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Abstract

This paper evaluates the effects of encouraging the selection of local politicians in India via community-based consensus, as opposed to a secret ballot election. While secret ballot elections prevent vote capture by guaranteeing voter anonymity, consensus-based elections may improve welfare by promoting the exchange of information. I find that politicians elected via community consensus are younger and more educated, but lead to worse governance as measured by a fall in local expenditure and regressive targeting of workfare employment. These results are consistent with qualitative evidence that finds that community-based processes are prone to capture by the local elite, and need not improve the quality of elected politicians or governance.

Keywords Political Economy, Decentralization, Electoral Competition, Secret Ballot, Public Employment Programs, Welfare Programs

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1 Introduction

Since the 1990s, developing countries have undertaken a broad range of decentralization reforms, aimed at enhancing the role of local stakeholders in policy making and program implementation (Bardhan 2002). These reforms have led to the creation of democratic governments at the local level, as well as the devolution of authority to existing local governments. In the last decade, research and policy attention has shifted to deepening democratic processes within these institutions by limiting the influence of elites and enhancing community participation in local decision making. These policies include the use of community monitoring (Olken 2007), community meetings (Besley *et al.* 2005, Rao & Ibáñez 2005, Alatas *et al.* 2013) and direct democracy (Olken 2008, Beath *et al.* 2013, Hinnerich & Pettersson-Lidbom 2014) to implement programs based on the consensus of local stakeholders.

This paper examines the effects of using community consensus to select political representatives themselves, rather than as a tool to monitor or alter policy decisions after politicians have assumed office. I first test for changes in observable politician characteristics, such as age and education, to understand whether the policy hurts incumbents and to quantify its impact on political selection. I also examine changes in measurable aspects of governance at the village level, such as the amount of local expenditure and targeting of workfare employment. These outcomes are directly affected by local politicians and can, therefore, be used to estimate the impact of the policy on governance.

I find that consensus-based elections significantly influence who communities elect, and their performance once in office. Consensus-based elections crowd younger, more educated representatives into political office. However, these elections also lead to a reduction in government size, reflected in a reduction in total expenditure, and more regressive targeting of workfare employment by the local council.[1] These findings are indicative of worse governance, since development expenditure and workfare employment disproportionately benefit the poorest households in Indian villages (Imbert & Papp 2015). Overall, the results are consistent with qualitative evidence that finds that community-based processes in general, and consensus-based elections in specific, are prone to elite capture and can lead to worse governance.

To estimate the impact of consensus-based elections, I compile a new dataset containing detailed information on candidates, politicians and governance indicators at the village level in Gujarat, a state in Western India, for the years 2011-15. While many states in India incentivize consensus-based elections at the village level, Gujarat offers untied financial grants that increase discontinuously with village population. In the 2011 elections in Gujarat, villages with populations greater than 5000 faced substantially larger incentives for elections via community consensus - the financial grant increased by fifty percent at the threshold, from 13 to 20 per cent of the median

[1] Regressivity is measured by the proportion of workfare employment allocated to historically marginalized sections of the population.

village budget. This increase in financial incentives is used to set up a regression discontinuity design, which tests for the causal impact of consensus elections on political selection and governance. The identifying assumption is that unobservables vary smoothly around this population threshold.

This setting also allows me to circumvent the contamination of estimates by multiple treatments, a common drawback of regression discontinuity designs. Two features of the local political system increase at the population threshold of 5000 - the consensus election grant and the number of political representatives. However, the number of political representatives also increases discontinuously at population thresholds other than 5000. Estimates at these alternative thresholds are used to show that this contaminating treatment (increase in the number of council members) does not drive the findings on electoral competition, politician identity and governance.

Why would crowding in younger, more educated politicians worsen governance? The state government does not place any restrictions on how village communities reach a consensus about their political representatives. Survey evidence indicates that local elites usually nominate candidates and mobilize support for their election by consensus, i.e., without formal opposition (Breman 2011). If these candidates are inexperienced and merely serve as political placeholders, they may lack both the ability and motivation to undertake administrative and development expenditures within the village, and negotiate with bureaucrats outside the village to influence funding towards workfare employment.[2] Financial incentives for consensus-based elections could, therefore, worsen governance by crowding in politicians that rely on the support of a handful of local elites instead of all village residents.

This paper contributes to the growing literature on the impact of electoral institutions on political selection and governance outcomes (Diermeier *et al.* 2005, Keane & Merlo 2010, Banerjee *et al.* 2011, Banerjee *et al.* 2017). The results are also consistent with theoretical work that shows that political competition and community participation may have negative or positive effects (Khwaja 2004, Caselli & Morelli 2004, Lizzeri & Persico 2005, Mattozzi & Merlo 2008). Empirical work shows that reducing political competition can worsen legislator quality and performance (Brazil, Ferraz & Finan 2009) and is associated with anti-growth policies (United States, Besley *et al.* 2010). This paper finds broadly similar results in the Indian village setting - incentives for consensus-based elections lower competition and crowd in younger (albeit more educated) politicians, and reduce expenditure and worsen employment targeting by the local government.

Additionally, I find support for the citizen-candidate models of Osborne & Slivinski (1996) and Besley & Coate (1997), which highlight the influence of politician identity on governance outcomes. My results add to the extensive literature documenting the influence of visible politician characteristics on governance outcomes in India (Pande 2003, Chattopadhyay & Duflo 2004, Rajaraman & Gupta 2012, Afridi *et al.* 2013) and other countries (Powley 2007, Washington 2008).

[2]Political and administrative inexperience has been shown to be an important determinant of implementation inefficiencies and leakages in the Indian village setting (Afridi *et al.* 2013)

This paper also contributes to the debate on the effects of elite influence on governance and social welfare. Studies show that elite capture can have sizable negative consequences in some contexts (Besley *et al.* 2004, Acemoglu & Robinson 2008, Caeyers & Dercon 2012, Acemoglu *et al.* 2014), but that these effects may be small or completely absent in other settings (Bardhan & Mookherjee 2006, Alatas *et al.* 2013, Beath *et al.* 2013).[3] This paper concurs with the findings of the former set of papers by showing that at least in the short term, elite influence in elections can influence politician identity and substantially worsen governance.

Finally, these results add to the burgeoning literature on regression-discontinuity designs in political economics (Lee 2008, Ferraz & Finan 2009, Pettersson-Lidbom 2012, Hinnerich & Pettersson-Lidbom 2014).

The remainder of this paper is organized into four sections. Section 2 describes the institutional setting and the data sources. Section 3 details the empirical strategy and Section 4 presents the results. Section 5 concludes.

2 Setting and Data

This section provides detailed information about the functioning of village governments in Gujarat, the implementation of the Samras (consensus) Panchayat scheme, as well as the datasets used in the empirical analysis.

Institutional Background

The Seventy Third Amendment to the Indian Constitution in 1992 mandated the creation of a three tiered local government system, at the district, block and village level (in descending order of size of jurisdiction) across states in India. This study focuses on elected councils at the village level, also called Gram Panchayats (henceforth, GPs) in Gujarat. GP members are directly elected for five-year terms by village residents and elections are not fought on party lines, i.e. candidates are not affiliated with political parties at the state or national level. The jurisdiction of each GP is divided into a number of mutually exclusive wards, and efforts are undertaken to ensure that each ward contains the same number of residents. The population of each ward then elects a single representative to occupy a GP seat. In Gujarat, the number of ward members is fixed at 7 for GPs with populations up to 3000, and increases by 2 for every multiple of 1000 thereafter. Figure 1 uses electoral data to plot the actual number of GP members elected in the 2011 elections against GP population in Gujarat, and shows that this rule was closely followed in practice. The village community as a whole also directly elects the president of the GP.

The Seventy Third Constitutional Amendment also mandated reservations for women, and

[3] Baland & Robinson (2012) show that the introduction of the secret ballot reduced elite influence over voting decisions, but do not measure its impact on government performance.

three disadvantaged classes - Scheduled Castes, Scheduled Tribes and Other Backward Classes at the district, block and village level.[4] At least 33 per cent of president and council member seats are reserved for women. Panel B of Figure 1 plots the number of seats reserved for women against GP population. The number of seats reserved for women increases discontinuously at each population threshold except the thresholds 5000 and 8000. For Schedules Castes, Scheduled Tribes and Other Backward Classes (henceforth, SC, ST and OBC respectively) the proportion of reserved seats is mandated to be as close as possible to their respective population shares in the state. Figure A.1 plots seats reserved for each of these three categories against GP population. While there is a distinct jump in the number of OBC seats at the population threshold 6000, no other visible discontinuities are seen at the other population thresholds.

GP functions include income generation via tax collection, the upkeep of local public goods, and the implementation of various development programs. A sizable proportion of GP revenue comes in the form of grants from central and state governments, but GPs collect a variety of taxes and fees within their jurisdictions. These include water, property and trade taxes, and to a lesser extent revenue from fees, cesses and rental income. The GP allocates its budget to administrative expenses like salaries, the provision and maintenance of various local public goods such as roads and irrigation canals, as well as the upkeep of services like sanitation at the village level. GPs are also required to organize and preside over two town-hall style meetings called Gram Sabhas every year. While all village residents are invited to attend these meetings, in practice attendance varies considerably across GPs.

GPs are also responsible for implementing social welfare programs like the National Rural Employment Guarantee Act (henceforth, NREGA). NREGA is funded by the central government, and guarantees one hundred days of employment a year to each rural household. Whether this guarantee is met in practice depends to a large extent on the elected council, since they are responsible for aggregating local preferences and filing requests for NREGA funds at the block level.[5] Once the project has been sanctioned, GPs exert considerable influence in the targeting of program funds, since they are responsible for enlisting program beneficiaries. Therefore, the Results section examines the impact of consensus-based elections on both the overall level of employment generation, as well as who this employment is targeted towards.

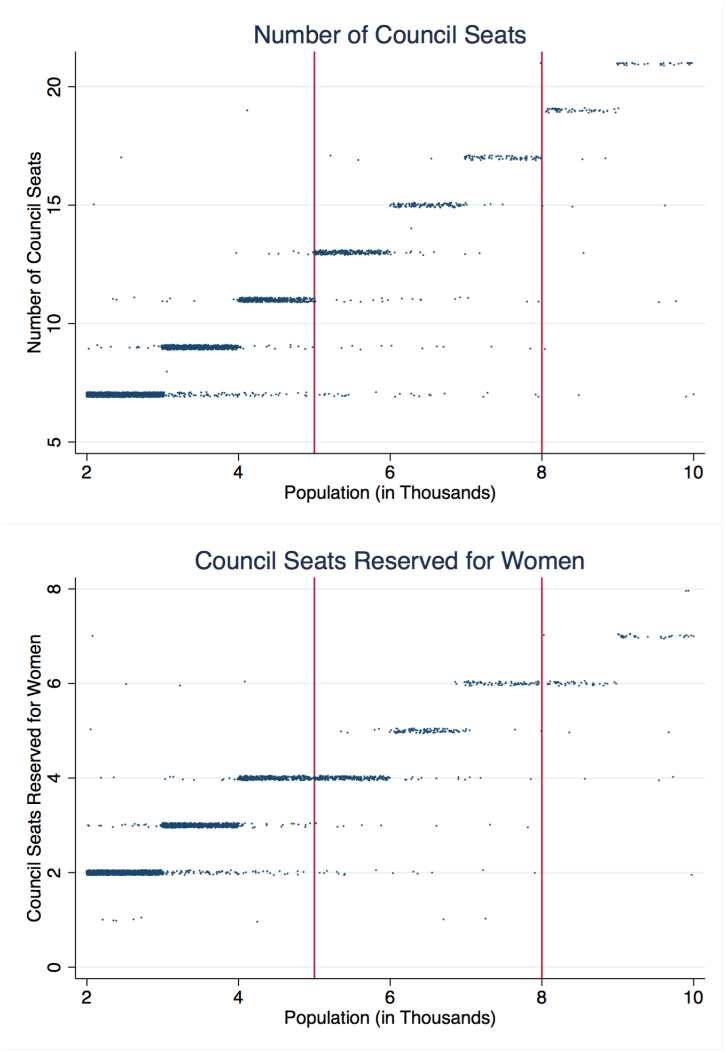
Consensus-Based Elections

Financial incentives that encourage elections via community consensus have been offered by many state governments in India, for differing periods of time. For instance, Andhra Pradesh has offered financial incentives since 1964, while more recent implementers include Punjab and

[4]The system of rotating, randomized reservations creates exogenous variation in politician identity, and has lead to a large literature linking politician identity to policy outcomes such as public good provision (Chattopadhyay & Duflo (2004), Rajaraman & Gupta (2012), Dunning & Nilekani (2013)).

[5]For instance, many GPs have zero person-days of employment generated under NREGA.

FIGURE 1: NUMBER OF SEATS INCREASE WITH GP POPULATION



Notes: GP Seats reserved for women do not increase at the population thresholds 5000 and 8000.

Haryana, who first offered incentives in 2008 and 2010 respectively.

This study focuses on Gujarat, a state in Western India, for three reasons. One, the incentive amount increases sharply at a fixed population threshold. This is not the case in states like Himachal Pradesh and Punjab. Two, the distribution of villages around the population threshold 5000 is dense enough to be able to conduct the empirical analysis.[6] This is not the case in Andhra Pradesh, for instance, where the incentive amount increases discontinuously if population exceeds 15,000; the population distribution around the cutoff point 15,000 is extremely sparse - only 64 GPs lie within the population range 14,000 to 16,000.[7] Third, the scheme has been implemented

[6]Figure A.2 plots the distribution of GP population based on the 2001 Census.

[7]This estimate is based on village level population and GP Names provided in the 2011 Census.

in Gujarat since 2001, so it is fair to assume that village residents understand its functioning, and believe that the government will pay out the promised grant amounts. Credibility has been a problem with recent implementers such as Punjab and Haryana, who failed to pay out the grants after the 2010 elections.[8]

The Gujarat Panchayat, Rural Housing and Rural Development Department is the agency that provides financial incentives for elections based on community consensus. The scheme's stated objectives are to promote social cohesion by minimizing electoral conflicts, and to reduce electoral expenses for candidates as well as the Gujarat State Election Commission (henceforth, SEC). The Gujarat SEC benefits financially if villages are able to agree upon a single candidate for each GP seat. This is because an unopposed candidate for a political post eliminates the need to set up polling booths and hire the associated electoral personnel. These expenses are described in detail below.

The Gujarat Panchayati Raj Act (1994) provides extensive details on how GP elections are to be conducted. First, the Gujarat SEC notifies the GP about which seats are reserved for women, SCs and STs. An individual can contest the election if he or she belongs to the reserved category, or if the seat is unreserved. Interested candidates are invited to file nomination papers within a few days of the initial announcement. All nominations are scrutinized to ensure that they satisfy the eligibility criteria, which vary by state. In Gujarat, candidates below the age of 21, or those who are not registered as voters, cannot stand for election in GPs. Candidates have a few days to appeal against the rejection of their nomination papers, as well as run election campaigns. At the end of this period, polling booths are set up within the GP. The day of polling is usually declared as a local holiday. Every individual above the age of 18 who is registered as a voter is eligible to vote in GP elections. Efforts are made to count votes on the same day as polling. Electoral personnel must be hired to ensure free and fair polls, which can include the scrutiny of nomination papers and election expenditure, detection and prevention of voter impersonation, maintenance of voting secrecy, scrutiny of doubtful/invalid votes, supervision of counting and recounting, as well as the declaration of final vote shares.

Samras (Consensus) Panchayat in Gujarat

Since 2001, Gujarat has incentivized the election of GP members via public consensus under its Samras (consensus) Panchayat scheme. Village residents are encouraged to deliberate amongst themselves, and reach a consensus on who their political representatives should be. This scheme is aimed at preventing multiple candidates from standing for election, so that the sole candidate to file nomination papers can be declared as the unopposed winner. This prevents the need to orga-

[8]The state government is legally obligated to pay these amounts. See http://indianexpress.com/article/india/india-others/hc-rap-for-govt-for-failure-to-pay-panchayat-incentive for an instance where a legal case was filed against the Punjab government. As this case demonstrates, it may take many years for a legal case to be processed in court, and even more time before the state government complies with the court's orders.

TABLE 1: SAMRAS INCENTIVE AMOUNTS BY GP TYPE

Elected by Consensus for the	First Time		Second Time		Third Time	
Gender Composition	Men & Women	All-Women	Men & Women	All-Women	Men & Women	All-Women
Population ≤ 5000	200	300	250	375	312.5	468.75
Population > 5000	300	500	375	625	468.75	781.25

Notes: Amounts displayed are in INR 1000, which is approximately $15 ($45 in PPP terms).

nize official elections, reducing the state government's expenditure on the set up of polling booths and the hiring of election officers. The policy has been fairly successful. In the 2011 elections, one out of every seven GPs in Gujarat were elected by consensus.[9] This means that each council seat in these GPs was filled by someone who faced no formal opposition.

The state government encourages consensus-based elections by providing untied grants[10] to councils elected without formal opposition, i.e. it directly rewards politicians who ensure that no other candidates stand for election. This grant increases discontinuously with population, is higher if an all-women council is chosen, and increases if the council is chosen without opposition for the second or third time.[11] Table 1 displays the grant amounts for each of these categories, which increase discontinuously as population exceeds 5000 irrespective of the composition of the council. This discontinuity in financial incentives is exploited to set up a regression discontinuity design in Section 3. The grant amount is paid only if each and every GP member is elected without formal opposition. This means that, on average, a village community must agree upon eight individuals as ward members and a President, and ensure that these are the only candidates to file official nomination papers and stand for election.

The state government does not delineate formal procedures or place any restrictions on how village residents should reach a consensus about their political representatives. Naturally, instances of creative approaches to reach a consensus abound. For instance, the village Kumkuva in south Gujarat organized a private election to choose amongst three competing candidates and ensure the receipt of the financial grant.[12] The village Vadavali, home to a substantial number of

[9] There were over 13,000 GPs in Gujarat in 2011 - just under 2,000 were elected without opposition.

[10] The state government also provides unguaranteed benefits such as informal priority in project approval and implementation (Guha 2014, https://planning.gujarat.gov.in/images/pdf/Sectorial-Profile-NEW-2015-16.pdf) and the ability to influence taluka and district planning processes (https://medium.com/nakabandi/samras-gram-incentivising-your-way-to-consensus-in-gujarat-71f32d3514f8). The government also provides extra incentives for those opting for samras consecutively for the third time: (a) schools (up to grade eight); (b) solar street lights; (c) pucca roads (Bandi 2013).

[11] The grant amounts for consensus elections were first introduced in 2001. Therefore, it is not possible for any given GP to be elected by consensus for a fourth time.

[12] See http://deshgujarat.com/2011/12/12/a-remote-village-does-something-that-neither-modi-nor-the-election-

Hindu and Muslim families, has decided to divide the President's five year term equally between a Hindu and Muslim President (two and a half years each).[13] However, survey evidence suggests that it is usually local elites who nominate candidates and mobilize consensus-based support to ensure receipt of the monetary benefits (Breman 2011, Bandi 2013, Ganguly 2013, Guha 2014).

The political economy literature has consistently documented the substantial authority that local elites exert over decision making at the community level (Olken 2007, Alatas *et al.* 2013, Acemoglu *et al.* 2014). It is, therefore, unsurprising that village elders and landowning caste members are reported to be heavily involved in nominating political candidates and mobilizing consensus-based support for them. For instance, the dominant[14] Rajput residents of Gopalpura GP nominated women belonging to SC and ST groups for election by consensus in 2011.[15] This anecdote is consistent with Breman (2011), who describes the process of nominating candidates for consensus based elections in four Gujarati villages Gandevigam, Chikhligam, Bardoligam and Atulgam:

" The dominant caste-class of landowners state in the village assembly (held twice a year) who are going to be the next sirpanch (President) and members of the village council. It is possible to turn down the invitation to be nominated ... but alternative names cannot come up in the hearing."

Breman (2011) further describes an underwhelming approach to governance by councils so-elected:

"In our observation none of the councils in Gandevigam, Chikhligam, Bardoligam or Atulgam has a record of activity to show that village democracy is indeed practiced. The members are not involved in the handling of local governance, there is no schedule for meetings and business is attended to by the talati, in charge of administration, and the sirpanch. The latter may be a figurehead only ... where the exercise of power is firmly in the hands of members (sic) who belong to the dominant caste-class of landowners ... "

These anecdotes do not imply that the rural poor have no space left for assertion, or that political representatives elected by community consensus cannot increase access to development programs and improve public good availability. However, political figureheads may lack the will-

commission-might-have-thought-of/

[13]This decision was made at a town-hall style meeting (gram sabha) in which leaders of all communities participated. See http://www.ndtv.com/india-news/day-before-riot-gujarat-village-split-sarpanchs-term-for-muslim-hindu-1674486 for more details.

[14]Dominant in terms of population share and socioeconomic status.

[15]The village has had official elections only thrice after Independence. There are about 290 Rajput families, 125 ST families and 65 SC families in the village. "During a village meeting, village elders and women suggested that a chance should be given to the women of SC and ST families as it would bring a lot of harmony among the villagers. The suggestion was readily accepted." For further details, see http://archive.indianexpress.com/news/narmada-s-rajput-village-appoints-tribal-woman-its-sarpanch/889943/

ingness to overcome the drawbacks of political and administrative inexperience, a significant determinant of implementation inefficiencies in the Indian village setting (Afridi *et al.* 2013). Breman (2011) also describes lack of experience and socioeconomic standing as hindrances in the effective functioning of political leaders:

"Their problems are manifold: to start with a total ignorance of government programmes and schemes in stock, when and where to circumvent or manipulate rules and regulations, lack of familiarity how to wheel and deal with officials, inability to back up action taken with speed money, i.e. a cash flow 'to get their work done' and last but not least, missing the poise to walk around with confidence in the corridors of the bureaucracy."

In sum, the policy of incentivizing consensus-based elections is controversial, because of its potential to increase the influence of an elite caucus over their community's choice of political representation. As discussed above, it can lead to the appointment of political leaders that merely serve as figureheads. It has also faced criticism from local politicians, who find themselves deprived of financial grants simply because the village chose to have an official election. It is exactly this deprivation that allows the local elite to quash any opposition in the name of obstructing village development, inhibiting the development of leadership in backward areas (Institute of Social Sciences 2012). However, the impact of these financial incentives on electoral competition, politician identity and governance is an open empirical question. To date, there do not exist any studies that quantify the causal impact of these financial grants, a gap that this paper seeks to fill.

Data

Multiple datasets were combined before conducting the empirical analysis. The 2001 and 2011 Population Censuses provides village-level characteristics, including demographic information and public good availability. GP jurisdictions may contain more than one village, and are mapped to villages using the Local Body Mapping data obtained from the Area Profiler website managed by the Ministry of Panchayati Raj.

Information on the 2011 GP elections was obtained from the Gujarat State Election Commission. This includes detailed information on each political candidate for over 75% of GPs, including reservation category, gender, education and occupation. Since these datasets are available only in Gujarati, they were manually merged with the Local Body Mapping dataset described above.

Village level income and expenditure receipts were obtained from the office of the Panchayat, Rural Housing and Rural Development Department. This department manages the Rural Accounts Management System, which keeps track of various categories of expenditure (education, nutrition, villlage development, etc) and income (grants, taxes, fees, etc) at the village budget on an annual basis. This study utilizes village level data for the three fiscal years 2013-16.

Information on the generation of workfare employment under NREGA for 2011-16 was obtained from the NREGA Public Data Portal. Gupta & Mukhopadhyay (2014) show that NREGA's primary implementation constraint is the supply of work generated by GPs, not demand. Therefore, I use information on the amount of employment actually generated as the outcome of interest. This includes measures of the number of households who were provided work, as well as the number of person-days of employment generated each month. To understand whether NREGA targeting changed as a result of the consensus-based elections, I use information on the amount of employment provided to women, Scheduled Castes, Scheduled Tribes and Indira Awaas Yojana (IAY) households.[16]

3 Empirical Strategy

This section sets up a regression discontinuity design based on the discontinuous increase in financial incentives for consensus-based elections at the population threshold 5000. The RD design quantifies the causal impact of the financial incentives on political competition, political selection and government performance.

3.1 Central Specification

I follow the suggestions of Hahn, Todd, and Van der Klaauw (2001) and Imbens and Lemieux (2008), and use local linear regressions after restricting attention to a close bandwidth around the threshold. Optimal bandwidth choice is based on the procedure outlined in Calonico *et al.* (2014). The identifying assumption is that unobservables vary smoothly at the cutoff.

Let pop_{GP} denote the population under the GP's jurisdiction. For ease of notation, I define a rescaled version of the GP population as $p_g = \frac{pop_{GP}}{1000}$. Restricting attention to observations within the optimal bandwidth, the empirical specification takes the following form:

$$E_{ig} = \gamma + \alpha^0 p_g \mathbb{1}[p_g \leq 5] + \alpha^1 (p_g - 5)\mathbb{1}[p_g > 5] + \beta \mathbb{1}[p_g > 5] + X_g + \epsilon_{ig}$$

E_{ig} denotes an electoral outcome, such as the number of candidates standing for election, for seat i in GP g. This specification includes a constant γ, and fits separate linear regressions before and after the population threshold - the slope coefficient is α^0 before the threshold, and α^1 after the threshold. X_g represents GP-level controls such as the number of villages under the council's jurisdiction as well as demographic controls like the proportion of SC and ST residents. Of primary interest is the β coefficient, which measures discontinuities in E_{ig} as GP population exceeds the policy threshold 5000 (i.e. as g_p exceeds 5). The β estimates are interpreted as the causal effects of financial incentives on electoral competition and political selection. Optimal bandwidths are

[16] Indira Awaas Yojana (IAY) is a program targeted at reducing homelessness. IAY households are socioeconomically disadvantaged groups (SCs, STs, free bonded laborers, and other rural households below the poverty line) that receive funding to construct housing units.

chosen separately for each outcome, following the procedure prescribed by Calonico *et al.* (2014).[17] Standard errors are clustered at the level of the discrete running variable, GP population.

Some electoral outcomes are measured at the GP level, like the total number of council seats won without formal opposition. For these outcomes, the central specification uses data at the GP level instead of the seat level:

$$E_g = \gamma + \alpha^0 p_g \mathbb{1}[p_g \leq 5] + \alpha^1 (p_g - 5)\mathbb{1}[p_g > 5] + \beta \mathbb{1}[p_g > 5] + X_g + \epsilon_g$$

The β coefficient measures the causal effect of the grant increase on electoral outcomes, and standard errors are clustered at the GP population level.

Governance

Four outcomes at the GP level are used to study governance - council expenditure, council income with a focus on revenue raised by the local council, and NREGA employment generation and targeting. Annual data on GP income and expenditure is available for the years 2013-16 and data on NREGA implementation is available for the years 2011-16. As there are significant outliers in both sets of data, I trim the top 1% of observations from each of the variables. The empirical specification takes the following form:

$$S_{gy} = \gamma + \alpha^0 p_g \mathbb{1}[p_g \leq 5] + \alpha^1 (p_g - 5)\mathbb{1}[p_g > 5] + \beta \mathbb{1}[p_g > 5] + X_g + \gamma_y + \epsilon_{gy}$$

S_{gy} denotes a governance outcome in GP g in year y, such as income, expenditure or employment creation. This specification includes a constant γ, separate linear regressions before and after the population threshold (α^0 and α^1 denote the slope coefficients before and after respectively), GP level controls X_g and year fixed effects γ_y. The β coefficient measures discontinuities in S_{gy} as GP population exceeds the policy threshold 5000 (i.e. as g_p exceeds 5), and is interpreted as the causal effect of the financial incentives on government functioning. Optimal bandwidths are chosen separately for each outcome, and standard errors are clustered at the level of the discrete running variable, GP population.

Alternative Explanations

As noted previously, two features of the elected council increase discontinuously as GP population exceeds 5000 - the financial incentive for consensus elections increases by 50 per cent, and the number of council members increases by 2. This means that the results on electoral and governance outcomes may be driven by the addition of two council members, not the increase in the financial grant. I leverage the existence of alternative population thresholds (i.e. those other than

[17] Optimal bandwidths are estimated using data on GPs with population within a bandwidth of 1000 around the threshold 5000. This avoids the inclusion of other population thresholds at which council composition changes.

5000) at which the number of GP members increases by 2. Discontinuity estimates at these alternate thresholds isolate the impact of additional council members on electoral and governance outcomes. These estimates are used to show that it is unlikely that additional council members are driving the effects documented at the threshold 5000.

Panel A of Figure 1 plots the relationship between the number of GP members and population. We can see that the number of council members is fixed at 7 for GPs with population up to 3000, and increases by 2 for every thousand people thereafter. Panel B of Figure 1 plots the relationship between the number of GP seats reserved for women and population. Since the law mandates the reservation of at least 33 per cent of seats for women, the number of seats reserved for women increases by one at every population threshold except 5000 and 8000. Figure A.1 shows that the number of seats reserved for SCs, STs and OBCs does not increase discontinuously at the thresholds 5000 or 8000. Therefore, I estimate the causal impact of two additional council seats (neither reserved for women) by testing for discontinuities in electoral and governance outcomes at the threshold 8000.[18]

The empirical specifications for electoral and governance outcomes (E_{ig} and S_{gy} respectively) are analogous to those described above:

$$E_{ig} = \gamma_8 + \beta_8 \mathbb{1}[p_g > 8] + \alpha_8^0 p_g \mathbb{1}[p_g \leq 8] + \alpha_8^1 (p_g - 8)\mathbb{1}[p_g > 8] + X_g + \epsilon_{ig}$$

$$S_{gy} = \gamma_8 + \beta_8 \mathbb{1}[p_g > 8] + \alpha_8^0 p_g \mathbb{1}[p_g \leq 8] + \alpha_8^1 (p_g - 8)\mathbb{1}[p_g > 8] + X_g + \gamma_y + \epsilon_{gy}$$

where γ_8 is a constant, α_8^0 and α_8^1 are distinct population slopes before and after the threshold 8000, and X_g represents GP-level demographic controls. The β_8 coefficient measures the impact of two additional unreserved seats. Optimal bandwidths are chosen separately for each outcome, following the procedure prescribed by Calonico *et al.* (2014).[19] Standard errors are clustered at the level of the running variable, GP population.

4 Results

This section presents estimates of the effect of increased financial incentives for consensus-based elections. The financial incentive reduces political competition by reducing the number of candidates standing for election for each seat, and increasing the number of seats won without formal opposition at the GP level. The incentive also crowds in a younger, more educated candidate pool; politicians who are ultimately elected from this pool are, on average, 4 years younger and have 2 more years of education. Finally, the impact on multiple measures of governance, including local government expenditure and the targeting of workfare employment, is negative and substantive.

[18] This implicitly assumes that the interaction effects of the higher incentive and additional members are negligible.

[19] Optimal bandwidths are estimated using data on GPs with population within a bandwidth of 1000 around the threshold 8000. This avoids the inclusion of other population thresholds at which council composition changes.

4.1 Baseline Continuity Tests

I first test for evidence of sorting around the population cutoff. This is because GPs may want to be listed as having more than 5000 residents to receive larger samras grant amounts. This is unlikely to be the case, however, because the running variable is taken from the Population Census that was conducted 10 years prior to the introduction of the discontinuous incentives. Figure A.2 presents the density of population surrounding the two cutoffs used in the analysis. Population is collapsed into bins of width 20, and no discontinuity in the vicinity of either of the thresholds is evident. Since the running variable is discrete, I follow Frandsen (2016) to test for the manipulation of reported population close to the cutoffs.[20] The hypothesis of no discontinuity at the threshold 5000 is not rejected at standard significance levels.[21]

Next, I show that village demographics and public good availability are balanced at baseline (in 2011) by testing for discontinuities at the thresholds 5000 and 8000. These balance tests use information from the 2011 Population Census and are presented in Table A.1. Among the fifty four tests, six yield statistically significant estimates, which is unsurprising and to be expected mechanically at the 10% level of significance.

Next, I verify that council seats increase at the thresholds 5000 and 8000, while those reserved for women do not. Table A.2 displays discontinuity estimates at each threshold using the central specification. The number of seats increases significantly at both thresholds. Notice that even though there are fewer observations around the threshold 8000, we are still able to reject the hypothesis of no discontinuity. When we repeat the same exercise for the number of seats reserved for women, we do not find evidence of a significant increase at either of the thresholds.

4.2 Electoral Competition

This section presents evidence that the samras grant reduced political competition by disincentivizing multiple candidates from running for each electoral seat. The primary outcome of interest is the number of candidates that stood for election to each council post. I also examine whether the grant increased the number of seats that were won without opposition, i.e. how frequently the grant reduced the number of candidates all the way to one.

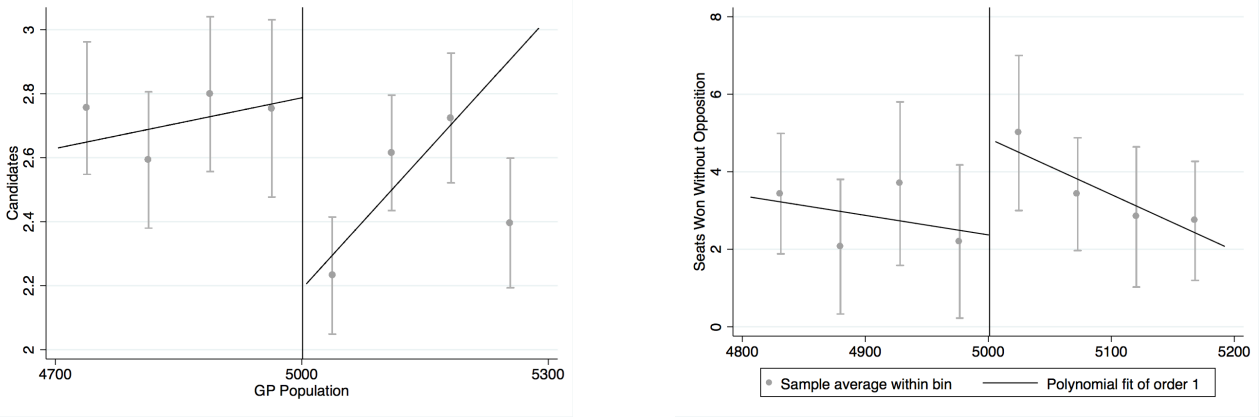
First, I examine the impact of the financial grant on political competition by testing for a discontinuous decrease in the number of candidates for each council seat as GP population exceeds 5000. The left panel of Figure 2 shows that the number of candidates for each seat falls by around 0.7 as we cross the threshold, consistent with the hike in incentives for consensus-based elections. The left panel of Table 2 displays discontinuity estimates consistent with this graph. The number of candidates per seat falls by 0.7 in response to the samras grant; the decrease in candidates is

[20] The McCrary (2008) test, which is commonly used to test for sorting around thresholds, assumes a continuous running variable. In the case of a discrete running variable, it may falsely reject the null of no manipulation at too high a rate.

[21] Figure A.2 displays p-values from the Frandsen (2016) test for discontinuities at the thresholds 5000 and 8000.

FIGURE 2: ELECTORAL COMPETITION

(A) CANDIDATES PER SEAT **(B) SEATS WON WITHOUT OPPOSITION**



Notes: Figures use data within the optimal bandwidth for each outcome, and display binned means with confidence intervals at the 95% significance level. Results are presented for seats not reserved for women.

larger (around 0.9) for seats that are reserved for women. This is a large effect, given that the average number of candidates is just over 2.5.

Since the objective of the grant is to incentivize completely unopposed elections (i.e. to reduce the number of candidates all the way to one), I test whether more seats were won without formal opposition at the population threshold 5000. The right panel of Figure 2 plots the number of seats won without opposition at the GP level, before and after the threshold 5000. Consistent with the hike in incentives for consensus-based elections, the number of seats filled without opposition rises by over 2 as we cross the threshold. The right panel of Table 2 displays discontinuity estimates consistent with this graph. The number of seats won without opposition increases by around 2.3 in response to the samras grant. This is a large effect, given that the average number of seats won without opposition is around 3. Further, this decrease is entirely driven by seats that are not reserved for women - unreserved[22] seats won without opposition increase by 2, whereas the coefficient for seats that are reserved for women is small and not significantly different from zero.

4.3 Political Selection

This section examines the impact of lower electoral competition on politician identity, as captured by the observable characteristics of elected leaders. These characteristics include age, years of education, gender and primary occupation. The reduction in political competition ushers in younger, more educated representatives, but does not significantly increase the proportion of female politicians. I also test for effects on occupation, and find that the grant does not increase the proportion

[22]Not reserved for women; may be reserved for other groups.

TABLE 2: EFFECTS ON ELECTORAL COMPETITION

Outcome	Candidates			Seats Won Without Opposition		
Seat Type	Total	Not Reserved For Women	Reserved For Women	Total	Not Reserved For Women	Reserved For Women
RD Estimate	-0.728**	-0.657**	-0.877**	2.328*	2.092**	0.248
Std. Error	(0.291)	(0.269)	(0.412)	(1.378)	(0.849)	(0.578)
Dep Var Mean	2.553	2.585	2.486	3.130	2.079	1.068
Bandwidth	243.549	253.072	238.180	204.841	203.358	237.051
Observations	2020	1444	616	134	133	158

Notes: Local linear regressions, triangular kernel; standard errors clustered at the GP population level. *** p<0.01, ** p<0.05, * p<0.1

of candidates from farming and business, which are indicative of elite status within Indian villages (Bhattacharya *et al.* 2016). Therefore, even though qualitative evidence suggests that the local elite have a greater say in consensus-based elections, I find suggestive evidence that they do not crowd themselves into political office.

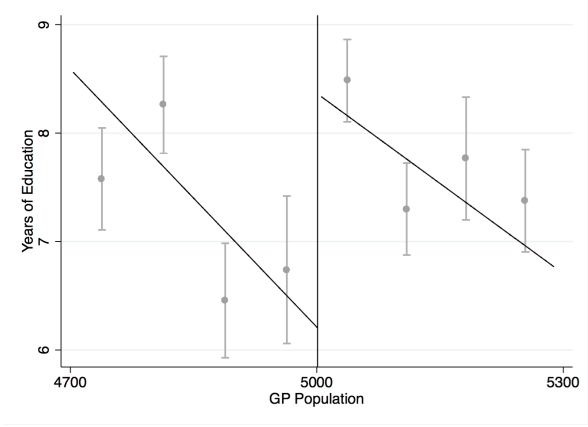
The first set of results shows the impact of the samras grant on age, education, gender and occupational status of candidates for council seats. Table 3 displays discontinuity estimates at the threshold 5000 for all council seats, council seats not reserved for women and council seats reserved for women. The grant crowds in younger, more educated candidates, but does not increase the proportion of female candidates. The proportion of candidates that report either farming or business as their primary occupation (indicative of elite status) does not increase - in fact the estimate is negative, but not significantly different from zero.

All of the above effects are driven by seats that are not reserved for women. This is consistent with the finding that the number of female-reserved seats won without opposition does not increase in response to the grant. Among seats that are not reserved for women, candidate age decreases by 3 years and years of education increases by 1.9. Despite the additional incentives for female candidates, I do not find any evidence that the samras grant crowded female representatives into seats not reserved specifically for them. The top panel of Figure 3 displays the discontinuous change in candidate age and educational achievement for unreserved seats graphically.

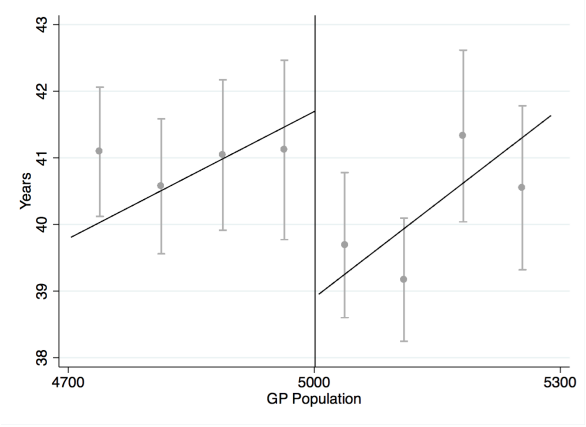
Next, I examine whether changes in the candidate pool translated into a change in politician identity. Table 4 repeats the above analysis, but for politician (i.e. eventual winner) characteristics instead of candidate characteristics. Politicians are significantly younger, by an average of over 4 years, and educational attainment rises by around 1.7 years. Effects are only found for politicians elected to seats not reserved for women, results that are displayed graphically in Figure 3. Despite the fact that the samras scheme offered additional incentives for female politicians, the proportion of female politicians does not increase. There does not seem to be a substantive effect of the samras

FIGURE 3: CANDIDATE & POLITICIAN SELECTION EFFECTS

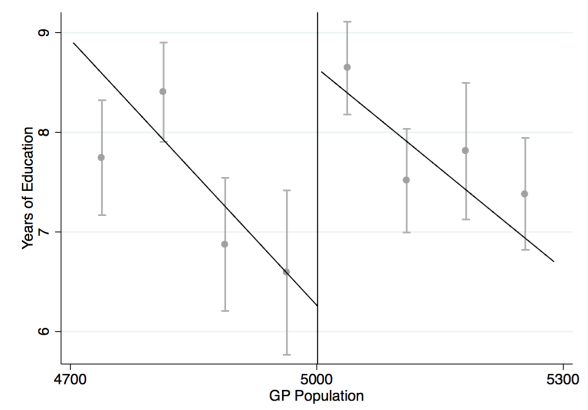
(A) CANDIDATE EDUCATION



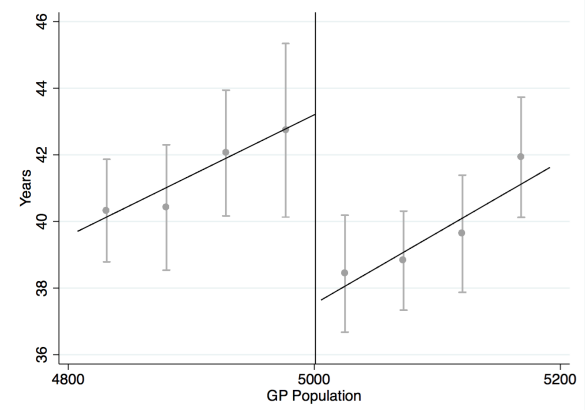
(B) CANDIDATE AGE



(C) WINNER EDUCATION



(D) WINNER AGE



Notes: Figures use data within the optimal bandwidth for each outcome, and display binned means with confidence intervals at the 95% significance level. Results are presented for seats not reserved for women.

TABLE 3: EFFECTS ON CANDIDATE POOL

All Seats

Outcome	Education (Years)	Age (Years)	Female	Occupation		
				Farming/Business	Job	Ag. Labor
RD Estimate	1.924***	-2.383**	-0.033	-0.089	0.021	0.020
Std. Error	(0.738)	(1.198)	(0.025)	(0.065)	(0.013)	(0.045)
Dep Var Mean	6.917	39.862	0.361	0.569	0.017	0.129
Bandwidth	258.203	239.669	333.544	340.671	267.425	238.796
Observations	2257	2093	2768	2818	2326	2086

Seats Not Reserved for Women

Outcome	Education (Years)	Age (Years)	Female	Occupation		
				Farming/Business	Job	Ag. Labor
RD Estimate	1.907***	-2.996***	0.006	-0.074	0.027	0.030
Std. Error	(0.634)	(1.131)	(0.035)	(0.065)	(0.017)	(0.047)
Dep Var Mean	7.696	40.573	0.084	0.658	0.024	0.138
Bandwidth	284.694	295.744	395.083	404.814	256.101	295.369
Observations	1691	1761	2310	2380	1549	1761

Seats Reserved for Women

Outcome	Education (Years)	Age (Years)	Occupation		
			Farming/Business	Job	Ag. Labor
RD Estimate	1.511	-0.992	-0.160	0.008	0.016
Std. Error	(1.055)	(2.002)	(0.122)	(0.006)	(0.059)
Dep Var Mean	5.203	38.298	0.373	0.002	0.111
Bandwidth	253.434	234.164	236.590	195.774	225.881
Observations	678	629	637	530	608

Notes: Local linear regressions, triangular kernel; standard errors clustered at the GP population level. *** p<0.01, ** p<0.05, * p<0.1

grant on politician occupation either.

Consensus based elections could crowd in younger, more educated politicians for two reasons. First, the majority of rural residents may consider these characteristics to be desirable for an effective political leader, and public deliberation helps shift candidates with these characteristics into political office. Under this hypothesis, we would expect to see GPs that face higher samras grants enjoying better governance than GPs that face lower grants. Second, local elites may nominate younger, inexperienced candidates that serve as political figureheads. This explanation is consistent with survey evidence that the grant amount is only used to justify nominations by the local

elite, who threaten detractors in the name of village development. Under this scenario, we would not expect to see governance improve. In order to separate between the two hypotheses and determine whether consensus-based elections have had a beneficial impact on governance, I turn to four measures of the performance of the elected council.

TABLE 4: EFFECTS ON POLITICIAN IDENTITY

All Seats

Outcome	Education (Years)	Age (Years)	Female	Occupation		
				Farming/Business	Job	Ag. Labor
RD Estimate	1.653**	-4.299**	-0.024	-0.066	0.007	-0.016
Std. Error	(0.699)	(1.720)	(0.031)	(0.066)	(0.016)	(0.055)
Dep Var Mean	7.014	39.767	0.357	0.579	0.016	0.124
Bandwidth	354.939	195.636	240.019	358.748	284.026	234.337
Observations	2773	1644	2006	2847	2316	1946

Seats Not Reserved for Women

Outcome	Education (Years)	Age (Years)	Female	Occupation		
				Farming/Business	Job	Ag. Labor
RD Estimate	2.122***	-5.660***	0.042	-0.106	0.008	0.002
Std. Error	(0.721)	(1.520)	(0.038)	(0.081)	(0.023)	(0.050)
Dep Var Mean	7.828	40.502	0.066	0.674	0.023	0.134
Bandwidth	314.098	224.284	218.639	307.208	281.295	273.452
Observations	1723	1293	1248	1697	1571	1536

Seats Reserved for Women

Outcome	Education (Years)	Age (Years)	Occupation		
			Farming/Business	Job	Ag. Labor
RD Estimate	0.829	-1.881	-0.147	0.000	-0.029
Std. Error	(1.079)	(2.799)	(0.134)	(0.000)	(0.085)
Dep Var Mean	5.283	38.203	0.377	0.001	0.101
Bandwidth	319.066	224.893	227.502	215.847	227.946
Observations	808	587	587	561	587

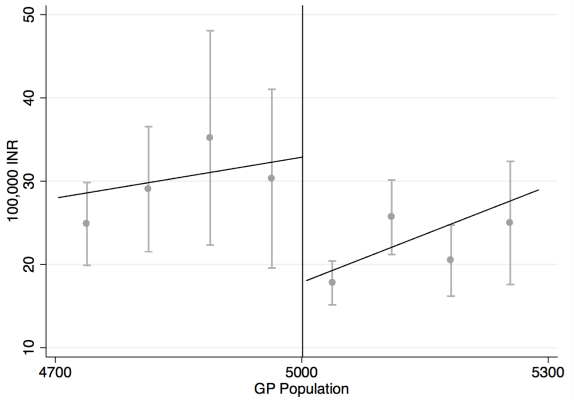
Notes: Local linear regressions, triangular kernel; standard errors clustered at the GP population level. *** p<0.01, ** p<0.05, * p<0.1

4.4 Governance

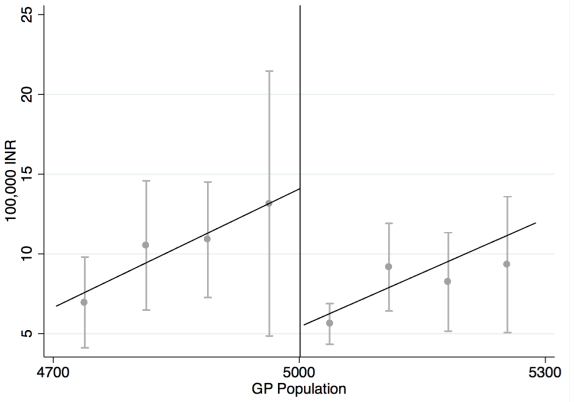
This section shows that GPs that faced higher samras grants differ systematically in terms of governance. Total expenditure in the GP is significantly lower, and this decrease is driven by ex-

FIGURE 4: GP EXPENDITURE INCOME

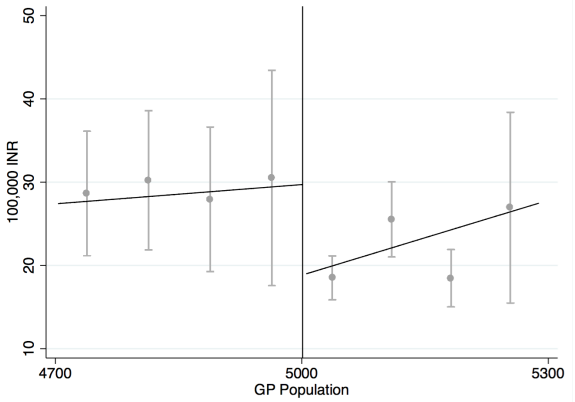
(A) TOTAL EXPENDITURE



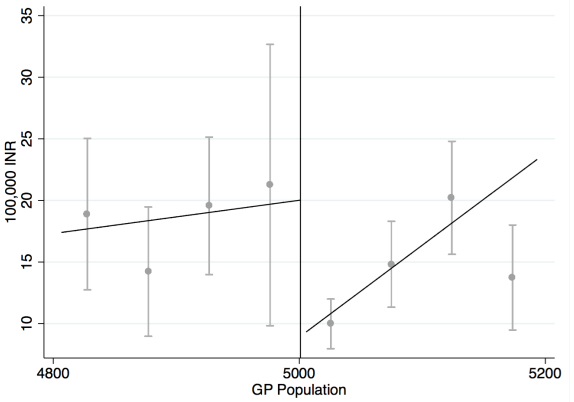
(B) OWN FUND EXPENDITURE



(C) TOTAL INCOME



(D) OWN FUND INCOME



penditure categories that are directly controlled by the elected council. The targeting of workfare employment, a direct responsibility of the elected council, also worsens.

4.4.1 GP Income and Expenditure

I first examine effects of the samras grant on GP expenditure and its components. The first two columns of Table 5 display estimates of discontinuities in total and "own fund" expenditure as GP population exceeds 5000. Own fund expenditure refers to all expense categories that are decided upon by the elected council such as program expenses of the agriculture, education and health departments, as well as salaries and other administrative expenses. The elected council has limited influence over the remaining expense categories, since these are chosen by and tied to grants received from the state and central government. The first column shows that total expenditure

decreases significantly and substantively - by over half of the mean. The second column shows that this decrease is driven by a significant drop in own fund expenses. That is, spending on local administration and development of the village falls as well. The upper panel of Figure 4 displays these discontinuity estimates graphically.

Is a decrease in council income driving the negative coefficients on expenditure? The third column of Table 5 shows that total income does not decrease significantly as population exceeds the threshold 5000. This estimate is negative, but not significantly different from zero and much smaller in magnitude than the fall in expenditure. As discussed previously, councils receive grants from state and national governments, but also collect taxes within their jurisdiction. Since political experience and socioeconomic standing may aid in the generation of government revenue, I examine whether "own fund" revenue changes discontinuously as population exceeds 5000. Own fund revenue includes revenue generated through the collection of taxes, fees and other charges. The last column of Table 5 shows that the effect on own fund revenue is negative and sizable (around 45 per cent of the mean), but not statistically significant. The lower panel of Figure 4 displays these discontinuity estimates graphically.

TABLE 5: EFFECTS ON INCOME AND EXPENDITURE

Outcome	Expenditure			Income		
	Total	Own Fund	Grant	Total	Own Fund	Grant
RD Estimate	-12.13*	-4.222*	1.000	-3.621	-6.474	-1.511
Std. Error	(7.006)	(2.424)	(2.333)	(4.763)	(5.653)	(2.274)
Dep Var Mean	21.522	6.858	11.826	20.903	14.110	5.769
Bandwidth	219.733	213.769	314.766	254.541	236.877	268.096
Observations	395	384	540	455	421	475

Notes: Local linear regressions, triangular kernel; standard errors clustered at the GP population level. *** p<0.01, ** p<0.05, * p<0.1

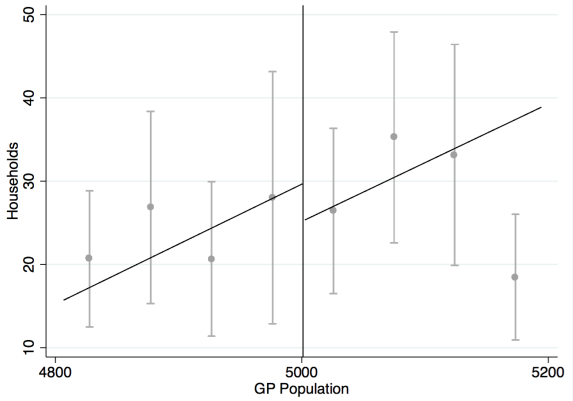
4.4.2 Employment Creation Under NREGA

The National Rural Employment Guarantee Act is intended to guarantee one hundred days of employment to each rural household, in order to complement market demand for labor and provide income insurance for families close to the poverty line. In practice, the amount and targeting of work provided is left up to local implementing authorities, and heavily influenced by the elected GP (Gupta & Mukhopadhyay 2014). Since the Act is entirely funded by the central government, the GP's main role is to formulate plans for worksites based on the needs of the village, petition for funding from higher level authorities and choose program beneficiaries.

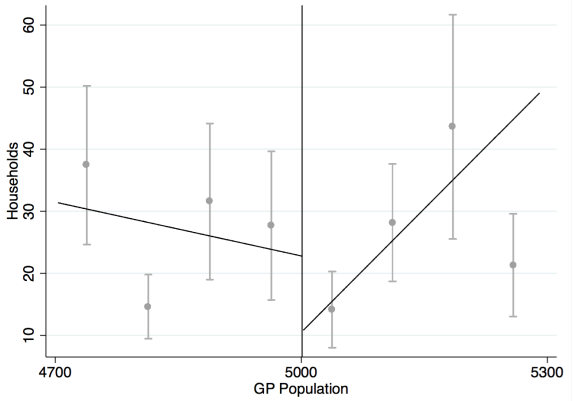
I examine four measures of annual employment generation by the council in Table 6 - the number of households employed, how many of these are SC, ST and IAY households, the number

FIGURE 5: WORKFARE EMPLOYMENT: CREATION AND TARGETING

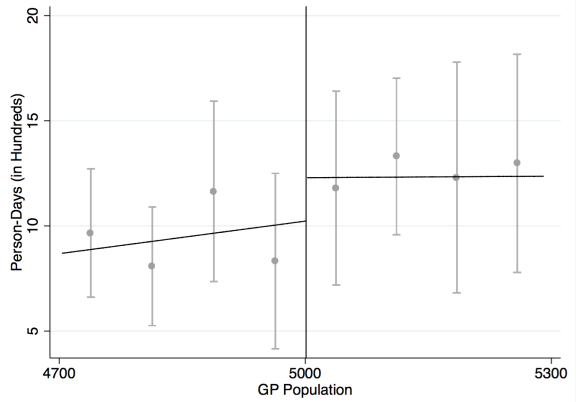
(A) NON-SC/ST HOUSEHOLDS



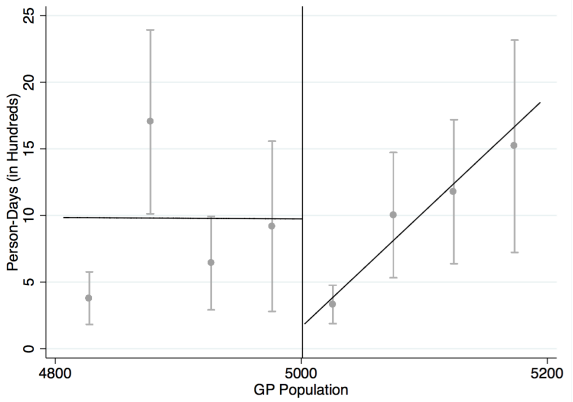
(B) SC/ST HOUSEHOLDS



(C) NON-SC/ST PERSON-DAYS



(D) SC/ST PERSON-DAYS



of person-days of employment generated, and how many of these are allocated towards SCs, STs and women.[23] The effect of the samras grant on overall employment creation is negative but not significantly different from zero. Targeting, however, is clearly negatively affected - the number of SC and ST households and person-days decrease discontinuously. The estimates are large - over fifty per cent of the mean in each case - and statistically different from zero. Figure 5 displays graphical estimates for a subset of these outcomes.

[23]The NREGA implementation data does not contain information on the number of women-only households provided employment, or person-days allocated towards IAY beneficiaries.

TABLE 6: EFFECTS ON EMPLOYMENT CREATION AND TARGETING

	Households Employed			
Category	Total	Scheduled Caste	Scheduled Tribe	Land Reform
RD Estimate	-19.82	-4.399**	-11.180*	-0.228
Std. Error	(15.206)	(2.089)	(6.360)	(0.152)
Dep Var Mean	55.726	3.042	21.885	0.412
Bandwidth	188.963	213.295	278.014	165.483
Observations	620	728	943	573

	Person-Days of Employment			
Category	Total	Scheduled Caste	Scheduled Tribe	Women
RD Estimate	-7.056	-1.408*	-6.414**	1.088
Std. Error	(6.694)	(0.760)	(3.149)	(2.782)
Dep Var Mean	21.789	1.224	7.818	9.547
Bandwidth	189.912	231.675	257.836	372.755
Observations	619	779	870	1213

Notes: Local linear regressions, triangular kernel; standard errors clustered at the GP population level. *** p<0.01, ** p<0.05, * p<0.1

4.5 Ruling Out Alternative Explanations

To ensure that these results are not driven by either the change in council size or council reservations, I repeat the above exercises for the population threshold 8000. The number of council seats increases discontinuously at the threshold 8000, while the number of seats reserved for women does not. Moreover, the samras grant does not change at this threshold. Therefore, discontinuity estimates at the threshold 8000 represent the effect of increasing council size alone. I find that the pattern of results documented at the threshold 5000 are not present at the threshold 8000. That is, it is likely that the samras grant is driving the reduction in political competition, change in politician identity and worsening of governance.

Estimates of the effect of council size on electoral competition are presented in Table A.3. None of the coefficients are statistically significant[24] and the coefficient measuring the drop in the number of candidates per seat is less than 0.1. Tables A.4 and A.5 present estimates of the effect of

[24]Table A.2 shows that this cannot be attributed to the fact that there are fewer observations around the threshold 8000. Despite the smaller number of observations, we can strongly reject the hypothesis that the number of council members does not increase at the threshold 8000.

council size on candidate and politician characteristics. None of the coefficients are statistically significant, and the coefficient on age in particular is much smaller in magnitude than those found at the threshold 5000.

Turning to measures of government performance, Table A.6 shows that the pattern of results found at the threshold 5000 is not replicated. The impact of council size on overall and own fund expenditure is negative but not significantly different from zero. Instead, the coefficient on total income is negative and statistically significant. The decrease in own fund income remains statistically indistinguishable from zero. Finally, Table A.7 presents estimates of the impact of council size on employment creation and targeting under NREGA. I find that an increase in council size alone cannot explain the effects found at the threshold 5000, since none of the coefficients are statistically significant and many are positive, which is the opposite of the effect documented at the threshold 5000. Altogether, these results indicate that the reduction in political competition, crowding in of younger, more educated politicians and worsening of governance is due to the increase in the consensus election grant.

5 Conclusion

This paper quantifies the impact of encouraging the selection of political representatives based on community consensus, as opposed to a secret ballot election, on both the pool of candidates and politicians that are eventually elected. It also examines the effects of politicians elected via community consensus on multiple measures of governance. The analysis makes use of a novel dataset containing detailed information on candidates, politicians and government functioning at the village level in the state of Gujarat in India for the period 2011-15.

To retrieve causal estimates, I exploit the existence of a population threshold at which financial incentives for consensus-based elections sharply increase. The results indicate that financial incentives can induce village electorates to choose their political leaders without formal opposition. I also find that the reduction in competition crowds in younger, more educated candidates and politicians. Finally, I study four measures of governance over which the elected council exercises substantial influence, and find a significant reduction in total expenditure as well as an increase in how regressively workfare employment is targeted. These findings are consistent with the fact that politicians that rely on the support of local elites, who have a greater say in elections based on community consensus, are not incentivized to appease the majority of village residents.

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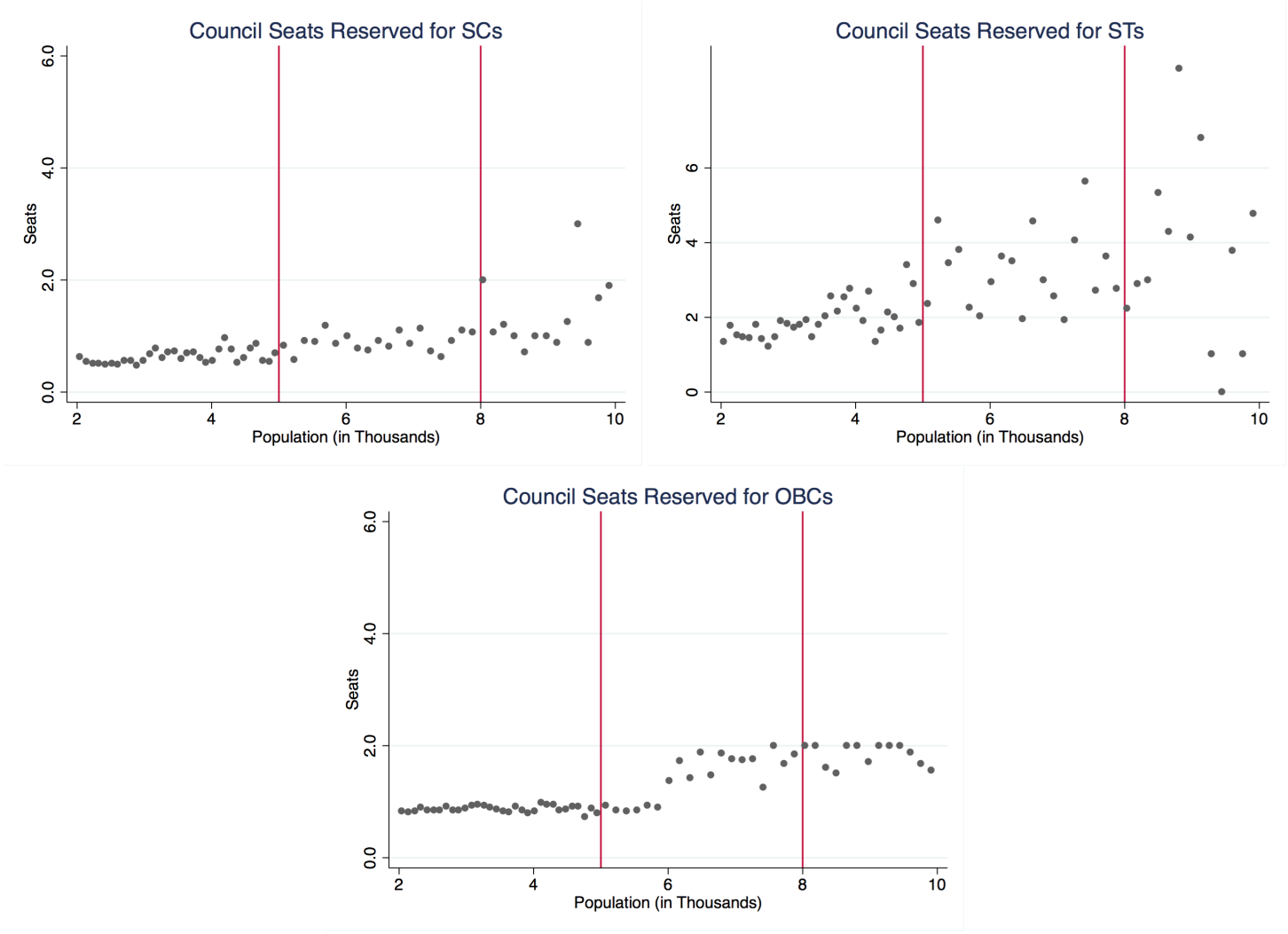
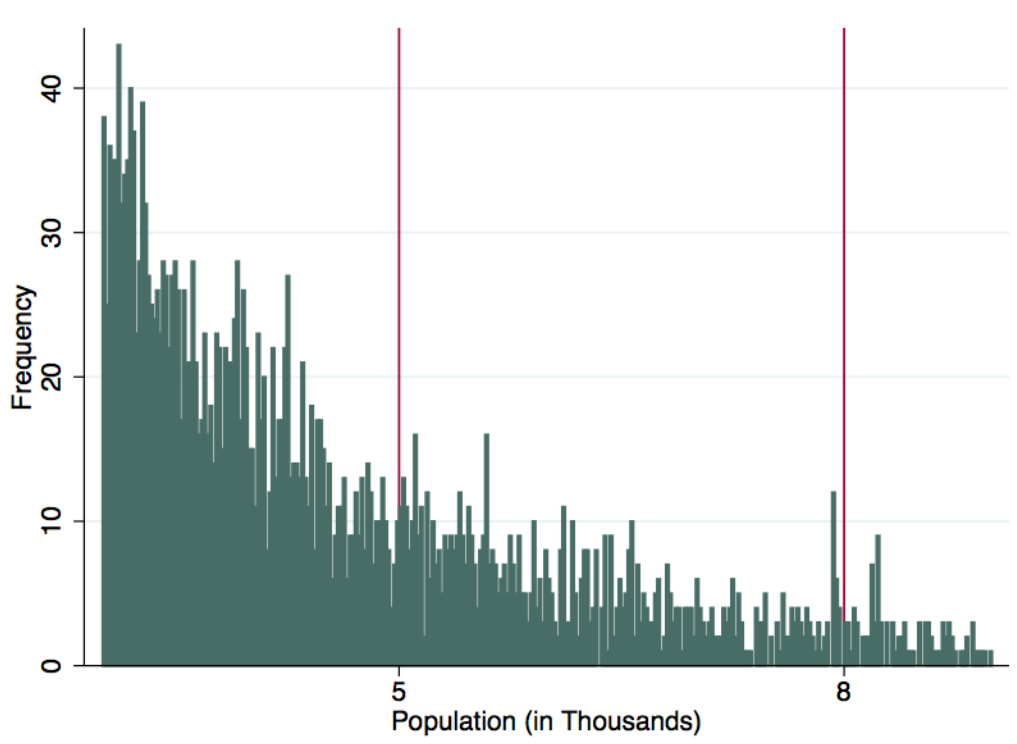
Appendix

FIGURE A.1: COUNCIL MEMBER RESERVATIONS & GP POPULATION



Notes: GP Seats reserved for Scheduled Castes, Scheduled Tribes and Other Backward Castes do not increase discontinuously at the population thresholds 5000 and 8000.

FIGURE A.2: DISTRIBUTION OF GP POPULATION



Notes: Population is grouped into bins of 20. The Frandsen (2016) RD Density Test does not reject the hypothesis of continuity in the population distribution at the thresholds 5000 and 8000 (p-values are 0.2 and 0.82 respectively).

TABLE A.1: BASELINE COVARIATES: DEMOGRAPHICS & PUBLIC GOODS

Characteristic	β	Bandwidth	β_8	Bandwidth
Number of Households	80.02	293	-5.74	271
	(82.99)		(220.32)	
Male Population	27.61	378	660.28	245
	(183.15)		(637.84)	
Female Population	-1.18	393	622.58	251
	(172.36)		(654.24)	
Scheduled Caste Male Population	-1.1	310	100.00	268
	(42.36)		(93.59)	
Scheduled Caste Female Population	-0.75	310	109.76	264
	(38.74)		(87.45)	
Scheduled Tribe Male Population	-133.67	273	-88.74	414
	(320.88)		(845.92)	
Scheduled Tribe Female Population	-135.19	271	-97.49	416
	(319.19)		(857.73)	
Geographic Area	-276.27	371	1554.14	371
	(438.68)		(994.85)	
Pre-Primary Schools	-0.05	252	-0.26	405
	(0.04)		(0.35)	
Primary Schools	0.46	263	2.51	300
	(0.71)		(1.67)	
Secondary Schools	0.03	399	-0.08	348
	(0.19)		(0.35)	
Senior Secondary Schools	0.26	397	-0.93	273
	(0.14)		(0.42)	
Tap Water	0.05	249	0.01	227
	(0.09)		(0.07)	
Covered Wells	0.05	266	-0.13	246
	(0.13)		(0.19)	
Uncovered Wells	0.04	331	-0.02	239
	(0.15)		(0.31)	
Handpumps	0.21	254	0.13	262
	(0.12)		(0.29)	
Tubewells & Borewells	0.03	438	-0.29	176
	(0.12)		(0.32)	
Springs	-0.01	220	0.01	339
	(0.02)		(0.18)	
Rivers & Canals	0.09	186	-0.11	269
	(0.16)		(0.28)	
Tanks, Ponds & Lakes	0.21	318	-0.11	245
	(0.13)		(0.28)	
Closed Drainage	0.07	283	-0.22	204
	(0.12)		(0.16)	
Open Drainage	0.04	393	-0.10	292
	(0.13)		(0.25)	
Community Toilet Complex (Including Baths)	-0.03	325	0.19	346
	(0.02)		(0.15)	
Community Toilet Complex (Excluding Baths)	0.04	301	-0.10	300
	(0.10)		(0.22)	
Rural Production Centres	-0.04	290	0.26	318
	(0.06)		(0.28)	
Community Waste Disposal System	0.08	262	-0.31	230
	(0.09)		(0.33)	
Community Biogas/Waste Recycling	0.04	373	-0.04	409
	(0.07)		(0.16)	

Notes: Outcome variables are based on the 2011 Census. Optimal bandwidths are chosen separately for each characteristic, and robust standard errors are based on Calonico *et al.* (2014).

TABLE A.2: RULE BASED EFFECTS: COUNCIL SIZE AND RESERVATIONS FOR WOMEN

Threshold	5000		8000	
Outcome	Total Seats	Seats Reserved For Women	Total Seats	Seats Reserved For Women
RD Estimate	2.160***	0.317	3.682**	1.090
Std. Error	(0.529)	(0.313)	(1.565)	(0.695)
Dep Var Mean	11.144	3.983	16.311	5.571
Bandwidth	264.930	318.599	390.535	402.394
Observations	703	703	161	161

Notes: Local linear regressions, triangular kernel; standard errors clustered at the GP population level. *** p<0.01, ** p<0.05, * p<0.1

TABLE A.3: EFFECTS OF ADDITIONAL MEMBERS ON ELECTORAL COMPETITION

Outcome	Candidates			Seats Won Without Opposition		
Seat Type	Total	Not Reserved For Women	Reserved For Women	Total	Not Reserved For Women	Reserved For Women
RD Estimate	-0.0724	0.0514	0.0442	2.981	1.816	1.331
Std. Error	(0.451)	(0.436)	(0.449)	(3.139)	(2.028)	(1.233)
Dep Var Mean	2.643	2.747	2.415	4.423	2.877	1.546
Bandwidth	193.715	199.071	285.451	279.434	293.965	248.808
Observations	668	486	300	55	58	51

Notes: Local linear regressions, triangular kernel; standard errors clustered at the GP population level. *** p<0.01, ** p<0.05, * p<0.1

TABLE A.4: EFFECTS OF ADDITIONAL MEMBERS ON CANDIDATE POOL

Outcome	Education (Years)	Age (Years)	Female	Occupation		
				Farming/Business	Job	Ag. Labor
RD Estimate	1.791	-0.122	0.157	0.024	-0.072	-0.016
Std. Error	(1.659)	(0.972)	(0.128)	(0.153)	(0.046)	(0.073)
Dep Var Mean	7.277	39.918	0.363	0.531	0.030	0.100
Bandwidth	173.924	177.974	207.185	366.124	261.097	231.093
Observations	604	604	760	1211	1028	904

Notes: Local linear regressions, triangular kernel; standard errors clustered at the GP population level. *** p<0.01, ** p<0.05, * p<0.1

TABLE A.5: EFFECT OF ADDITIONAL MEMBERS ON POLITICIAN IDENTITY

Outcome	Education (Years)	Age (Years)	Female	Occupation		
				Farming/Business	Job	Ag. Labor
RD Estimate	1.977	-0.978	0.139	0.047	-0.099*	0.014
Std. Error	(1.984)	(1.618)	(0.128)	(0.166)	(0.054)	(0.067)
Dep Var Mean	7.362	39.775	0.362	0.548	0.028	0.088
Bandwidth	172.861	137.907	209.296	310.065	227.998	249.290
Observations	552	476	708	1020	800	886

Notes: Local linear regressions, triangular kernel; standard errors clustered at the GP population level. *** p<0.01, ** p<0.05, * p<0.1

TABLE A.6: EFFECTS OF ADDITIONAL MEMBERS ON INCOME AND EXPENDITURE

Outcome	Expenditure			Income		
	Total	Own Fund	Grant	Total	Own Fund	Grant
RD Estimate	-15.37	-7.279	-8.554	-20.34*	-8.138	-3.660
Std. Error	(12.419)	(5.913)	(6.613)	(11.067)	(8.950)	(4.308)
Dep Var Mean	32.014	12.830	15.278	33.020	22.525	8.031
Bandwidth	168.987	181.012	172.008	165.629	169.518	268.743
Observations	69	78	69	69	70	134

Notes: Local linear regressions, triangular kernel; standard errors clustered at the GP population level. *** p<0.01, ** p<0.05, * p<0.1

TABLE A.7: EFFECTS OF ADDITIONAL MEMBERS ON EMPLOYMENT CREATION

	Households Employed			
Category	Total	Scheduled Caste	Scheduled Tribe	Land Reform
RD Estimate	-4.934	0.355	6.146	-0.274
Std. Error	(30.444)	(2.883)	(16.785)	(0.253)
Dep Var Mean	47.520	2.152	16.222	0.477
Bandwidth	328.771	213.385	392.632	231.497
Observations	338	220	385	254

	Person-Days of Employment			
Category	Total	Scheduled Caste	Scheduled Tribe	Women
RD Estimate	2.436	0.145	-0.412	-0.474
Std. Error	(13.005)	(0.886)	(3.824)	(5.820)
Dep Var Mean	18.246	0.733	5.570	8.142
Bandwidth	308.807	240.439	305.111	380.111
Observations	318	266	318	373

Notes: Local linear regressions, triangular kernel; standard errors clustered at the GP population level. *** p<0.01, ** p<0.05, * p<0.1