Does Direct Democracy Limit Resource Capture? Experimental Evidence from Afghanistan[1]

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The use of direct democracy is often proposed as a means of granting citizens greater control over public resource allocation decisions. Using a randomized field experiment conducted in 250 villages in Afghanistan, this study identifies the impact of secret-ballot referenda on the choice of development programs, as compared to decisions made through consultative public meetings. The use of referenda reduces the extent to which elites are able to influence the choice of projects and improves villagers' satisfaction. The effect is particularly pronounced when the council overseeing the decision-making process was elected using single multi-member districts rather than multiple two-member districts.

I. Introduction

Directly democratic decision-making procedures are presumed to limit elite capture of public resources (Matsusaka 2004, 2005) and enhance the public legitimacy of such allocation processes (Olken 2010; Lind and Tyler 1988). This study identifies the impact of direct democracy on the selection of development projects using a field experiment conducted in 250 villages in Afghanistan. Half of the villages in the sample were randomly assigned to select projects through a referendum

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while the other half through a village meeting. According to the referendum procedure, villagers vote for their most preferred project and resources are allocated to the projects that receive the most votes. Under the village meeting procedure the proposed projects are chosen at a public meeting convened by an elected village council with the council having the final say over the projects selected for funding. Both procedures employed an identical agenda-setting procedure according to which the list of proposed projects was chosen by the village council after informal consultations with the villagers.

We examine the effect of alternative decision-making rules on elite capture by comparing the alignment of project selection outcomes with the preferences of male villagers, male elites and leading female villagers. Across both selection procedures, the preferences of male villagers are found to significantly determine which projects are selected, while the preferences of leading village women appear to have no effect. The preferences of village leaders, however, only matter when the selection is conducted through a village meeting. Thus, we find that direct voting prevents elite capture of resource allocation, which may take place in villages that choose projects at a village meeting.

We also assess the effect of the project selection procedure on villagers' satisfaction with local governance. As in Olken (2010), directly democratic procedures are found to enhance villager satisfaction, even after controlling for the type of selected project. Villager satisfaction is, however, found to be lower in instances where selected projects were preferred only by village leaders suggesting villagers' distaste over such elite decisions. The results thus indicate that direct democracy increases villager satisfaction both through an increase in alignment of decision outcomes with villager preferences, as well as by an increased sense of legitimacy in the process.

The study also identifies the impact of interactions between project selection procedures and the district magnitude of the elections for council members who oversee the selection and implementation of projects. Identification is based on the randomized assignment of election types that was conducted independently of the assignment of project selection procedures. Specifically, villages were assigned to elect councils either using one multi-member district or multiple two-member districts (Beath, Christia, and Enikolopov 2011b). In villages assigned to select projects by referendum, the district magnitude of the council election has no effect on selection outcomes. However, in villages which selected projects through a village meeting, village leaders exercised significant influence over project selection only if elected using one multi-member district. These

results indicate that direct democracy constrains the influence of village leaders irrespective of the method of council election, but that when decisions are made at a village meeting, the characteristics of how officials are elected can allow them to exercise disproportionate influence over the allocation of resources.

The study contributes to the literature on the effects of variation in decision rules, in general, and direct democracy, in particular. While various effects of direct democracy have been examined observationally by Matsusaka (1995), Funk and Gathmann (2011), Hinnerich and Pettersson-Lidbom (2010), and Frey and Stutzer (2005), the analysis in this paper is most closely connected to that of Olken (2010), which experimentally identifies the relative impact of similar variations in project selection procedures in Indonesia and finds a significant positive effect of direct democracy on villagers' satisfaction, but weak impacts on the type of selected projects. The difference in the results of Olken (2010) and those reported here likely confirms the caveat in Olken (2010) concerning the limited size of that sample (49 villages in 3 provinces). In contrast, the larger sample in this study (250 villages in 10 districts) enables a more precise identification of the effect. The finding that direct democracy can prevent elite capture is important since elite capture is often considered as one of the main challenges to decentralization of governance, especially in developing countries (Bardhan 2002, Bardhan and Mookherjee 2006).

It is important to note that disproportionate influence over the choice of projects in villages that select projects at a village meeting is not necessarily related with outcomes that make ordinary villagers worse off. The difference in projects preferred by elite and ordinary people may reflect not only relative benefits derived by each group, but also an informational advantage on the part of the elite in assessing which projects will bring more benefits to the village or which projects are more likely to be successfully implemented (Labonne & Chase 2009; Rao and Ibanez 2005; Owen and van Domelen 1998). However, the finding that elite influence over allocation of resources has a negative effect on villagers' perceptions of local governance is not consistent with a benign interpretation of elite control over resources but rather suggestive of elite capture.

This paper is divided into six sections: Section II provides a description of the sample and of the variations induced in project selection procedures and council elections; Section III describes the data sources; Section IV presents the methodology and results of the empirical analysis; Section V discusses the results; and Section VI concludes.

II. Description of the Experiment

The National Solidarity Program, Afghanistan's largest community driven development program,[2] is structured around two village-level interventions: (i) the creation of a gender-balanced local council through a secret-ballot, universal suffrage election; and (ii) the community-based selection of village infrastructure development projects. As part of a randomized impact evaluation of NSP, we randomly assigned two methods of project selection and council elections, the latter based on variation in electoral district magnitude in an effort to assess the role of direct democracy on elite capture over resources.

The baseline survey for the project was administered in August-September 2007, with treatment assignment occurring shortly after. Local council elections took place between October 2007 and May 2008 and project selection occurred between November 2007 and August 2008, and at least a month after the elections of the council in each of the villages. The follow-up survey for the project was administered between June and October 2009 following the start of project implementation.

II.1. Project Selection

NSP villages receive a block grant, valued at $200 per household up to a village maximum of $60,000, to support the implementation of development projects in the village. Villages are relatively unrestricted in the types of projects they can select for NSP funding.[3] These projects however must be selected in consultation with the village community and 10 percent of project costs must be met by villagers. Villages in the sample were randomly assigned to one of two project selection procedures. These two procedures, which are closely related to those of Olken (2010), are described below: [4]

Referendum: All adult village residents are eligible to vote, by secret ballot, for the project that they most prefer from the list of proposed projects.[5] Projects with the highest number of votes are selected for implementation. The number of projects selected for funding is such that the block

[2] NSP is executed by the Ministry of Rural Rehabilitation and Development (MRRD) of the Government of Afghanistan, funded by the World Bank and a consortium of bilateral donors, and implemented by around 25 NGOs. By mid 2010 NSP had already been implemented in over 29,000 villages across 361 of Afghanistan's 398 districts at a cost of nearly $1 billion.

[3] A list of projects is precluded from receiving funding, which includes the purchase of weapons, cultivation of illicit crops, and the construction or rehabilitation of religious-oriented facilities. More information is available at: http://www.nspafghanistan.org

[4] Detailed guide on implementation of the procedures is available at: http://nsp-ie.org/sti/sti2e.doc

[5] At least 50 percent of eligible voters in the village must vote in the referendum in order for it to be valid.

grant is used completely. Selected projects are prioritized according to the number of votes received, so that the sequence of their implementation reflects their relative popularity.

Village Meeting: The village council convenes a meeting, open to all villagers and moderated by the village council, to discuss and select projects for funding. Informal points-of-procedure (such as a show-of-hands) may be employed in consultation meetings, but no formal vote takes place. Based on the discussion but at its own ultimate discretion, the village council selects and prioritizes projects for funding.

Under both procedures, the list of proposed projects is prepared using an identical agenda-setting procedure by the village council after consultation with the villagers.

II.2. Village Council Election Method

In villages participating in NSP a gender-balanced village council is elected prior to the selection of the projects. The mandate of the councils is to organize the selection of the NSP projects and manage their implementation. Secret-ballot elections of the council were open to all adult residents and were conducted according to one of two procedures that differ primarily in terms of district magnitude. In both cases villages were segmented into geographically contiguous clusters. The number of clusters equals the number of council members of each gender to be elected. Further details of the two procedures are provided below:[6]

Cluster Election: Voters are restricted to casting a ballot for a single candidate, who must also live in their cluster. In each cluster, the one male and one female with the largest number of votes are elected to the council as representatives of their cluster. This method represents a single-ballot, simple plurality election with multiple districts (Cox, 1997), similar to the Anglo-American first-past-the-post system.

At-large Election: Under this method, no geographical constraints are placed on vote choice, with male and female candidates receiving the most votes across the village getting elected to the council. To ensure a sufficient number of elected members, voters cast ballots for a maximum of three different people, which are not ranked.[7] The at-large election method is a multi-member election

[6] A guide to implementing the two election methods, which was issued to all participating NGOs, is available here: http://www.nsp-ie.org/sti.html

[7]This means the system allows plumping, but not cummulation (Cox, 1997). Permitting three votes in at-large elections was requested by participating NGOs who considered it a high probability that, if villagers were accorded only one vote

under a plurality rule with a single district and multiple non-transferable votes. Thus, the two main differences from cluster elections are: 1) the higher district magnitude (multiple elected members of each gender instead of one) and 2) the number of votes cast (three instead of one).

Beath, Christia and Enikolopov (2011b) provide more details on the two procedures of electing village councils and document their effect on the characteristics of the elected council members.

II.3. Sample and Randomization Procedure

The randomization of electoral district magnitude and of project selection procedures occurred across 250 villages split evenly across 10 Afghan districts.[8] Although none of the ten sample districts are drawn from Afghanistan's southern provinces due to security constraints, the districts otherwise represent the country's geographic, ethnic, and economic diversity. The location of the ten districts is shown in Figure 1.

[FIGURE 1 HERE]

To randomly and independently assign villages to variations of council election and project selection procedures, the 250 villages were grouped using an optimal greedy matching algorithm which first paired villages within districts based on background characteristics and then matched pairs of pairs to form quadruples.[9] Each village within the quadruple was then randomly assigned one of four combinations of electoral district magnitude and project selection procedure.

[TABLE 1 HERE]

The matched-pair cluster randomization procedure resulted in a well-balanced set of villages in the four groups with differences in characteristics between groups never exceeding 13 percent of the standard deviation.[10] Table 1 presents a comparison between the treatment and control groups in the proportion of male villagers that preferred different types of projects at baseline, i.e. before the introduction of the program.

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in at-large elections, the number of candidates receiving votes would be less than the number of CDC seats, thereby necessitating multiple rounds of voting.

[8] In each of the 10 districts, NGOs contracted to implement NSP in the district selected 50 villages for inclusion in the study. 25 of these 50 villages in each district were selected to receive NSP according to a matched-pair cluster randomization. These villages received NSP following the administration of a baseline survey in September 2007, with the remaining 250 control villages assigned to receive NSP in fall 2011.

[9] These characteristics include village size, distance to river, distance to a major road, elevation, and terrain slope.

III. Data on Preferences, Selection Process and Outcomes

The primary outcome of interest for the study is the degree of alignment between project selection outcomes and the preferences of elite and non-elite villagers.[11] This measure is constructed from data on the *ex-ante* preferences of different groups of villagers and from data on project selection outcomes. Data on selection outcomes comes from lists of proposed, selected, and prioritized projects for each village. Data on *ex-ante* preferences comes from the baseline survey administered prior to local council elections and which, in each village, ascertained project preferences individually from ten randomly-selected male heads-of household, a focus group of village leaders, and a focus group of leading village women.[12]

III.1. *Ex-Ante* Selection Preferences

Data from the baseline survey is used to construct measures of *ex-ante* preferences from different groups of villagers with respect to the types of projects that should be selected for funding. A question in the baseline survey asked all respondents to indicate, from a list of potential projects, the project that should be implemented if the village is provided with the equivalent of $60,000.[13] The data is used to construct village-level dummy variables which indicate the project most frequently preferred by male household respondents; the project most frequently preferred by elite male focus group participants; and the project most frequently preferred by leading female focus group respondents.[14] These variables provide measures of the preferences of male villagers, male elites, and women, respectively.

[TABLE 2 HERE]

[11] In addition, the study examines the impact of directly-democratic selection procedures on villagers' satisfaction, for which data is obtained from the follow-up survey administered after project implementation to the same group of male villagers interviewed in the baseline, to wives of these villagers, and to focus groups of male village leaders and senior village women.

[12] More details on the coverage of the baseline and follow-up survey can be found in Table A3

[13] Male and female focus group respondents were asked to identify one project from a list of 15 possible projects, while individual male household and female respondents were asked to select and prioritize three projects from the same group of 15. To ensure comparability, we focus on the project that was named as the most important in the household and individual surveys. Since respondents in the female focus group were the same as in the female individual questionnaire, we use only information from the female individual questionnaire as the measure of female preferences, and check robustness with information from the female focus group. To increase statistical power in the analysis, we group the 15 possible project types into five categories: (i) roads and bridges; (ii) irrigation; (iii) drinking water; (iv) electricity; and (v) other (which include men's courses, health courses, schools, health facilities, seeds, agricultural equipment, livestock, microfinance programs, communal toilet facilities, and community centers). The four types of projects not included in the "other" category are the four most popular types of selected projects.

[14] In the case two or more projects had the same number of respondents supporting them, which exceed the number of supporters of other projects, they were all marked as the most preferred.

Table 2 displays the measures of preferences for the three groups of villagers. Drinking water projects are the first choice of male household respondents and women, while preferences of male focus group respondents are more evenly distributed across an array of different projects. Comparison of villages assigned to different project selection procedures and different election methods reveals no significant differences with respect to the projects that were most preferred by different groups of villagers. However, the full distribution of preferences (including second and third projects) was not well balanced between villages that were assigned different council election methods.[15] Women's preferences were also not well-balanced across project selection procedures. To account for these imbalances, all results are verified for robustness by controlling for the second and third most preferred projects.

III.2. Project Selection Process

In 127 randomly-selected villages, monitoring was conducted to obtain data on the project selection process.[16] According to the data gathered, the median consultation meeting was attended by 120 villagers and 14 council members, whereas participation of villagers in referenda was significantly higher, with a median of 213 villagers voting.[17] Monitoring reports from consultation meetings indicate that council members dominate the discussion, with approximately half of council members expressing their opinion during the meeting, compared to only one out of eight male villagers present and one out of twenty female villagers present.

III.3. Project Selection Outcomes

The project selection process is comprised of three stages: (i) proposal; (ii) selection; and (iii) prioritization.[18] Data on proposed and selected projects was provided for all but 15 of the 250 villages. Of these 15 villages, data was not received from 7 villages due to non-compliance with the assignment to treatment.[19] For the remaining 8 villages, the necessary information was not provided by NGOs overseeing the selection process. Overall, the data provided covers 1,567 proposed and 820 selected projects.

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[15] See Table A1 in the Appendix

[16] A detailed description of the monitoring results can be found at: http://nsp-ie.org/reportsmonitoring.html

[17] In both consultation meetings and referenda, there was no significant difference in participation or in the number of selected or prioritized projects between villages assigned to either of the two types of village council elections.

[18] As projects are sequentially implemented, prioritization determines which project is implemented first.

[19] Violation of treatment assignment was driven primarily by the confusion between villages with similarly sounding names. Violations were not correlated with the assigned decision making rules.

Across the sample of 235 villages for which data on project selection is available, a median of five projects were proposed and a median of three projects were selected and one project prioritized i.e. selected to be implemented first .[20] Roads and bridges, irrigation, drinking water, and electricity were the most frequently proposed projects.[21] Selected projects largely mirrored those of proposed projects, with roads and bridges being the most frequently selected, followed by drinking water, irrigation, and electricity. Electricity was the most frequently prioritized project.

[TABLE 3 HERE]

Table 3 describes the effect of different decision-making processes on the types of projects proposed, selected and prioritized. There is no statistically significant effect of the project selection procedure or the combination of local council election type and project selection procedure on the type of projects that are proposed or selected. Villages that are assigned to allocate resources using referenda are, however, more likely to prioritize electricity projects,[22] with the difference concentrated in villages that combine referenda with council elections of low district magnitude.

IV. Results

The following sections present estimates of the effects of variation in project selection procedures on the degree of alignment of selection outcomes with the elite as well as non-elite preferences over projects, as well as estimates on villagers' general levels of satisfaction.

IV.1. Effect of Selection Procedure on Selection Outcomes

The effect of the project selection procedure on allocation outcomes is estimated using the following conditional fixed effects logit model:[23]

[20] As shown in Table A4, there was little variation in the number of projects proposed between villages with different election and selection rules.

[21] Schools and health facilities, despite being preferred by relatively large numbers of respondents across the ten sample districts, were very rarely proposed, which is due to the requirement that such project types be coordinated through the responsible ministries.

[22] The difference is significant at the 1 percent level. Chi-squared test also reject the hypothesis of the equality of distributions at the 10 percent level. For the sub-sample assigned to this group, chi-squared test rejects the hypotheses of the equality of distributions at the 5 percent level.

[23] The conditional logit model accounts for all village-specific variables and estimates the effect of the characteristics that are specific to a project in a village.

$$Pr\left(\mathrm{Y}_{\boldsymbol{vp}}|Pref_{pvg}, S_{iv}, \alpha_p, \beta_{ig}\right) = \Lambda\left(\alpha_p + \sum_{i=1}^{2}\sum_{g=1}^{3} Pref_{pvg} \times S_{iv} \times \beta_{ig}\right)$$

where Y_{vp} is a dummy variable indicating whether project *p* was proposed, selected or prioritized in village *v*; $Pref_{pvg}$ is a dummy variable indicating whether project *p* was preferred by group $g \in \{Male\ Villagers; Male\ Elite;\ Females\}$; and S_{iv} is a dummy variable which equals 1 if village v selected projects using decision-making process $i \in \{Referendum; Village\ Meeting\}$ and 0 otherwise. To test whether different procedures produce different allocation outcomes, we test the hypothesis of equality of β_{ig} across values of *i*. Standard errors are clustered at the village level.

Conditional logit takes into account all village-specific variables and estimates the effect of the characteristics that are specific to a certain project in a village. In the specification reported in **Table 4**, the coefficients indicate how the fact that a project was preferred by one of the three groups of villagers affects the probability that this project will be proposed, selected and prioritized and it does so separately for villages that used different decision-making procedures.[24]

The results indicate that meetings afford village elites a significant influence over proposed, selected, and prioritized projects, whereas in referendum villages, elite preferences do not affect proposal, selection, or prioritization decisions. The difference between the effect of elite preferences in referendum and meeting villages is significant for selected and prioritized projects, but not for proposed projects. Preferences of male villagers do not affect proposals, but significantly influence the selection and prioritization of projects under both procedures. There is no significant difference in the effect of male villager preferences between the two selection types. Although female preferences have a marginally significant effect on project selection in village meetings, the results indicate that female preferences are generally not a significant determinant of decisions. As in the case of male preferences, there are no significant differences between the two procedures.

[TABLE 4 HERE]

To determine whether different project selection procedures affect selection and/or prioritization of projects independent of the outcome after the proposal stage, we estimate the effects for proposed projects only. Consistent with the aforementioned findings, results in columns (4) and (5) indicate that, after the proposal stage, elites influence project prioritization in meetings, but have no such

[24] Unfortunately, conditional logit specification does not allow for meaningful interpretation of the absolute value of the coefficients or marginal effects, since it does not identify village fixed effects.

influence in referenda. Interestingly, women appear to have some influence over the selection of proposed projects in meetings, but not in referenda.

IV.2. Effect of Combination of Selection Procedure and Electoral District Magnitude

To analyze the effect of the interaction between project selection procedures and the district magnitude of council elections, we estimate the effect of all possible combinations of the different variations in both institutional components using the following conditional fixed-effects logit model:[25]

$$Pr\left(\mathrm{Y}_{\boldsymbol{vp}} = \mathbf{1} | Pref_{pvg}, Comb_{iv}, \alpha_p, \beta_{ig}\right) = \Lambda\left(\alpha_p + \sum_{i=1}^{4}\sum_{g=1}^{3} Pref_{pvg} \times Comb_{iv} \times \beta_{ig}\right)$$

where $Comb_{iv}$ is a dummy variable which equals 1 if village v allocated resources using *i*-th combination of election type and decision-making process and 0 otherwise. To test whether different combinations produce different allocation outcomes, we test the hypothesis of the equality of the four coefficients β_{ig} across values of *i*.

For each stage of the decision-making process, Table 5 presents estimates of the effect of different combinations of project selection procedure and electoral district magnitude on the alignment of outcomes with the ex-ante project preferences of the three different groups—be they male villagers, male elites or women. The estimates reported in columns (1)-(3) indicate that elite preferences have a significant effect on proposed, selected, and prioritized projects only in villages that combine village meetings with elections of high district magnitude (at-large). In addition, the difference in the effects of referenda and village meetings on selection outcomes is significant only for villages with council elections of high district magnitude (at-large). In villages where councils were elected through a system of low district magnitude (cluster), elites do not exercise influence over selection outcomes, even when meetings are employed.

[TABLE 5 HERE]

Results in columns (4) and (5) indicate that, in villages with councils that were elected through high district magnitude (at-large), the influence of elites over the prioritization and selection of projects is statistically smaller under referenda. In villages with low electoral district magnitude (cluster), elites have no influence over the prioritization and selection of proposed projects regardless of the

[25] Results for the effect of election method are reported in the Appendix.

decision-making procedure. Women's preferences are influential in the prioritization and selection of proposed projects only in villages that combine low district magnitude with village meetings.

IV.3. **Effect on Villagers' Satisfaction**

The above results indicate that directly-democratic selection procedures limit the influence of elites, but do not address the effects on villagers' satisfaction with local governance and their economic situation. To explore this further, we identify the effects of the project selection procedures and of elite influence over project selection through four perception-based indicators: (i) disagreement with a recent action of the village leadership; (ii); attribution of positive economic changes to actions of the village leadership; (iii) satisfaction with the work of village leaders; (iv) perceptions of economic improvement of the household situation during the past year. Data is provided by the male and female household surveys administered during the follow-up survey which took place after the start of project implementation.

The effect of decision-making procedures on perceptions of local governance and economic welfare is estimated by the following OLS regression:

$$Y_{ijk}^{FU} = \alpha + \beta \cdot Referendum_{jk} + \delta_k + \varepsilon_{ijk}$$

where Y_{ijk}^{FU} is one of the four perception measures for respondent *i* in village *j* in district *k*; $Referendum_{jk}$ is a dummy variable that equals one if village *j* in district *k* was assigned to allocate resources by referendum and zero otherwise, and δ_k is a quadruple fixed effect.[26] Standard errors are clustered by village.

[TABLE 6 HERE]

Results in columns (1) and (4) of Table 6 present the results of this estimation for the responses of male and female respondents respectively. The results show that referenda make male respondents more likely to report satisfaction with the work of village leaders and an improvement in their economic situation over the last year and female respondents less likely to disagree with decisions of village leaders and more likely to attribute positive economic changes to village leaders. Overall, the results indicate that referenda have a positive impact on villagers' satisfaction.

[26] We include quadruple fixed effects to account for the allocation of treatment to villages through quadruple-wise matching (Bruhn and McKenzie, 2009).

To determine whether elite influence over project selection affects villager' satisfaction, we estimate the following OLS regression:

$$Y_{ijk}^{FU} = \alpha + \beta \cdot Elite\_Influence_{jk} + \delta_k + \varepsilon_{ijk}$$

where $Elite\_Influence_{jk}$ is a dummy variable that equals one if the prioritized project in village *j* in district *k* was preferred by the elite and was not preferred by ordinary villagers. As in the previous specification, we use quadruple fixed effect and allow for clustering of standard errors at the village level.

Results, presented in columns (2) and (5) of Table 6, indicate that elite domination in project selection has a strong negative effect on the level of satisfaction: male villagers' were more likely to report disagreement with decisions of village leaders, less likely to report positive changes in their economic situation, and less likely to attribute positive economic changes to the work of village leaders. However, there is no negative effect on female respondents' satisfaction and a marginally significant, positive effect on reports of improvement in the household's economic situation.[27] Overall, elite domination of project selection has a strong negative effect on the satisfaction of male villagers', but there is no such effect for women.

To determine whether the positive effect of referendum on villagers' satisfaction is driven by the outcomes of project selection or by the process itself, we estimate the following regression

$$Y_{ijk}^{FU} = \alpha + \beta \cdot Referendum_{jk} + \gamma \cdot Elite\_Influence_{jk} + \delta_k + \mu_l + \varepsilon_{ijk}$$

where all the variables are the same as above and μ_l is a project type fixed effect. Thus, the specification estimates the effect of the selection procedure on villagers' satisfaction controlling for elite domination and the type of selected projects.[28]

Columns (3) and (6) of Table 6 present the results of this estimation. The effect of referenda on villagers' satisfaction decreases in magnitude in all specifications but one, but remains significant. Results for the effect of elite domination remain virtually unchanged. Thus, the higher levels of satisfaction that are observed when villagers select projects by referendum appears to be driven

[27] Due to the fact that female focus group respondents commonly share familial links with the male focus group members which proxy for the elite in this study, this result is perhaps not entirely surprising.

[28] The results for the effect of referendum are robust to using three dummy variables for the project being preferred by the three groups of villagers, instead of the dummy variable for elite domination.

mainly by the procedure itself, rather than by the difference in the allocation decision that derives from the difference in project selection procedures.

V. Discussion of Results

The results demonstrate that project selection procedures can have a significant impact on the relative ability of elites and non-elites to influence resource allocation outcomes. Specifically, resource allocation decisions made through consultative procedures give significant influence to male elites, as compared to directly democratic procedures. However, this effect exists only when consultative procedures are combined with elections of high district magnitude, with no such effect observed when consultative procedures are combined with elections of low district magnitude. The results further indicate that elite influence over allocation decisions creates dissatisfaction with local leaders and worsens general economic perceptions of villagers, indicating that elite influence is perceived by villagers as malevolent capture rather than benevolent control.

The finding that consultative procedures grant elites greater influence over allocation decisions is unsurprising given the extent to which council members - who often overlap with pre-existing elites[29] appear to have dominated discussions during the consultation meeting.[30] Such results, which reinforce those of Humphreys et al. (2006), indicate that the preferences of discussion leaders can significantly influence the outcomes of deliberative meetings. The findings, however, are not consistent with Olken (2010), who finds no effects of the decision-making procedure on resource allocation outcomes, although the difference in results is likely to be driven by the difference in sample size. Olken's (2010) findings which suggest that directly democratic procedures have beneficial impacts on economic and political opinion are, however, fully supported by this study. As with Olken (2010), the change appears to be mainly due to the process itself, rather than the outcome, as the effect is not altered by the addition of controls for the type of project selected.

In addition, the finding that elections of high district magnitude, when combined with consultative processes, result in enhanced elite influence over selection outcomes indicates that the level of district magnitude affects the type of officials elected. Specifically, elections of high district

[29] Beath, Christia, and Enikolopov (2011b) finds that more than at least a quarter of males elected to the CDC were identified as village leaders before the CDC elections.

[30] The results of the selection process monitoring indicate that in 98 percent of cases village council members had the most influence in the selection of sub-projects during the consultation meetings. Approximately half of the council members expressed their opinion during the meeting, whereas only one out of eight male villagers and one out of twenty female villagers spoke out.

magnitude appear to advantage: (i) pre-existing elites; (ii) candidates with preferences closely aligned to those of pre-existing elites; and/or; (iii) candidates with characteristics that enable them to be more effective in manipulating consultative processes to realize their own preferences. Complementary analysis in Beath, Christia, and Enikolopov (2011b) indicates that elections of high district magnitude do not affect the probability of pre-existing elites being elected nor the probability of elected officials being drawn from groups with preferences aligned with those of the pre-existing elite, but do favor better educated candidates. Such higher levels of human capital thus appear to enable council members to better manipulate consultative processes to realize their own preferences, either through enhanced skills of persuasion and/or better within-group coordination. Monitoring data from consultation meetings, shown in Table 7 below, supports this hypothesis, with council members elected under high district magnitude elections found to be more likely to speak in favor of a project proposed by the village council. Thus, through advantaging candidates who are able to better exploit consultative processes, high district magnitude elections result in consultative outcomes more closely aligned with the preferences of elected officials and, by extension, with those of the pre-existing elite.

[TABLE 7 HERE]

An alternative, yet potentially complementary, explanation is that low district magnitude elections make village council members more accountable. Under the low district magnitude method, representatives have a defined constituency which is directly responsible for their election and in which they must reside. Accordingly, the method would tend to promote stronger links between representatives and the population and thus increase the likelihood of such representatives advocating on behalf of the population, rather than themselves or members of the elite (Keefer and Vlaicu 2008). Such an effect could not only be driven by re-election concerns, but also by closer familial or economic ties between representatives and constituents.

Finally, the findings reveal the predominance of male preferences over female ones in project choice. Women's preferences seem to have no systematic effect on the choice of projects regardless of election type and project selection method. Since the number of women who participated in the referendum is substantial, this suggests that even in the context of secret voting, women were casting their votes for projects that were preferred by males. This finding is not necessarily surprising in the context of Afghanistan were women's choices and community involvement has been traditionally very constrained if existent and always male-dominated.

VI. Conclusion

This paper examines the effect of formal decision-making rules on resource allocation outcomes. Using a field experiment which randomized institutional decision rules across 250 villages in Afghanistan, we compare the effects on selection outcomes of direct democracy with outcomes from a village meeting. Our findings indicate that direct voting at a referendum limits elite influence on project selection outcomes. In contrast, selection of projects at a village meeting are susceptible to elite capture, especially in cases in which the village council overseeing the meeting is comprised of members elected using high district magnitude elections, which result in council members having higher levels of human capital and limited accountability to geographically-specified constituencies.

The findings also demonstrate that elite influence over resource allocation outcomes results in worsened perceptions of local governance and of people's economic situation, which implies that such influence is perceived to work against the interests of the general population. The results also indicate that direct democracy increases villager satisfaction both through an increase in alignment of decision outcomes with villager preferences, and through an increased sense of legitimacy in the process itself.

This paper therefore provides evidence that differences in institutional design influence economic and political outcomes and highlights the decisive role that interactions between institutional components can serve in determining economic and political outcomes.

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Figure 1: Ten Sample Districts

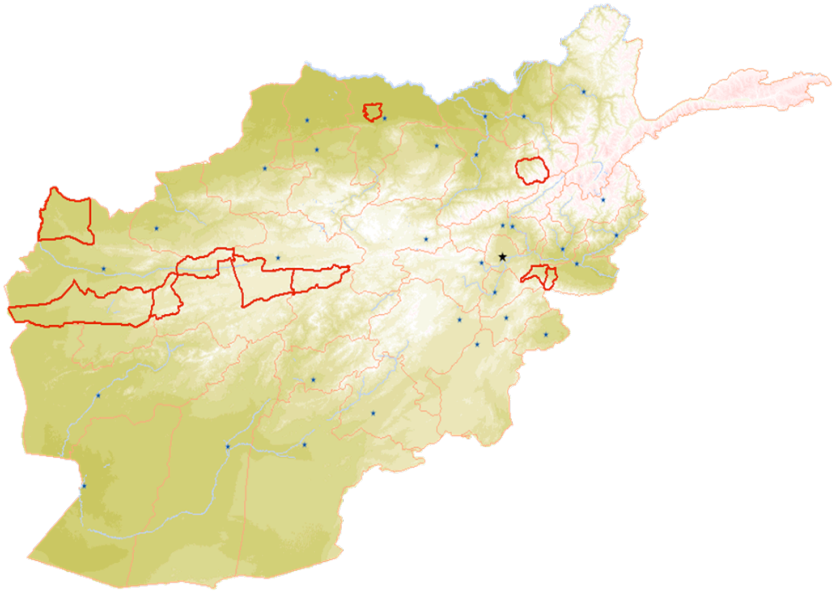


Table 1: Balance of Pre-Treatment Covariates

	Village Meeting	Referendum	Standardized Difference	Cluster	At-large	Standardized Difference
Number of Households in Village	102	113	0.12	108	108	0.00
Size of Household of Respondents	9.73	9.85	0.02	9.57	10.02	0.09
Age of Respondent	44.04	43.64	0.03	44.03	43.65	0.03
Respondent is Formally Educated	0.71	0.71	0.00	0.73	0.69	0.09
Household is Food Secure	0.45	0.45	0.02	0.43	0.47	0.09
Source of Drinking Water is Unprotected Spring	0.28	0.26	0.03	0.28	0.26	0.03
Respondent Has Access to Electricity	0.17	0.13	0.11	0.14	0.15	0.04
Male Health Worker is Available	0.12	0.12	0.00	0.14	0.11	0.09
Female Health Worker is Available	0.09	0.10	0.04	0.12	0.08	0.13
Respondent Owns a Mobile Phone	0.17	0.19	0.06	0.19	0.17	0.05
Respondent Owns a Radio	0.77	0.74	0.07	0.74	0.76	0.05
Respondent Owns Sheep	0.56	0.54	0.05	0.56	0.55	0.02
Total Food Expenditure in Past 30 Days (Afghanis)	3512	3612	0.05	3524	3600	0.04
Respondent Received Loan in Past Year	0.46	0.48	0.03	0.48	0.46	0.05
Respondent Believes People Should Pay Taxes	0.37	0.43	0.13	0.41	0.40	0.02
Respondent Prefers Drinking Water Project	0.30	0.29	0.03	0.30	0.28	0.05
Respondent Prefers School Project	0.16	0.18	0.06	0.18	0.16	0.08
Respondent Prefers Road or Bridge Project	0.13	0.14	0.04	0.12	0.16	0.12
Respondent Attended Meeting of Shura	0.32	0.32	0.02	0.33	0.31	0.05
Female Respondent Owns Private Land	0.32	0.28	0.09	0.30	0.31	0.02

Table 2: Ex-Ante Most Preferred Projects of Village Groups

Panel A: Male Head of Household				
Most Preferred Project is	Village Meeting	Referendum	At-large Elections	Cluster Elections
Drinking Water	36.0%	40.8%	42.4%	34.4%
Irrigation	17.6%	12.0%	9.6%	20.0%
Electricity	18.4%	18.4%	22.4%	14.4%
Roads and Bridges	6.4%	4.8%	5.6%	5.6%
Other	33.6%	36.8%	33.6%	36.8%
Observations	125	125	125	125
Panel B: Male Focus Group				
Most Preferred Project is	Village Meeting	Referendum	At-large Elections	Cluster Elections
Drinking Water	27.6%	23.6%	30.7%	20.5%
Irrigation	25.2%	29.3%	27.4%	27.1%
Electricity	25.2%	21.1%	22.6%	23.8%
Roads and Bridges	16.3%	19.5%	20.2%	15.6%
Other	48.8%	45.5%	46.8%	47.5%
Observations	123	123	124	122
Panel C: Female				
Most Preferred Project is	Village Meeting	Referendum	At-large Elections	Cluster Elections
Drinking Water	54.0%	50.0%	49.6%	54.5%
Irrigation	2.4%	5.7%	3.2%	4.9%
Electricity	6.5%	8.9%	6.4%	8.9%
Roads and Bridges	9.7%	5.7%	9.6%	5.7%
Other	32.3%	34.7%	30.4%	36.6%
Observations	124	124	125	123

Table 3: Resource Allocation Outcomes, by Project and Decision Stage

	Decision-Making Procedure		Combination of Election and Decision-Making Procedure			
	Meeting	Referendum	Cluster + Meeting	Cluster + Referendum	At-Large + Meeting	At-Large + Referendum
Proposal						
Drinking Water	19.7%	19.3%	19.0%	20.0%	20.3%	19.5%
Irrigation	21.0%	19.3%	20.4%	16.2%	21.6%	18.2%
Roads and Bridges	28.0%	28.3%	27.7%	30.2%	28.2%	29.0%
Electricity	17.1%	17.9%	18.0%	16.2%	16.3%	17.1%
Other	14.2%	15.4%	14.9%	17.5%	13.6%	16.4%
Observations	590	597	289	315	301	604
p-Value for χ^2 Test	0.40			0.71		
Selection						
Drinking Water	27.2%	23.6%	26.6%	24.2%	27.7%	22.9%
Irrigation	20.7%	18.4%	20.8%	15.2%	20.7%	21.7%
Roads and Bridges	28.5%	29.3%	27.3%	30.3%	29.7%	28.3%
Electricity	16.5%	20.2%	18.2%	20.6%	14.8%	19.9%
Other	7.0%	8.4%	7.3%	9.6%	7.2%	7.2%
Observations	309	331	154	165	155	166
p-Value for χ^2 Test	0.69			0.93		
Prioritization						
Drinking Water	29.9%	20.5%	35.1%	19.3%	25.0%	21.8%
Irrigation	25.6%	17.9%	24.6%	12.3%	26.7%	23.6%
Roads and Bridges	22.2%	20.5%	21.1%	22.8%	23.3%	18.2%
Electricity	18.8%	37.5%	15.8%	40.4%	21.7%	34.6%
Other	3.5%	3.6%	3.6%	5.3%	3.4%	1.8%
Observations	117	112	57	57	60	55
p-Value for χ^2 Test	0.06			0.32		

Table 4: Effect of Selection on Selection Outcomes

Instrument	Procedure	Proposal	Selection	Prioritization	Selection	Prioritization
		(1)	(2)	(3)	(4)	(5)
		All projects			Proposed Projects only	
Male Household	Meeting	-0.35	0.53**	0.46*	1.05***	0.63**
		[0.270]	[0.230]	[0.257]	[0.354]	[0.283]
	Referendum	0.22	0.81***	0.66**	1.02***	0.63**
		[0.238]	[0.258]	[0.263]	[0.356]	[0.260]
t-Stat of Diff. btw. Types		[1.584]	[0.840]	[0.550]	[-0.057]	[0.002]
Male Focus Group	Meeting	0.82***	0.54**	0.75***	0.24	0.53*
		[0.314]	[0.242]	[0.260]	[0.301]	[0.296]
	Referendum	0.20	-0.04	-0.11	-0.30	-0.23
		[0.289]	[0.242]	[0.258]	[0.293]	[0.262]
t-Stat of Diff. btw. Types		[-1.498]	[-1.696]*	[-2.371]**	[-1.302]	[-1.912]*
Female	Meeting	0.07	0.47*	0.46	0.65*	0.61*
		[0.285]	[0.247]	[0.288]	[0.338]	[0.323]
	Referendum	0.18	0.11	-0.31	-0.01	-0.32
		[0.259]	[0.242]	[0.300]	[0.305]	[0.321]
t-Stat of Diff. btw. Types		[0.297]	[0.259]	[0.242]	[-1.469]	[-2.287]**
Project Type Fixed Effects		Yes	Yes	Yes	Yes	Yes
Number of Observations		865	1,100	1,110	635	817

Notes. All specifications are conditional fixed-effect logit regressions. Unit of observation is project type-village. Dependent variable assumes value one if project type is proposed, selected, or prioritized and zero otherwise. Each row corresponds to an interaction between a binary variable denoting the decision-making procedure and a binary variable denoting whether project type was preferred by the respective village group. Robust standard errors are clustered at the village level. *, **, and *** denote significance at 10%, 5%, and 1% levels.

Table 5: Effect of Combination of Election Type and Decision-Making Procedure on Allocation Outcomes

Instrument	Combination	Proposal	Selection	Prioritization	Selection	Prioritization
		(1)	(2)	(3)	(4)	(5)
		All projects			Proposed Projects only	
Male Household	Cluster + Meeting	-0.28	0.61*	0.41	1.33**	0.53
		[0.379]	[0.333]	[0.382]	[0.517]	[0.464]
	Cluster + Referendum	0.58*	1.31***	0.67*	1.46***	0.54
		[0.336]	[0.373]	[0.384]	[0.565]	[0.374]
	t-Stat of Diff. btw. Types	[0.507]*	[0.493]	[0.534]	[0.770]	[0.593]
	At-Large + Meeting	-0.46	0.43	0.47	0.76	0.65*
		[0.395]	[0.314]	[0.342]	[0.482]	[0.362]
	At-Large + Referendum	-0.11	0.36	0.66*	0.63	0.74**
		[0.331]	[0.353]	[0.369]	[0.464]	[0.366]
	t-Stat of Diff. btw. Types	[0.518]	[0.474]	[0.506]	[0.669]	[0.515]
Male Focus Group	Cluster + Meeting	0.52	0.19	0.46	0.10	0.43
		[0.446]	[0.333]	[0.375]	[0.468]	[0.452]
	Cluster + Referendum	-0.18	0.16	0.25	0.02	0.14
		[0.391]	[0.287]	[0.316]	[0.355]	[0.322]
	t-Stat of Diff. btw. Types	[0.599]	[0.435]	[0.489]	[0.584]	[0.559]
	At-Large + Meeting	1.15***	0.87**	1.04***	0.42	0.68*
		[0.413]	[0.340]	[0.361]	[0.402]	[0.402]
	At-Large + Referendum	0.48	-0.27	-0.53	-0.65	-0.60
		[0.416]	[0.405]	[0.423]	[0.474]	[0.419]
	t-Stat of Diff. btw. Types	[0.567]	[0.527]**	[0.553]***	[0.623]*	[0.579]**
Female	Cluster + Meeting	-0.04	0.50	0.59	0.95**	0.92**
		[0.379]	[0.329]	[0.387]	[0.471]	[0.456]
	Cluster + Referendum	0.38	-0.05	-0.41	-0.44	-0.55
		[0.362]	[0.328]	[0.426]	[0.474]	[0.451]
	t-Stat of Diff. btw. Types	[0.504]	[0.459]	[0.555]	[0.664]**	[0.611]**
	At-Large + Meeting	0.22	0.42	0.30	0.39	0.30
		[0.415]	[0.360]	[0.366]	[0.472]	[0.405]
	At-Large + Referendum	0.08	0.17	-0.33	0.34	-0.16
		[0.375]	[0.360]	[0.415]	[0.415]	[0.431]
	t-Stat of Diff. btw. Types	[0.548]	[0.506]	[0.526]	[0.639]	[0.552]
Project Type Fixed Effects		Yes	Yes	Yes	Yes	Yes
Number of Observations		865	1,100	1,110	635	817

Notes. All specifications are conditional fixed-effect logit regressions. Unit of observation is project type-village. Dependent variable assumes value one if project type is proposed, selected, or prioritized and zero otherwise. Each row corresponds to an interaction between a binary variable denoting the combination of election type and decision-making procedure and a binary variable denoting whether project type was preferred by the respective village group. Robust standard errors are clustered at the village level. *, **, and *** denote significance at 10%, 5%, and 1% levels.

Table 6: Effect of Selection Method on Villagers' Attitudes.

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Respondents Disagreed With Decision or Action of Village Leaders					
Survey	Male Respondents			Female Respondents		
Referendum	-0.016		-0.011	-0.055***		-0.044***
	[0.013]		[0.013]	[0.017]		[0.017]
Prioritized Project Preferred by Elite Only		0.074***	0.065***		-0.019	-0.025
		[0.026]	[0.024]		[0.027]	[0.024]
Types of selected projects	No	No	Yes	No	No	Yes
Observations	2,366	2,366	2,366	2,083	2,083	2,083
R-squared	0.06	0.06	0.07	0.11	0.10	0.12
Panel B	Respondent Attributes Positive Change in Economic Situation to Village Leaders					
	Male Respondents			Female Respondents		
Referendum	0.0001		-0.009	0.064**		0.059**
	[0.017]		[0.017]	[0.027]		[0.026]
Prioritized Project Preferred by Elite Only		-0.066**	-0.067**		-0.041	-0.05
		[0.028]	[0.028]		[0.048]	[0.044]
Types of selected projects	No	No	Yes	No	No	Yes
Observations	2,143	2,143	2,143	2,101	2,101	2,101
R-squared	0.16	0.16	0.17	0.13	0.13	0.14
Panel C	Respondent is Satisfied with Work of Village Leaders					
Survey	Male Respondents			Female Respondents		
Referendum	0.017**		0.018**	0.007		0.008
	[0.008]		[0.008]	[0.006]		[0.006]
Prioritized Project Preferred by Elite Only		-0.018	-0.011		-0.003	-0.003
		[0.012]	[0.011]		[0.014]	[0.013]
Types of selected projects	No	No	Yes	No	No	Yes
Observations	2,355	2,355	2355	2,135	2,135	2135
R-squared	0.08	0.08	0.09	0.04	0.04	0.04
Panel D	Household's Economic Situation Has Improved in Past 12 Months					
	Male Respondents			Female Respondents		
Referendum	0.062***		0.047**	0.024		0.017
	[0.023]		[0.023]	[0.026]		[0.026]
Prioritized Project Preferred by Elite Only		-0.086**	-0.071**		0.064*	0.067**
		[0.035]	[0.036]		[0.033]	[0.034]
Types of selected projects	No	No	Yes	No	No	Yes
Observations	2,366	2,366	2366	2,140	2,140	2,140
R-squared	0.13	0.13	0.13	0.15	0.15	0.15

Notes. Robust standard errors are clustered at the village level. *, **, and *** denote significance at 10%, 5%, and 1% levels.

Table 7: Effect of Election Type on CDC Member Behavior During Consultation Meetings

	Share of Male Council Members Who Spoke in Favor of a Project		Share of Female Council Members Who Spoke in Favor of a Project	
At-Large	0.087**	0.049	0.065*	0.020
	[0.042]	[0.057]	[0.033]	[0.017]
District Dummies	Yes	No	Yes	No
Quadruple Dummies	No	Yes	No	Yes
Observations	287	287	192	192

Notes. Results based on data collected in 63 villages by decision-making process monitors. Unit of observation is project-village. Robust standard errors are clustered at the village level. *, **, and *** denote significance at 10%, 5%, and 1% levels.

Appendix

Table A1: Ex-Ante Distribution of Project Preferences of Village Groups

Panel A: Male Head of Household				
	Village Meeting	Referendum	At-large Elections	Cluster Elections
Drinking Water	30.1%	28.7%	30.5%	28.3%
Irrigation	12.6%	12.9%	10.9%	14.6%
Schools	15.9%	18.2%	18.5%	15.6%
Health Facilities	12.9%	14.3%	11.5%	15.6%
Roads and Bridges	16.8%	13.2%	15.8%	14.2%
Electricity	6.1%	6.4%	6.4%	6.1%
Other	5.6%	6.5%	6.4%	5.6%
Observations	1194	1193	1198	1189
p-Value for χ^2 Test	0.162		0.036	
Panel B: Male Focus Group				
	Village Meeting	Referendum	At-large Elections	Cluster Elections
Drinking water	13.5%	14.4%	16.4%	12.4%
Irrigation	14.7%	15.0%	12.9%	17.1%
Schools	14.7%	12.5%	12.6%	12.5%
Health facilities	11.7%	12.9%	13.3%	12.6%
Roads and Bridges	10.2%	11.2%	11.1%	11.4%
Electricity	21.4%	22.6%	23.3%	21.9%
Other	13.5%	14.4%	16.4%	12.4%
Observations	1007	997	1001	1003
p-Value for χ^2 Test	0.537		0.001	
Panel B: Female				
	Village Meeting	Referendum	At-large Elections	Cluster Elections
Drinking Water	43.6%	38.7%	41.4%	40.9%
Irrigation	2.8%	3.9%	3.0%	3.7%
Schools	13.5%	14.9%	12.8%	15.7%
Health Facilities	13.5%	16.2%	14.7%	15.0%
Roads and Bridges	5.2%	7.7%	6.1%	6.8%
Electricity	8.2%	5.4%	8.6%	4.9%
Other	13.3%	13.2%	13.4%	13.1%
Observations	853	857	869	841
p-Value for χ^2 Test	0.014		0.053	

Table A2: Ex-Ante Preferences of Sub-Samples of Male Household Respondents

	Low Asset	High Asset	No Relatives in Village Leadership	Relatives in Village Leadership	Illiterate	Literate	Non-Landowner	Landowner
Drinking Water	29.6%	30.0%	28.2%	26.8%	32.0% ***	24.4%	28.4%	30.5%
Irrigation	13.2%	14.0%	14.0%	13.1%	13.1%	15.0%	13.8%	13.7%
Schools	14.4% **	16.9%	17.1%	15.5%	14.7% ***	18.5%	14.6%	16.5%
Health Facilities	14.5%	13.1%	14.8%	12.9%	13.8%	13.4%	14.6%	13.1%
Roads and Bridges	15.0%	13.4%	13.8%	14.6%	13.6%	15.3%	14.1%	14.1%
Electricity	6.6%	6.1%	5.5% ***	10.1%	6.1%	6.6%	5.9%	6.5%
Other	6.8%	6.5%	6.6%	7.0%	6.6%	6.7%	8.6%	5.6%
Observations	2,139	2,828	3,492	921	3,556	1,376	1,649	3,218

Notes. The test compares the means of the two related sub-groups of male heads of household subsamples. *, **, and *** denote significance at 10%, 5%, and 1% levels.

Table A3: Summary of Coverage and Composition of Surveys

	Baseline Survey (September 2008)	Follow-Up Survey (May -October 2009)
Male Household Questionnaire	4,895 in 500 villages	4,666 in 474 villages
Male Focus Group Questionnaire	5,334 participants in 500 villages	3,197 in 469 villages
Female Focus Group Questionnaire	3,670 participants in 406 villages	2,792 in 424 villages
Female Household Questionnaire	Not Administered	4,234 in 431 villages
Female Individual Questionnaire	3,398 in 406 villages	Not Administered

Table A4: Number of Proposed and Selected Projects

	Proposed Projects				Selected Projects			
	Obs	Mean	Med.	Std. Dev.	Obs	Mean	Med.	Std. Dev.
Total	235	5	5	1.9	234	2.7	3	1.3
Cluster Election	118	5.1	5	1.9	118	2.7	3	1.2
At-Large Election	117	5	5	2	116	2.8	3	1.4
Consultation Meeting	119	5	5	1.8	119	2.6	3	1.2
Referendum	116	5.1	5	2	115	2.9	3	1.5
Cluster and Meeting	59	4.9	5	1.8	59	2.6	2	1.1
Cluster and Referendum	59	5.4	5	2	59	2.8	3	1.3
At-Large and Meeting	60	5	5	1.9	60	2.6	3	1.2
At-Large and Referendum	57	4.9	5	2	56	3	3	1.6

Table A5: Number of Votes in Referendum

	Total Votes				Male Votes			Female Votes		
	Obs.	Mean	Med.	Std. Dev.	Mean	Med.	Std.Dev.	Mean	Med.	Std.Dev.
					Selected Projects					
Total	330	64.1	36	76.9	40.5	26	50.3	28.9	13	43.4
Cluster	166	64.9	43.5	66	40.6	28	46.1	30	16.5	34.5
At-large	164	63.3	32	86.9	40.3	25	54.3	27.8	9	50.7
					Projects Not Selected					
Total	269	16.3	5	34.6	9.7	3	17.9	7.2	0	18.7
Cluster	154	15.1	4	35.1	9.1	2.5	18	6.8	0	19.6
At-large	115	17.9	6	34	10.5	3	17.9	7.7	0	17.7

Notes: Differences between means for election types are not statistically significant at 10% level.

Table A6: Participation by Decision-Making Procedure and Election Type

	Villagers				CDC Members			
	Obs.	Mean	Med.	Std. Dev.	Obs.	Mean	Med.	Std. Dev.
				Consultation Meeting				
Total	107	149.8	113	132.2	116	15.6	14	7.0
Cluster Election	54	141.3	105	111.6	57	16.2	14	7.3
At-Large Election	53	158.4	121	151.0	59	14.9	12	6.7
				Referendum				
Total	116	251.2	213	161.7				
Cluster Election	60	248.6	210	153.5				
At-Large Election	56	254.1	223	171.5				

Notes: Differences between means for election types are not statistically significant at 10% level.

Table A7:: Effect of Combination on Allocation Outcomes for Proposed Projects

Instrument	Combination	Selection	Prioritization
Male Household	Cluster + Meeting	1.33** [0.530]	0.53 [0.466]
	Cluster + Referendum	1.46*** [0.565]	0.54 [0.391]
	At-Large + Meeting	0.76 [0.476]	0.65* [0.364]
	At-Large + Referendum	0.63 [0.502]	0.74** [0.339]
p-Value for Equality of Coefficients		0.61	0.98
Male Focus Group	Cluster + Meeting	0.10 [0.466]	0.43 [0.464]
	Cluster + Referendum	0.02 [0.324]	0.14 [0.328]
	At-Large + Meeting	0.42 [0.392]	0.68* [0.391]
	At-Large + Referendum	-0.65 [0.485]	-0.60 [0.401]
p-Value for Equality of Coefficients		0.40	0.13
Female Focus Group	Cluster + Meeting	0.95** [0.463]	0.92** [0.458]
	Cluster + Referendum	-0.44 [0.472]	-0.55 [0.467]
	At-Large + Meeting	0.39 [0.469]	0.30 [0.405]
	At-Large + Referendum	0.34 [0.421]	-0.16 [0.480]
Project Type Fixed Effects		Yes	Yes
Number of Observations		635	817

Notes. All specifications are conditional fixed-effect logit regressions. Unit of observation is project type-village. Dependent variable assumes value one if project type is proposed, selected, or prioritized and zero otherwise. Each row corresponds to an interaction between a binary variable denoting the combination of election type and decision-making procedure and a binary variable denoting whether project type was preferred by the respective village group. Robust standard errors are clustered at the village level. *, **, and *** denote significance at 10%, 5%, and 1% levels.

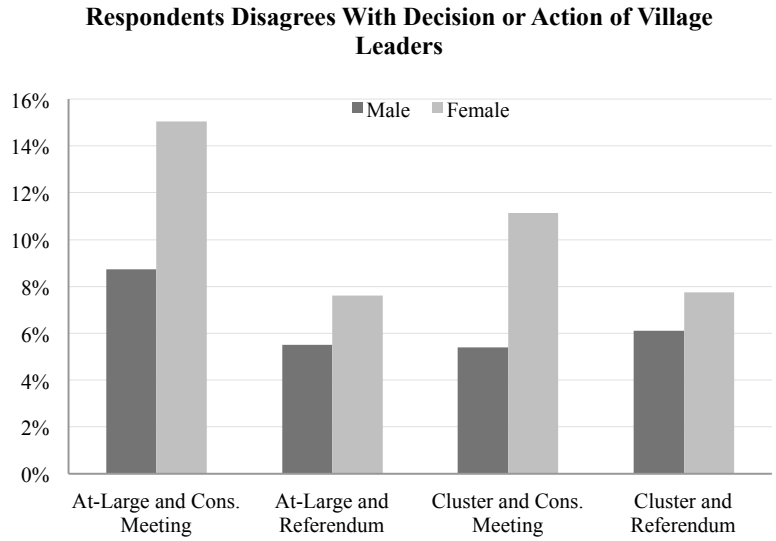
Table A8: Correlation of Preferences among Different Groups of Villagers

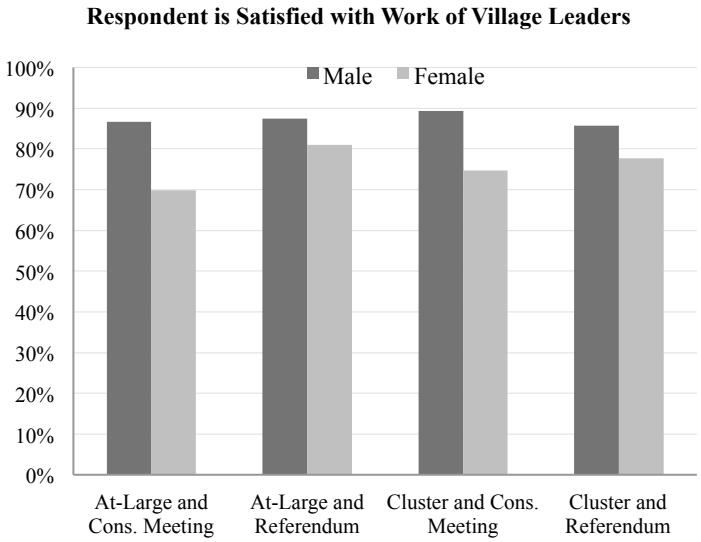
	Male Household	Elite	Elite Elected to CDC	Female Individual	Female Focus Group	No Relatives in Village Council	Relatives in Village Council	Does Not Attend Village Council Meetings	Attends Village Council Meetings	Illiterate	Literate	Low Level of Assets	High Level of Assets	Non-Landowner
	Full Sample					Sub-Samples of Male Household								
Elite	0.23													
Elite Elected to CDC	0.23	0.55												
Female Individual	0.27	0.13	0.16											
Female Focus Group	0.26	0.17	0.15	0.30										
No Relatives in Village Council	0.89	0.23	0.23	0.26	0.24									
Relatives in Village Council	0.59	0.25	0.23	0.26	0.22	0.47								
Does Not Attend Village Council Meetings	0.76	0.23	0.23	0.29	0.25	0.82	0.48							
Attends Village Council Meetings	0.66	0.24	0.24	0.23	0.20	0.58	0.78	0.46						
Illiterate	0.83	0.22	0.22	0.30	0.24	0.83	0.54	0.73	0.60					
Literate	0.61	0.21	0.22	0.23	0.18	0.56	0.53	0.53	0.54	0.43				
Low Level of Assets	0.64	0.26	0.23	0.30	0.23	0.61	0.51	0.61	0.52	0.65	0.46			
High Level of Assets	0.76	0.21	0.22	0.23	0.24	0.75	0.56	0.67	0.63	0.68	0.61	0.43		
Non-Landowner	0.66	0.22	0.22	0.26	0.21	0.60	0.49	0.58	0.54	0.64	0.49	0.57	0.58	
Landowner	0.78	0.24	0.23	0.27	0.25	0.76	0.57	0.71	0.61	0.72	0.56	0.61	0.69	0.43

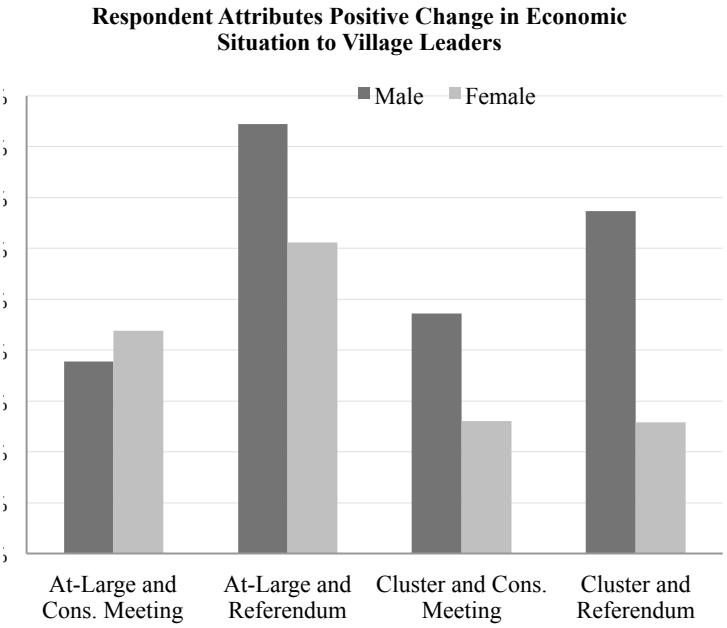
Table A9: Effect of Decision-Making Process on Perceptions, Controlling for Selected Project

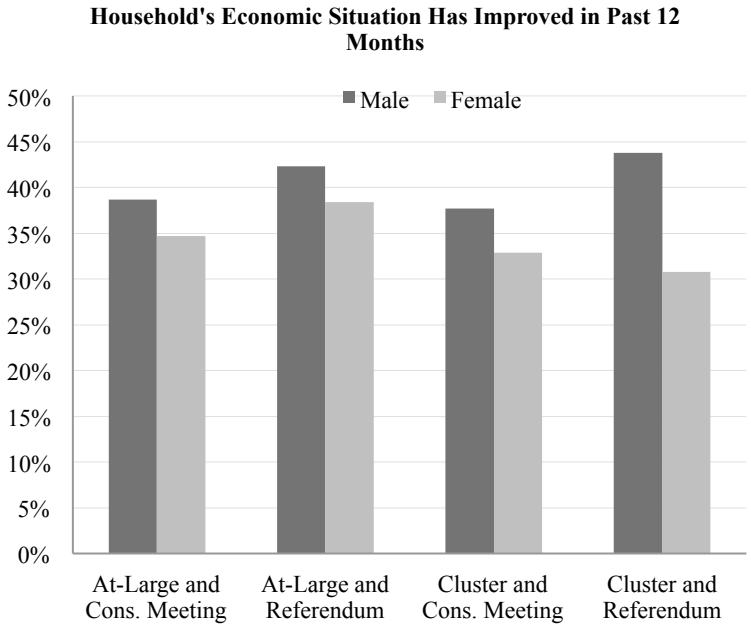
	Disagreed With Action of Village Leaders				Attributes Positive Change to Village Leaders			
	Male	Male	Female	Female	Male	Male	Female	Female
Referendum	-0.013	-0.014	-0.044**	-0.054***	-0.003	-0.009	0.064**	0.059**
	[0.013]	[0.013]	[0.017]	[0.019]	[0.016]	[0.017]	[0.028]	[0.027]
Three Dummies for Selected Project being Preferred by Village Group	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Variables for Project Type	No	Yes	No	Yes	No	Yes	No	Yes
Observations	2,366	2,366	2,083	2,083	2,143	2,143	2,101	2,101
	Satisfied with Work of Village Leaders				Perceives Economic Situation to Have Improved			
	Male	Male	Female	Female	Male	Male	Female	Female
Referendum	0.016**	0.018**	0.008	0.008	0.056**	0.048*	0.022	0.013
	[0.008]	[0.008]	[0.006]	[0.006]	[0.025]	[0.025]	[0.027]	[0.027]
Three Dummies for Selected Project being Preferred by Village Group	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Variables for Project Type	No	Yes	No	Yes	No	Yes	No	Yes
Observations	2,355	2,355	2,135	2,135	2,366	2,366	2,140	2,140

Figure A1: Villagers' Attitudes by Election Type and Selection Method









Effect of District Magnitude on Resource Allocation

To test for the effect of the election type we estimate a similar conditional fixed-effects logit:

$$Pr\left(\mathrm{Y}_{\boldsymbol{vp}}|Pref_{pvg}, S_{iv}, \alpha_p, \beta_{ig}\right) = \Lambda\left(\alpha_p + \sum_{i=1}^{2}\sum_{g=1}^{3} Pref_{pvg} \times E_{iv} \times \beta_{ig}\right)$$

where E_{iv} is a dummy variable which equals 1 if village v selected projects using election type $i \in \{At-large; Cl\square ster\}$ and 0 otherwise. To test whether there is a difference between different methods we test the hypothesis of the equality of β_{ig} across values of *i*. Standard errors are clustered at the village level.[31]

Next we look at the effect of election method on the alignment between stated *ex ante* preferences of different groups of villagers and project choice. The results of the estimation, reported in Table A10, suggest that male elite preferences have a statistically significant effect on the choice of proposed projects only in at-large villages, although the difference in the estimated influence of male elites between at-large villages and cluster villages is not statistically significant. With regard to selected and prioritized projects, elite preferences do not have a significant effect regardless of election method.

As in the project selection context, preferences of male villagers do not have a statistically significant effect on the choice of proposed projects, but have an important effect on the choice of selected and prioritized projects. The effect is there irrespective of election method. Preferences of the female respondents have no significant effect on the choice of the proposed, selected or prioritized projects regardless of election type.

[31] Election type is randomly prescribed. According to official documentation, there were no cases of non-compliance with assignments. However, monitoring data indicated that, in 18 out of 235 villages, the method of election differed from that prescribed. Intention-to-treat (ITT) effects are estimated using the prescribed treatment status, rather than what may have been the actual method of election. In the event of cases of non-compliance, the ITT estimates may underestimate the true effects.

Table A10: Effect of Election Type on Resource Allocation Outcomes

Instrument	Election Type	Proposal	Selection	Prioritization
Male Household	Cluster	0.10 [0.247]	0.90*** [0.257]	0.52* [0.283]
	At-Large	-0.28 [0.253]	0.39* [0.232]	0.60** [0.247]
t-Stat of Diff. btw. Types		[1.083]	[1.526]	[0.221]
Male Focus Group	Cluster	0.23 [0.307]	0.15 [0.212]	0.29 [0.257]
	At-Large	0.81** [0.341]	0.38 [0.260]	0.40 [0.261]
t-Stat of Diff. btw. Types		[1.266]	[0.724]	[0.297]
Female Individual	Cluster	0.13 [0.281]	0.26 [0.240]	0.12 [0.310]
	At-Large	0.14 [0.283]	0.32 [0.239]	0.06 [0.268]
t-Stat of Diff. btw. Types		[0.021]	[0.161]	[0.154]
Project Type Fixed Effects		Yes	Yes	Yes
Number of Observations		865	1,100	1,110

Notes. All specifications are conditional fixed-effect logit regressions. Unit of observation is project type-village. Dependent variable assumes value one if project type is proposed, selected, or prioritized and zero otherwise. Each row corresponds to an interaction between a binary variable denoting the election type and a binary variable denoting whether project type was preferred by the respective village group. Robust standard errors are clustered at the village level. *, **, and *** denote significance at 10%, 5%, and 1% levels.