey companies and employed two (different) citizen respondent sampling strategies in 819 GPs that we first randomly selected.[13]

[13]Since there were fewer off-cycle GPs (which remained governed by elected leaders), we first sampled all these GPs and then randomly selected on-cycle GPs in the same block as the

To implement our first strategy to sample respondents within these GPs, we acquired a database of phone numbers from each village registered with the three major mobile service providers. Then, we drew a random sample of phone numbers for each GP, with half drawn from the GP's main village and the remainder drawn from one of the GP's peripheral villages.[14]

Our second strategy involved snowball sampling. For each of the 819 sampled GPs, we contacted a randomly selected member of the GP staff (e.g. the PDO, child care worker, cleaner, etc) and asked the worker to share phone numbers of citizens in their GP. Next, we contacted these citizens to harvest phone numbers of other citizens. Then, we surveyed citizens who were at least two degrees of freedom away from the initial seed. Reassuringly, both samples have similar demographic characteristics, and our results are similar regardless of the sampling procedure used.

Overall, we surveyed 11,810 citizens across 819 GPs. We measured citizens' (i) participation in GP activities and public meetings, (ii) ratings of local governance, delivery of public services and COVID management, (iii) trust in the GP leadership, (iv) perception of corruption in the GP, and (v) preference for being governed by an elected leader or an appointed bureaucrat.

We also elicited citizens' preferences over how GP funds should be spent. Specifically, we asked citizens to identify the most important two (out of 12) categories of public goods to which they would allocate GP funds if given the chance. The options were *roads*, *piped water*, *housing*, *toilets*, *streetlights*, *library*, *education*, *healthcare*, *anganwadi* (*rural child care centre*), *tube wells*, *drainage* and *temples*. For every GP, we calculate the share of citizens who desire higher spending on each category. Moreover, since we know each citizen's demographic characteristics, we can compute the spending preferences of different groups of citizens (e.g. by gender, caste, etc).

3.2 Administrative data

Personnel data. For all 6,022 GPs, we observe the date the GP council took office and the date it completed its term. We also obtained data on the universe of bureaucrats appointed as temporary administrators in each GP. In addition, for all 2,400 administrators, we observe their prior department and job title. Together, these data allow us to (i) identify GPs where the council's term ended during the 2020 COVID period (and administrators should have been appointed), (ii) test whether administrators were indeed appointed in compliance with the law, and (iii) the prior expertise of each administrator.

off-cycle GPs.

[14] We identify a village as the GP's main village if it shares the name of the GP.

GP staff attendance. As a proxy for effort exerted by GP-level staff, we compiled attendance records for GP-level staff for a random sample of working days. Specifically, we compiled attendance data for 1 day each week during the period April 2019 - March 2021. This gives us weekly panel data on attendance for 78,227 GP staff — PDOs, data entry staff, drivers, cleaners, etc — across 6,022 GPs. [15]

Public expenditure. Financial statement data allow us to track the expenditures of all GPs at a granular, line-item level. Typical expenditures include the construction and upkeep of local public amenities like roads, bridges, streetlights, and water supply systems. Where possible, we categorise each expenditure line item into one of the 12 categories used in the citizen survey. Then, we construct category-wise expenditures for each GP. For instance, to construct total spending on "*piped water*", we add expenditures for all transactions related to water supply, pipe maintenance and the implementation of water-related schemes.[16]

Through the citizen survey, we elicit what citizens would like to spend public money on. The financial statements tell us what the GP actually spent on. Together, they enable us to measure how well spending patterns reflect citizen preferences. This is our primary measure of representation.

Social protection. The National Rural Employment Guarantee Scheme (NREGS) is India's largest rural social protection program. Registered households are guaranteed up to 100 days of unskilled wage employment each fiscal year. To avail these benefits, households must register for a job card and request work, both through their GP office. We scraped the universe of job cards and employment records for Karnataka from the NREGS portal. For each beneficiary, this gives us (i) basic demographic characteristics, (ii) the number of days and exact dates worked, and (iii) dates when job cards were registered.

These data allow us to measure how responsive the GP was in registering new beneficiaries for the scheme and offering social protection to households during the COVID period. Our primary outcomes are the number of job cards created and the number of days worked by households in each village. The data is structured as a village-month panel covering January 2017-2021. The data is also extensive, capturing over 99 million days worked by 8.6 million registered workers

[15] For our analysis, we identify the staff roster on a rolling basis — all officers that were present at least once in a 3-month window prior to the week (t). Next, we construct the mean attendance for all "regular" GP staff.

[16] We also examine GP revenues, including taxes, rental income, and user fees. However, for most GPs, the single largest revenue source is funds devolved from the state and central governments.

from over 4 million households.

Specialised development projects. We collected detailed information about local development projects in each village. These projects include the construction of roads and libraries, and the development of tap water and drainage systems. Our data contains 1.4 million projects across 28,000 villages and 6,022 GPs over 7 years (2015-2021). For each project, we observe (i) a project description, (ii) location, (iii) the implementing local government agency (e.g. water supply department), (iii) funding source and estimated cost, (iv) current status.

While each project is different, all follow a standard process. Each project begins with a *proposal* that requires *administrative approval* from bureaucrats of the relevant implementing agency. Thereafter, the project requires technical sanction from a competent authority (usually a government engineer) and a measurement report (to finalise cost estimates) before a *work order* is issued. The project reaches *physical* and *monetary completion* once the work is done and the funds are disbursed.

We observe the exact dates of all these project milestones. Using these, we construct a measure of the pace of project progress based on whether (and how many) milestones are achieved in a given time period. This serves as our primary indicator for measuring performance on specialised governance tasks.

We also measure how narrowly targeted each development project is by applying neural natural language processing techniques to the text of project descriptions. Specifically, we classify projects into four categories according to whether their likely beneficiaries are (i) a specific household or set of households, (ii) a neighbourhood, (iii) a village, or (iv) multiple villages in the GP.

GP meetings. We collate data on all public meetings organised by the GP during the fiscal year 2020-21, covering April 2020 to March 2021. These meetings include (i) *Gram Sabhas*, which are constitutionally mandated public meetings open to all citizens in the GP; (ii) *Ward Sabhas* — public meetings held at the ward level,[17] (iii) *General Body Meetings* — gatherings of all elected representatives, and (iv) meetings of *Standing Committees* which are specially constituted by the GP to manage particular needs or events.

[17]Each GP is divided into 12-14 wards. Each member of the GP council is elected from and represents a particular ward.

Pre-treatment GP characteristics. To assess balance on pre-treatment levels of economic development and public good provision, we compile village-level data from the last three decennial Census rounds (1991, 2001, and 2011) and the Socioeconomic and Caste Census (SECC) 2011.

3.3 Satellite Data

We use satellite data to measure local economic growth and agricultural productivity. To construct village-level spatial averages, we used village polygons from the Karnataka Geographic Information System (KGIS) portal.[18]

Night-time luminosity. We processed night-time light data from the Visible and Infrared Imaging Suite (VIIRS) of the Earth Observation Group. VIIRS collects low-light imaging data globally, which addresses issues like top-coding. We compile monthly night-time light data for 2019-21, and construct a GP-month panel. Our primary outcome is a GP's average night-time lights, which is the area-weighted average for cells within each GP. Specific details of night lights construction are in appendix A.1.1

Agricultural productivity. We use the Normalized Difference Vegetation Index (NDVI), which is sensitive to chlorophyll levels and has been used to proxy village-level agricultural productivity in other by other authors (Asher and Novosad, 2020). Details of NDVI construction are in appendix A.1.1. Karnataka has three cropping seasons: *Kharif* (Apirl-September), *Rabi* (October-December), and Summer (January-March). We construct a village-season-year NDVI measure for the period 2015-2021.

4 Empirical Strategy

4.1 The Natural Experiment

Our paper compares how well politicians and bureaucrats perform various governance tasks. To do this, we exploit quasi-random variation in whether a GP was governed by elected politicians

[18] Karnataka Geographic Information System, https://kgis.ksrsac.in/kgis/downloads.aspx

or appointed bureaucrats. This variation stems from two factors: first, the COVID pandemic, which caused elections in 2020 to be indefinitely postponed (the newly elected council eventually took office in March-April 2021). Second, a longstanding provision in Karnataka's Panchayat Raj Act, 1993, which empowers the state government to appoint *administrators* to govern GPs if elections are delayed.[19]

As a result, GPs whose electoral term ended in 2020 had bureaucrats appointed to govern them. These bureaucrats took charge in June 2020 and governed for about 9-10 months (i.e. most of the 2020-21 fiscal year), until elections were held and the new council took office in Mar-Apr 2021. We refer to these as *on-cycle GPs*, since most GPs in Karnataka had electoral terms expiring in 2020.[20]

Meanwhile, in *off-cycle* GPs, where the electoral term was still in progress (and ended in 2021, 2022, 2023 or 2024), elected leaders continued to govern as usual. This situation created hyper-local variation in governance regimes during the 2020-21 fiscal year: off-cycle GPs were governed by elected politicians while on-cycle GPs were governed by appointed bureaucrats.

We classify GPs as on- or off-cycle based on whether their electoral term ended in 2020 or some other year. Using this definition, our sample contains 5,183 on-cycle GPs that were governed by appointed bureaucrats and 162 off-cycle GPs governed by elected politicians. The appointed administrators were existing Class B block-level bureaucrats from a variety of departments. Depending on the availability of Class B officers in a block, a bureaucrat could be appointed to administer more than one GP.[21]

Since we will be comparing on- and off-cycle GPs, it is important to understand if off-cycle GPs are ex-ante different. We proceed in two steps. First, we discuss why the 162 GPs are on a different electoral cycle. While the reasons are not uniform, they tend to be rather idiosyncratic, as section 4.2 details. Second, we test for (i) balance on predetermined variables, including demographic characteristics and pre-COVID public goods and development outcomes, and (ii) parallel trends for panel data outcomes.

[19] According to Karnataka's Gram Swaraj and Panchayat Raj Act, 1993, Section 8(4), once a GP council completes its term, "The Administrative Committee or Administrator shall be deemed to be the duly constituted Grama Panchayat".

[20] Approximately 93% of GPs had terms which ended in 2020 and the remaining 7% had terms ending in 2021, 2022, 2023 and 2024 (table A.1).

[21] In section 6.3, we show that our results are robust to restricting attention to single-GP administrators or controlling for the number of GPs administered.

4.2 Historical Reasons for Differences in GP Electoral Cycles

To understand why some GPs follow alternative electoral cycles, we examined administrative circulars and other historical documents. These sources highlight several factors that delayed elections in the late 1990s and early 2000s. While we are unable to identify why every single off-cycle GP went off-cycle, the reasons we do uncover appear to be relatively idiosyncratic.

In 2000, parliamentary by-elections were held in Ballari, Devanagere, and Belgaum districts to fill vacant state and national legislature seats (Mathew, 2000). These by-election polls were delayed in some GPs due to ballot paper flaws, such as wrongly printed party symbols and serial number errors (Mohanty et al., 2007). In 2005, elections were postponed in some GPs because of torn nomination papers (which affected 14 GPs in Gulbarga district), a high court stay order (which affected the GPs of Mustur and Siddapur) and inclement weather (Mathew and Jain, 2005). Finally, GP by-elections were sometimes held when an incumbent GP head died in office.

We believe these reasons are generally exogenous to governance and development outcomes, for two reasons. First, election administration issues reflect mistakes by the State Election Commission (which administers elections) and say little about the quality of the local bureaucracy.[22] Second, even when we cannot trace why a GP went off-cycle, we verify that they have been on their alternate electoral cycle for at least 15-20 years. Thus, the shocks or idiosyncratic events that caused GPs to off-cycle occurred many years ago. If they reflect underlying GP attributes or have lasting effects on development and governance outcomes, we should observe that off- and on-cycle GPs have different pre-treatment characteristics. We examine this in the next subsection.

4.3 Assessing Validity of Natural Experiment

To assess the validity of our natural experiment, we compare on- and off-cycle GPs on a wide range of pre-treatment characteristics and governance outcomes. Table 1 contains summary statistics of these key variables. As a balance test, we estimate our main regression specifications using pre-determined characteristics as outcomes. For cross-sectional outcomes, we estimate

[22] Unlike their national counterpart, which was formed in the 1950s, state election commissions were only established in the 1990s. This may explain why there were more administrative issues with elections in the late 1990s and early 2000s than in subsequent years.

$$Y_{ij} = \alpha_j + \beta \cdot Elected_i + \epsilon_{ij} \tag{1}$$

where Y_{ij} refers to an outcome (or pre-determined) variable for GP i in block j; $Elected_i$ indicates whether GP i was governed by an elected politician (as opposed to an appointed bureaucrat) during the 2020-21 financial year; and α_j denotes block fixed effects. Standard errors are clustered at the GP level.

We include block FEs since all GPs work with their block-level bureaucracy to implement development programs. By including block FEs, we leverage only very local (within-block) variation in GP governance regimes. Our effective variation comes from the 78 blocks (35% of the state's 222 blocks) with at least one politician-run and one bureaucrat-run GP. As figure A.1 shows, these blocks are broadly representative of the state of Karnataka, boosting the external validity of our natural experiment.

For panel data outcomes, we restrict attention to the pre-2020 period and estimate regressions of the form

$$Y_{it} = \alpha_j + \rho_t + \beta \cdot Elected_i + \epsilon_{ijt} \tag{2}$$

where Y_{it} is the pre-period governance outcome for GP i in period t; α_j are block FEs while ρ_t denote time fixed effects.[23]

Figure 1 presents coefficient estimates from both these specifications. We observe that politician- and bureaucrat-run GPs are *ex ante* similar on a wide range of predetermined cross-sectional variables, including demographic characteristics, public goods availability, pre-period household consumption, occupational composition, and proxies for local economic growth such as night-time luminosity and agricultural productivity in different seasons. Furthermore, for governance outcomes where we have panel data, such as the delivery of NREGS benefits, the attendance of GP staff and the pace of implementation of local development projects, we also observe no difference between politician- and bureaucrat-run GPs in the pre-period.

The evidence suggests that (i) idiosyncratic factors pushed some GPs onto different electoral cycles in the 1990s and 2000s; (ii) these off-cycle GPs appear similar to on-cycle GPs on a wide range of predetermined characteristics, including pre-2020 economic and governance outcomes;

[23] In some specifications, we additionally control for month-of-year or day-of-week fixed effects to capture forces like seasonality.

(iii) but they remain on a different electoral cycle and thus were governed by elected leaders during the 2020-21 financial year — unlike on-cycle GPs who were governed by appointed bureaucrats during this period.

4.4 First Stage: De Jure and De Facto Power

Next, we present direct evidence that this quasi-random variation in GP electoral cycles affected who held *de jure* and *de facto* power within the GP. We surveyed PDOs—the effective COO of each GP—about who was in charge of their GP and responsible for key governance decisions. Table A.2 presents results.[24] In on-cycle GPs, only 13% of PDOs said an elected leader was in charge, whereas this figure is 72% (59pp higher) in off-cycle GPs. We interpret this as evidence that elected politicians had greater de jure power in off-cycle GPs. This indicates strong (though imperfect) compliance with the natural experiment.

We also constructed a measure of *de facto* power, by asking PDOs who was responsible for making important decisions about COVID management, which was an important governance activity during this period. In off-cycle GPs, COVID management was 11pp more likely to be led by elected politicians, whereas appointed bureaucrats were 13pp more likely to be the key decision-makers in on-cycle GPs. A similar share of PDOs in both regimes believe they played a key role in COVID management. This evidence suggests that our natural experiment does not change the role of the PDO, but rather changes whether she reports to an elected or appointed leader.

These results indicate that the appointment of administrators was not merely something that happened on paper but affected how the GP was governed and who held real power in making decisions. Taken together, our evidence suggests that the natural experiment created meaningful differences in whether elected politicians or appointed bureaucrats had *de facto* governance authority within the GP. We now examine the effects on governance outcomes.

5 Results

We compare how politician- and bureaucrat-run GPs perform on six dimensions of governance: (i) representation of citizen preferences, (ii) responsiveness to citizen needs, (iii) elite capture

[24] The sample is about 45% of the total, since we were not able to survey PDOs in all blocks.

and corruption, (iv) expertise in performing specialised governance functions, (v) crisis management, and (vi) local economic growth.

5.1 Representation

Representation is a key governance task. In many contexts, leaders aggregate citizen preferences and translate them into policy. Our measure of representation captures how well GP spending reflects citizen preferences. Specifically, we estimate the regression

$$y_{ij} = \alpha + \beta_1 Elected_i + \beta_2 CitizenPref_{ij} + \beta_3 Elected_i * CitizenPref_{ij} + \epsilon_{ij} \quad (3)$$

where y_{ij} is the amount GP i spends on category j and $Elected_i$ denotes whether GP i is governed by an elected politician (as opposed to an appointed bureaucrat). $CitizenPref_{ij}$ is the share of citizens in GP i who consider j one of the two most important categories of public goods and would like their GP to spend more on it.[25] β_2 indicates how correlated GP spending is with citizen preferences in bureaucrat-run GPs, while β_3 tells us how the preference-spending correlation differs in politician- vs bureaucrat-run GPs.

Table 2 presents results. Column 1 shows the raw correlation between citizen preferences and GP spending. We see that GPs generally spend more on public goods that citizens consider important. When all citizens in a GP indicate a preference for a particular public good, the GP spends 6.3% more on it. This positive correlation between citizen preferences and expenditure is robust to including block fixed effects and controlling for GP characteristics (like total expenditure). Thus, even in bureaucrat-run GPs, spending decisions reflect citizen preferences.

We find that public spending is more closely aligned with citizen preferences in politician-run GPs. These GPs spend more on public goods that are important to citizens, as demonstrated by the positive β_3 coefficient in column 3. This pattern appears robust: GP expenditures are more highly correlated with preferences in politician-run GPs in over 70% of the 25 districts in our sample (figure A.2). On average, when all citizens value a public good, a politician-run GP spends 9.4% more on it. Thus, the preference-expenditure correlation is 59% stronger in politician-run GPs.

This result is not driven by politicians spending more (or less) than bureaucrats on any specific public good (table A.4). Rather, given the considerable heterogeneity in preferences across

[25] Citizens were given a list of the following 12 public goods categories and asked to select up to two: *roads*, *piped water*, *housing*, *toilets*, *streetlights*, *library*, *education*, *healthcare*, *anganwadi* (*rural child care centre*), *tube wells*, *drainage* and *temples*.

and even within GPs (table A.5), elected leaders may be better than appointed bureaucrats at understanding those preferences and translating them into policy choices.

5.1.1 Mechanism: Citizen Engagement

Why do politicians outperform bureaucrats on representation-related governance tasks? One reason may be that politicians, who hail from the villages they govern, are better informed about citizens' needs than bureaucrats, who tend to come from other villages in the same district.

We provide evidence for a second reason: politicians engage more with citizens than bureaucrats. GPs are required to organise various public meetings to hear citizens' views on collective concerns such as the allocation of public spending (Sanyal and Rao, 2018). These assemblies have been described as "the fulcrum of the Panchayat system" (Aiyar, 2002). We compare how frequently politician- and bureaucrat-run GPs hold public meetings, estimating the regression

$$y_{ib} = \alpha_{block} + \beta_1 Elected_i + \epsilon_{ib} \tag{4}$$

where y_{ib} is the meetings held by GP i in block b and α_{block} denote block fixd effects.

Table A.6 presents results. Politician-run GPs organise 0.27 SD more public meetings than bureaucrat-run GPs. This result is driven by elected leaders holding (i) more general body meetings (0.16 SD), which typically see broader citizen participation; (ii) more standing committee meetings (0.41 SD), which are specifically constituted to discuss issues of particular concern to citizens. Thus, something propels elected leaders to consult more with citizens, and they may learn more about citizen preferences through these deliberations. We discuss whether electoral incentives drive politicians to engage with citizens in section 6.1.

5.2 Responsiveness

Another core government responsibility is delivering social assistance to the poor and victims of shocks. Reflecting this, several well-known papers have used the implementation quality of social protection schemes to measure government performance (Besley and Burgess, 2002; Muralidharan et al., 2016).

COVID caused tremendous economic anxiety in rural India. Millions of migrants lost their jobs in cities and were forced to return home after severe lockdowns were imposed in cities. Conse-

quently, demand for rural social protection programs surged. As a result, the 2020-21 financial year saw unprecedented demand for NREGS, the workfare scheme that is India's largest social protection program.[26] The spike in NREGS demand is borne out in figure A.3(a).

We compare how politician- and bureaucrat-run GPs responded to the spike in NREGS demand. We construct three measures of NREGS service delivery: (i) the total number of workfare days delivered, (ii) the number of new beneficiaries registered and (iii) the workfare payments earned by beneficiaries. Registering new beneficiaries is particularly important since many returning migrants may not have NREGS job cards required to obtain work. We observe NREGS outcomes at the village-month level and estimate the difference-in-difference regression,

$$y_{it} = \alpha_i + \alpha_t + \beta_1 Elected_i + \beta_2 Post_t + \beta_3 Elected_i * Post_t + \gamma X_{it} + \epsilon_{it} \tag{5}$$

where y_{it} is the NREGS outcome in village i in month t, $Elected_i$ denotes whether village i is in an off-cycle GP, and $Post_t$ is a dummy indicating whether the month is in FY2020-21 (during which we see variation in governance regimes across GPs). Our coefficient of interest is β_3, which captures the impact of being governed by an elected leader. Our preferred specification includes village and month fixed effects and controls for seasonality or time-varying demand shocks. Standard errors are clustered at the GP level.

Figure A.3(a) provides strong support for the parallel trends assumption: NREGS outcomes for on- and off-cycle GPs track each other very closely in the pre-period. Table 3 shows that politician-run GPs register more new beneficiaries (columns 1-3), provide more workfare days (columns 4-6), and deliver more NREGS payments to households (columns 7-9). Controlling for seasonality improves precision (columns 2, 5 and 8). Controlling for demand shocks by including block-month fixed effects increases the point estimates and statistical significance (columns 3, 6 and 9). The effect sizes we observe are sizeable: politician-run GPs (i) register 1.7 more new beneficiaries than bureaucrat-governed GPs, a 0.17 SD increase; (ii) organise 49 more workdays (a 0.11 SD increase); and (iii) transfer Rs 13,800 more NREGS benefits to citizens (a 0.12 SD increase). Furthermore, tables A.7 and A.8 show that this increase in NREGS benefits is experienced by different social groups.

Taken together, these results suggest that politicians were more responsive in delivering social protection to citizens during a period of economic distress.

[26] According to some newspaper articles, NREGS demand in 2020 was at "an all-time high...since the inception of the scheme in 2006 "

5.2.1 Mechanism: Bureaucrat Effort

How do politician-run GPs deliver social assistance more effectively than bureaucrat-run GPs? We show that politicians get local GP staff to exert greater effort. While elected leaders (or appointed administrators) are ultimately in charge of a GP, and make key decisions like allocating public expenditure and selecting NREGS projects, they rely on local GP staff to enact their decisions and implement development programs. These frontline bureaucrats play an essential role in many governance activities and their level of effort is often the binding constraint to improving governance. High levels of absenteeism are common in many developing countries (Chaudhury et al., 2006) and an issue in Karnataka too (Dhaliwal and Hanna, 2017).

We compare the attendance rates of GP staff in politician- and bureaucrat-run GPs. We observe attendance at the GP x day level and thus estimate a regression similar to equation 5:

$$y_{it} = \alpha_i + \alpha_t + \beta_1 Elected_i + \beta_2 Post_t + \beta_3 Elected_i * Post_t + \gamma X_{it} + \epsilon_{it} \quad (6)$$

where y_{it} is the average attendance rate of local staff in GP i on day t, $Elected_i$ denotes whether village i is in an off-cycle GP, and $Post_t$ is a dummy indicating whether the day is during the FY2020-21 period. Our coefficient of interest is β_3. We include GP, week and day-of-week fixed effects and cluster standard errors at the GP level. Figure A.3(b) illustrates that attendance rates for GP staff in the pre-period are very similar across on- and off-cycle GPs — reinforcing the parallel trends assumption.

Table 4 presents results. We find that bureaucrats are 4.1pp more likely to be at work when an elected leader governs their GP—a 10% increase over the baseline attendance rate. These results are robust to controlling for the e-attendance registration rate and officer category. Table A.9 breaks down this result by officer type. Attendance rates are higher in politician-run GPs for 6 out of 8 officer categories and the point estimates are largest for accounts and facilities staff.

These results suggest that local staff exert greater effort in politician-run GPs. Our interpretation is that politicians exert greater pressure on GP staff to show up and do their job in order to be responsive to citizens. However, higher attendance could also be due to greater bottom-up pressure from citizens who feel more empowered to demand accountability when an elected leader is in charge.

Either way, the evidence shows that politician-run governments are more responsive to citizens, partly through mobilising greater effort from frontline bureaucrats.

5.3 Elite Capture

Our results thus far suggest that, on average, politicians perform better than bureaucrats at representing citizen preferences and responding to their needs. Is this because politicians are more sensitive to the preferences and needs of the poor (i.e., their median voter), or because they are more influenced by the interests of elites? There is a longstanding concern that elected officials—especially local politicians in developing countries—may be more susceptible to capture by economic and social elites (Bardhan and Mookherjee, 2006; Alesina and Tabellini, 2008; Olken, 2007).

We test for elite capture by assessing whether GP spending is more sensitive to elite preferences than those of other social groups. Table 5 presents several noteworthy results. We observe that the coefficient on $CitizenPriority_{ij}$ is positive and significant for all groups. This indicates that, even in bureaucrat-run GPs, the preferences of all groups receive some weight in spending choices. However, citizens' preferences are not equally represented in GP expenditures. The preferences of citizens from traditionally powerful groups (men, general caste, OBCs, households in the GP's main village) are more strongly correlated with GP spending than those of citizens from disadvantaged groups (women, Scheduled Castes, households in peripheral villages). For instance, if all men value spending on a particular category, bureaucrat-run GPs spend 5.4% more on it. By contrast, if all women think a category is important, GP spending is only 2.1% higher, implying that men's preferences receive 62% more weight than women's preferences. We call this difference the *representation gap*. Figure 2 shows that there are sizeable representation gaps along gender, caste and main-peripheral village lines, indicating a fair degree of elite capture in bureaucrat-governed GPs.

We find that these representation gaps widen in politician-run GPs. The coefficient on $CitizenPref_{ij} * Elected_i$, which captures the effect of being governed by an elected leader, is positive for all groups (though not always significant). This indicates that politicians weakly increase the preference-expenditure correlation (i.e. improve representation) for all groups. While no group is worse represented by politicians, the representation gains are not equally shared. In politician-run GPs, expenditure becomes even more strongly correlated with the preferences of advantaged groups, while disadvantaged groups do not gain much or at all. In a politician-run GP, when all men value a category, the GP spends 8.9% more on it—expenditure is 39% more sensitive to men's preferences than in bureaucrat-run GPs. By contrast, when all women value a spending category, politician-run GPs only spend 2.6% more on it—no different from bureaucrat-governed GPs. Thus, as figure 2 shows, the gender representation gap widens from 62% in bureaucrat-run GPs to 71% in politician-run GPs. We see similar patterns for caste: the General-

SC representation gap widens from 26% in bureaucrat-governed GPs to 49% in politician-governed GPs. The main-peripheral village representation gap also widens from 52% in bureaucrat-run GPs to 66% in politician-run GPs. Thus, politicians improve representation, but the gains accrue primarily to advantaged social groups.

Table A.10 paints an even starker picture. The only groups that seem to be better represented by politicians are men and general castes in the GP's dominant village. The coefficient on $CitizenPref_{ij} * Elected_i$ tells us the impact of politician rule on citizens in peripheral villages. This coefficient is insignificant for all groups, indicating that even men and general castes in peripheral villages do not get better representation when politicians rule. By contrast, the coefficient on $CitizenPref_{ij} * Elected_i * MainVillage_i$ captures how politician rule affects main village citizens.[27] The coefficients are only positive and significant for men and general castes.

Thus, in our context and using this measure, only advantaged citizens in the GP's dominant village are better represented by politicians than bureaucrats. Designating general caste men in the main village as GP elites, figure 2 shows that the representation gap between elites and other citizens increases from 10% in bureaucrat-run GPs to 33% in politician-governed GPs.

Overall, these results show that elite capture is greater in politician-run GPs. While disappointing, the findings are consistent with other studies of village politics in Karnataka and other Indian states, which highlight the dominance of landed elites (Bardhan and Mookherjee, 2006; Besley et al., 2012; Anderson et al., 2015). Nevertheless, they are also surprising given India's extensive system of political reservations for disadvantaged groups (women and SCs). Indeed, 63% of politicians in our sample are women, compared to only 7% of GP administrators. We explore whether the identity of leaders matters in section 6.2.

5.3.1 Mechanism: Political selection

In this section, we explore why politicians are more sensitive to elite preferences. One mechanism is political selection: politicians may be drawn from wealthier households. We test whether this is indeed true and then ask whether elite capture is greater in GPs with wealthy politicians.

We construct a measure of politicians' wealth by (i) matching GP council members to administrative data on the universe of property owners and (ii) using tax liability (which is based on property value) to proxy wealth. Table A.11 shows that, within a GP, politicians own 0.7 more

[27] The coefficients on $CitizenPref_{ij} * MainVillage_i$ capture the additional weight given to main village preferences in bureaucrat-run GPs. The mostly positive coefficients highlight that main village citizens get more representation even under administrator rule.

properties than the average property owner and are 7 percentiles wealthier.[28]

Table A.12 compares elite capture in GPs with wealthier vs less wealthy politicians. We find suggestive evidence of greater elite capture in GPs with wealthy politicians. The coefficient on the triple interaction term $Elected_i * CitizenPref_{ij} * WealthyGPCouncil_i$ is positive for advantaged groups like men and general caste (indicating that GPs run by wealthy politicians are more sensitive to their preferences) and negative for disadvantaged groups like women and SCs (indicating weaker representation of their preferences in wealthy politician-run GPs). However, we think of this result as merely suggestive since the coefficients are not statistically significant.

5.4 Corruption

Having shown that politicians are more susceptible to elite capture, we assess whether politician-run GPs are more corrupt. We use two proxies for corruption. First, we construct a measure of self-dealing—whether elected GP leaders appropriate NREGS benefits for themselves and their families. Prior work shows that GP leaders capture welfare benefits for their own households (Besley et al., 2012), including NREGS benefits (Jeong et al., 2023).

We test whether there is more self-dealing in politician-run GPs. By linking GP politicians to the NREGS beneficiary list, we identify the workfare days and payments received by each politician's household. We estimate the regression

$$y_{ijt} = \alpha_i + \alpha_j + \alpha_t + \beta_1 Elected_i * Post_t + \beta_2 Elected_i * Council_j + \beta_3 Council_j * Post_t + \beta_4 Elected_i * Council_j * Post_t + \gamma X_{it} + \epsilon_{it} \quad (7)$$

where y_{ijt} is the NREGS outcome for household j in village i in month t. $Elected_i$ indicates whether village i is in an off-cycle GP, $Council_j$ denotes whether j is a GP council member's household, and $Post_t$ indicates whether the month is in FY2020-21. As before, β_2 captures the impact of being governed by elected leaders. Our coefficient of interest is β_4, which captures the impact of being on the GP council when politicians are in power.

Table A.13 shows that the triple interaction β_4 is positive but statistically insignificant for both outcomes—workdays and payment received. The results imply that there is no additional self-dealing in politician-run GPs.

[28] Our data likely underestimates the relative wealth of GP politicians since it excludes landless households, who are likely to be at the bottom of the GP wealth distribution.

Our second corruption measure comes from the citizen survey. We ask citizens about their experiences with corruption while trying to access public services and compare this across politician-run and bureaucrat-run GPs. If anything, our evidence suggests that citizens were less likely to pay bribes in politician-run GPs (table A.13, columns 7 and 8). That said, we interpret this result cautiously given the potential inaccuracies with self-reported bribe data.

Taken together, these results suggest that politicians and bureaucrats perform similarly on corruption.

5.5 Expertise

Our results thus far show that politicians outperform bureaucrats on governance tasks related to representation and responsiveness—despite being more susceptible to elite capture. To perform these kinds of tasks well, leaders must understand citizens and be motivated (or incentivised) to serve their needs. No specific technical knowledge is required. By contrast, some governance tasks require specific expertise. Thus, central bankers and judges often have advanced training in economics or law. In our context, the barrier to performing tasks like bridge construction or drainage system design well is usually not local information or effort but a lack of domain expertise.

We evaluate whether bureaucrat-run GPs perform better at specialised governance tasks. We compile rich data on the universe of local development projects in each GP since 2015 and measure performance using the pace of project progress. We estimate the regression

$$y_{ijt} = \alpha_{ij} + \alpha_t + \beta_1 Admin_i * Post_t + \gamma X_{it} + \epsilon_{it} \tag{8}$$

where y_{ijt} is a dummy indicating whether project j in GP i saw any progress during each 6-month period t, $Admin_i$ indicates whether GP i is on-cycle and $Post_t$ indicates whether period t is during FY2020-21. Regressions include work and period fixed effects. The coefficient of interest in β_1 and standard errors are clustered at the GP level. We construct outcome variables to capture both overall project progress and achievement of specific milestones, as described in section 3.2. Further, Figure A.3(c) shows the pre-period parallel trend in progress rates for development projects across on- and off-cycle GPs.

Panel A of table 6 shows that, on average, development projects managed by bureaucrat- and politician-run GPs progress at similar rates. In both groups of GPs, the probability of a project showing any progress (column 1) is very similar, and we see no difference in the odds of projects

completing any of the five key milestones (columns 2-6). This evidence goes against the argument that bureaucrats are generally better at implementing specialised development projects.

On the other hand, it is unreasonable to expect appointed GP administrators to have expertise in all domains. A fairer test of the *expertise* hypothesis would be to assess whether bureaucrats are better at implementing projects in their domain of expertise. We categorise bureaucrats' expertise based on their home department prior to being appointed GP administrators. We identify the domain expertise each project requires by its implementing government department. By these definitions, bureaucrats have relevant expertise for a project in approximately 5% of cases, though over 15% of administrators have expertise in at least one project ongoing in the GP.[29] We estimate a slightly modified version of the above regression

$$y_{ijt} = \alpha_{ij} + \alpha_t + \beta_1 Admin_i * Post_t + \beta_2 Admin_i * Post_t * SameDept_{ij} + \gamma X_{it} + \epsilon_{it} \quad (9)$$

where the coefficient of interest β_2 captures the differential effect of having a bureaucrat who previously worked in the department that is implementing the project. Panel B of table 6 shows that bureaucrat-run GPs implement development projects faster when the projects lie within the administrator's area of expertise. Bureaucrat-run GPs are 4pp more likely to make progress on a development project if they have prior expertise in this domain (column 1), a 0.17 SD increase or 67% over the baseline mean. Implementation pace improves for all project stages, but effect sizes are largest for the approval and work order stages (columns 2 and 3), which require knowledge of government rules and processes and sound judgement about technical feasibility and cost-effectiveness.

Overall, these results illustrate that expertise is valuable for certain governance tasks, and bureaucrats can significantly outperform politicians on tasks that lie within their area of expertise. This echoes earlier work on participatory development, which shows that politicians outperform bureaucrats when the planning of local projects is in their hands, but technical decisions are better executed by technocrats (Khwaja, 2009; Mansuri and Rao, 2013).

5.6 Externalities

A common criticism of decentralisation is that local leaders have limited incentives to internalise cross-jurisdiction externalities (Lipscomb and Mobarak, 2016). In our setting, GP politicians

[29] Specifically, of the 497,022 projects managed by appointed bureaucrats, the GP administrators has domain expertise in only 24,699 of these.

are elected from wards, which comprise a collection of neighbourhoods in a village. There are usually 3-4 wards per village and 12-15 wards per GP. In theory, politicians may place greater weight on policies and projects that benefit citizens in their own locality and not internalise impacts on citizens in other neighbourhoods or villages. By contrast, bureaucrats do not face these incentives.

We construct a measure of how narrowly targeted each development project is by applying natural language processing techniques to project descriptions. We classify projects into three categories according to whether their likely beneficiaries are (i) specific households, (ii) a neighbourhood, or (iii) multiple villages in the GP. Details of this procedure are in section A.1.3. For instance, a project that installed streetlights would fall under (ii), while a road connecting two villages in the GP would be classified under (iii). We test whether politician-run GPs are more likely to advance narrow projects that provide targeted benefits to their constituents.

Table 7 presents results. Panel A shows that politician- and bureaucrat-run GPs have similar progress rates for all types of projects. The coefficient on $Admin_i * Post_t$ is very small and statistically insignificant for all columns. These results suggest that, at least in our context and using this measure, politicians and bureaucrats perform similarly in terms of internalising cross-jurisdiction spillovers. Further, in Panel B, we designate projects that benefit a village or the entire GP as those with externalities, and then compare progress rates for projects with vs without these spillovers. Again, we find that the coefficient on $Admin_i * Post_t * Externalities_i$ is small and statistically insignificant for all project milestones.[30]

5.7 Crisis management

Next, we compare politicians' and bureaucrats' ability to manage crises. Our natural experiment took place in 2020-21, and one important local government role during this period was controlling the spread of COVID-19. We construct several measures of the quality of COVID management using data from our citizen survey and estimate the regression

$$y_{ij} = \alpha + \beta Elected_i + \gamma X_i + \theta X_j + \epsilon_i \tag{10}$$

where y_{ij} is COVID management quality according to citizen j in village i, and X_i, X_j denote village- and household-level controls. Table 8 presents results.

[30]The coefficients are consistently negative, which would if anything suggest that politicians perform relatively better on projects with externalities.

First, we examine specific COVID-mitigation actions under the charge of local governments. Each GP was supposed to organise a COVID task force to generate awareness about the pandemic and encourage citizens to adopt precautionary health measures. However, implementation was patchy: only 43% of citizens were even aware of these COVID task forces. Comparing politician- and bureaucrat-run GPs, we see that citizens were equally likely to know about the activities of the COVID task force in both kinds of GPs (column 1). Citizens' subjective evaluation of the quality of COVID management is also similar in politician- and bureaucrat-run GPs (column 5).

Second, we compare COVID mortality rates. Since Indian administrative data under-reported COVID mortality (Malani and Ramachandran, 2022; Jha et al., 2022; Anand et al., 2021), we ask citizens whether anyone in their village died over the past year. We find that mortality rates are similar in politician- and bureaucrat-run GPs (column 2).

Third, we construct indices that capture households' health and economic well-being during the COVID period. These indices combine objective questions (e.g. about morbidity and food insufficiency) with subjective assessments of the household's health and financial situation.[31] Here again, we find no difference between politician- and bureaucrat-governed GPs.

Moreover, these null effects are precisely estimated. On average, for the outcomes in columns 1-5, we can reject effects larger than 0.07 SD. These results provide strong evidence that the severity of COVID and the quality of COVID management was similar in politician and bureaucrat-run GPs. They also suggest that the findings described above — on representation, responsiveness, elite capture and expertise — are unlikely to be driven by differences in COVID exposure.

5.8 Local Economic Growth

Finally, we compare politicians and bureaucrats in terms of the local economic growth during their tenure. We use two proxies for local economic growth — night-time luminosity and NDVI. Night-time lights are often used to measure local economic activity when economic statistics are not available at the same granularity or frequency. Similarly, NDVI is a satellite-based measure of agricultural productivity, which is a good indicator of economic growth since agriculture is the principal economic activity in our sample.

Since we have night-lights data at the village-year level and NDVI data at the village-season-year

[31] Details are in the notes below table 8.

level, we estimate a specification very similar to equation 5.

$$y_{it} = \alpha_i + \alpha_t + \beta Elected_i * Post_t + \gamma X_{it} + \epsilon_{it} \tag{11}$$

where y_{it} is the growth outcome in village i in month t, $Elected_i$ denotes whether village i is in an off-cycle GP, and $Post_t$ is a dummy indicating whether the month is in FY2020-21. Our coefficient of interest is β.

Figure A.3(d) and A.3(e) illustrates the pre-period parallel trend in our aggregate outcomes across on- and off-cycle GPs underlining the validity of the parallel trends assumption. The results in table 9, columns 1-3 show that being governed by elected leaders has no impact on night lights. Similarly, for NDVI, we see that politician- and bureaucrat-run GPs have similar levels of agricultural productivity in each of the three cropping seasons (columns 4-6). As with the COVID results, the estimates here are precise: on average, for the outcomes in columns 1-6, we can reject effects larger than 5% of the baseline mean.

Null effects on these slower-moving outcomes are not entirely surprising, given the time horizon of our natural experiment.

6 Discussion

Our results show that politicians outperform bureaucrats on governance tasks related to representation and responsiveness. Bureaucrats are less susceptible to elite capture and perform better on tasks that require specific expertise. Governments led by politicians and bureaucrats exhibit comparable levels of corruption, crisis management, and local economic growth. In this section, we examine whether these patterns reflect politicians' electoral incentives and explore how GP and leader characteristics affect these conclusions.

6.1 The Role of Electoral Incentives

A vast literature stresses the importance of electoral accountability (Ferejohn, 1986; Ferraz and Finan, 2011; Finan and Mazzocco, 2021), including in village governments (Martinez-Bravo et al., 2022). To explore whether electoral incentives influence governance outcomes in our context, we identify GPs where elected leaders have particularly salient re-election concerns—those with elections due in the coming year. As table A.1 shows, 62% of politician-run GPs were sched-

uled to have elections in 2021, while the remaining politician-run GPs had their next election in 2022 or later.

We test whether politicians have differential effects in GPs with upcoming elections. Table A.14 presents the baseline treatment effect of elected leaders and the additional impact of re-election concerns.[32] Looking across the different governance outcomes, we see no clear pattern: the interaction terms $Elected_i * Reelection2021_i$ and $Elected_i * Post_t * Reelection2021_i$ do not have a consistent sign and is only statistically significant for 3 out of 7 outcomes. However, we also interpret these estimates cautiously since re-election concerns may also influence the behaviour of politicians with elections in later years.

Nevertheless, these results suggest that re-election concerns are not the only (or main) reason why politicians and bureaucrats govern differently. Instead, politicians may be better at representing citizen preferences because they have better local information and elections select leaders who are inclined towards citizen engagement.

6.2 Heterogeneity

Heterogeneity by GP Characteristics Prior research argues that local democracy is least effective in (i) poor, (ii) unequal, (iii) diverse communities with (iv) no tradition of participatory government (Mansuri and Rao, 2013). We test these predictions by exploring whether the treatment effects of elected leaders vary along these dimensions.

Table A.15 presents results. Each cell contains the coefficient on the interaction term $Elected_i * HeterogeneityVariable_i$ or $Elected_i * Post_t * HeterogeneityVariable_i$ for governance outcome. We see very little heterogeneity along these dimensions. Elected leaders have similar impacts in GPs with greater poverty (row 1), wealth inequality (row 2) and diversity in terms of caste composition (row 3). Moreover, these null effects are seen across all our main governance outcomes.

In the fourth row, we test whether politicians have different effects in GPs with a longer tradition of participatory government. Present-day Karnataka comprises five regions that were in different polities during the colonial period — three princely states (Mysore, Hyderabad and Coorg) and two British-ruled presidencies (Madras and Bombay). Mysore introduced participatory local government with the Mysore Local Boards Act in 1902, more than half a century before the

[32] As the GPs with an upcoming election also have the longest-serving councils, we control for any prior office-holding experience the President may have. 14% of GPs in our sample have an "Experienced President" who has held office at least once before.

other regions (Ananth Pur and Moore, 2010; Sanyal and Rao, 2018).[33] We test whether elected leaders have different effects in Mysore compared to the other regions of Karnataka. The results in row 4 of table A.15 indicate limited heterogeneity across all governance outcomes. This suggests that, at least in our context, the impact of politicians does not vary with the strength of underlying democratic traditions.

Heterogeneity by Leader Characteristics

Gender. An influential body of work demonstrates that leader identity shapes governance and development outcomes. In the Indian context, several papers find that female leaders affect policy choices, representation of female preferences and public good provision (Chattopadhyay and Duflo, 2004; Clots-Figueras, 2012; Bhalotra and Clots-Figueras, 2014). In our setting, politicians are more representative of the citizenry than bureaucrats, partly thanks to India's extensive political reservations for disadvantaged groups. Focusing on gender (where we can cleanly infer leader identity from names), we observe that 63% of politicians are women compared to only 7% of GP administrators. We test whether our results are driven by the different social backgrounds of politicians and bureaucrats. Panel A of Table A.16 presents results. Controlling for leader gender does not affect the coefficient on $Elected_i$, including for governance outcomes related to representing and being responsive to women. This evidence suggests that our results are driven by how the leader is selected rather than her group identity.

Experience. Politicians and bureaucrats both vary significantly in levels of experience. 47% of GPs have experienced politicians (who have held office before), while 89% of GP administrators are experienced Class I officers, a relatively senior position in the state bureaucracy. We control for experience in panel B of table A.16, and find that our estimates are virtually unchanged. This provides further evidence that our results are not driven by specific demographic characteristics that differ between them.

[33] Local elections were introduced with the Mysore Local Boards Act, 1902. By contrast, other regions of Karnataka, which were carved out of other historical states (the British-ruled Madras Presidency and the more extractive Hyderabad princely state) only experienced local democracy in the 1980s

6.3 Robustness

In some blocks, administrators managed more than one GP due to a shortage of available block-level officers who could be appointed. We test whether our results are influenced by these multiple-GP administrators. We control for the number of GPs each bureaucrat manages and include interactions with $Post_t$ or $CitizenPref_{ij}$ depending on the governance outcome.

Table A.17 shows that governance outcomes are unchanged by the multiple GP control and its interaction with treatment. These results strongly suggest that our primary results are not driven by some administrators governing multiple GPs.

6.4 Preference for Democracy

Having shown that politicians perform better on some governance tasks (representation and responsiveness) and bureaucrats perform better on others (e.g. expertise-intensive tasks), we elicit citizens' overall assessment of the quality of governance in their GP. Then, we ask citizens whether they prefer to be governed by an elected or appointed leader.

We find that citizens rate the quality of governance to be similar in politician- and bureaucrat-run GPs (figure 3 and table A.20, column 1). Nevertheless, when asked, 76% of citizens say they would prefer to be governed by an elected politician than a bureaucrat appointed by the state government. Even in a crisis, over 68% of citizens prefer to be governed by an elected leader. This appears to reflect citizens' high trust in elected leaders (82% have high or very high trust) and belief in the legitimacy of the democratic process (as table A.19 shows, 86% believe that elections are the best way to select their village leader and 78% think elections are the only fair way of doing so).

We test whether temporarily being governed by an appointed bureaucrat affects citizens' preference over governance regimes or their attitude towards democracy. Table A.20 shows a null effect on a standardized "democracy" index based on citizens' views on elections, governance method and trust in elected leaders and appointed bureaucrats. This likely reflects both the short time horizon of our natural experiment and the similar overall governance quality delivered by both regimes (Acemoglu et al., 2024).

7 Conclusion

In this paper, we compared how politicians and bureaucrats govern. We analyse a natural experiment in the Indian state of Karnataka that created quasi-random variation in whether elected politicians or appointed bureaucrats were in charge of villages during the 2020-21 financial year.

We find that politicians perform better at representing citizens' preferences and translating them into policy outcomes. They are also more responsive in delivering social assistance to citizens during periods of economic distress. Politicians achieve this by engaging more with citizens and making front-line officials work harder.

On the other hand, politicians are more susceptible to elite capture. Local elites are the primary beneficiaries of improved representation, leading to a wider representation gap between groups in politician-run GPs. Bureaucrats also perform better at specialised tasks that utilise their expertise, such as implementing development projects.

We find that politicians and bureaucrats are no different in terms of corruption, internalising cross-jurisdiction externalities, crisis management and promoting local economic growth. Nevertheless, most citizens prefer to be governed by an elected leader.

Our findings broadly support efforts to decentralise political power to local levels of government. However, they highlight the difference between political and administrative decentralisation. Instead of viewing decentralisation as a binary "yes or no" choice, policymakers could consider task-level decentralisation. Politicians could manage tasks where the binding constraint is local information or lack of effort, while technocrats could handle tasks that require domain expertise.

Trust in politicians and experts is declining in many societies. Designing institutions so that politicians and technocrats manage tasks where they have a comparative advantage may improve governance and restore trust. In practice, however, tasks are often misallocated within government, as politicians opt to control specialised tasks (e.g. monetary policy) for electoral gain, while centralised bureaucrats' scepticism about politicians pushes them to resist devolution to local elected leaders. Understanding how to improve task allocation within government is a fruitful area for further research.

References

Acemoglu, D., N. Ajzenman, C. G. Aksoy, M. Fiszbein, and C. Molina (2024): "(Successful) democracies breed their own support," *Review of Economic Studies*, rdae051.

Acemoglu, D., S. Naidu, P. Restrepo, and J. A. Robinson (2019): "Democracy does cause growth," *Journal of political economy*, 127, 47–100.

Afridi, F., K. Mahajan, and N. Sangwan (2022): "Employment guaranteed? Social protection during a pandemic," *Oxford Open Economics*, 1.

Aiyar, M. S. (2002): "Panchayati Raj: The Way Forward," *Economic and Political Weekly*, 3293–3297.

Alesina, A. and G. Tabellini (2007): "Bureaucrats or politicians? Part I: a single policy task," *American Economic Review*, 97, 169–179.

——— (2008): "Bureaucrats or politicians? Part II: Multiple policy tasks," *Journal of Public Economics*, 92, 426–447.

Alsan, M., L. Braghieri, S. Eichmeyer, M. J. Kim, S. Stantcheva, and D. Y. Yang (2023): "Civil liberties in times of crisis," *American Economic Journal: Applied Economics*, 15, 389–421.

Ambedkar, B. R. (1948): *Constituent Assembly Debates*, Constitution of India.

Anand, A., J. Sandefur, A. Subramanian, et al. (2021): "Three new estimates of India's all-cause excess mortality during the COVID-19 pandemic," Tech. rep., Center for Global Development Washington, DC.

Ananth Pur, K. and M. Moore (2010): "Ambiguous institutions: Traditional governance and local democracy in rural South India," *The Journal of Development Studies*, 46, 603–623.

Anderson, S., P. Francois, and A. Kotwal (2015): "Clientelism in Indian villages," *American Economic Review*, 105, 1780–1816.

Arora, A. and M. Dell (2023): "LinkTransformer: A Unified Package for Record Linkage with Transformer Language Models," .

Ash, E. and W. B. MacLeod (2021): "Reducing partisanship in judicial elections can improve judge quality: Evidence from US state supreme courts," *Journal of Public Economics*, 201, 104478.

Asher, S., T. Lunt, R. Matsuura, and P. Novosad (2021): "Development research at high geographic resolution: an analysis of night-lights, firms, and poverty in India using the shrug open data platform," *The World Bank Economic Review*, 35, 845–871.

Asher, S. and P. Novosad (2020): "Rural Roads and Local Economic Development," *American Economic Review*, 110, 797–823.

Aziz, A. (2000): "Democratic Decentralisation: Experience of Karnataka," *Economic and Political Weekly*, 35, 3521–26.

Bardhan, P. and D. Mookherjee (2006): "Pro-poor targeting and accountability of local governments in West Bengal," *Journal of development Economics*, 79, 303–327.

Besley, T. and R. Burgess (2002): "The political economy of government responsiveness: Theory and evidence from India," *The quarterly journal of economics*, 117, 1415–1451.

Besley, T., R. Burgess, A. Khan, and G. Xu (2022): "Bureaucracy and development," *Annual Review of Economics*, 14, 397–424.

Besley, T. and S. Coate (2003): "Elected versus appointed regulators: Theory and evidence," *Journal of the European Economic Association*, 1, 1176–1206.

Besley, T., R. Pande, and V. Rao (2012): "Just rewards? Local politics and public resource allocation in South India," *The World Bank Economic Review*, 26, 191–216.

Bhalotra, S. and I. Clots-Figueras (2014): "Health and the political agency of women," *American Economic Journal: Economic Policy*, 6, 164–197.

Blom-Hansen, J., K. Houlberg, and S. Serritzlew (2014): "Size, democracy, and the economic costs of running the political system," *American Journal of Political Science*, 58, 790–803.

Burgess, R., M. Hansen, B. A. Olken, P. Potapov, and S. Sieber (2012): "The political economy of deforestation in the tropics," *The Quarterly journal of economics*, 127, 1707–1754.

Casey, K., R. Glennerster, E. Miguel, and M. Voors (2023): "Skill versus voice in local development," *Review of Economics and Statistics*, 105, 311–326.

Chattopadhyay, R. and E. Duflo (2004): "Women as policy makers: Evidence from a randomized policy experiment in India," *Econometrica*, 72, 1409–1443.

Chaudhury, N., J. Hammer, M. Kremer, K. Muralidharan, and F. H. Rogers (2006): "Missing in action: teacher and health worker absence in developing countries," *Journal of Economic perspectives*, 20, 91–116.

Choi, S. J., G. M. Gulati, and E. A. Posner (2010): "Professionals or politicians: The uncertain empirical case for an elected rather than appointed judiciary," *The Journal of Law, Economics, & Organization*, 26, 290–336.

Chopra, D. (2016): "Demand Shortfalls or Supply-side Constraints: What Explains the Shrinking Employment Guarantee in Rajasthan, India?" *Journal of South Asian Development*, 11, 175–202.

Clots-Figueras, I. (2012): "Are female leaders good for education? Evidence from India," *American economic journal: applied economics*, 4, 212–244.

Dahis, R. and C. Szerman (2024): "Decentralizing Development: Evidence from Government Splits," .

Devlin, J., M.-W. Chang, K. Lee, and K. Toutanova (2019): "BERT: Pre-training of Deep Bidirectional Transformers for Language Understanding," .

Dhaliwal, I. and R. Hanna (2017): "The devil is in the details: The successes and limitations of bureaucratic reform in India," *Journal of Development Economics*, 124, 1–21.

Ehrmann, M. and M. Fratzscher (2011): "Politics and monetary policy," *Review of Economics and Statistics*, 93, 941–960.

Elvidge, C. D., K. Baugh, M. Zhizhin, F. C. Hsu, and T. Ghosh (2017): "VIIRS night-time lights," *International Journal of Remote Sensing*, 38, 5860–5879.

Ferejohn, J. (1986): "Incumbent Performance and Electoral Control," *Public Choice*, 50, 5–25.

Ferraz, C. and F. Finan (2011): "Electoral accountability and corruption: Evidence from the audits of local governments," *American Economic Review*, 101, 1274–1311.

Finan, F. and M. Mazzocco (2021): "Electoral incentives and the allocation of public funds," *Journal of the European Economic Association*, 19, 2467–2512.

George, S., V. Rao, and M. Sharan (2024): "Two and Hundred and Fifty Thousand Democracies: A Review of Village Democracy in India," *World Bank Policy Research Working Paper*.

González, F., P. M. noz, and M. Prem (2021): "Lost in transition? The persistence of dictatorship mayors," *Journal of Development Economics*, 151, 102669.

Gulzar, S. and B. J. Pasquale (2017): "Politicians, bureaucrats, and development: Evidence from India," *American Political Science Review*, 111, 162–183.

Hessami, Z. (2018): "Accountability and incentives of appointed and elected public officials," *Review of Economics and Statistics*, 100, 51–64.

Iyer, L. and A. Mani (2012): "Traveling agents: political change and bureaucratic turnover in India," *Review of Economics and Statistics*, 94, 723–739.

Jacoby, H. G., G. Mansuri, and F. Fatima (2021): "Decentralizing corruption: Irrigation reform in Pakistan," *Journal of Public Economics*, 202, 104499.

Jeong, D., A. Shenoy, and L. Zimmermand (2023): "Rethinking Transparency: Corruption in Local Public Office in India," *Journal of Public Economics* (*Forthcoming*).

Jha, P., Y. Deshmukh, C. Tumbe, W. Suraweera, A. Bhowmick, S. Sharma, P. Novosad, S. H. Fu, L. Newcombe, H. Gelband, et al. (2022): "COVID mortality in India: National survey data and health facility deaths," *Science*, 375, 667–671.

Khwaja, A. I. (2009): "Can good projects succeed in bad communities?" *Journal of Public Economics*, 93, 899–916.

Kling, J. R., J. B. Liebman, and L. F. Katz (2007): "Experimental analysis of neighborhood effects," *Econometrica*, 75, 83–119.

Labus, M. P., G. A. Nielsen, R. L. Lawrence, R. Engel, and D. S. Long (2002): "Wheat yield estimates using multi-temporal NDVI satellite imagery," *International Journal of Remote Sensing*, 23, 4169–4180.

Lassen, D. D. and S. Serritzlew (2011): "Jurisdiction Size and Local Democracy: Evidence on Internal Political Efficacy from Large-scale Municipal Reform," *American Political Science Review*, 105, 238â258.

Lim, C. S. H. (2013): "Preferences and incentives of appointed and elected public officials: Evidence from state trial court judges," *American Economic Review*, 103, 1360–1397.

Lipscomb, M. and A. M. Mobarak (2016): "Decentralization and pollution spillovers: evidence from the re-drawing of county borders in Brazil," *The Review of Economic Studies*, 84, 464–502.

Maine, H. (1880): *Village Communities in the East and West*, Henry Holt and Company.

Malani, A. and S. Ramachandran (2022): "Using household rosters from survey data to estimate all-cause excess death rates during the COVID pandemic in India," *Journal of Development Economics*, 159, 102988.

Mansuri, G. and V. Rao (2013): *Localizing development: Does participation work?*, Policy Research Report, The World Bank.

Martinez-Bravo, M. (2014): "The role of local officials in new democracies: Evidence from Indonesia," *American Economic Review*, 104, 1244–87.

Martinez-Bravo, M., P. Mukherjee, and A. Stegmann (2017): "The non-democratic roots of elite capture: Evidence from Soeharto mayors in Indonesia," *Econometrica*, 85, 1991–2010.

Martinez-Bravo, M., G. Padró i Miquel, N. Qian, and Y. Yao (2022): "The rise and fall of local elections in China," *American Economic Review*, 112, 2921–2958.

Maskin, E. and J. Tirole (2004): "The politician and the judge: Accountability in government," *American Economic Review*, 94, 1034–1054.

Mathew, G. (2000): "Panchayati Raj Updates," Researched using the printed copy distributed at the Institute of Social Sciences, Delhi.

Mathew, G. and L. Jain (2005): *Decentralisation and Local Governance: Essays for George Mathew*, Orient Blackswan Private Limited.

Mergele, L. and M. Weber (2020): "Public employment services under decentralization: Evidence from a natural experiment," *Journal of Public Economics*, 182, 104113.

Mills, S., S. Weiss, and C. Liang (2013): "VIIRS day/night band (DNB) stray light characterization and correction," in *Earth Observing Systems XVIII*, ed. by J. J. Butler, X. J. Xiong, and X. Gu, International Society for Optics and Photonics, SPIE, vol. 8866, 88661P.

Mkhabela, M. S., M. S. Mkhabela, and N. N. Mashinini (2005): "Early maize yield forecasting in the four agro-ecological regions of Swaziland using NDVI data derived from NOAA's-AVHRR," *Agricultural and Forest Meteorology*, 129, 1–9.

Mohanty, M., G. Mathew, R. Baum, and R. Ma (2007): *Grass-Roots Democracy in India and China: The Right To Participate*, SAGE Publications.

Mookherjee, D. et al. (2015): "Political Decentralization," *Annual Review of Economics*, 7, 231–249.

Mu, R. and X. Zhang (2014): "Do elected leaders in a limited democracy have real power? Evidence from rural China," *Journal of Development Economics*, 107, 17–27.

Muralidharan, K., P. Niehaus, and S. Sukhtankar (2016): "Building state capacity: Evidence from biometric smartcards in India," *American Economic Review*, 106, 2895–2929.

Myerson, R. B. (2021): "Local agency costs of political centralization," *Theoretical Economics*, 16, 425–448.

Narasimhan, V. and J. Weaver (2023): "Polity size and local government performance: evidence from India," *Available at SSRN 4678837*.

Nath, A. (2016): "Bureaucrats and politicians: Electoral competition and dynamic incentives," *Unpublished working paper. Boston University*.

Olken, B. A. (2007): "Monitoring corruption: evidence from a field experiment in Indonesia," *Journal of political Economy*, 115, 200–249.

Rasmussen, M. S. (1997): "Operational yield forecast using AVHRR NDVI data: Reduction of environmental and inter-annual variability," *International Journal of Remote Sensing*, 18, 1059–1077.

RDPR (1993): "The Karnataka Gram Swaraj And Panchayat Raj Act, 1993," .

Retzlaff, R. H. et al. (1962): *Village government in India: a case study.*, Bombay: Asia Publ. House.

Rojas, O. (2007): "Operational maize yield model development and validation based on remote sensing and agroâmeteorological data in Kenya," *International Journal of Remote Sensing*, 28, 3775–3793.

Sanyal, P. and V. Rao (2018): *Oral democracy: Deliberation in Indian village assemblies*, Cambridge University Press.

Srinivas, M. N., A. M. Shah, et al. (1960): "The myth of self-sufficiency of the Indian village," *Economic weekly*, 12, 1375–1378.

Tanwar, R. and U. A. Kadam (2022): *India the Mother of Democracy*, Indian Council for Historical Research.

Trautmann, T. R. (2023): "India's Place in the History of Democracy," *The India Forum*.

Venkatarangaiya, M. and M. Pattabhiram (1969): "Local Government in India: Select Readings," (*No Title*).

Whalley, A. (2013): "Elected versus appointed policy makers: Evidence from city treasurers," *The Journal of Law and Economics*, 56, 39–81.

Wong, H. L., Y. Wang, R. Luo, L. Zhang, and S. Rozelle (2017): "Local governance and the quality of local infrastructure: Evidence from village road projects in rural China," *Journal of Public Economics*, 152, 119–132.

8 Tables

Table 1: Summary Statistics

	Mean	SD
Panel A: Pre-treatment characteristics		
Rural population	1,521.47	1,687.46
Households	318.47	342.95
Literate (share)	0.62	0.11
Primary schools	1.76	1.59
Primary Health Sub-centres	0.31	0.51
All weather road (0/1)	0.93	0.25
Service sector employees 2013 (share)	0.80	0.21
Manufacturing sector employees 2013 (share)	0.19	0.20
Rural per capita consumption (mean)	19,046.48	6,035.89
Panel B: Main outcomes		
GP Expenditure (Rs lakhs)		
Total Expenditure	277.60	176.99
On roads	8.95	22.54
On toilets	7.22	12.15
On water	20.72	27.81
GP Meetings		
Total Meetings	5.22	4.11
General Body	2.30	2.33
Gram Sabhas	1.30	1.16
NREGS delivery		
Days Requested	340.55	768.99
Days Worked	305.35	695.93
Total New Cards	2.23	8.21
Payment Earned	75,012.36	171,597.16
GP Staff Attendance (%)		
All Staff	23.24	39.05
PDO	9.72	29.54
Data Staff	34.07	46.00
Accounts Staff	32.10	42.94
Implementation of Development Projects		
Any Progress	0.09	0.28
Administrative/Technical progress	0.08	0.27
Completion	0.02	0.13
Agricultural productivity (NDVI)		
Kharif	-0.74	0.24
Rabi	-0.58	0.22
Summer	-0.95	0.28
Night Lights		
Mean Night lights (log)	-0.52	0.81
Cumulative Night lights (log)	2.40	1.11

Notes: This table reports summary statistics for pre-treatment village characteristics and our key outcome variables. Data in Panel A comes from the Population Census 2011 and Socio-Economic and Caste Census 2011-12. The outcome variables in Panel B are described in more detail in section 3.

Table 2: **Representation** — Alignment of Public Spending with Citizen Preferences

	(1)	(2)	(3)
Citizen Priority (share)	0.063***	0.064***	0.059***
	(0.004)	(0.004)	(0.004)
Citizen Priority x Elected			0.035***
			(0.011)
Total expenditure (log)		1.533***	1.549***
		(0.146)	(0.147)
Observations	7084	7084	7084
Adjusted R^2	0.032	0.085	0.087
Block FE	No	Yes	Yes
Controls	No	Yes	Yes
Gram Panchayats	644	644	644

Notes: This table presents results from estimating equation (3). The dependent variable is the log of GP i's expenditure in category j. $CitizenPriority$ is the share of citizens in GP i who list category j among the two most important public goods they want the GP to spend on. $Elected$ is a dummy variable that takes value 1 if GP i is governed by an elected politician and 0 if the GP is governed by an appointed bureaucrat. Column 1 reports the raw correlation. Columns 2 and 3 include block fixed effects and controls. In all regressions, standard errors, shown in parentheses, are clustered at the GP level. Significant at *10%, **5%, and ***1%.

Table 3: **Responsiveness** — Delivery of NREGS Benefits

	New Job Cards			Days worked			Payment Earned (INR)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Elected x Post	1.521*	1.519*	1.773**	45.729	49.567*	83.695***	12813.467	13887.030*	23343.376***
	(0.864)	(0.870)	(0.796)	(28.828)	(28.790)	(23.204)	(8188.371)	(8156.480)	(6422.288)
Observations	419376	419376	419376	419376	419376	419376	419376	419376	419376
Adjusted R^2	0.465	0.464	0.496	0.362	0.405	0.456	0.360	0.402	0.454
Mean Y Admin	2.73	2.73	2.73	337.30	337.30	337.30	85,614.59	85,614.59	85,614.59
SD Y	10.16	10.16	10.16	766.19	766.19	766.19	196407.56	196407.56	196407.56
Village FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month-Year FE	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Block x Month FE	No	Yes	No	No	Yes	No	No	Yes	No
Block x Month-Year FE	No	No	Yes	No	No	Yes	No	No	Yes

Notes: This table presents results from estimating equation (5). Each observation is a NREGS service delivery outcome of village i in month m of year t. We have three primary outcomes: (i) the number of new job cards which indicate the number of new beneficiaries; (ii) the number of work days provided to beneficiaries in the village in that month; (iii) the total workfare payments (in Rs) earned by beneficiaries. $Elected$ is a dummy variable indicating whether village i is in a politician-run GP. $Post$ is a dummy indicating whether the month is after June 2020, the period during which our natural experiment leads to variation in governance regimes across GPs. Village and month-year fixed effects are included in all regressions. In addition, columns 2, 5 and 8 include block x month-of-year fixed effects to capture seasonality and columns 3, 6 and 9 include block-month-year to capture local demand shocks. Standard errors are clustered at the GP level. Significant at *10%, **5%, and ***1%.

Table 4: **Effort** — Attendance Rates of Frontline Staff

	(1)	(2)	(3)	(4)	(5)
Elected x Post	4.157***	4.056***	4.058***	4.176***	4.087***
	(1.501)	(1.500)	(1.499)	(1.509)	(1.495)
Registration % (mean)		0.303***	0.302***		0.316***
		(0.016)	(0.016)		(0.017)
PDO (share)				0.037	-0.028
				(0.028)	(0.028)
Data-staff (share)				0.133***	0.055**
				(0.026)	(0.026)
Senior-staff (share)				-0.075	-0.101**
				(0.047)	(0.049)
Secretary (share)				0.114***	0.050
				(0.033)	(0.032)
Assistants(share)				0.085	-0.029
				(0.101)	(0.100)
Accounts-staff(share)				0.185***	0.119***
				(0.028)	(0.027)
Project-coord (share)				-0.237	-0.326
				(0.339)	(0.328)
Tech-staff (share)				-0.176***	-0.187***
				(0.063)	(0.062)
Facilities-staff (share)				0.120***	0.087***
				(0.024)	(0.023)
Constant	42.059***	12.764***	12.863***	29.183***	3.721
	(0.031)	(1.577)	(1.574)	(2.398)	(2.947)
Observations	160345	160345	160345	160345	160345
Adjusted R^2	0.408	0.412	0.412	0.410	0.414
Mean Y Admin	42.13	42.13	42.13	42.13	42.13
SD Y	38.23	38.23	38.23	38.23	38.23
Week FE	Yes	Yes	Yes	Yes	Yes
Weekday FE	No	No	Yes	Yes	Yes
GP FE	Yes	Yes	Yes	Yes	Yes

Notes: This table presents results from estimating equation (6). The unit of analysis is the GP-week, and the dependent variable is the average attendance rate (in %) of all active frontline staff officers in GP j during week-year t. $Elected$ is a dummy indicating whether the GP is governed by an elected politician (rather than an appointed bureaucrat) during the 2020-21 financial year. $Post$ is a dummy indicating whether the week is after June 2020, the period during which we observe variation in governance regimes across GPs. The variable of interest is the diff-in-diff coefficient on $Elected * Post$. All specifications include GP and week-year fixed effects. In column 2, we add controls for the share of officers who registered to use the e-attendance registration system. Column 3 adds day-of-week fixed effects while column 4 includes controls for the share of each officer type. Column 5 includes both the controls used in columns 3 and 4. Standard errors are clustered at the GP level. Significant at *10%, **5%, and ***1%.

Table 5: **Elite Capture** — Alignment of Public Spending with Preferences of Citizens from Different Groups

	(1) Male	(2) Female	(3) General	(4) OBC	(5) SC/ST	(6) Main-Villages	(7) Sub-Villages	(8) Elites	(9) Non-elites
Citizen priority (prop)	0.054***	0.021***	0.032***	0.031***	0.024***	0.045***	0.022***	0.028***	0.025***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.002)
Citizen Priority x Elected	0.035***	0.005	0.032***	0.019**	0.009	0.030***	0.005	0.020**	0.006
	(0.011)	(0.009)	(0.009)	(0.009)	(0.008)	(0.011)	(0.006)	(0.009)	(0.006)
Observations	7051	4851	6699	5544	5467	6457	11803	5445	19316
Adjusted R^2	0.085	0.055	0.071	0.070	0.064	0.075	0.074	0.064	0.078
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gram Panchayats	644	644	644	644	644	638	638	638	638

Notes: This table presents results from estimating equation (3). The dependent variable is the log of GP $i$âs expenditure in category j. $CitizenPriority$ is the share of citizens in GP i who list category j among the two most important public goods they want the GP to spend on. $Elected$ is a dummy variable that takes value 1 if GP i is governed by an elected politician and is 0 if the GP is governed by an appointed bureaucrat. In columns 1-5, we restrict attention to citizens from different social groups (e.g. men, SCs, etc) and identify the correlation between GP expenditures and the preferences of citizens from this group. In column 6, we restrict attention to all citizen in the GP's main village, while in column 7 we restrict attention to citizens in peripheral villages of the GP. Column 8 restricts attention to GP elites, defined at general caste men who live in the GP's main village (i.e. the intersection of citizens in columns 1, 3 and 6). Column 9 restricts attention to non-elites, i.e. all citizens in the GP other than elites. All regressions include block fixed effects and controls for total GP expenditure. Standard errors, clustered at the GP level, are in parentheses. Significant at *10%, **5%, and ***1%.

Table 6: **Expertise** — Bureaucrats' Domain Experience and Management of Specialised Development Projects

	(1) Any Progress	(2) Approval Prog	(3) Workorder Prog	(4) Tender Prog	(5) Monetary Prog	(6) Completion Prog
Panel A: Politicians vs Bureaucrats on average						
Admin x Post	-0.001	-0.001	-0.000	0.007	-0.002	-0.001
	(0.002)	(0.002)	(0.002)	(0.008)	(0.002)	(0.001)
Work ID FE	Yes	Yes	Yes	Yes	Yes	Yes
Period-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean Y Admin	0.06	0.06	0.04	0.06	0.02	0.01
Observations	6808895	4793926	6389575	250741	1750205	6808895
Panel B: Effect of Bureaucrat Expertise						
Admin x Post	-0.002	-0.001	-0.000	0.007	-0.002	-0.001
	(0.002)	(0.002)	(0.002)	(0.008)	(0.002)	(0.001)
Admin x Post x Same-Dept	0.040***	0.033***	0.029***	0.023	0.009***	0.002**
	(0.004)	(0.003)	(0.002)	(0.014)	(0.003)	(0.001)
Work ID FE	Yes	Yes	Yes	Yes	Yes	Yes
Period-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean Y Admin	0.06	0.06	0.04	0.06	0.02	0.01
Observations	6808895	4793926	6389575	250741	1750205	6808895

Notes: Panel A presents results from estimating equation (8) while panel B shows results from estimating equation (9). The regression is run at the project x period level and examines the progress achieved by development project i in GP j during period t, where each period t is a 6-month window (e.g. January to May, June to December). In column 1, the dependent variable is a dummy indicating whether project i experienced any progress during period t. In columns 2-6, the dependent variable is a dummy indicating whether project i achieved that particular milestone during period t. Details on the milestones are in section 3.2. $Admin$ denotes whether GP j is governed by an appointed bureaucrat during 2020-21 and $Post$ denotes whether period t is after June 2020 (i.e. during which our natural experiment generates variation in governance regimes). In Panel B, $SameDept$ denotes whether the mother department of GP j's administrator is the same bureaucratic agency tasked with implementing project i. All regressions include project and period fixed effects. Standard errors, clustered at the GP level, are in parentheses.

Table 7: **Internalising Externalities** — Implementation of Development Projects with Cross-Jurisdiction Spillovers

	(1) Household	(2) Neighbhourhood	(3) GP	(4) Without externalities	(5) With externalities
Panel A: Management of Different Project Types					
Admin x Post	0.000	-0.004	-0.001	-0.001	-0.001
	(0.006)	(0.005)	(0.003)	(0.004)	(0.002)
Observations	1102777	769247	3438686	1818463	4990432
Panel B: Management of Projects with Externalities					
	Any Progress	Approval Prog	Workorder Prog	Monetary Prog	Completion Prog
Admin x Post	-0.001	0.002	-0.002	0.002	-0.001
	(0.004)	(0.003)	(0.003)	(0.002)	(0.001)
Externalities x Post	-0.013***	-0.013***	0.004	-0.026***	-0.002
	(0.004)	(0.003)	(0.002)	(0.003)	(0.001)
Admin x Post x Externalities	-0.001	-0.004	0.002	-0.005*	0.001
	(0.004)	(0.003)	(0.002)	(0.003)	(0.001)
Work ID FE	Yes	Yes	Yes	Yes	Yes
Period-Year FE	Yes	Yes	Yes	Yes	Yes
Mean Y Admin	0.06	0.06	0.04	0.02	0.01
Observations	6808895	4793926	6389575	1750205	6808895

Notes: Panel A presents results from estimating equation (8) on different subsamples. The dependent variable is a dummy variable indicating whether any progress was made on project i in GP j during period t. We estimate equation (8) for different categories of projects as defined in section A.1.3. Column 1 restricts attention to projects that primarily benefit specific households, while column 2 focuses on projects that benefit specific neighbourhoods in a GP. In column 3, the sample is restricted to projects that benefit multiple villages in the GP. The sample in column 4 is restricted to projects without externalities, which benefit either specific households (i.e. column 1 sample) or neighbourhoods (i.e. the column 2 sample). Column 5 contains all projects with externalities. $Admin$ denotes whether GP j is governed by an appointed bureaucrat during 2020-21 while $Post$ indicates whether period t is after June 2020 (i.e. during which we see variation in governance regimes across GPs). In panel B, the dependent variable in each column in a dummy indicating whether project i achieved that particular milestone during period t. $Externalities$ is a dummy indicating whether the project has cross-jurisdiction externalities, i.e. benefits citizens in multiple villages of the GP. All regressions include project and time period fixed effects. Standard errors, clustered at the GP level, are in parentheses. Significant at *10%, **5%, and ***1%.

Table 8: **Crisis Management** — Comparing Politicians' and Bureaucrats' Quality of COVID management

	(1) Task Force Awareness (W1)	(2) Covid Mortality (W1)	(3) Covid Well-Being	(4) Economic Well-Being	(5) GP Covid Rating (W1)
Elected	-0.033	0.013	0.022	0.031	-0.027
	(0.035)	(0.023)	(0.026)	(0.034)	(0.031)
Observations	8170	8162	7652	8737	8662
Adjusted R^2	0.056	-0.001	0.017	0.036	0.038
SD Y	0.43	11.62	1.19	1.05	1.00

Notes: This table presents results from estimating equation (10). Each observation is a COVID management outcome constructed from our citizen survey. Throughout, the key independent variable is $Elected$, which is a dummy indicating whether citizen i is in a politician-run GP. The dependent variable in column 1 is a dummy indicating whether the citizen knows about the GP Task Force that was supposed to be set up to manage COVID. In column 2, the dependent variable is the citizen-reported number of COVID deaths in their village in Wave 1. In Column 3, the dependent variable is a standardized COVID well-being index based on the number of COVID patients and deaths in the respondent's village and household, and the overall health of their household (1=very poor, we have many problems to 4=excellent, we have no problems) during Wave 1 of the COVID period. Similarly, the dependent variable in column 4 is a standardized economic well-being index based on the citizen's assessment of their household's economic and employment situation (1=very poor, we have many problems to 4=excellent, we have no problems) and food sufficiency. In column 5, the dependent variable is the citizen's evaluation of the GP's management of COVID (from 1=poor to 4=excellent). All specifications control for respondent, village, and surveyor-specific characteristics. Respondent-level controls include age, sex, caste category, religion, education, and occupation. Village-level controls include demographic characteristics (SC, ST and literate share of the population), occupational mix (manufacturing and service sector share of employment), public good availability (no. of primary, middle, secondary & senior-secondary schools, no. of public health centres and medical dispensaries, public distribution shops, Anganwadi centers), and per-capita consumption. We also include an enumerator fixed effect. Standard errors, clustered at the GP level, are in parentheses. Significant at *10%, **5%, and ***1%.

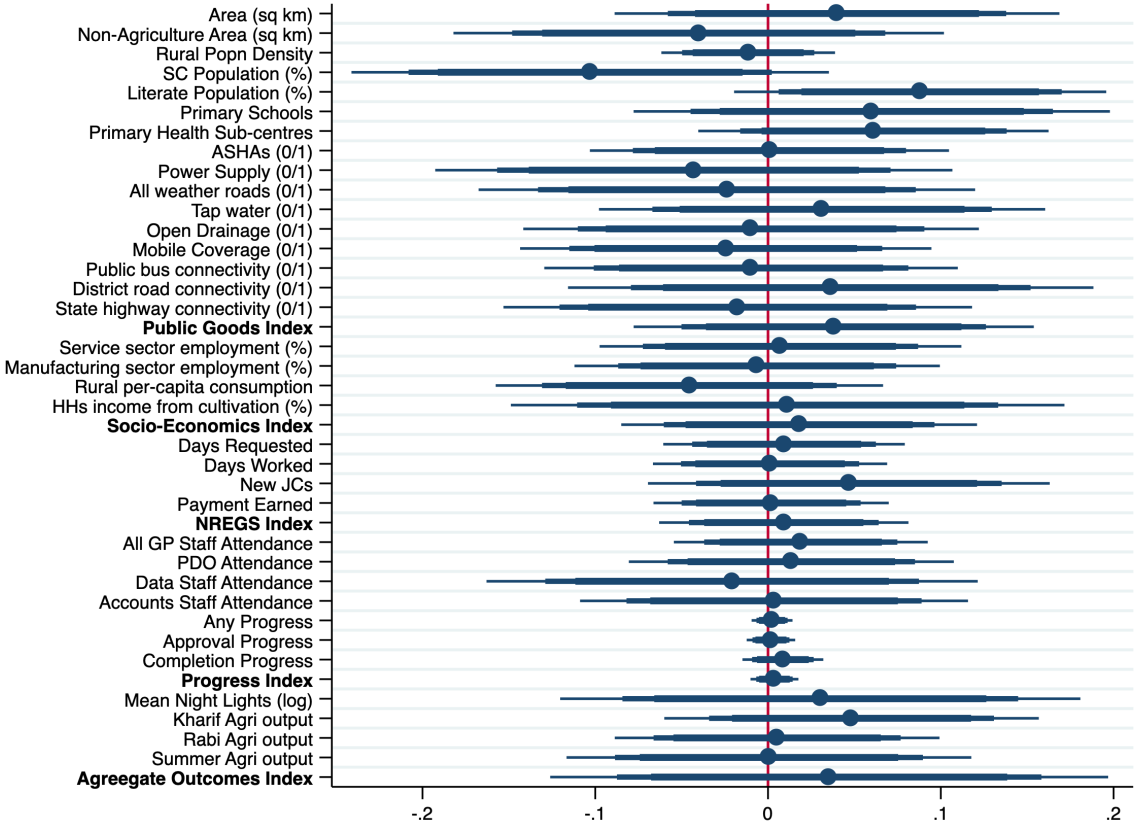
Table 9: **Local Economic Growth** — Night Lights and Agricultural Productivity

	Night Lights			Agricultural Production		
	(1) Mean (log)	(2) Total (log)	(3) Max (log)	(4) Kharif	(5) Rabi	(6) Summer
Elected x Post	-0.010	-0.010	-0.011	0.012	0.042	-0.053
	(0.020)	(0.020)	(0.019)	(0.033)	(0.062)	(0.038)
Observations	205780	205780	205787	44735	44735	53682
Adjusted R^2	0.779	0.887	0.829	0.703	0.260	0.410
Mean Y Admin	-0.455	2.473	0.227	-1.411	-3.516	-3.580
Village FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table presents results from estimating equation (11). The dependent variables are measures of local economic activity. In columns 1-3, the dependent variable is the night-time luminosity of village i in GP j during month t. Details on the data construction are in section A.1.1. In column 1, the outcome is the log of the average night-time lights across all pixels in village i; in column 2, it is total night lights across all pixels in village i; in column 3, it is the maximum level of night-time luminosity across all pixels in village i. In columns 4-6, the dependent variable is the Normalized Difference Vegetation Index (NDVI), i.e. the difference between early-season and max vegetation averaged over all pixels in village i located in GP j during year t. Karnataka has three different cropping seasons — *kharif*, *rabi*, and summer. As before, $Elected$ is a dummy indicating whether GP j is politician-run and $Post$ denotes whether the period is after June 2020 onwards. All regressions include village and month-year fixed effects. Standard errors, clustered at the GP level, are in parentheses. Significant at *10%, **5%, and ***1%.

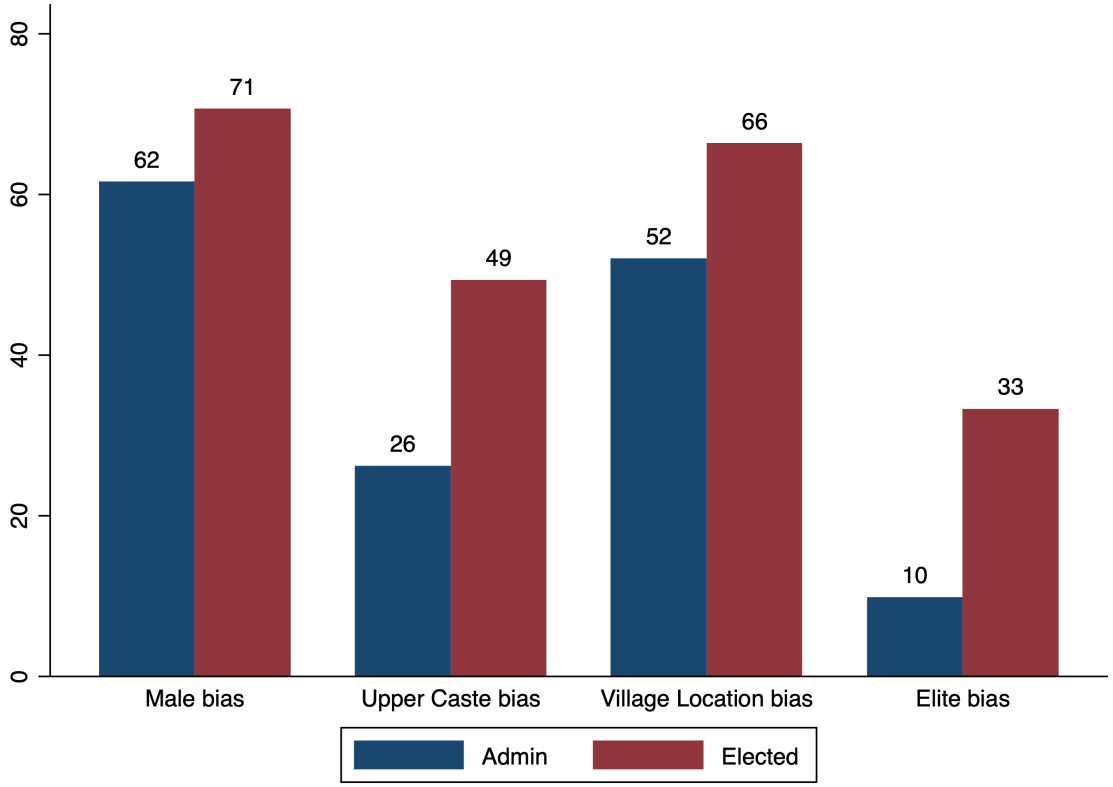
9 Figures

Figure 1: Covariate Balance between Politician- and Bureaucrat-run Villages



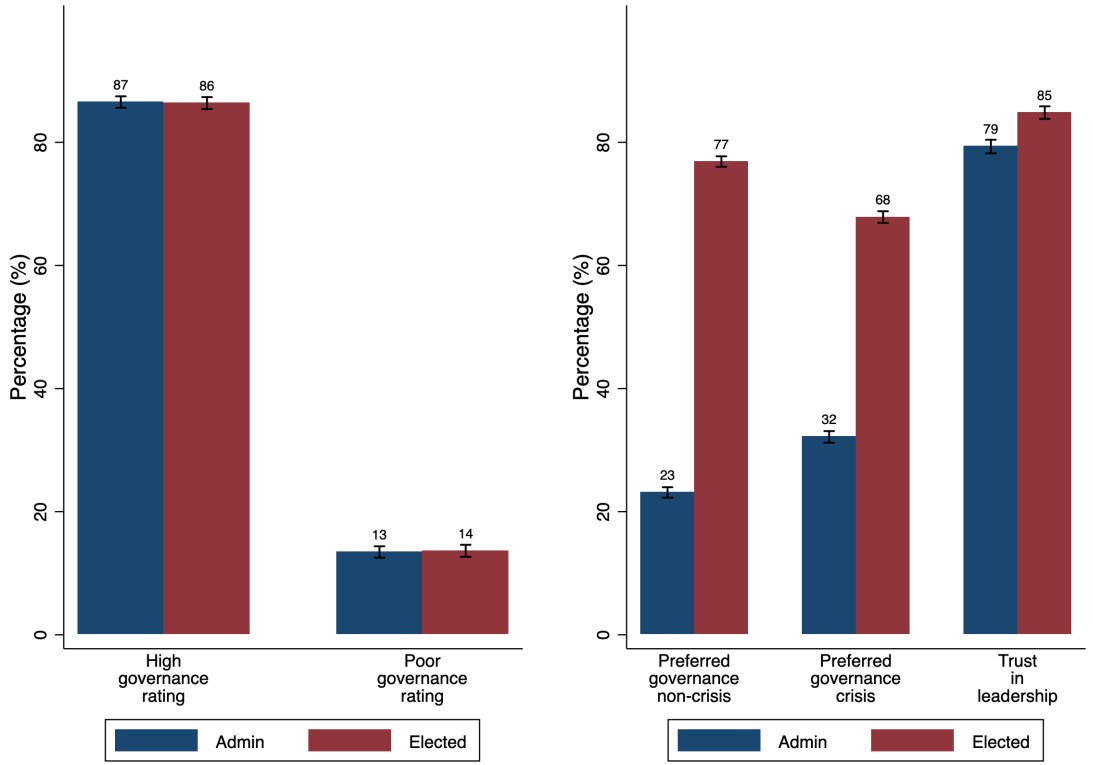
Notes: This figure plots coefficients from estimating balance regressions (1) and (2). All regressions include block fixed effects and standard errors are clustered at the GP level Geographic, demographic and public goods variables come from the 2011 Population Census. Details on the underlying variables used are in section 3 and details on the index construction are in section A.1.2.

Figure 2: Representation Gaps in Alignment of Public Spending with Citizen Preferences



Notes: This figure displays representation gaps, defined as the disparities in the extent to which public spending reflects the preferences of different citizens. For each social group, we estimate equation (3) and save the coefficients shown in table 5. Using these coefficients, we compute $RepGap = \frac{\beta_{advantaged} - \beta_{disadvantaged}}{\beta_{advantaged}} * 100\%$ for each dimension of identity (e.g. gender, caste). For each dimension, the blue bars show the representation gap in bureaucrat-run GPs while the red bars show the representation gap in politician-run GPs. For example, $GenderRepGap = \frac{\beta_{male} - \beta_{female}}{\beta_{male}} * 100\%$, implying that male preferences receive 62% more weight than female preferences in bureaucrat-run GPs and 71% more weight in politician-run GPs. For caste, we compare representation of general caste and SC/ST citizens. For village importance, we compare representation of citizens in the GP's main village vs peripheral villages. We define GP elites as general caste men in the main village—the intersection of the privileged groups for each identity dimension—and compare the representation of their preferences to those of all other citizens in the GP.

Figure 3: Citizens' Evaluation of Governance and Preferred Governance Regime



Notes: This figure showcases citizens' evaluation of governance in their GP and their preferred governance regime. These outcomes come from the citizen survey. In the graph on the left, the bars reflect the percentage of citizens who rated governance as high and poor respectively. In the graph on the right, the first two bars indicate the percentage of citizens who prefer by an elected politician or an appointed bureaucrat. Citizens were asked about their preferred governance regime in normal times and in a crisis and we report results for both. The final bar reports the percentage of citizens who have high trust in their GP leadership.

A Appendix

A.1 Data

A.1.1 Satellite data

Night-time lights. We use monthly composites that are stray light corrected from the (VIIRS) Day/-Night Band (DNB) and exclude data impacted by cloud cover the advantages of which over other products from the suite are outlined in (Mills et al. (2013); Elvidge et al. (2017)). As an additional check, number of days of cloud cover were bench-marked with monsoon cycles in Karnataka during 2019 and 2020 to ensure that we are working on data less impacted by weather fluctuations.

Agricultural productivity. We calculate the NDVI measure as follows. Images are derived from the Moderate Resolution Imaging Spectroradiometer (MODIS) satellite. Each image from the satellite is a 16-day composite and its pixels are spatially averaged to village polygons to get mean VI at the village-composite level. Our primary measure of agricultural production is NDVI (Rojas, 2007; Mkhabela et al., 2005), which is the difference between early-season VI (the mean of the first three 16-day composites) and the max VI value observed at the village level (Labus et al., 2002; Rasmussen, 1997). Like Asher and Novosad (2020), we use the differenced measure because it controls for non-crop vegetation (such as forest cover) by measuring the change in vegetation from the planting period (when land is fallow) to the time of peak vegetation.

A.1.2 Variable Definitions and Details of Indices

Table 1 and figure 1 present summary statistics and balance tests for a wide range of variables. In this section, we describe their sources and definitions and explain how the various indices are constructed.

Data on geographic, demographic and socioeconomic characteristics and public goods availability all come from SHRUG, a wonderful dataset made publicly available by (Asher et al., 2021) at the Development Data Lab. This allows us to use variables from multiple administrative datasets, including the 2011 Population Census, the 2013 Economic Census and the 2011 Socioeconomic and Caste Census.

First, we construct a standardized index of public goods availability using the village amenities tab of the 2011 Population Census. The index is based on a wide range of variables, including the number of primary schools, number of primary health centres, dummies indicating the availability of ASHAs, power supply, all weather roads, tap water, open drainage, mobile coverage, public bus connectivity, district roads and state highway connectivity. We first take principal components and then construct z-score the index.

Second, we construct a standardized socioeconomic index using data from the 2013 Economic Census's village directory and the 2011 Socio-Economic and Caste Census. Variables include the share of employment in the service and manufacturing sector, the number of households whose main income is from cultivation and per-capita consumption.

Third, we construct an index of NREGS service delivery using administrative data sourced from the NREGS portal. We construct variables on the cumulative days requested, days worked, new job cards registered and workfare payment earned by NREGS beneficiaries in each village in each month. The NREGS index is a standardised variable based on these variables.

Fourth, the attendance index is constructed using administrative data on GP staff attendance for all GPs in Karnataka. This data spans a randomly selected day each week for 108 weeks.

Fifth, the progress index is constructed using the local development projects data. For each project, using the dates of different project milestones, we define different variables indicating project progress, as described in section 3.2. We construct dummy variables denoting whether a project achieved that particular milestone during that 6-month time period. We focus on the variables $AnyProgress$, $ApprovalProgress$ and $Completion$, where "any progress" is a catch-all dummy capturing whether the project made any progress on any milestone in that window. The progress index is a standardized variable constructed from these underlying three variables.

Finally, we construct a local economic activity (or aggregate outcomes) index which combines night lights and agricultural productivity variables. The nighttime luminosity variable used is the log of the average night light luminosity in village i during month t. For the agricultural production outcome, we use the mean NDVI measure during the three different cropping seasons, namely *Kharif* (April - September), *Rabi* (October-December) and Summer (January-March).

A.1.3 Project classification approach

In section 5.6, we analyse management of projects with cross-jurisdiction spillovers. In this section, we describe how we identify projects with such spillovers. We classify development projects based on short textual descriptions of each project. These descriptions include the specific construction (road, well, streetlight etc), and the geographical scope or location of the project. For example, "New Room Contraction to KBS School @ K Bagewadi". We classify projects according to how narrowly targeted vs diffused its benefits are — just a household, a neighbourhood or the whole GP.

We train language models to predict whether a project can be classified into GP, Neighbourhood, or Household categories. First, we extract a sample of work descriptions from the universe of works in our dataset. We then construct a labelled dataset by manually annotating 6000 project descriptions. For example, projects involving infrastructure for public schools or large roads are labelled "*GP*" works. Project descriptions like streetlights, pavements or handpumps in certain areas of a village are classified as "*Neighborhood*" projects. Descriptions that mention specific residents are "*Household*" projects. Our annotated data contains 6000 descriptions identified as GP, Neighborhood, and/or Household projects. We split the data into a 70-15-15 train-val-test split. Since the descriptions can be in Kannada or English, we double the size of the labelled data by translating the descriptions from Kannada (English) to English (Kannada) to enable multilingual training.

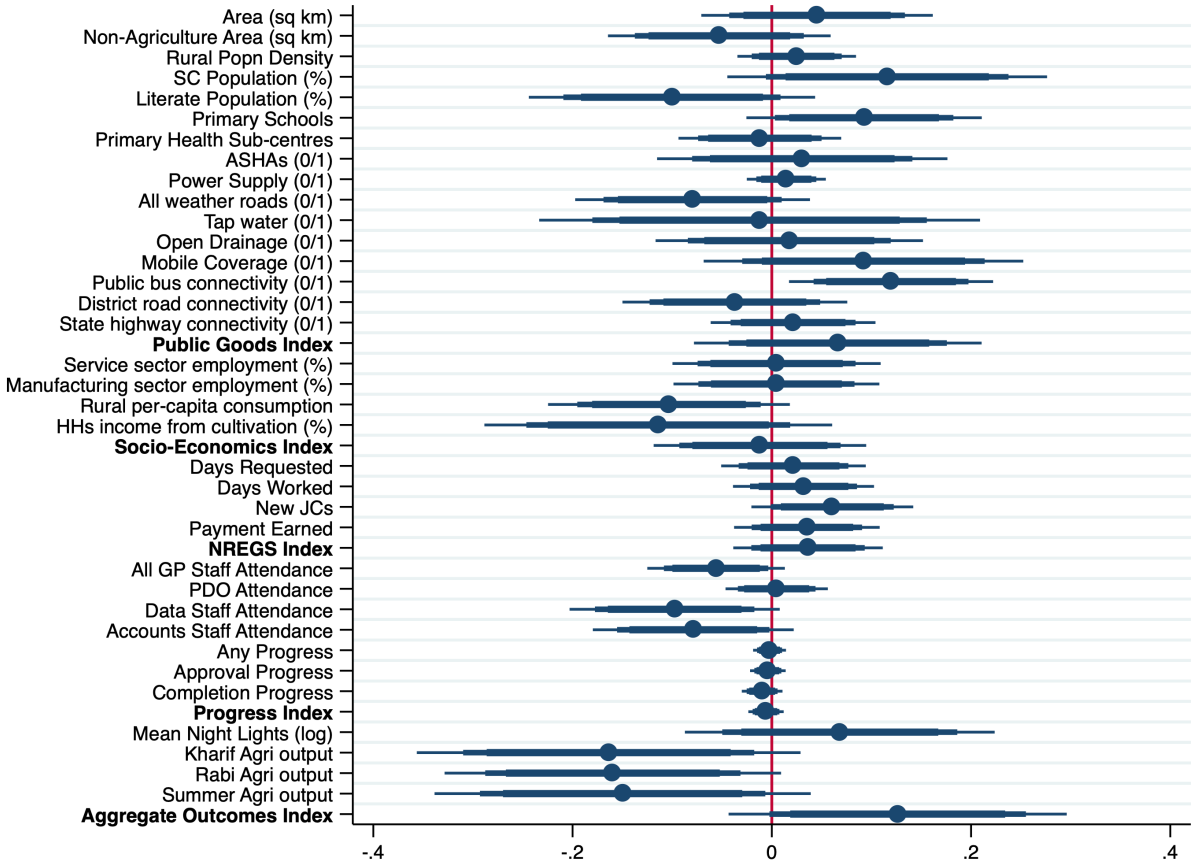
Next, we use this data to train binary classifiers for each category. We fine-tune a multi-lingual BERT model (Devlin et al., 2019)— specifically, *bert-base-multilingual-cased* sourced from the Hugging Face Hub using the LinkTransformer (Arora and Dell, 2023) framework. These models are trained to minimize classification loss, and the best model checkpoint is selected using classification F1 on the validation split. Classification F1 of the various models on the hold-out test split is 90.3% for GP, 95.9% for neighbourhood and 90.9% for household. [34] Our models are publicly available on the Hugging Face Hub and code and data to train and deploy them will be available in the replication package.

Finally, we deploy each model to predict for each of our approximately 1.4 million project descriptions whether that project is or is not a household, neighbourhood or GP work. This enables us to study the progress rates and management of different project types. We identify projects predicted to be *GP* works as those most likely to have cross-jurisdiction spillovers.

[34] Test-split accuracy is 93.7%, 93.6% and 98.3% for GP, neighbourhood and household respectively.

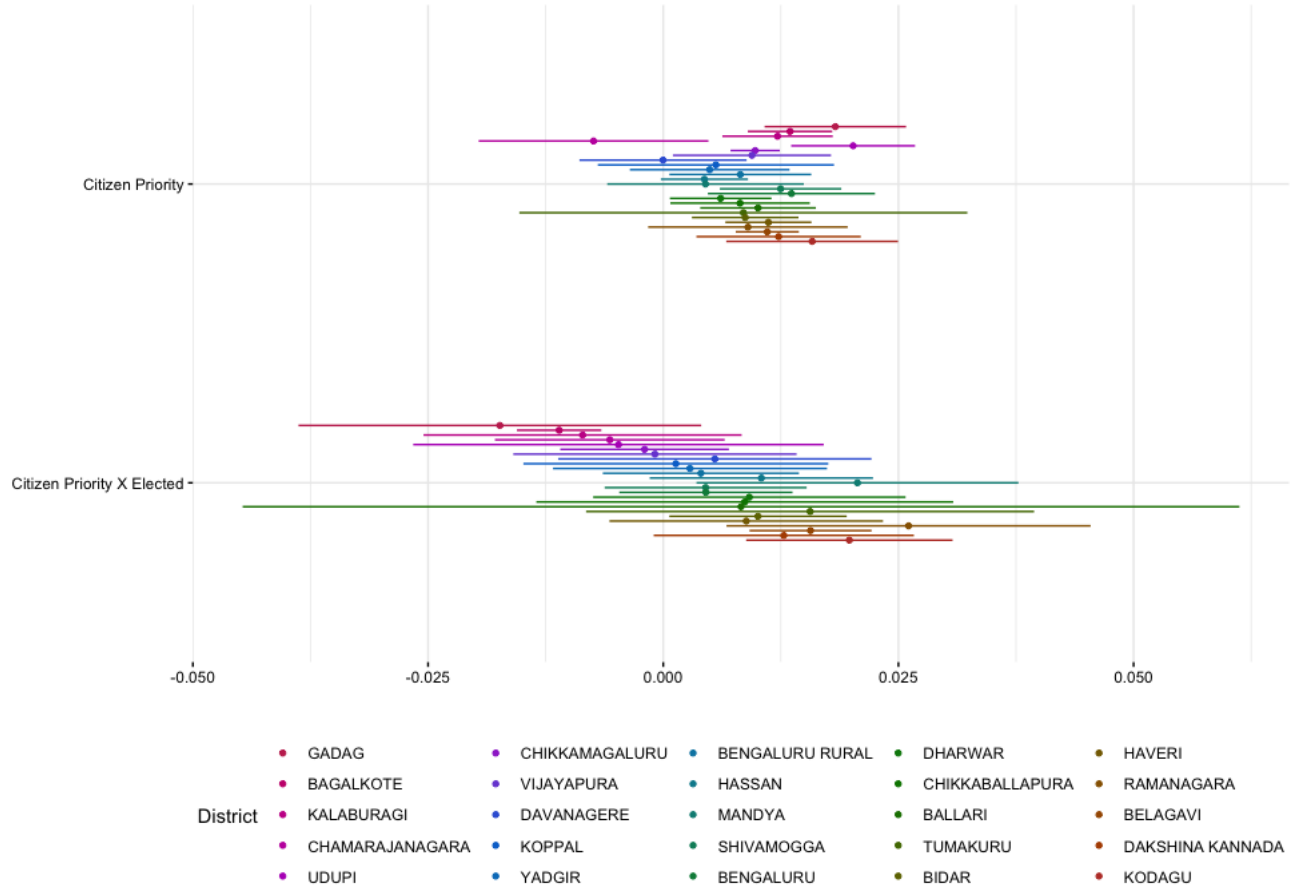
A.2 Figures

Figure A.1: **External Validity**—Similarity between GPs in Natural Experiment Blocks and Rest of Karnataka



Notes: This figure compares characteristics of natural experiment blocks—which include at least one politician-run and at least one bureaucrat-run GP—and blocks where there is no variation in governance regimes across GPs. We estimate the regression $Y_{ij} = \alpha + \beta NaturalExperimentBlock_j + \epsilon_{ij}$, and plot the coefficients in this figure. All specifications include district fixed effects, time fixed effects for panel outcomes and standard errors are clustered at the block-level. Detailed information on the construction of key variables in described in section A.1.2.

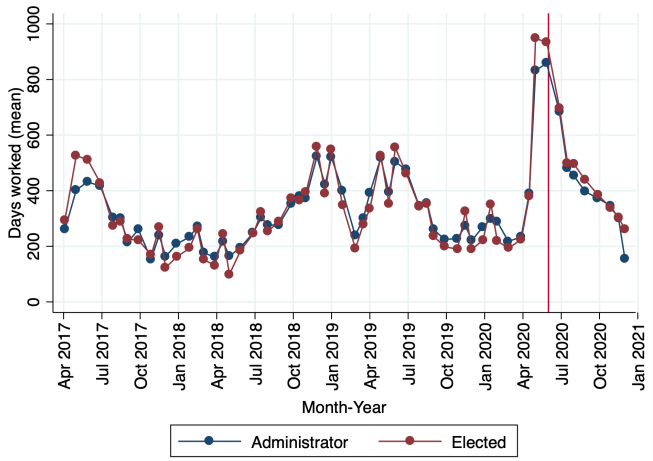
Figure A.2: **Representation**—Correlation between Public Spending and Citizen Preferences by District



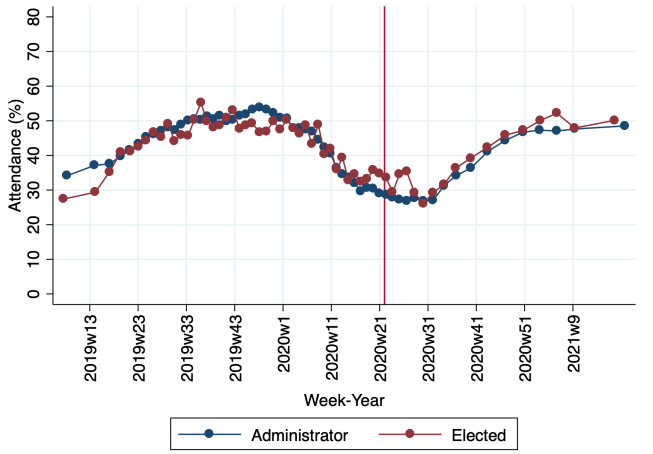
Notes: This figure presents the correlation between citizen preferences and public spending (and the impact of elected leaders on this correlation) by district. We estimate regression equation (3) separately by district and plot coefficients β_2 and β_3. All regressions include block fixed effects, controls for the total GP expenditure. Standard errors are clustered GP level.

Figure A.3: **Parallel trends for panel outcomes**

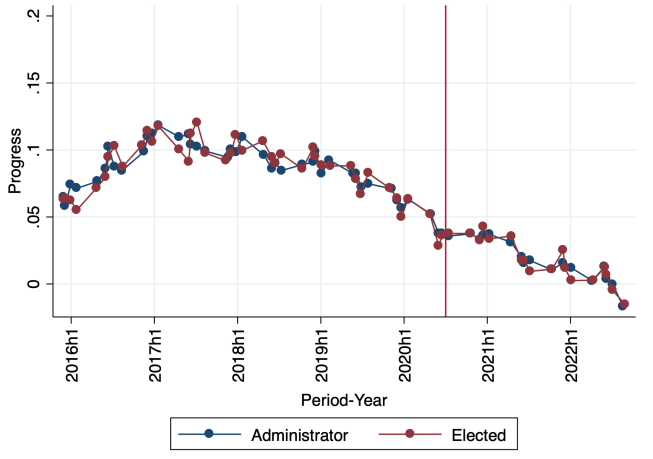
(a) NREGS days delivered



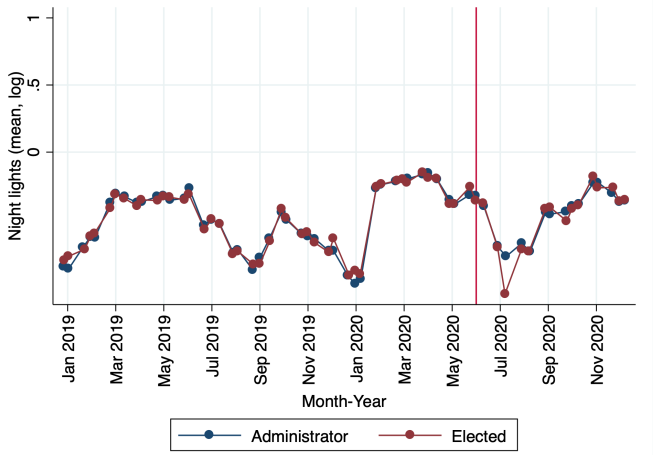
(b) Attendance (%, mean)



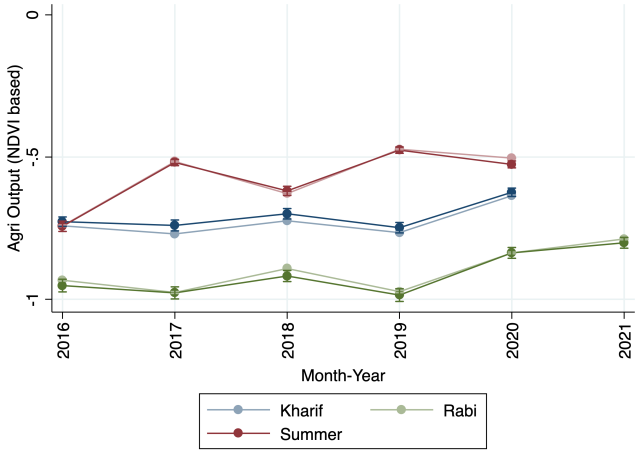
(c) Development progress



(d) Night-time lights (log, mean)



(e) Agricultural productivity



Notes: Each sub-figure is a binscatter-plot of the mean of the stated outcome within each bin (here n = 60) for the time period of the data available. Across plots, The maroon line (darker line in sub-plot (e)) is for politician-run GPs while the navy blue line (lighter line in sub-plot (e)) is for bureaucrat-run GPs. The red vertical corresponds to the beginning of our treatment period. For each outcome we add the controls and fixed effects as stated in the main specification in their corresponding regression tables (though we omit time fixed effects).

A.3 Tables

Table A.1: Distribution of Electoral Term end dates across GPs

	Frequency	Percentage	Governance during FY 2020-21
2020	2159	93.02	Appointed bureaucrat
2021	101	4.35	Elected politician
2022	27	1.16	Elected politician
2023	23	0.99	Elected politician
2024	10	0.43	Elected politician
2025	1	0.04	Elected politician
Total	2321	100.00	

Notes: This table displays the ending date for the electoral term for each GP in our sample of blocks. The final column indicates the governance regime during 2020-21 for each GP category and shows that only GPs whose electoral term ended in 2020 were governed by administrators.

Table A.2: **First Stage** — Who Holds De Facto Power in On- and Off-cycle GPs

Variable	(1) On-cycle	(2) Off-cycle	(3) Difference
Elected Incharge	0.130	0.726	0.591***
	(0.336)	(0.449)	(0.052)
Covid Management			
Led by Admininistrator	0.126	0.000	-0.128***
	(0.331)	(0.000)	(0.017)
Led by Elected leader	0.049	0.151	0.110**
	(0.217)	(0.360)	(0.044)
Led by PDO	0.767	0.803	0.048
	(0.426)	(0.398)	(0.054)
Observations	972	73	1,045

Notes: This table presents data from the survey of Panchayat Development Officers. Columns (1) and (2) report the mean response by PDOs in bureaucrat- and politician-run GPs. Column (3) reports the coefficient from estimating equation (1) and standard errors, clustered at the GP level, are in parentheses. $ElectedIncharge$ is a dummy indicating whether the PDO stated that an elected leader was in charge of the GP during 2020-21. *COVID management led by Administrator* is a dummy indicating that the PDO believed an appointed bureaucrat made most important COVID management decisions. *COVID management led by Elected leader* is a dummy indicating that the PDO believed an elected politician made the most important COVID management decisions. Lastly, *COVID management led by PDO* is a dummy indicating that the PDO believed they themselves were the most important in making COVID management decisions.

Table A.3: **PDO Behaviour** —How PDOs spend their time on various governance tasks

Variable	(1) Appointed	(2) Elected	(3) Difference
Roads/Drains Cleaning	5.145	4.041	-0.952**
	(5.724)	(3.147)	(0.462)
Solid waste management	4.906	4.534	-0.131
	(5.247)	(4.732)	(0.620)
Maintenance works	4.618	4.014	-0.371
	(5.121)	(4.940)	(0.596)
Natural resource management	4.003	3.082	-0.858***
	(4.661)	(2.087)	(0.331)
Review meetings	4.235	3.822	-0.524
	(4.032)	(3.207)	(0.361)
GP meetings	3.436	3.178	-0.374
	(3.641)	(3.225)	(0.322)
Tax collection	4.545	3.658	-0.920**
	(4.724)	(2.825)	(0.394)
Paperwork	6.550	5.589	-1.134*
	(6.429)	(4.512)	(0.658)
COVID-related work	6.069	5.192	-0.823
	(6.506)	(4.225)	(0.577)
Protocol work	1.507	0.986	-0.336
	(3.372)	(1.791)	(0.260)
Public service delivery	4.373	4.616	0.418
	(5.230)	(4.523)	(0.571)
Citizen interaction	4.836	4.603	-0.411
	(5.397)	(4.199)	(0.590)
Social welfare (other dept)	3.399	2.904	-0.360
	(4.406)	(2.456)	(0.337)
COVID share of total hours (%)	10.464	10.206	-0.186
	(7.443)	(5.609)	(0.705)
Observations	972	73	1,045

Notes: This table presents data from the survey of Panchayat Development Officers. We asked the PDOs,"In the last week, how many hours did you spend on _____?" for the various governance tasks reported in the table. In addition, we report the share of total hours spent on COVID management. Columns (1) and (2) re-port the mean response (in hours) by PDOs in bureaucrat- and politician-run GPs, respectively. Column (3) reports the coefficient from estimating equation (1 and standard errors, clustered at the GP level, are in parentheses.

Table A.4: Impact of Governance Regime on Public Expenditure by Category

	(1) Drains	(2) Education	(3) Health	(4) Housing	(5) Library	(6) Roads	(7) Streetlights	(8) Toilets	(9) Water	(10) Wells
Elected	-0.324	0.108	-0.457	-0.836**	-0.166	-0.301	-0.174	-0.233	-0.035	0.321
	(0.443)	(0.489)	(0.333)	(0.371)	(0.442)	(0.427)	(0.226)	(0.401)	(0.153)	(0.468)
Observations	644	644	644	644	644	644	644	644	644	644
Adjusted R^2	0.513	0.167	0.184	0.471	0.178	0.507	0.431	0.439	0.404	0.163
Admin Y Mean	8.05	8.05	8.05	8.05	8.05	8.05	8.05	8.05	8.05	8.05
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gram Panchayats	644	644	644	644	644	644	644	644	644	644

Notes: This table presents results from estimating equation (3) separately for each expenditure category. The dependent variable is the log of expenditure in GP i on category j. The independent variable of interest *Elected* is a dummy indicating whether GP *i* is governed by an elected leader during the 2020-21 financial year. All regressions include block fixed effects and control for total expenditure in a GP. Standard errors, clustered at the GP level, are in parentheses. Significant at *10%, **5%, and ***1%.

Table A.5: Citizens' Preferences over Public Goods

	Across all GPs	GPs with this as top preference	
	Citizens who prefer (%)	GPs with this top preference (%)	Citizens who prefer (%)
Anganwadi	3.32	0.73	37.14
Drain	19.24	15.38	39.68
Education	17.86	10.26	39.09
Health	14.00	6.23	39.74
Housing	13.94	3.66	44.50
Library	6.06	0.37	53.85
Roads	31.50	23.20	49.88
Street lights	11.69	2.56	42.21
Temple	3.41	0.73	28.89
Toilets	22.48	12.94	47.40
Water	31.57	23.69	49.97
Wells	2.33	0.24	21.43

Notes: This table presents summary statistics on citizen preferences over various categories of public goods. Data comes from the citizen survey. Column 1 reports the share of citizens who list each category as one of the top two priorities for GP expenditure. Column 2 reports the share of GPs for which each public goods category is the most preferred category among citizens. Column 3 reports the share of citizens in GPs where category j is the most popular category who list j as one of their top two priorities.

Table A.6: **Citizen Engagement**—Public Meetings Organised by Politician- and Bureaucrat-run GPs

	(1) Total	(2) Gram Sabha	(3) Ward Sabha	(4) General Body	(5) Special	(6) Standing Comittee	(7) Other	(8) Jamabandi
Elected	0.270**	-0.032	0.002	0.373***	0.017	0.251*	0.072	0.105
	(0.105)	(0.098)	(0.094)	(0.120)	(0.094)	(0.137)	(0.081)	(0.096)
Observations	883	883	883	883	883	883	883	883
Adjusted R^2	0.209	0.187	0.113	0.135	0.061	0.096	0.382	0.348
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean Y Admin	5.15	1.31	0.24	2.23	0.37	0.09	0.48	0.44
SD Y	4.11	1.16	0.65	2.33	0.99	0.41	1.48	0.50

Notes: This table presents from estimating equation (4). In columns 2-8, the dependent variable in each column is the number of meetings of each type organised by GP i. In column 1, the dependent variable is an index constructed following the approach of Kling et al. (2007). The resulting index is a standardised variable that is constructed by taking the average of all meeting outcomes in columns 2-8 and taking the z-score of this average. $Elected$ is a dummy variable indicating whether GP i was governed by an elected leader during FY2020-21. All columns include block fixed effects. Standard errors, clustered at the GP level, are in parentheses. Significant at *10%, **5%, and ***1%.

Table A.7: Politicians' Impact on NREGS Responsiveness for Different Groups of Households

	New Job Cards/Members					Days Worked				
	(1) BPL	(2) Female	(3) Male	(4) SC	(5) ST	(6) BPL	(7) Female	(8) Male	(9) SC	(10) ST
Elected x Post	0.143**	0.139*	0.146*	0.046**	-0.008*	27.894*	22.284	26.196*	7.338	-3.646
	(0.067)	(0.072)	(0.080)	(0.021)	(0.004)	(16.432)	(14.127)	(14.608)	(5.925)	(2.833)
Observations	419376	419376	419376	419376	419376	419376	419376	419376	419376	419376
Adjusted R^2	0.065	0.078	0.084	0.051	0.056	0.386	0.411	0.414	0.364	0.359
Mean Y Admin	0.14	0.21	0.19	0.04	0.02	116.75	152.70	162.17	55.27	26.55
SD Y	1.46	1.82	1.66	0.67	0.48	320.15	387.34	387.98	182.30	144.23
Village FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Block x Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table presents results from estimating equation (5) separately for different groups of households. In each column, the dependent variable is the NREGS outcome in village i during month m of year t for a particular group. For example, in column 1 the dependent variable is the number of new job cards registered for Below Poverty Line (BPL) households in a village-month-year. The independent variable *Elected* takes 1 if village i belongs to a politician-run GP. $Post$ takes 1 for all observations from June 2020, the period during which we observe variation in governance regimes across GPs. The main variable of interest is $Elected * Post$. All specifications include village and month-year fixed effects as well as block x month-of-year fixed effects to control for seasonality in NREGS demand. Standard errors, clustered at the GP level, are in parentheses. Significant at *10%, **5%, and ***1%.

Table A.8: Politicians' Impact on NREGS Responsiveness for Different Groups of Households

	Payment Earned (INR)				
	(1) BPL	(2) Female	(3) Male	(4) SC	(5) ST
Elected x Post	7923.463*	6148.819	7329.076*	2135.777	-1146.965
	(4617.734)	(4014.347)	(4173.760)	(1719.927)	(814.920)
Observations	419376	419376	419376	419376	419376
Adjusted R^2	0.381	0.407	0.410	0.358	0.350
Mean Y Admin	29,754.88	38,733.22	41,151.57	14,007.01	6,711.91
SD Y	82,536.10	99,034.93	99,494.91	46,751.27	36,764.55
Village FE	Yes	Yes	Yes	Yes	Yes
Month-Year FE	Yes	Yes	Yes	Yes	Yes
Block x Month FE	Yes	Yes	Yes	Yes	Yes

Notes: This table presents results from estimating equation (5) separately for different groups of households. In each column, the dependent variable is the NREGS outcome in village i during month m of year t for a particular group. For example, in column 1 the dependent variable is the total workfare payments (in *Rs*) earned by Below Poverty Line (BPL) households in a village-month-year. The independent variable *Elected* takes 1 if village i belongs to a politician-run GP. $Post$ takes 1 for all observations from June 2020, the period during which we observe variation in governance regimes across GPs. The main variable of interest is $Elected * Post$. All specifications include village and month-year fixed effects as well as block x month-of-year fixed effects to control for seasonality in NREGS demand. Standard errors, clustered at the GP level, are in parentheses. Significant at *10%, **5%, and ***1%.

Table A.9: Politicians' Impact on Frontline Staff Attendance by Officer Category

	(1) PDO	(2) Data Staff	(3) Secretary	(4) Assistants	(5) Accounts Staff	(6) Project Coord	(7) Technical Staff	(8) Facilities Staff
Elected x Post	1.065	2.846	0.588	8.696	5.636***	-6.586	-0.857	4.354***
	(2.825)	(2.208)	(3.145)	(14.083)	(1.946)	(9.847)	(5.712)	(1.623)
Observations	75035	120465	65329	1424	125744	1853	3148	147459
Adjusted R^2	0.364	0.336	0.353	0.356	0.336	0.194	0.086	0.394
Mean Y Admin	26.24	50.43	35.45	24.24	48.42	44.35	2.77	43.08
Week FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weekday FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GP FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table presents results from estimating equation (6). The unit of analysis is the GP-week, and the dependent variable is the attendance rate (in %) of active frontline staff officers of that category in GP j during week-year t. $Elected$ is a dummy indicating whether the GP is governed by an elected politician (rather than an appointed bureaucrat) during the 2020-21 financial year. $Post$ is a dummy indicating whether the week is after June 2020, the period during which we observe variation in governance regimes across GPs. The variable of interest is the coefficient on $Elected * Post$. All regressions include GP, week and day-of-week fixed effects and controls for average registration percentage and the share of each officer type in the GP. Standard errors, clustered at the GP level, are in parentheses. Significant at *10%, **5%, and ***1%.

Table A.10: **Elite Capture**—Alignment of Public Spending with Citizen Preferences by Social Group and Village Status

	(1) Overall	(2) Male	(3) Female	(4) General	(5) OBC	(6) SC/ST
Citizen Priority (prop)	0.022***	0.022***	0.013***	0.017***	0.017***	0.021***
	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)
Citizen Priority (prop) x Main Village	0.024***	0.019***	0.006	0.012**	0.016***	-0.005
	(0.005)	(0.004)	(0.006)	(0.005)	(0.005)	(0.005)
Citizen Priority x Elected	0.005	0.003	-0.002	0.004	0.006	-0.001
	(0.006)	(0.007)	(0.007)	(0.006)	(0.007)	(0.007)
Cit Priority x Elected x Main Village	0.028***	0.030***	0.007	0.027***	-0.007	0.009
	(0.010)	(0.010)	(0.009)	(0.010)	(0.009)	(0.010)
Observations	18260	17347	7491	13266	9702	8756
Adjusted R^2	0.104	0.104	0.065	0.089	0.082	0.084
Block FE	No	No	No	No	No	No
GP FE	Yes	Yes	Yes	Yes	Yes	Yes
Gram Panchayats	638	638	638	638	638	638

Notes: This table presents results from estimating equation (3) separately for each social group. In addition, we include an interaction with $MainVillage$, a dummy indicating whether the group of citizens resides in the GP's main village. The dependent variable is the log of expenditure in GP i on category j. $CitizenPriority$ is the share of citizens in GP i who list category j among the two most important public goods they want the GP to spend on. $Elected$ is a dummy variable that takes value 1 if GP i is governed by an elected politician and is 0 if the GP is governed by an appointed bureaucrat. Thus, the first row (coefficient on $CitizenPriority$) indicates the correlation between citizen preferences and spending for citizens in peripheral villages in bureaucrat-run GPs. The second row indicates the additional correlation between citizen preferences and public spending for citizens in the main village of bureaucrat-run GPs. The third row indicates the additional correlation for citizens of peripheral villages in politician-run GPs. The final row indicates the additional correlation for citizens in the main village of politician-run GPs. All regressions include block fixed effects and controls for total GP expenditure. Standard errors, clustered at the GP level, are in parentheses. Significant at *10%, **5%, and ***1%.

Table A.11: **Political Selection**—Property Wealth of GP Politicians Relative to Average Household

	(1) Properties Owned	(2) Sum of demand (centile)
Council Member	0.707***	7.766***
	(0.0263)	(0.277)
Constant	1.211***	47.02***
	(0.0000751)	(0.000789)
Observations	8379945	8379945
Adjusted R^2	0.016	.041
Village F.E	Yes	Yes

Notes: This table presents estimates from the regression $PropertyOwnership_{ij} = \alpha_j + \beta \cdot CouncilMember_i + \epsilon_{ij}$, where *Property Ownership* denotes the number of properties owned (column 1) or value of properties owned (column 2) by household i in village j. The data comes from property tax administrative records on the universe of property owners in all villages of rural Karnataka. *Council Member* is a dummy denoting whether property owner i is a member of the elected GP council. In Column 1, the outcome variable is the number of properties owned. In column 2, the dependent variable is the percentile of property wealth as measured by the total value of all properties owned by individual i as inferred from property tax liability. Both regressions include village fixed effects and standard errors are clustered at the GP level. Significant at *10%, **5%, and ***1%.

Table A.12: How Wealth of GP Council Influences Alignment of Public Spending with Citizen Preferences

	(1) Overall	(2) Male	(3) Female	(4) General	(5) OBC	(6) SC/ST	(7) Elites	(8) Non-elites
Cit-Priority	0.048***	0.043***	0.012*	0.023***	0.030***	0.013**	0.019***	0.041***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)	(0.006)
Cit-Priority x Elected	0.068***	0.058***	0.039***	0.049***	0.037**	0.031**	0.027*	0.068***
	(0.019)	(0.020)	(0.014)	(0.012)	(0.017)	(0.014)	(0.014)	(0.019)
Cit-Priority x Wealthy GP council	0.030***	0.030***	0.017*	0.024***	0.012	0.023***	0.022***	0.024***
	(0.010)	(0.010)	(0.009)	(0.009)	(0.009)	(0.008)	(0.009)	(0.009)
Cit-Priority x Wealthy GP council x Elected	-0.019	-0.001	-0.055**	-0.008	-0.026	-0.022	0.000	-0.027
	(0.025)	(0.026)	(0.023)	(0.023)	(0.024)	(0.021)	(0.024)	(0.025)
Observations	5093	5060	3410	4807	3971	3938	3872	5071
Adjusted R^2	0.053	0.051	0.009	0.031	0.032	0.029	0.021	0.046
GP FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gram Panchayats	644	644	644	644	644	644	644	644

Notes: This table presents results from estimating equation (3) separately for each social group. The dependent variable in each regression is the log of expenditure in GP i on category j.$CitizenPriority$ is the share of citizens in GP i who list category j among the two most important public goods they want the GP to spend on. $Elected$ is a dummy variable that takes value 1 if GP i is governed by an elected politician and is 0 if the GP is governed by an appointed bureaucrat. In addition, we include an interaction with $WealthyGPCouncil$, which is a dummy variable constructed based on the property wealth of GP council members. We compute the property wealth percentile of each GP council member and the average percentile rank of its GP council members. We compare the average wealth of the GP council across GPs. $WealthyGPCouncil$ takes value 1 if the GP council has above median property wealth relative to other GPs in Karnataka. All regressions include block fixed effects and controls for total GP expenditure. Standard errors, clustered at the GP level, are in parentheses. Significant at *10%, **5%, and ***1%.

Table A.13: Corruption—Self-Dealing in NREGS and Citizens' Self-Reported Bribes

	Days worked			Payment Earned			Citizen assessment	
	(1)	(2)	(3)	(4)	(5)	(6)	Self-Reported bribes	Other citizen's bribes
Elected							-0.062*	-0.050*
							(0.035)	(0.029)
Elected x Post	0.946	1.103		251.381	293.698*			
	(0.635)	(0.674)		(172.861)	(176.817)			
Council Member x Post	0.018	-0.272	-0.627*	3.744	-71.562	-175.161*		
	(0.391)	(0.378)	(0.360)	(104.315)	(100.477)	(96.005)		
Council Member x Elected x Post	1.305	1.616	2.208	342.979	387.684	588.682		
	(1.895)	(1.776)	(1.494)	(518.907)	(483.529)	(403.461)		
Observations	3703854	3703767	3701677	3703854	3703767	3701677	6840	7815
Adjusted R^2	0.201	0.243	0.376	0.207	0.250	0.382	0.064	0.034
Mean Y Admin	15.39	15.39	15.39	3,913.88	3,913.88	3,913.88	0.15	0.17
SD Y	13.68	13.68	13.68	3,508.89	3,508.89	3,508.89	0.34	0.37
Applicant FE	Yes	Yes	Yes	Yes	Yes	Yes		
Period-Year FE	Yes	Yes	No	Yes	Yes	No		
Village x Period FE	No	Yes	No	No	Yes	No		
Village x Period-Year FE	No	No	Yes	No	No	Yes		

Notes: This table presents results comparing politician- and bureaucrat-run GPs on two corruption outcomes—self-dealing in NREGS delivery and bribes. In columns 1-6, we present results from estimating equation 7. Data comes from the NREGS portal. The dependent variable is the number of workdays (columns 1-3) or workfare payments received (columns 4-6) by household i in GP j during period t, where we divide each calendar year into two periods (Jan-Jun, Jul-Dec). $Elected$ is a dummy indicating whether GP j is governed by an elected leader, $Post$ indicates whether period t is after June 2020, the period during which we have variation in governance regimes across GPs. $CouncilMember$ denotes whether household i includes an elected member of the GP's governing council. The main variable of interest is $CouncilMember * Elected * Post$. Columns 1 and 4 include household and time fixed effects. In columns 2 and 5, we add village x time fixed effects. In column 3 and 6 the specification includes household and village-time fixed effects.

In Columns 7 and 8, the dependent variable comes from the citizen survey and is a self-reported measure of bribes paid by the respondent (column 7) or others in the village (column 8). The regression estimated here is 1 and include block and enumerator fixed effects, and a set of village and household controls. Village controls are SC/ST share, literate share, share employed in services and manufacturing. Household controls are age, sex, religion, caste category, education and occupation of the respondent. In all columns, standard errors are clustered at the GP level and reported in parentheses. Significant at *10%, **5%, and ***1%.

Table A.14: Heterogeneity in Politicians' Impact by Electoral Incentives

	Citizen Preferences	GP Meetings	Covid	NREGA		Attendance	Works
	(1) GP Expenditure	(2) Total	(3) Mortality (W1)	(4) New JCs	(5) Days worked	(6) GP Staff	(7) Any Progress
Elected	-0.974***	0.399	-0.003				
	(0.317)	(0.245)	(0.025)				
Cit-Pref x Elected	0.091***						
	(0.015)						
Cit-Pref x Re-election	0.059***						
	(0.004)						
Cit-Pref x Elected x Re-election	-0.061***						
	(0.021)						
Elected x Post				3.872*	44.544	1.461	-0.004
				(2.342)	(49.438)	(1.940)	(0.003)
Elected x Re-election	0.324	-0.237	0.024				
	(0.403)	(0.259)	(0.032)				
Elected x Post x Re-election				-4.130*	-1.474	0.907	0.008**
				(2.332)	(59.028)	(2.572)	(0.004)
Observations	7073	882	7609	419126	419126	1098607	6798536
Adjusted R^2	0.086	0.210	0.018	0.465	0.405	0.247	0.093

Notes: This table explores heterogeneity in our main effects by whether the GP's next election was within the coming year or not. All specifications remain the same as before, except that we add an interaction term $Re-election$, which is a dummy indicating whether the GP is up for re-election in 2021 (i.e., upcoming year). In column 1, the specification is equation (3) and the dependent variable is the log of spending by GP i on category j. The coefficient of interest is $CitPref * Elected * ReElection$. In columns 2 and 3, the specification estimated is equation (1) and the key coefficient is $Elected * ReElection$. In columns 4-7, the specification estimated is equation (5) and the key coefficient is $Elected * Post * ReElection$. In addition, in all specifications, we include a control for whether the elected GP President has prior office-holding experience. Standard errors are clustered at the GP level and reported in parentheses. Significant at *10%, **5%, and ***1%.

Table A.15: Heterogeneity in Politicians' Impact by Village Characteristics

Elected x (Post) Heterogeneity Dimension	Covid Management	NREGA		Works	Citizen Preferences
	Covid Mortality (W1)	Days worked	New Job Cards	Any Progress	GP Expenditure
Rural Consumption ($<$ p50)	0.056	23.804	1.192	-0.004	0.000
	(0.067)	(51.737)	(1.198)	(0.004)	(0.007)
Land Inequality ($>$ p50)	0.058	38.214	0.129	0.002	-0.005
	(0.037)	(43.890)	(0.972)	(0.003)	(0.008)
SC & ST prop ($>$ p50)	0.064	-39.849	-0.663	-0.004	0.006
	(0.068)	(50.323)	(1.621)	(0.004)	(0.007)
Old Mysore	-0.041	-29.317	-1.939	0.002	-0.005
	(0.044)	(58.505)	(1.787)	(0.005)	(0.012)

Notes: This table displays how our main results vary with village characteristics. *Rural consumption <p50* denotes whether rural per-capita consumption of the village is below Karnataka's median. *Land inequality >p50* is a dummy denoting whether the village has above median land Gini as constructed from our property tax administrative data. *SC/ST prop >p50* is an indicator for whether the village has above-median share of Scheduled Caste and Scheduled Tribe population. *Old Mysore* denotes whether the village is within the borders of (and was governed by) the Mysore princely state before 1956. In column 1, the specification estimated is equation (1) and the coefficient reported is the interaction term $Elected * HeterogeneityVar$. In columns 2-4, the regression estimated is equation (5) and the coefficient reported is $Elected * Post * HeterogeneityVar$. In column 5, the regression estimated is equation (3) and the coefficient reported is $Elected * CitPriority * HeterogeneityVar$. In all columns, standard errors are reported in parentheses and clustered at the GP level. Significant at *10%, **5%, and ***1%.

Table A.16: Heterogeneity in Politicians' Impacts by Leader Identity

	Citizen Preferences			NREGA Days Worked			NREGA New Cards			Covid
	All	Male	Female	All	Male	Female	All	Male	Female	Mortality (W1)
Panel A: Controlling for leader gender										
Elected x (Post/Cit-Pref)	0.045***	0.044***	0.009	73.725**	38.700**	35.594**	1.958*	0.207**	0.188**	0.007
	(0.011)	(0.011)	(0.010)	(30.579)	(15.502)	(14.814)	(1.111)	(0.095)	(0.082)	(0.024)
Female x (Post/Cit-Pref)	-0.018*	-0.016*	-0.005	-24.800	-12.832	-12.100	-0.560	-0.101**	-0.077*	0.009
	(0.010)	(0.010)	(0.009)	(21.120)	(10.380)	(9.983)	(0.720)	(0.045)	(0.040)	(0.036)
Panel B: Controlling for experience										
Elected x (Post/Cit-Pref)	0.036***	0.042***	-0.002	57.080*	30.644**	25.537*	1.541*	0.167**	0.149**	0.048
	(0.012)	(0.012)	(0.009)	(29.540)	(15.025)	(14.610)	(0.843)	(0.081)	(0.071)	(0.041)
Experience x (Post/Cit-Pref)	-0.002	0.004	-0.008	-28.658	-10.257	-10.414	-0.256	0.013	0.014	0.071**
	(0.013)	(0.012)	(0.009)	(19.101)	(9.551)	(9.666)	(0.481)	(0.036)	(0.036)	(0.035)

Notes: This table shows how our main results vary with the identity and experience of the (elected or appointed) leader. In Panel A, we control for leader gender whereas in Panel B we control for leader experience. We define $Experience$ separately for politician- and bureaucrat-run GPs. A politician is experienced if the GP *adhyaksha* or a GP council member has previously held political office. For GP administrators, $Experience$ takes 1 for Class 1 officers —the highest ranking state bureaucrat appointed at the GP-level. The regression estimated in columns 1-3 is equation (3) and the coefficient reported is $Elected*CitPreference$. The regression estimated in columns 4-9 is equation (5) and the coefficient reported is $Elected*Post$. The regression estimated in column 10 is equation (1) and the coefficient reported is $Elected$. Standard errors are always clustered at the GP level and included in parentheses. Significant at *10%, **5%, and ***1%.

Table A.17: Heterogeneity in Bureaucrats' Impacts by Number of GPs Administered

	Citizen Preferences	Covid	NREGA		Works
	(1)	(2)	(3)	(4)	(5)
	Overall	Mortality (W1)	New JCs	Days worked	Any Progress
Elected	-0.719***	0.020			
	(0.233)	(0.025)			
Cit-Pref	0.061***				
	(0.007)				
N-GPs	0.036	0.002			
	(0.037)	(0.006)			
Cit-Pref x N-GPs	-0.001				
	(0.001)				
Cit-Pref x Elected	0.033***				
	(0.011)				
N-GPs x Post			-0.022	-1.467	-0.001***
			(0.037)	(2.066)	(0.000)
Elected x Post			1.565*	55.255*	-0.001
			(0.877)	(28.701)	(0.003)
Observations	6380	7580	352647	352647	5845923
Adjusted R^2	0.084	-0.002	0.464	0.405	0.096

Notes: This table explores whether our main results are robust to controlling for the number of GPs managed by each administrator. $N-GPs$ denotes the number of GPs managed by each administrator. In column 1, the regression estimated is equation (3) and the coefficient of interest remains $Elected*CitPref$. In column 2, the regression estimated is equation (1) and the coefficient of interest is $Elected$. The dependent variable is the number of COVID-related deaths as measured in the citizen survey. In columns 3 and 4, the specification estimated is equation (5) and the coefficient of interest is $Elected*Post$, while the outcomes are new job cards (JCs) and workdays received by households. Lastly, in Column 5, the specification estimated is equation (8), the coefficient of interest is $Elected*Post$ and the outcome is a binary variable "progress" which takes 1 if a development project achieves any milestone in period t. In all columns we control for the number of GPs each leader manages and include the relevant interactions with $CitPref$ or $Post$ in columns 1, 3, 4 and 5). Standard errors are always clustered at the GP level and reported in parentheses. Significant at *10%, **5%, and ***1%.

Table A.18: Heterogeneity in Bureaucrats' Impacts by Administrator Characteristics

Heterogeneity Dimension x (Post)	Covid Management	NREGA		Works	Citizen Preferences
	Covid Mortality (W1)	Days worked	New Job Cards	Any Progress	GP Expenditure
Male	-0.043	34.189	-0.08	-0.001	0.006
	(0.079)	(22.11)	(0.704)	(0.002)	(0.011)
No. of GPs managed	0.006	-1.55	-0.023	-0.001***	-0.001
	(0.008)	(2.075)	(0.037)	(0)	(0.001)
RDPR Dept	0.107*	-17.342	0.366	-0.002	-0.005
	(0.056)	(19.651)	(0.584)	(0.002)	(0.014)
Senior Administrator	0.017	-14.728	-0.141	0.002	-0.028*
	(0.046)	(19.537)	(0.445)	(0.003)	(0.016)

Notes: This table displays how our main results vary with administrator characteristics—gender, number of GPs managed, a dummy for whether the administrator's mother department is the Rural Development and Panchayati Raj Department, and a dummy indicating whether the administrator is a senior officer (Class I bureaucrat). More specifically, for elected GPs we code $Experience$ as 1 if any member has previous electoral office experience. As for appointed administrators $Experience$ takes 1 for Class 1 officers —the highest ranking state bureaucrat appointed at the GP-level. For all outcomes, we first restrict our sample to only administrators and then include a specific characteristic to estimate heterogeneous effects. In column 1, the regression estimated is equation (1), the dependent variable is COVID mortality during wave 1 and we report the coefficient on $HeterogeneityVar$. In columns 2-4, the regression estimated is equation (5), the outcomes are NREGS days provided (column 2), new job cards registered (column 3) and whether a development project makes any progress during period t. We report the coefficient on $HeterogeneityVar * Post$. In column 5, the outcome is log of expenditure by GP i on category j, the regression estimated is equation (3) and the coefficient reported is $CitPref * HeterogeneityVar$. In all cases, standard errors are clustered at the GP level and reported in parentheses. Significant at *10%, **5%, and ***1%.

Table A.19: Citizen Preferences over Village Governance Regime

	Mean	SD	Observations
Elections best mode	0.86	0.34	10097
GP elections fair	0.78	0.41	9990
Trust in elected	0.85	0.36	10336
Elected leader preferred to Appointed (non-crisis)	0.77	0.42	9407
Elected leader preferred to Appointed (crisis)	0.68	0.47	9317
GP Governance rating: poor	0.14	0.34	10267
GP Governance rating: high	0.86	0.34	10267

Notes: This table reports summary statistics about citizen preferences over their village governance regime. Data comes from our citizen survey. We convert responses into binary variables and report the mean, SD and number of observations. *Election best mode* indicates whether citizens believe elections are the best method to elect a GP leader. *GP elections fair* indicates whether citizens believe GP elections are generally fair. *Trust in elected* measures whether citizens trust their elected leader. *Elected leader preferred to Appointed* indicates whether citizens prefer to be governed by an elected leader rather than an appointed bureaucrat in a crisis or normal time. *GP Governance rating* reports the citizen's evaluation of the governance of their GP. We recode the Likert scale question as a dummy, where the top 2 responses (assessments of excellent and good) receive a high rating while the bottom 2 responses (poor and very poor) receive a poor rating.

Table A.20: Politicians' Impact on Citizens' Preferred Governance Regime

	Local Democracy Support (Index) (1)	Election Best (2)	Election Fair (3)	Admin Suitable (4)	Trust Elected (5)	Trust Admin (6)	Prefer Elected (normal times) (7)	Prefer Elected (crisis) (8)
Elected	-0.025	0.004	-0.012	-0.030	0.039	-0.029	-0.019	-0.036
	(0.035)	(0.031)	(0.029)	(0.033)	(0.029)	(0.030)	(0.033)	(0.035)
Observations	6855	8626	8519	8174	8819	8632	8675	8628
Adjusted R^2	0.021	0.019	0.017	0.040	0.032	0.024	0.025	0.028
SD Y	1.38	0.34	0.41	0.47	0.73	0.76	1.49	1.61

Notes: This table presents regression estimates from estimating equation (1). Data comes from the citizen survey. Each observation is the view of a citizen i in GP j. The main independent variable is $Elected$, which takes 1 if citizen i was in a politician-run GP during 2020-21. In Column 1 the dependent variable is a standardized local democracy support index using all variables in Columns 2-8. Columns 2 - 4 are responses to whether elections are the best method to elect a GP President; whether such elections are fair; and whether a government-appointed administrator be a more suitable leader, respectively (as in table A.19. The dependent variables in columns 5 and 6 are citizens' trust in elected and appointed leaders. The responses range from 1 = trust completely to 3 = do no trust. Lastly, dependent variables in Columns 7 and 8 are citizens' preferred governance regime appointed during normal and crisis times. These take range from 1= strongly prefer elected leader to 5 = strongly prefer government-appointed administrator. All specifications control for respondent, village, and surveyor-specific characteristics. Respondent-level controls include age, sex, caste category, religion, education, and occupation. Village controls are SC, ST, and literate proportion of population, manufacturing and service sector share of employment, number of primary, middle, secondary and senior-secondary schools, number of public health centers and medical dispensaries, public distribution shops, Anganwadi centers, and per-capita consumption. Lastly, we include a dummy for each surveyor. Standard errors are clustered at the GP level and reported in parentheses. Significant at *10%, **5%, and ***1%.

Table A.21: Summary of the data sources

Data source	Type	Time period	Outcomes	Unit of Analysis	Hypothesis	Variable construction
Panchayat Development Officer survey	Primary survey	September 2021	Decision-making power in the GP	PDO	De-facto vs De-jure (Table A.2)	To measure treatment compliance we compare PDO responses to who was in-charge of overall governance during the treatment period to distinguish between de-facto and de-jure power.
			PDO time use	PDO	PDO Behaviour (Table A.3)	Given the central role PDOs play, we ask how much time they spent on various routine governance tasks such as — COVID management, public service delivery, paper work etc.
Citizen phone survey	Primary survey	August - September, 2021	Citizen preferences over GP expenditure	GP-Category	Representation (Table 2)	Using citizen responses to the two most important public goods they want the GP to prioritise, we aggregate citizen preference for each category in a GP.
			Sub-group preferences over GP expenditure	Group-GP-Category	Elite Capture (Table 5)	We aggregate citizen preferences of different groups — gender and socio-economic caste. Then, we assess whether preferences align with expenditure by main village and wealthy GP council.
			COVID management evaluation	Individual	Crisis Management (Table 5)	We create indices to assess quality of COVID management using citizens responses on — awareness of the COVID task force, mortality, well-being and their overall evaluation of the governance during COVID.
			Governance regime preferences	Individual	Preference in governance regime (Table A.20)	We ask citizens a variety of questions — whether elections are the best method to elect GP president, fairness, their levels of trust and preference for each regime — to construct a local democracy support index. Then, we test whether this support changes under elected/admin GPs.

Table A.21: Summary of the data sources

Data source	Type	Time period	Outcomes	Unit of Analysis	Hypothesis	Variable construction
Rural Development Panchayat Raj (RDPR)	Admin	April 2020-March 2021	GP expenditure	GP-Category	Representation (Table 2)	Using each GP's income/expenditure report we can measure the amount of total expenditure and category-wise expenditure. Some of the categories include roads, housing, education, water etc.
	Admin	April 2019 - March 2021	Attendance of GP Frontline Staff	GP-Week	Effort (Table 4, A.9)	We collect the bio-metric attendance given by each front-line staff in the GP office for one day a week throughout the time period (108 weeks). We identify the staff roster as all officers that were present at least once in a 3-month window prior to the week (t), then construct the mean attendance for all GP staff.
	Admin	April 2020 - March 2021	GP meetings	GP	Citizen Engagement (Table A.6)	We use the number of different public and official GP meetings organised a fiscal year.
	Admin	2015 - 2021	Progress on local development projects	Work Project-Period	Expertise (Table 6)	The outcome to test expertise is created using the binary *progress* which indicates whether a project experiences any progress during a 6-month window time period. Using various project milestone dates we can create any progress or specific types of project milestones.
	Admin	2015-2021	Extent of project benefits	Work Project-Period	Internalising externalities (Table 7)	Using each work project's description of the asset constructed we classify these projects according to how narrowly targeted vs defused its benefits are — a household, a neighbourhood, or the whole GP. This allows us to create the *externalities* dummy.

Table A.21: Summary of the data sources

Data source	Type	Time period	Outcomes	Unit of Analysis	Hypothesis	Variable construction
Rural Development Panchayat Raj (RDPR)	Admin	2020	Prior experience in project implementing agency	Work Project-Period	Expertise (Table 6)	We consider an appointed administrator to have expertise if their prior department is the same as the implementing agency of the development project.
	Admin	2020	Administrator characteristics	Outcome based	Administrator heterogeneity (Table A.18)	We create administrator characteristics specific variables — male, number of GPs they managed, whether they had prior expertise in the Panchayat Raj department (RDPR) and whether they are experienced (i.e., highest ranking GP-bureaucrat). Then we limit our sample to administrator GPs and estimate heterogeneous effects for various characteristics.
	Admin	2020	Re-election next year	Outcome based	Electoral Incentives (Table A.14)	We create a *Re-election* dummy that takes 1 for all elected GPs where politicians' are up for re-election next year i.e., in 2021. To test electoral incentives, we interact our main *Elected* coefficient with the *Re-election* to see heterogeneous effects.
	Admin	April 2020 - March 2021	Council property ownership	Household	Political Selection (Table A.11)	We locate council members in the local land and property tax data for FY20-21. Then we construct how many properties they own, the total tax liability and if they were below/above median compared to all properties in the GP (defined as *Wealthy GP Council*.)

Table A.21: Summary of the data sources

Data source	Type	Time period	Outcomes	Unit of Analysis	Hypothesis	Variable construction
Ministry of Rural Development, NIC portal	Admin	January 2017 - 2021	MGNREGS benefits	Village-Month	Responsiveness (Table 3, A.7 , A.8)	Aggregate individual data on registration date, days worked and payment earned to create village-month level MGNREGS benefits. Leveraging our individual data, we can decompose these village outcomes by sub-groups —BPL, male, female, SC and ST
				Household-Month	Corruption (Table A.13)	We locate our elected council members' households in the MGNREGS beneficiary list. Using this we construct a *Council member* dummy that takes 1 for council households and otherwise takes 0.
Visible Infrared Imaging Suite (VIIRS)	Satellite data	2019-2021	Night-time luminosity	Village-Month	Local economic growth (Table 9)	We create area-weighted average, cumulative and maximum luminosity of a village within a GP during a given month to measure the night-time lights.
Normalised Difference Vegetation Index (NDVI)		2015-2021	Agricultural productivity	Village-Year		We construct average difference between early-season and maximum vegetation for Kharif, Rabi and Summer seasons at the village level, in a given year to measure agriculture productivity.
Decennial census (2011), Socioeconomic Caste Census 2013	Admin	1991-2011	GP characteristics	Village	Balance (Table 1)	We report pre-treatment averages (SD) for a host of village characteristics and our main outcomes across the elected-run and bureaucrat-run GPs to discuss baseline similarity.

Table A.21: Summary of the data sources

Data source	Type	Time period	Outcomes	Unit of Analysis	Hypothesis	Variable construction
Decennial census (2011), Socioeconomic Caste Census 2013	Admin	2011	Village characteristics	Village	Heterogeneity by village characteristics (Table A.15)	Using the 2011 census and our property tax data, we assign whether a village is above/below median on — per-capita consumption, land inequality, SC/ST proportion. Also, whether it historically belonged to the Mysore princely state. Then, we test whether our elected/admin effects differ by these (otherwise salient) village characteristics.