Experience of Inclusive Institutions and the Value of Participation: Experimental Evidence from Bangladesh

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Abstract

A prerequisite for institutional development is that citizens prefer the new institutions to the old ones. However, it is unclear how citizens value different institutional settings and how these values evolve. This paper advances our understanding of institutional development by answering two questions: If given a choice, would citizens choose to adopt democratic and inclusive institutions in order to take collective decisions? Does experiencing inclusive institutions affect how citizens value them? I implement a novel lab-in-the-field experiment, which provides the first incentivized measure of the value that citizens place on taking collective decisions via a participatory process. Then, exploiting randomly assigned exposure to inclusive institutions through a Community-Driven Development (CDD) program, I provide the first causal evidence over whether experiencing such institutions changes citizens' evaluations of participatory governance. My results indicate that citizens prefer taking collective decisions by an inclusive process, and these positive evaluations are reinforced by the exposure to the CDD program. The overall effect is driven primarily by an increase in the value that citizens attach to inclusive decision-making practices per se, above and beyond instrumental considerations. The evidence presented in this paper elucidates one potential mechanism for institutional development.

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1 Introduction

A broad consensus holds that institutions are a fundamental pillar of economic prosperity. Strengthening governance is therefore now a top priority in developing countries (World Bank, 2017).[1] However, there remains much to learn about how institutions form and develop, and how change in institutions can be fomented.[2] One important open debate among both policy-makers and researchers concerns whether or not exposure to democratic or inclusive institutions can lead to sustainable institutional changes.[3]

In order to advance this debate it is crucial to understand how experience with institutions affect how citizens value them.[4] How citizens value different institutions is ex-ante ambiguous, because different institutional settings imply different costs and benefits for agents.[5] Further, a prerequisite for sustainable institutional change is that citizens prefer the new institutions to the old ones: because they like them intrinsically, because they think they work better, or both (Casey, 2018).[6] In this paper, I combine a novel lab-in-the-field experiment and a temporary exogenous shock to local institutions in order to answer the following questions: If given a choice, would citizens choose to adopt democratic and inclusive institutions in order to take collective decisions? Does experiencing inclusive institutions affect how citizens value them?

Learning about how citizens value institutions, and how these values change in response to experience of institutions, is difficult for two reasons. First, measuring socio-political values is methodologically challenging. Previous research has focused on stated preferences or realized behaviors and institutions. The latter can be more easily observed, but they do not necessarily reflect values and preferences.[7] Subjective survey measures provide some

[1] For example, the World Bank has launched in July 2018 a $12 million fund to increase government transparency, improve accountability and strengthen citizen engagement and government responsiveness.

[2] Attempts to elaborate unifying theories of institutional development are complicated by its many "irregularities" e.g. the evolution of democracies into autocracies (Acemoglu and Robinson, 2017; Acemoglu et al., 2013), or the failure of political reforms to deliver expected outcomes (Acemoglu and Robinson, 2008; Anderson et al., 2015).

[3] For example, Casey et al. (2018) show that experts in public policy and academia held very divergent prior beliefs over the effect of programs designed to make local institutions more inclusive and democratic on actual institutional change in the long-run.

[4] Recent theoretical contributions model the two-way interplay between values and institutions and how they coevolve: values and norms influence policies and institutions, whereas policies and institutions in turn model values and norms (Aghion et al., 2010; Besley and Persson, 2018).

[5] For example, democratic systems may deliver better socio-economic outcomes or encourage cooperative behaviors (Dal Bó et al., 2010), and citizens might appreciate living in a democracy per se and the possibility to express their view on issues of common interest (Coate et al., 2008). At the same time, well functioning democracies require well-informed voters (Banerjee et al., 2011; Ferraz and Finan, 2008; Stromberg, 2004) and citizens bear the costs of participating in elections.

[6] A second requirement is that citizens possess the requisite political will to change existing power dynamics (Casey, 2018).

[7] For example, individual values and preferences may not translate into realized behaviors if the latter are

evidence, but respondents may – consciously of unconsciously – refrain from truthfully reporting their views and opinions (Bertrand and Mullainathan, 2001), for example because of social desirability concerns. The risk of reporting bias is particularly severe in the context of initiatives that promote the adoption of democratic and inclusive practices (Mansuri and Rao, 2013). Second, it is difficult to provide a casual link between experience and citizens' value of institutional regimes. The institutions that citizens have previously been exposed to may themselves reflect preferences and institutions and values coevolve. A further concern is that institutional changes are often embedded within broadly transformative economic, social and political reforms, making it hard to isolate the direct effect of experiencing new institutions on how citizens value them.

My study resolves both these challenges. First, I implement a novel lab-in-the-field experiment which provides the first incentivized measure of how citizens value taking collective decisions via inclusive institutions. Then, exploiting randomly assigned exposure to inclusive institutions through a Community-Driven Development (CDD) program, I provide the first causal evidence over whether exposure to such institutions changes these values.[8]

In order to provide empirical evidence on citizens' value of inclusive institutions and its evolution with experience of institutions, my paper focuses on one specific institutional setting: participatory decision-making. A central feature of this approach is that decisions regarding a community or a group are delegated to the community or the group themselves, and typically taken via debates and deliberations during public meetings. Participatory governance is largely widespread, for example in direct democracies (e.g. town meetings), as a way to deliver development programs, or for decentralization reforms.[9] The lab-in-the-field experiment elicits agents' willingness-to-pay (WTP) for participatory decision-making relative to an alternative option designed to have the same unconditional expected monetary outcome as the participatory process. The participatory process requires participants to discuss face-to-face in an unregulated negotiation process in groups of three, and take distributive choices for the group by unanimous consensus. The alternative procedure consists of receiving the distributive choice of another group, randomly extracted within the

influenced by social concerns or otherwise constrained.

[8]The non-descriptive analysis is based on the pre-analysis plan submitted to the AEA-RCT registry: AEARCTR-0001809.

[9]In direct democracies, citizens directly express their views on laws and policies, often during town or village meetings (Hinnerich and Pettersson-Lidbom, 2014). Participatory governance has emerged as one of the dominant approaches in the development sector. Over the past few decades, development projects based on community participation have received a massive injection of funding (for example the World Bank currently supports 190 active CDD projects in 78 countries, for a total value of $19.2 billion (Wong and Guggenheim, 2018)), and international aid agencies increasingly condition access to their funds on the adoption of beneficiary participation components (Banerjee et al., 2010). Decentralization reforms are often based on deliberative fora intended to actively engage stakeholders in community decision-making (Ban et al., 2012; Besley et al., 2005).

same community. The elicitation procedure is fully incentivized: agents' WTP for participatory decision-making determines how group decisions will be taken in the last stage of the experiment, with approximately one-third of the Bangladeshi rural daily wage at stake.

I find that taking decisions via an inclusive process is preferred by the large majority of participants in my sample, and 47% of agents have a positive WTP for participatory decision-making. However, support for participatory decision-making is highly polarized, with 26% of participants willing to pay 8% or more of Bangladeshi rural daily wage for participatory decision-making, and 22% of participants willing to forgo the same amount or more to avoid it. My results also indicate that selection into participatory decision-making is highly selected: subjects who choose to participate are those with greater influence over decisions (e.g. leaders and those with higher education) and lower costs of participation (e.g. men and the youth).

For the policy evaluation, I use an exogenous shock to local institutions through a CDD program. The CDD program is a water-safety intervention with strong participatory components (Cocciolo et al., 2018a). The CDD program assigns decision-making powers to communities that otherwise have no jurisdiction over the provision of local public goods or services, and therefore can be interpreted as a participation experience. The community decision-making process imposes rules which ensure that everyone is guaranteed the *de jure* right to express his/her voice, providing first-hand exposure to an inclusive institutional arrangement. The CDD program is randomly assigned to eligible communities, meaning that communities assigned to the CDD program are statistically identical to communities assigned not to receive the program. Importantly, the CDD program is limited in time and scope. Exposure to the CDD program can be interpreted as a learning experience of the material and non-material costs and benefits of inclusive institutions (e.g. costs of participation; households' access to safe water), but it has no impact on political or socio-economic dimensions that can be directly related to how citizens value institutions. These features allow me to estimate the causal effect of this temporary exogenous shock to local institutions on WTP for participatory decision-making.[10]

I find that the value that citizens associate to participatory decision-making is significantly larger in communities that experienced inclusive institutions through the CDD intervention. This effect is primarily driven by a 10 percentage point increase in the share of share of citizens that strongly prefers inclusive practices. The lab-in-the-field experiment design allows me

[10]In this paper I follow an emerging literature that adopts lab-in-the-field experiments as a tool to develop better measures to evaluate the impact of development programs on social norms, values and preferences (e.g. Attanasio et al. (2015) and Polan (2016)), including Fearon et al. (2009), Fearon et al. (2015), Avdeenko and Gilligan (2015) in the context of participatory governance. While these previous contributions rely on standard experimental measures of social cohesion and social capital, in my project I introduce a novel measure of procedural utility.

to separately estimate the effect of the CDD program on the instrumental and intrinsic value of participatory decision-making. I find that the expected monetary gain from taking part in decision-making is smaller in treated than in control communities, and therefore the main effect is driven entirely by an increase in the value that citizens place on participatory processes per se, above and beyond instrumental motives.

The exposure to inclusive institutions can affect how citizens value them via three channels: it might lead to efficiency gains for future public consultations with similar characteristics; it might induce citizens to update their beliefs on the benefits and costs of these types of institutional arrangements; or it might generate a taste for inclusive practices. Being exposed to the CDD program does not change the quality of the bargaining outcomes – in terms of realized inequality or total contributions in public good games – nor the negotiation time, but it is associated to a lower risk of conflicts, therefore reducing the psychological costs and efforts associated to a face-to-face negotiation dynamics. Agents in treated communities are less overconfident on their ability to influence collective decisions in their favor, and therefore they report lower expected monetary outcomes from participating in decision-making and lower negotiation skills. Suggestive evidence indicates that the effect of the CDD program on the value of participation does not vary with the quality of community decisions or the welfare impact of the intervention, but it is larger in communities were the decision-making process was more actively participated. Overall, these results suggest that the main effect is not driven by improvements in or learning about the decision outcomes of inclusive institutions, but rather by learning about the intrinsic qualities of participatory practices and how to reduce the non-monetary costs associated to them (e.g. conflicts).

My paper is related to a number of literatures. It contributes most generally to the broad literature on the formation and development of institutions, and in particular how citizens' values are shaped by the institutional setting they are exposed to. One limitation is that the existing evidence focuses on stated preferences or realized behaviors.[11] A second concern is that previous papers often rely on "institutional shocks" from the past history that had a transformative impact on many aspects of the political, social and economic environment, such as in the case of transition from socialism (Aghion et al., 2010) or communism in East Germany (Alesina and Fuchs-Schündeln, 2007) or North Korea (Kim et al., 2017). Understanding the effects of institutions on citizens' values, other than intellectually intriguing, can have important policy implications. For example, exposure to democratic or inclusive

[11]For example, (Aghion et al., 2010), (Alesina and Fuchs-Schündeln, 2007) and (Kim et al., 2017) use survey measures that capture citizens' attitudes and trust towards the state. Other papers instead rely on political preferences and turnout in relation to past voting experience (Fujiwara et al., 2016) or to the exposure to democratic regimes (Fuchs-Schundeln and Schundeln, 2015), violent conflicts (Blattman, 2009) or events building national identity and civic duty (Madestam and Yanagizawa-Drott, 2011).

institutions can have a more sustainable impact on citizen's choices and behaviors if these changes are mediated by a shift in preferences, values and norms.[12] In my paper I provide the first direct causal evidence on the link between experiencing democratic and inclusive institutions and the value that citizens attach to them. I also take advantage of a shock to local institutions which is limited in time and scope, with no impact on political or socio-economic dimensions that can be directly related to how citizens value institutions.

Previous literature on procedural utility has primarily focused on individual decision-making.[13] The existing evidence does not easily generalize to the case of group decision-making, which – especially in case of face-to-face unregulated public negotiations – entails a different set of potential costs and benefits for participants.[14] Using ex-post survey measures of satisfaction, previous studies provide suggestive evidence on whether and how citizens evaluate that a development program is implemented via a deliberative and participated process (Alatas et al., 2012; Beath et al., 2017; Madajewicz et al., 2017; Olken, 2010). In a recent review, Casey (2018) stresses the need to better understand the potential participation costs of participatory initiatives. My paper provides the first incentivized measure of the net value that citizens attach ex-ante to different decision-making processes in the context of group deliberations.

Finally, my paper relates to the literature on the effect of participatory initiatives on local institutions. By encouraging participation and dialogue between social groups, CDD programs are often promoted as a potential channel to build social cohesion and strengthen democratic values and practices (Mansuri and Rao, 2013).[15] However, exposure to CDD

[12] A large body of research in political science and sociologyholds that democratic values play a key rule in inducing and supporting democratic institutions, for example because democratic attitudes can sustain citizens' willingness to struggle for democracy and cumulated values can increase the stability of democracies (Besley and Persson, 2018; Persson and Tabellini, 2009).

[13] The economic concept of procedural utility was first advanced by Frey et al. (2004) and Frey and Stutzer (2005). The existing evidence in the context of individual decision-making indicates that agents evaluate the decision processes per se (Bolton et al., 2005), their voting rights (Güth and Weck-Hannemann, 1997), their autonomy and decision power (Bartling et al., 2014; Fehr et al., 2013; Neri and Rommeswinkel, 2014; Owens et al., 2014). Rather than being a fixed construct, demand for agency is influenced by social norms, for example gender norms (Afzal et al., 2018).

[14] Deliberative processes might create a sense of legitimacy for resource allocation, and beneficiaries often seem to value being consulted and involved. However, the exercise of voice and choice can be costly, for instance because of the opportunity cost of the time dedicated to participation, the psychological costs of conflictual deliberations, or the material/social costs incurred when citizens take positions that are contrary to the interests of powerful groups (Mansuri and Rao, 2004).

[15] Additionally, community participation is often proposed as a method to improve the quality of development programs and service delivery. Community participation can effectively incorporate local knowledge into planning, implementation and monitoring of interventions (Alatas et al., 2012), generate accountability for service delivery (Björkman et al., 2017; Björkman and Svensson, 2009; Reinikka and Svensson, 2011; World Bank, 2014) and reinforce stakeholders' sense of ownership over project assets (Alatas et al., 2012). However, successful experiences of community mobilization are counterbalanced by projects with limited welfare impacts (Banerjee et al., 2010; Khwaja, 2004; Olken, 2007) or whose outcomes are distorted in favor

programs does not seem to affect local governance (Casey et al., 2012; Humphreys et al., 2012; van der Windt et al., 2018).[16] Fearon et al. (2015) and Casey et al. (2018) argue that exposure to CDD programs seems create "zombie" institutions that exist on paper but in practice remain unadopted.[17] As stressed in Casey (2018), it remains to be explained why CDD programs, despite being effective in bringing public goods to poor communities, fail to induce local institutional changes. One potential explanation is simply that the temporary experience of democratic and inclusive institutions does not increase the value that citizens attach to them. In this paper I show that this hypothesis appears unlikely to explain the absence of changes in local institutions.

The findings of this paper elucidate one potential mechanism for institutional development. Citizens demand being involved in decision-making for their community, and this can encourage initiatives from governments and international organizations aimed at promoting community participation and decentralization reforms. While previous evidence indicates that participatory initiatives have no impact on local governance, I find that experiencing inclusive institutions does strengthen the value that citizens attach to them. What can explain these supposedly contrasting results? One possible explanation is that, while experiencing inclusive institutions increases the value that citizens attach per se on being involved in decision-making, it also induces more realistic expectations on the personal benefits from participation, with an ambiguous effect on the overall demand for institutional reforms. An alternative explanation is that the exposure to CDD programs can change social values for participatory practices in receiving communities, but these changes will not necessarily translate into realized institutional reforms, as institutions are persistent and constrained by the existing social and political structures within a society. This explanation would have significant policy implications, as it would suggest that interventions aimed at fostering institutional development should focus on relaxing such potential constraints.

In the remaining of the paper I first describe the data collection (Section 2) and the sample (Section 3). In Section 4 I illustrate the design of the lab-in-the-field experiment and the details of the WTP elicitation, and in Section 5 I describe my novel measure of value of

of local elites (Alatas et al., 2013; Labonne and Chase, 2009) or wealthier communities (Baird et al., 2013). Recent reviews agree that the available evidence indicates that CDD effectively delivers public goods at relatively low cost (Casey, 2018; White et al., 2018).

[16] Exposure to CDD programs does have significant effects on self-reported pro-social values and norms (Avdeenko and Gilligan, 2015; Ibanez and Rao, 2005; Labonne and Chase, 2011), but it is unclear how these findings are driven by experimenter demand effects.

[17] For example, Beath et al. (2013) find that local elected councils function effectively several years after their creation as part of a CDD program in Afghanistan, but communities rely on them to take collective decisions only when specifically called upon by external agencies. Similarly, Casey et al. (2018) shows that communities that received a CDD program in Sierra Leone are more likely to have a village development committee, but this committees are not being used for much in practice.

participatory decision-making. Section 6 presents the CDD program and explains why it can be used as a temporary exogenous shock to local institutions. In Section 7 I test whether the experience of inclusive institutions through the CDD program had an impact on the value of participatory decision-making measured via the lab-in-the-field experiment, and discuss potential mechanisms. Section 8 concludes with policy implications and avenues for future work.

2 Data

The project relies on data collected during a baseline household survey, a baseline water source census, the implementation of the CDD program and the lab-in-the-field experiment (Figure A.1). The set up allows to link individual data from the lab-in-the-field experiment to detailed information collected within the CDD program during the baseline survey and during the project implementation. The richness of the data allows me to explore the mechanisms that might drive the effect of the CDD program on the value that people place on participatory decision-making.

Baseline data collection

The baseline data collection was carried out between August 2015 and February 2016, before the randomization of the CDD treatment status and before the implementation of the intervention. The household survey includes information on household's composition, health, wealth, network, leadership and participation in the life of the community. I rely on this information in order to stratify the sample of participants to the lab-in-the-field experiment by household leadership status (Section 3), and for estimating heterogeneous treatment effects.

CDD program

The CDD intervention started in October 2015 and was completed by August 2017. I rely on rich implementation data in order to characterize the dynamic of community discussion, the degree of participation of each household in the community debate and deliberation, and the distribution of benefits from the program within the community. This data allows me to provide suggestive evidence on whether the effect of the CDD program on the value of participatory decision-making is driven by the characteristics of the community discussion, the quality of community decisions or the welfare impact of the intervention.

Lab-in-the-field experiment

The lab-in-the-field experiment was run between December 2016 and May 2017.[18] The experiment was always conducted after decisions regarding the CDD program were taken by the community during the community meetings.[19] Participants successfully invited to the experiment complete an individual survey on social values and attitudes (Appendix D.4). During the experimental session, a team of six enumerators record the outcomes from each task and the time required to each group/player to complete each task, as well as their observations on group dynamics, their perceived level of conflict within the group and individual bargaining skills. After the experimental session and before payments are disbursed, participants complete a short individual questionnaire on understanding of the tasks and satisfaction (Appendix E.5).

3 Sample

3.1 Selection of communities

The communities enrolled in the CDD programs were 171, 42 in the control and and 129 in the treated group. Because of budget constraints, I carried out the lab-in-the-field experiment only in 96 communities (35 control and 61 treated communities).[20]

I select the villages where to conduct the lab-in-the-field experiment primarily via an optimization procedure that maximizes the balance between the treatment and the control group.[21] The main rationale for this optimization procedure is small sample bias reduction. In Appendix C, I describe the optimization procedure in details, and I report the set of pre-intervention observables used to test the balance between the treatment and control group. As ensured by this optimization procedure, treated and control communities selected for the lab-in-the-field experiment are balanced (Table A19). As indicated in the pre-analysis plan, in one of the robustness checks I correct standard errors in order to take into account this

[18] Every day we conduct the lab-in-the-field experiment in a different community. We work sequentially in nearby communities, and I do not expect information about the lab to spread across communities through existing social networks so rapidly.

[19] In order to avoid possible confounding effects, I try to run the experiment after the full implementation of the CDD program: after the community failed to raise contributions or after the tubewell installation was complete. In only 7 communities the lab-in-the-field experiment was conducted before the tubewell installation work was completed.

[20] The lab-in-the-field experiment was run between December 2016 and May 2017. Because the CDD program was scheduled to be implemented in the Gaibandha District in 2017, I carried out the lab-in-the-field experiment only in the Bogra District.

[21] I follow an optimization algorithm that selects as best sample – out of 1,000 random samples – the one with the highest pvalue from the F-test on the balance of pre-intervention observables between treated and control villages. The random sampling procedure respects the stratification by Union of the CDD intervention, and it is balanced on contribution approaches.

sample selection procedure.

The sample departs from this selection rule in two respects. One, I excluded six communities where he CDD program failed because of hydro-geological reasons that impeded the installations of new safe water sources ("exogenous failures"). At the time of sample selection (November 2016), the implementing partner NGOF was exploring the possibility to adopt an improved installation technology, and therefore to make a second installation attempt in communities where the first one failed. Because I did not want to contaminate the CDD program with the lab-in-the-field experiment before the intervention was complete, I decided to not run the lab-in-the-field experiment in communities where the CDD program "failed exogenously".[22] Because these cases concerns only one Union, in one pre-specified robustness check I verify that the main treatment effect does not vary if I include or exclude this Union.

Two, I oversampled four communities where the CDD program failed due to tensions and disagreements within the community or lack of interest in the CDD program ("endogenous failures").[23] At the time of sample selection, in agreement with project staff, I excluded these communities because of feasibility constraints.[24] As the project staff gained experience with the implementation of the lab-in-the-field experiment, I was able to revise this decision and add these four communities to the sample of 92 communities selected via the optimization algorithm. Because I oversampled communities where the CDD program "failed endogenously", the estimates of the main treatment effect might be downward biased. In order to correct this bias, I pre-specified to weight all regressions by the probability of each community to be selected by the optimization algorithm.[25] In addition, in one of the pre-specified robustness checks, I verify that the main findings are not driven by the choice to include or exclude these four oversampled communities.

[22] These cases are concentrated in one Union only, specifically in the South-Eastern region of Deuli Union. This results in a non-homogeneous geographic distribution of treated and control communities in Deuli Union. In Deuli Union, communities involved in the lab-in-the-field experiment are widespread in the whole area if they belong to the control group, but they are mainly from the North-Western area if from the treated group.

[23] The CDD program failed "endogenously" in four communities: (i) one where the community was not interested in holding the meeting; (ii) two where the community did not reach an agreement during the community meetings; (iii) one where installation failed for one tubewell and cash contributions failed for the other tubewell.

[24] Although aware that this selection might create an upward bias in my estimates, this choice was imposed by feasibility constraints. We thought it was unfeasible to conduct the lab-in-the-field experiment in communities where the implementation of the CDD program created tensions within the communities and between the community and project staff.

[25] In order to derive the weights, I repeat the optimization procedure 1,000 times on the full sample of Treatment Units in the CCLPG program, and for each Treatment Unit I calculate the probability to be included in the optimal sample.

3.2 Selection of participants

36 people per community participated in the lab-in-the-field experiment. Households invited to the lab-in-the-field experiment are randomly selected among those interviewed during the CDD program baseline household survey. Invited households endogenously choose which household member, if any, will take part to the experimental session.[26] The final sample of participants is determined by each player's final decision to actually take part to the experimental session.

Enumerators invite one man and one woman per household, ensuring to invite overall 18 men and 18 women per experimental session.[27] I stratify the sample selection in order to invite, in each community, 2 households identified as leader by other households in their community. Table 2 reports the realized and planned sample stratification by gender and leadership status.

In Table 3, A2 and A3, I report the results from three pre-specified tests, which test whether this self-selection into the lab-in-the-field experiment differed in treated and control communities. Table 3 and A2 show that the sample of players that accepted to participate to the experimental session and the final sample of players actually participating in it are balanced across treatment status.[28] Table A3 demonstrates that the attrition rate from the experimental session does not significantly differ in treated and control communities.[29] The overall evidence reported in Table 3, A2 and A3 indicate that the self-selection process into the lab-in-the-field experiment did not differ in treated and control communities, and therefore the final sample of players is comparable across treatment status.

4 Lab-in-the-field experiment

The purpose of the lab-in-the-field experiment is to measure how citizens value inclusive decision-making practices. I model the expected utility associated with the decision-making

[26] Enumerators are instructed to invite household members that can actively participate to the experimental session and understand the rules of the different tasks, primarily the household head and his spouse. In case one or two members from the household do not accept to participate, our project staff look for a replacement household/player within the same community, following a pre-defined (randomized) order that maintains the sample balance on gender and leadership status. In order to maintain the desired balance between leader and non-leader households taking part in the experiment, enumerators replace households with the same leadership status.

[27] Inviting one man and one woman per household proved to be crucial in order to facilitate participation among women. However, in rare cases, only one household member accepted to take part in the experimental session.

[28] In columns (2) and (4) of Table A2 I show that the sample of players that completed the WTP elicitations, which is the relevant sample for this paper, is balanced across treatment status.

[29] I calculate the attrition rate as the share of players that accepted to participate in the experimental session, but ultimately did not.

process p as having three components: the expected individual outcome from the decisions taken under arrangement p;[30] the intrinsic value that agents might place on taking decisions via arrangement p (precedural utility); the expected time cost of participating in the decision-making process p:[31]

$$Value_p = Expected\ outcome_p + Procedural\ Utility_p - Time\ cost_p \quad (1)$$

In the context of participatory governance, the procedural utility term from arrangement p can be interpreted as the net evaluation of procedure p, as resulting from, for example, legitimacy of the decision outcomes, value of autonomy and self-expression, stress and risk of conflicts, social and psychological costs of negotiating, actively participating in deliberations and publicly disagreeing. Although the value that citizens attach to taking common-interest decisions via procedure p can be modelled in a more comprehensive fashion, this framework mirrors exactly the experimental design.[32] The main objective of the design is to disentangle instrumental and intrinsic motives and ensure that the time cost component does not vary across decision-making processes.

One experimental session is carried out in each community separately.[33] Each experimental session is conducted with 12 groups of three people each and it is divided in 5 main stages, illustrated in Figure 1.[34] In this paper I focus on the WTP elicitations, which allow me to measure my main variable of interest: the net value that agents attach to take decisions regarding their group in a participatory way. During the WTP elicitations, participants are presented with group tasks inspired to redistribution games and public good games. Participants can choose, under different price conditions, how to solve these group tasks during the last stage of the experiment: if via a participatory process or not. In order to incentivize participants to report their preferences truthfully, each of their choices has a

[30] This term depends on the context in which decisions are taken. For example it can be thought as access to safe water in the context of an arsenic-mitigation program, or receiving a cash-transfer in the context of a social safety net program.

[31] These three components mirror the three terms in the Downsian "calculus of voting" framework (Downs, 1957; Riker and Ordeshook, 1968; Tullock, 1968). In the context of individual decision-making, Bartling et al. (2014) already discuss that preferences for being in control of own decisions might be driven by instrumental and intrinsic motives.

[32] For example, altruistic agents might evaluate different institutional settings not only based on their own expected outcome, but considering also the expected outcomes of others and the fairness of the resulting distribution. Because different decision-making processes can be associated to different level of uncertainty, my simple framework can also be extended in order to take into account the variance of the decision outcomes and agents' risk aversion.

[33] In Appendix E I report the scripts of the experimental session.

[34] The lab-in-the-field experiment is conducted in collaboration with Selene Ghisolfi. In a related paper, Ghisolfi (2018) studies the dynamics of group-bargaining occurring during Task 1 and Task 2. Despite we joined forces for fund raising and implementation of the experiment, our research projects are originated, developed and designed independently.

positive probability to be implemented during the last stage of the experiment.

Within the basic framework outlined in Equation 1, the WTP measure can be interpreted as the sum of: the expected monetary gain from participating in decision-making (instrumental value); the intrinsic value associated to retaining group decision rights relative to the alternative process (intrinsic value); the time cost differential. The key features of the design are the following: I allow the WTP measure to take positive and negative values; the WTP elicitation is incentivized; the instrumental value of participation is set to 0 by design for players that consider themselves as average bargainers; I elicit beliefs on own expected outcomes from the two decision-making processes; the time cost differential is set to 0 by design.

$$
\begin{aligned}
WTP_{PDM} = & \underbrace{Own\ expected\ outcome_{PDM} - Own\ expected\ outcome_{AD}}_{\text{Instrumental value of PDM vs AD}} \\
& + \underbrace{Procedural\ utility_{PDM} - Procedural\ utility_{AD}}_{\text{Intrinsic value of PDM vs AD}} \\
& + \underbrace{Time\ cost_{PDM} - Time\ cost_{AD}}_{\text{Time cost of PDM vs AD} = 0}
\end{aligned} \tag{2}
$$

The experimental design is guided by two additional considerations. First, reporting bias and experimenter demand effect can be particularly severe in the context of my policy evaluation: the exposure to participatory messaging may make members of program communities more likely to report higher appreciation of inclusive institutions, even without any substantial change in evaluations (Mansuri and Rao, 2013).[35] I adopt various techniques to minimize the influence of experimenter demand, including fully incentivizing the elicitation procedures, with approximately one-third of rural Bangladeshi wage at stake.[36] Another challenge is related to the low literacy rate of the population involved in the study, which constrained design choices in order to ensure full understanding from all participants. Throughout the whole experimental session, instructions are provided verbally by project staff. The field supervisor

[35]Social desirability bias is not a concern per se in the context of this study, but only if it applies differentially in control and treated communities.

[36]I carefully concealed potential signals about the study objectives and the true experimental hypothesis. I never revealed to project staff the goals of the policy evaluation. During the experimental session, project staff used real-life examples tailored to the local context in order to explain the bargaining games and the choice between different decision-making processes, but I never referred to the CDD intervention and the parallel between the lab-in-the-field experiment and the arsenic mitigation program is not self-evident.
The ability of incentives to mitigate reporting bias is still debated. In a recent study De Quidt et al. (2018) find that experimenter demand is not reduced in incentivized tasks versus unincentivized tasks. However, they use low-stake incentives of approximately 1 USD with US participants, and conclude that the effect of incentives should be further explored in future studies.

introduces the lab-in-the-field experiment to all participants and gives the main instructions for each task. Enumerators play a crucial role in ensuring that all participants fully understand the rules of each task: they provide additional clarifications whenever needed, and explain in details the WTP elicitation procedure to each participant, individually.[37]

4.1 Group negotiation tasks

The experimental decision-making process is designed in order to mimic the procedures and implementation rules that are typical of participatory initiatives. Participants are divided in groups of three and discuss face-to-face in an unregulated negotiation process in order to take decisions for the group, which entails common and individual economic interests. Additionally, group decisions should be taken by unanimous consensus, and groups have maximum 20 minutes to reach an agreement. These features impose similar dynamics and constraints as in the CDD program studied in this paper (Section 6), where decisions are taken by the community during an open negotiation, community members know each other and will meet each other after the deliberation, and communities have a maximum of 3 community meetings to reach an unanimous agreement, otherwise they lose the possibility to receive the intervention.

The group tasks are a "Redistribution task" and a "Contribution task", played in random order.[38] Participants receive an initial individual endowment, and then complete the negotiation exercise with their group peers.[39] During the "Redistribution task", participants receive their individual endowment and negotiate on how to redistribute among themselves a group endowment of 30 tokens. In the "Contribution task", participants decide how much of their initial endowment to contribute for the creation of a common pool of resources, equivalent to twice the sum of the contributions, and simultaneously negotiate on how to distribute it. The "Redistribution task" mimics a situation when beneficiary communities receive development interventions or public service provisions for free, but they are involved

[37] I do not expect this feature to worsen concerns related to experimenter demand effect. I always discussed the purposes of the lab-in-the-field experiment with project staff in terms of understanding the dynamics of group bargaining and preferences for participation in the context of rural Bangladesh. I never revealed that the project aims at evaluating how the CDD intervention affects evaluations of inclusive institutions. Additionally, while the field supervisor was also involved in the implementation of the CDD program, the enumerators took no role in it.

[38] For both group tasks, participants play one training round and one round with real money at stake. Before starting the training round, participants answers few questions to verify their understanding on the rules and on how their final rewards are calculated. In order to enable all players, even those with poor numerical skills, to effectively take part in the group discussion, participants complete the tasks using simple and intuitive visual aids.

[39] Within each community, players are randomly pre-assigned to the equality/inequality treatment. Equality: before each task, participants receive an initial endowment of 10 tokens. Inequality: before each task, participants in each group randomly receive initial endowments of 15, 10 token or 5 tokens.

in decision-making regarding how to redistribute project benefits within the community. The "Contribution task" is the experimental counterpart of community projects that, in addition, require communities to co-fund the project with cash or labour contributions.[40]

For this paper, the "Contribution task" and the "Redistribution task" serve two main purposes. First, during Task 1 and Task 2, all participants experience the discussion dynamics and observe the outcomes of the deliberation. This is a crucial feature in order to allow participants to take meaningful choices when I present them the option to choose the decision-making process for Task 3. Second, it allows me to directly observe players' performance within an open negotiation process, which I expected to play an import role in driving their preferences for the decision-making process for Task 3.

4.2 WTP elicitation

During the WTP elicitation, I randomly assign to participants their initial individual endowment for Task 3, and I inform them that during Task 3 they might face again the same group task as in the "Contribution task" or the "Redistribution task", with new group peers, randomly selected and ex-ante unknown. I offer them the possibility to decide ex-ante how they want their group to take decisions during Task 3. The first option is the participatory decision-making process (PDM): the same negotiation process that they already experienced under Task 1 and Task 2. The other option is to not participate in decision-making and receive an assigned distribution of tokens (AD). In this latter case, the group receives the outcome distribution decided by another group, randomly selected within the same community, during that task.[41]

I measure individual willingness to pay for participatory decision-making using a binding auction design. I start by presenting participants a hypothetical choice between "participatory decision-making" and "assigned distribution" at zero price. I present to all participant ten other choices by varying the price attached to the participatory option, ranging from -5 tokens to +5 tokens.[42] I define individual WTP as the highest price attached to the participatory

[40] Community contributions – in cash, kinds, or labor – are a key component of CDD programs. Co-financing requirements, other than reducing implementation costs, are seen as a way to elicit information about demand and to enhance the sense of ownership over project assets. However, this approach is far from being uncontroversial. A requirement for financial contributions may prevent poorer communities to access the intervention. Cash contributions may transfer greater decision power towards local elite and wealthier individuals, creating a channels through which elites are legitimated to capture project benefits. In Cocciolo et al. (2018a) we provide the first experimental evaluation of the effect of contribution requirements on community decision-making and the impact of a project to provide a local public good.

[41] Each person in the group receive the final number of tokens obtained during that group task by the person in the assigned group with the same initial individual endowment. The group is randomly selected within the same equality/inequality treatment.

[42] I do not allow players to submit choices that are inconsistent across prices. In these cases, enumerators

option at which the participant does not choose the "assigned distribution" option.

By design, because future group peers are randomly selected and ex-ante unknown and the outcome received under the "assigned distribution" is a random draw from the previous outcomes of other players within the same community, an average player has the same unconditional expected monetary outcome under the participatory process or the "assigned distribution" procedure. Additionally, all monetary rewards are disbursed at the end of the experimental session, after all groups completed Task 3 and after a short individual questionnaire, therefore there is no time saving from avoiding the participatory decision-making process.[43] These are the key features of the design, which allow to interpret, following Equation 2, the WTP measure as a close approximation of the intrinsic value of participation in group decisions.

This interpretation of the WTP measure applies only to participants that consider themselves average negotiators. For players that expect to receive above- or below-average outcomes from participating in group decisions, the WTP measure should be interpreted as the sum of the instrumental and intrinsic components. In order to measure the share of participants whose instrumental value of taking part in group negotiation is zero, I elicit players' beliefs on their expected outcomes under the two decision-rules. I incentivize their answers by awarding a prize if their guess under the "assigned distribution" option is correct. The beliefs elicitation is not incentivized for the "participatory decision-making" option, as it would not be incentive compatible given the ability of players to collude during Task 3. The beliefs elicitation also allows to calculate the instrumental value of participation and to derive an explicit measure of the intrinsic value of participatory decision-making for all players.

I complete the WTP elicitation with one participant per group, individually assisted by one enumerator. This approach ensures that one of participant's choices will be implemented in the last stage of the experiment, without diluting the real incentives associated to the WTP elicitation procedure.[44] The design presents several further advantages. First, because

are required to review players' choices and, if necessary, clarify the WTP elicitation procedure. Using audit data automatically recorded with the tablets, I am able to measure the frequency of initial inconsistencies in the WTP elicitation procedure, which is 18% relatively to Task 1 and 15% relatively to Task 2 (Table A1).

[43] Despite all participants are required to spend the same amount of time at the experiment, participating in decision-making in the last stage of the experimental session obviously requires additional efforts from participants. The mental, social and psychological costs of a face-to-face negotiation process are intrinsic characteristics of participatory decision-making which, in my simple framework outlined in Equation 1, are included in the *Procedural utility* term.

[44] Although I sacrifice a larger sample size, this feature allows me to assign one enumerator to each participant during the WTP elicitation within the available budget and the time constraints of the experimental session, and it avoids adding further complexities to the design. Conducting the WTP elicitation with all participants would have implied to introduce an additional rule to aggregate choices expressed by participants assigned to the same group in Task 3, for example a majority rule or implementing the choice of one player per group, randomly extracted.

I present all price conditions to all participants and I implement their choices for Task 3, the elicitation procedure is incentive compatible and it ensures that it is optimal for all participants to truthfully report their preferences.[45] Second, by design players do not know the identity of their group members for Task 3, ensuring that their choices are not driven by selection effects. Finally, choices are elicited with the assistance of one enumerator, privately and independently from other players, ensuring understanding from all participants and preventing individual choices to be influenced by peer pressure or reputation concerns.[46]

4.3 Realization of choices

Before the last stage of the experimental session, each participant that completed the WTP elicitation is randomly assigned one task ("Contribution task" or "Redistribution task") and one price between -5 tokens and +5 tokens.

The decision rule for Task 3 depends on whether, relatively to the assigned task at the assigned price, the participant previously chose the participatory option or not. Participants with a WTP equal or higher than the assigned price complete Task 3 together with their new group peers, and pay/receive the assigned price. Participants with a WTP lower than the assigned price, as well as their new group peers, do not complete the last negotiation stage and receive the outcome distribution decided by another group randomly selected within the same community. During the last stage of the experimental session there is approximately one-third of the Bangladeshi rural daily wage at stake, and this feature should minimize concerns related to reporting bias and experimenter demand effect.

The random selection of the task and the price for participatory decision-making relatively to Task 3 is conducted privately by the enumerators with each participant that completed the WTP elicitation stage. The randomly selected price is never revealed to other players,

[45] To influence the results, experimented demand effects should be more important to the respondent than the real expected gains (in terms of expected monetary outcomes and procedural utility) from answering truthfully.

[46] Enumerators take several steps in order to ensure understanding from all participants. Before the WTP elicitations, enumerators verify individual understanding for each participant on the two decision-making processes and on how their final outcome is determined under the two alternatives. Enumerators verify that crucial elements of the design are clear, specifically that under the "participatory decision-making" option they will bargain with new group peers, and that under the "assigned distribution" option they will be assigned the final outcome of another player randomly extracted. Enumerators stress that each of their choices might be implemented in Task 3, and therefore it is best for them to truthfully report their preferences. They stress that choices are confidential, and that, by design, other players cannot infer their answers from the decision-making process implemented during Task 3. In order to facilitate participants in their choices, enumerators remind them about their outcome in the previous round, ask them whether they liked or disliked the bargaining stage and how much they expect to be influential in the last stage given their initial tokens. Relatively to the first WTP elicitation procedure, the instruction time is on average more than 3 minutes, the WTP elicitation almost 2 minutes and the beliefs elicitation 1.5 minutes (Table A1).

and this guarantees that individual choices expressed during the WTP elicitation are never fully revealed by the decision-making process implemented during Task 3. This is a further mechanism to ensure that individual choices during the WTP elicitation are not influenced by peer pressure or reputation concerns.

4.4 Payment

Payments are disbursed at the end of the experimental session, only after all groups completed the last group negotiation during Task 3 and after the completion of a short individual questionnaire on satisfaction. Participants receives a fixed net show-up fee of 40 Bangladeshi Takas (1 BDT = 0.013 USD in December 2016).[47] They receive a bonus equals to the sum of their outcomes from Task 1, Task 2 and Task 3, converting 1 token in 5 BDT. Players that completed the WTP elicitations receive(pay) the randomly assigned price in case they chose the "participatory decision-making" option under the randomly assigned scenario (task-price). Correct beliefs on outcomes under the "assigned distribution" option are rewarded with 30 BDT. Participants can expect a total reward between 250 BDT and 500 BDT, equivalent to 0.8-1.7 local daily wage.[48] Therefore, when players in the WTP elicitations express their preferences on the decision-making process for Task 3, there is approximately one-third of local daily wage at stake.

5 Value of participatory-decision making

Despite the widespread adoption of participatory development, the question of whether agents value collective decision-making rights has not been explored before. Democratic and inclusive institutions entails monetary and non-monetary benefits (e.g. legitimacy of the decision outcomes, value of autonomy and self-expression) and costs for citizens (e.g. social and psychological costs of exercising voice and decision rights). In a recent review, Casey (2018) stresses that, while participation costs have received little attention in the literature, these considerations should be carefully taken into account when designing and evaluating participatory programs. In this Section, I provide novel evidence on this topic by describing the individual demand for participatory decision-making as well as the instrumental and intrinsic value that citizens associate to it.

The large majority of participants in my sample prefer to take group decisions in a participatory way: 71% of participants prefer the participatory option at the 0 price condition

[47] Because the Bangladeshi law requires a flat 10 BDT tax from those with a daily income larger than 400 BDT, the gross show-up fee is 50 BDT for participants with total outcome higher than 400 BDT.

[48] The average daily income in rural Bangladesh is approximately 300 BDT.

(WTP $\geq$ 0), and 47% have a strictly positive WTP for participatory decision-making. By aggregating participants choices with a simple majority rule, I observe that 84% of communities would choose to adopt a participatory decision-making process at 0 price, and 34% of them even at positive prices. This is in line with the consensus emerging from the behavioral literature, where several studies show that agents value the decision process per se (Bolton et al., 2005), their voting rights (Güth and Weck-Hannemann, 1997), their autonomy and decision power [Fehr et al. (2013), Owens et al. (2014), Bartling et al. (2014), Neri and Rommeswinkel (2017).

By design, the WTP range is constrained between +5 and -5 tokens, corresponding to +25 and -25 BDT. Despite these amounts are small in absolute terms, the maximum and minimum WTP allowed by the design are significant amount within the experiment, as they represent 25% of the median expected monetary outcome from each group negotiation task. They are also non-trivial amount in the local context where this study took place, as 5 tokens correspond to 8% of the average daily income in rural Bangladesh.[49] The average WTP is 0.3 tokens, corresponding to 2% of the median expected monetary outcome from the future group task.

Figure 2 shows the distribution of the WTP measure in my sample. Preferences are polarized on three main focal points, characterizing three types of agents. 26% of agents display a strong support for inclusive arrangements: under any offered price condition (up to 8% or rural Bangladeshi wage), they prefer that decisions for their groups are determined through a participatory decision-making process rather than exogenously assigned. 24% of participants have a weak preference for participation (WTP = 0), choosing the participatory option over the "assigned distribution" alternative only at 0 or negative prices, but not at positive prices. 22% of agents display a strong disfavor for participatory decision-making, being willing to forgo any offered compensation (up to 8% or rural Bangladeshi wage) in order to avoid the next group deliberation.

As discussed in Section 4, one main feature of the experimental design is that, for players with self-perceived average bargaining skills, the alternative decision-making process has the same unconditional expected monetary outcome as the participatory process. I make use of the beliefs elicitation procedure in order to validate this feature of the design. Figure 3 shows the distribution of the instrumental of participatory decision-making, calculated as the difference in expected outcomes under the "participatory decision-making" option and the "assigned distribution" alternative.[50] As might be expected given the experimental design, the large majority of participants (71%) expect to receive the same monetary outcome under

[49] Approximately 300 BDT.

[50] For comparison, I censor the distribution of the instrumental value of participatory decision-making at the WTP ranges.

the "participatory decision-making" option and the "assigned distribution" alternative. A remaining 11% and 18% of participants expect, respectively, to be penalized or to benefit from taking part in decision-making.[51] The polarization of evaluations observed in Figure 2 is not mirrored in the distribution of the instrumental value of participatory decision-making, indicating that players that display a strong support or a strong disfavor for participation must be motivated by intrinsic considerations.

The WTP measure can be interpreted as the net intrinsic value of participatory decision-making, but only for players that expect to receive the same monetary outcome from participating or not in decision-making. For the remaining 29% of players, the WTP measure captures both the instrumental value and the intrinsic value of participatory decision-making. In order to obtain an explicit measure of the intrinsic value of participatory decision-making for all participants to the experimental session, I apply Equation 2 and calculate the intrinsic value of participatory decision-making as the difference between the WTP measure and the instrumental value of participation. In my sample, 45% of participants associate a positive intrinsic value to taking part in decision-making, above and beyond instrumental consideration, but for 38% of them the social and psychological costs of participation prevail. Comparing Figure 2 and Figure 4 confirms that intrinsic motives drive the highly polarized views that players have on participatory practices.

These findings can elucidate some anecdotal evidence on real-world participatory initiatives. Mansuri and Rao (2013) argue that beneficiaries of development programs seem to value being consulted and involved in decision-making, and deliberative processes might create a sense of legitimacy for the resource allocation. On the other hand, (Mansuri and Rao, 2004) stress that the exercise of voice and choice can be costly, for instance because of psychological efforts entailed in public deliberations or the material/social costs when participation requires taking positions that are contrary to the interests of powerful groups. Alatas et al. (2012) show that community decision-making often entails extended effort and fatigues for participants. Rather than providing a unifying answer to these contrasting arguments, my findings indicate that the intrinsic value associated to participating in decision-making is indeed highly heterogeneous across agents.

[51] The experimental data allows to verify whether players have correct beliefs on the monetary outcome from participating and non-participating in decision-making. Figure A.3 and Figure A.4 show that, respectively, 55% and 27% of participants have correct beliefs on their own monetary outcome from participating or non-participating in decision-making. On average, errors are small: more than 60% of participants predict their monetary outcome from participating and non-participating in decision-making within a +/- 2 tokens range. Accuracy of beliefs is partially explained by the small variation in the outcomes from the group negotiation tasks. Ghisolfi (2018) shows that groups seem to follow fairly homogeneous strategies on how to solve the group tasks, especially in the "Redistribution task". For example, among groups with an equal distribution of initial individual endowments, respectively 80% and 63% distribute the group resources equally when solving the "Redistribution task"/"Contribution task".

The rich data collected before and during the lab-in-the-field experiment allows me to explore the determinants of these heterogeneity. The estimates reported in Table 4 indicate that the group dynamic and the quality of the negotiation process experienced in the previous experimental group tasks are critical factors in shaping evaluations of participatory decision-making, primarily via instrumental motives. For example, the instrumental value of participatory decision-making is higher for players that were able to obtain an higher outcome in the previous group task, and in groups with higher realized inequality. I observe that agents take into account the group negotiation task that they previously experienced, and update accordingly their beliefs on their ability to influence the group deliberation in their favor. In line with the theoretical predictions in Osborne et al. (2000), these strategic considerations partially drive participation choices, and agents that expect to be able to exert greater influence over decisions are more likely to self-select into participation.

Choosing to participate in decision-making is also correlated with socio-economic characteristics that are associated with lower costs of participation. For example, value of participation is higher for leaders and lower for women (Table 5). Because the instrumental value of participation does not differ across socio-economic groups, differences in the WTP for participatory decision-making must be driven by intrinsic motives. Leader households may place a higher value on participation because they are more used to be involved in community decision-making and therefore associate a lower social/psychological costs to taking part in a public debate. The opposite might be true for women, who in the Bangladeshi rural context rarely play an active role in the public sphere and therefore their participation choices might be constrained by social norms and self-perceived barriers to public express own opinions and possibly disagreeing with others.[52] These considerations are in line with the positive self-selection of beneficiaries in community meetings that is often observed during the implementation of CDD programs (Besley et al., 2005; Labonne and Chase, 2009; White et al., 2018). It is worth noticing that CDD programs often mandate participation quota for historically marginalized groups, such as women or the poor. Casey (2018) raises concerns that explicit requirements to include the poorest and most marginalized groups in project activities might represent a regressive tax, for example because of time-opportunity costs. My evidence extends these considerations beyond time-opportunity costs, looking explicitly at the instrumental and intrinsic value of participation for different socio-economic groups. For example, because women associate a lower value to participatory decision-making, we should be conscientious of the potential hidden welfare costs of mandating women participation in community decision-making.

[52] In line with this result, Fafchamps and Hill (2018) find that demand for agency and the value of deciding autonomously are smaller among Pakistani women than Pakistani men.

Because the intrinsic value of participatory decision-making is obtained as a residual term between the WTP and the instrumental value measures, it potentially captures a variety of social attitudes and values that are not explicitly modelled in the simple framework outlined in Equation 1. In order to address these concerns, in Table A4 I show how the WTP, instrumental value and intrinsic value measures correlate with a battery of social attitudes and values elicited before the lab-in-the-field experiment. As expected, the instrumental values of participatory decision-making is higher for those players that perceive themselves as good negotiators. The WTP and the instrumental/intrinsic value of participatory decision-making are not driven by other social attitudes and values, such as trust towards others, risk aversion, fairness preferences or generosity.[53] Therefore, the available evidence suggests that the WTP and the intrinsic value measures can be interpreted as good proxies of the value that agents place on participatory practices per se.

6 The CDD program

Does experiencing inclusive institutions affect how citizens value them? In order to answer this question I combine the value of participatory decision-making measured via the lab-in-the-field experiment with random exposure to inclusive institutions through a CDD program. The CDD program is an arsenic mitigation program conducted in rural Bangladesh (Cocciolo et al., 2018a). The program consists of a package of technical advice and subsidies for the installation of new sources of safe drinking water, and it has strong participatory components.

Communities take all key decisions regarding project implementation and maintenance: (i) how many water sources to install in the community; (ii) where to construct them; (iii) how to divide the required contributions between households, if required; (iv) who are the households responsible for the management and maintenance of each new water source. These decisions are crucial because they determine which households will have access to the new safe water source and the sustainability of the new public infrastructure. Communities take all decisions at meetings organized by project staff. Project staff organize information meetings in order to increase awareness of water safety issues and stressing the importance that everyone takes an active part in the community meeting. The community meetings are held only if minimum participation requirements are met. All decisions must be taken by unanimous consensus during the meeting in the presence of project staff. The project is not implemented in communities where an agreement is not found after a maximum of three community meetings. The rules and procedures imposed on the decision-making process

[53] All measures reported in Table A4 are non-incentivized, except "Generosity", which represents the amount donated in an incentivized dictator game.

are designed to reduce the likelihood that influential groups or individuals could co-opt the decision-making process, and ensure that everyone is guaranteed the *de jure* right to express his/her voice.

This inclusive consensus-based approach contrasts sharply with pre-existing formal and informal institutions in rural Bangladesh. Villages in Bangladesh do not have any jurisdiction on the provision of local public goods and services, and decisions are taken by local government bodies (e.g. Union Parishad, Upazila (sub-district) Council or District government), or local offices of ministries/government agencies.[54] In the villages targeted by the CDD program, informal local institutions are typically not inclusive and local collective actions are rare. Our baseline household survey data reveals that 63% of households are usually not involved in taking decisions regarding their community, 6% attended a village meeting in the last 6 months, and 4% participated in the last 3 years in a collective action organized in the community. When they happen, community informal decision-making processes are typically restricted to elites and influential individuals and women rarely play an active role in the public sphere. In this context, the CDD program is innovative for two reasons: first because it gives full decision rights to communities, and second because it ensures that the decision-making process is inclusive. This consideration motivates this study, which evaluates whether this temporary introduction of a more participatory process can have an effect of beneficiaries' preferences on how collective decisions in their village should be taken.

Importantly, the CDD program is limited in time and scope, suggesting that the impact of the CDD program on citizen's value of inclusive institutions, if any, should derive from the experience of the dynamics and outcomes of the public debate and deliberations realized during the community meetings. Other than the exposure to the participatory decision-making process, the CDD program increased the availability of safe drinking water in beneficiary communities. This can be an important aspect for the interpretation of my results, because realized changes in households access to safe drinking water can contribute to individuals' learning about the welfare benefits of inclusive institutions. In Section 7.2, I provide suggestive evidence on this mechanism. The CDD program also entails few interactions between project staff and beneficiary communities, but I do not expect this can channel an effect on citizens' value of participatory decision-making. These interactions were sparse and specifically related to the practical details of the intervention: on average, project staff visited beneficiary communities 9 times over the full duration of the project cycle (8 months), and most of the visits were organized after the community meetings (and after the lab-in-the field experiment) in order to organize the tubewell installations.

[54] Unions are the smallest rural administrative and local government units in Bangladesh. Each Union is made up of nine Wards, and usually one village is designated as a ward. In Bangladesh, the lowest level at which elections are held is for the election of the Union Parishad (Union council) chairman and members.

The CDD program does not have an impact on other political or socio-economic dimensions that can be directly related to how citizens value institutions (Table A13). Improved access to safe water can affect the time devoted to household chores and labor activities, but in the context of rural Bangladesh households are not willing to walk long to access safe water, and water collection is almost entirely a women' responsibility, who have limited options outside home production.[55] Participating in community decision-making and collective actions can boost community cohesiveness and trust and extend the existing network structure. However, communities targeted by the CDD program are small – between 50 and 250 households – and relatively homogeneous (e.g. in terms of religion), community members well know each other, and they report high trust and good community relations. In this context, the dynamics fueled by the CDD program can hardly make a durable impact on the level and quality of household interactions.

The CDD program targets communities with high levels of arsenic contamination. The intervention is located in north-western Bangladesh, in Shibganj and Sonatala Upazilas in Bogra District and in Gobindaganj Upazila in Gaibandha District, and it is implemented by the Bangladeshi NGO "NGO Forum for Public Health". This area was selected for the intervention because government officials and national media (Daily Observer, 2014) reported high levels of arsenic contamination and low levels of prior intervention. Based on water test results from a census of all existing sources of drinking water in the community (performed during the baseline data collection), 171 communities were enrolled in the program, 129 selected randomly selected to receive the intervention. Treated communities were randomly assigned to three contribution requirements: under the cash contribution approach communities are required to co-fund the installation costs; under the labour contribution approach communities are required to provide labour to help with the installation work: under the waiver approach the new water source is installed for free. The randomization of the program was performed during public lottery meetings, where we invited representatives from each eligible community. In order to guarantee complete transparency of the randomization process and full understanding by beneficiaries, the randomization was stratified only by Union.[56]

The intervention was implemented between October 2015 and August 2017. All com-

[55]Baseline survey data indicate that 76% of households are willing to switch to a new safe water source distant 2 minutes by walking from their house, but only 20% if the water source is 5 minutes away (Cocciolo et al., 2018b).

[56]The program is randomized at "Treatment Unit" level. Treatment Units are communities of 50-250 households. Treatment Units are defined using administrative household lists at village level. Villages with less than 50 households are excluded from the study, and larger villages are divided into several smaller Treatment Units along pre-existing geographic boundaries. I refer to "communities" or "Treatment units" interchangeably.

munities selected to receive the program initially decided to participate, with the exception of one community. Communities agreed on tubewell location(s) during the first community meeting in 91% of cases, and during the second community meeting in 8% of cases. In only one case the intervention failed because the community was not able to find a consensus on the tubewell location(s). The CDD program successfully installed at least one tubewell in 64% of treated communities. In communities assigned to labor or waiver approach the causes of failures are only related to hydrogeological constraints impeding installation or lack of suitable land. However, in cash communities the low uptake is primarily due to communities failing to raise the required cash contributions. On average, the CDD program installed 1.1 tubewells in communities assigned to the labor or waiver approach, and 0.2 in communities assigned to the cash approach. The majority of tubewells (64%) are located on private land, and they are on average around 300 feet deep. For each installed tubewell, the community selected two caretakers, one man and one woman. All caretakers participated in a one-day training course and are provided with a toolkit for basic maintenance, as well as contact details for local engineers who are able to provide services for more advanced repairs if necessary. The details of the implementation are reported in greater details in Cocciolo et al. (2018b).

7 CDD program and value of participation

One important open debate among both policy-makers and researchers concerns whether the exposure to democratic or inclusive institutions can lead to sustainable institutional changes. A prerequisite for sustainable institutional change is that citizens prefer the new institutions to the old ones. In this Section I provide evidence on this mechanism by combining my experimental measure of citizens' value of participatory practices (Section 5) with a random shock to local institutions via a CDD program (Section 6). The lab-in-the-field experiment designs allows me to test the effect of experiencing inclusive institutions on how citizens value them, as well as explaining whether the main effect is driven by changes in the instrumental value or the intrinsic value of inclusive institutions.

The effect of the CDD program is estimated using the following specification:

$$y_{igc} = \alpha + \beta T_c + \eta d_c + \epsilon_{igc} \tag{3}$$

where y_{igc} is outcome of interest of player i in group g and community c, T_c indicates whether community c received the CDD program or not, d_c are Union fixed effects and stan-

dard errors are clustered at community level.[57] Because the actual exposure to the treatment depends on the community decision on whether to receive the CDD program and individual and household decisions about involvement in its implementation (e.g. participation to the community meeting(s) and contribution to the installation costs/work), β provides the intention-to-treat effect.

7.1 Main treatment effect

The main finding of the paper is that previous experience of inclusive institutions via the CDD intervention significantly increases the value that subjects attach to participatory decision-making (Table 6). This effect represents an increase of 3% of the WTP relative to the median expected outcome from the group task, and an increase of 1% of the WTP relative to the average Bangladesh rural daily wage.[58] The exposure to the CDD program does not change the share of participants with a negative or null WTP for participatory decision-making. Instead, the main effect is driven by a 10 percentage point increase in the share of participants with a positive value of participation, especially of those that choose the participatory process under any offered price conditions (up to 8% of rural Bangladeshi daily wage).

Next, I make use of the belief elicitation in order to calculate the instrumental value of participatory decision-making as the difference in expected outcomes from the participatory decision-making option and the "assigned distribution" alternative. I apply Equation 2 and calculate the intrinsic value of participatory decision-making as the difference between the WTP of participation and its instrumental value. Table 7 shows that the CDD program has a positive effect on the value of participation, despite a negative effect on its instrumental value. Agents in treated communities have less optimistic expectations on the benefits from participatory decision-making: experiencing the CDD program leads to a lower share of players that expect to gain from participating in decision-making and an increase in the share of players that expect to receive the same monetary outcome from the participatory decision-making option and the "assigned distribution" alternative (Figure 6). The main treatment effect is driven by an increase in the intrinsic value of participatory practices, above and beyond instrumental considerations (Table 7). Figure 7 shows that the exposure to the CDD program leads to a decrease in the share of players with a negative intrinsic value of participatory decision-making, and a corresponding increase among those with a positive

[57] Following the pre-analysis plan, the regressions, unless specified, are estimated pooling together the data from the "Redistribution task" and the "Contribution task".

[58] The estimated effect doubles if I take into account that the WTP variable is censored both from above and below at 5/-5 tokens (column (2)).

intrinsic value.[59]

Despite CDD programs are often promoted as a way to empower the more marginalized groups (e.g. women, non-elites, the poorer) in the society, I do not find that the main treatment effect varies significantly across socio-economic groups (Table A7). It should be noted though that my study is under-powered to detect these heterogeneous effects. One alternative explanation might be that the implementation of CDD interventions necessarily interacts with the existing social structure in receiving communities. In the context of the CDD program studied in this paper and carried out in rural Bangladesh, despite a strong commitment to guarantee to all community members equal voice and decision rights, women rarely play an active role in the discussion and the decision-making process is often polarized by few influential persons. These dynamics might explain why the treatment effect is not significantly larger for those social groups that, in the absence of the program, would be less involved in community decision-making.

7.2 Mechanisms

The main results of the paper indicate the value of participatory decision-making increases with exposure to the CDD program, primarily because an increase in the value that citizens attach to inclusive practices per se, above and beyond instrumental considerations. The exposure to inclusive institutions can affect how citizens value them via three channels: it might lead to efficiency gains for future public consultations with similar characteristics; it might induce citizens to update their beliefs on the benefits and costs of these types of institutional arrangements; or it might generate a taste for inclusive practices.

Efficiency

Table 8 shows the negotiation stage delivers the same outcomes in treated and control communities, for instance in terms of inequality in the final outcome distribution or the total contributions raised in a public good game ("Contribution task"). The average bargaining time is also not significantly different for groups previously exposed to the CDD program. However, the risk of conflicts is significantly lower in communities that received the CDD program.[60] Because project staff plays an important mediation role during the community meetings, one interpretation of this effect is that the exposure to the CDD program provided

[59] In Table A5 and Table A6 I test these distributional shifts within a regression framework.

[60] The variable "Tense bargaining" is based on enumerators' observations during the group negotiation tasks. Table A8 validates this measure, showing that it positively correlates with features of the negotiation tasks that indicate a more intense bargaining dynamics, such as bargaining time and inequality in the final distribution of experimental tokens.

communities with new tools to avoid or solve conflicts and tensions during public debates.[61] Consistent with these results, experiencing the CDD program might lead to an increase in the intrinsic value of participatory decision-making via a reduction in the social costs and psychological efforts associated to a face-to-face group deliberation.

Beliefs updating

Previous experience of inclusive institutions via the CDD program might lead to beliefs updating on the benefits and costs of these types of institutional arrangements. Table 7 shows that players in treated communities associate a lower instrumental value to participatory practices. This effect is entirely driven by a lower expected outcome from participating in group deliberations (Table 9), and it can be explained by lower self-perceived negotiation skills in treated communities report lower self-perceived negotiation skills. Experiencing inclusive institutions via the CDD program might induce agents in treated communities to adjust their beliefs on their ability to influence the decision-making process and to shift community decisions in their favor. Indeed, suggestive evidence indicate that players in treated communities are less likely to be overestimate their monetary outcome from participating in the last negotiation task, and more likely to predict it correctly (Table 10). This effect is specific to beliefs on own monetary outcome from participatory decision-making: exposure to the CDD program does not affect the probability of correctly predicting the monetary outcome from the non-participatory option (Table A9).

Further, I test whether beliefs updating on the benefits of inclusive institutions relates to the welfare impacts of the CDD program. I find that the main treatment effect is not larger in communities with poorer baseline water quality and therefore most in need of the intervention (Table 11), and it does not vary with the randomly assigned implementation rules (Table A10), despite these are associated with different success rates (Cocciolo et al., 2018a). Suggestive evidence indicates that the main treatment effect is not larger in communities where the chosen sites for tubewell installation provide the largest possible welfare improvement, nor for household who benefited the most from the CDD program in terms of access to safe water (Table 12).

Preferences

[61] The CDD program can be interpreted as a short training on dispute resolutions. Hartman et al. (2018) evaluate the impact of a campaign to promote alternative dispute resolution (ADR) practices, and find that it reduces the hostilities and violence associated to local disputes, but not the incidence of disputes. Because of data limitations, I cannot elucidate further whether the risk of conflicts decreases in response to the CDD program because less disputes arise or because disputes are less likely to escalate.

The third channel is the hardest to test, because I cannot directly observe preferences. However, the available evidence seems to indicate that experiencing inclusive institutions via the CDD program have an effect on the value of participatory decision-making because agents learn about the intrinsic qualities of these types of institutional arrangements. For instance, the CDD program seems to have the larger effect on the value of participatory decision-making in smaller communities (Table A11), where the community meetings are more inclusive and actively participated (Cocciolo et al., 2018c).[62] Table 13 provides suggestive evidence that it is not attendance per se that drives the main treatment effect, but rather active participation of the community in the decision-making process, for example in terms of the number of sites for tubewell installation discussed during the community meeting or the share of households that raised their voice during the debate. Finally, Table A12 shows that the CDD program does not have an effect on other social values and attitudes, such as trust towards others, fairness attitudes, generosity, or distributional preferences.[63]

Intrinsic motives

The evidence presented in this Section indicates that the effect of the CDD program on the value of participation is not driven by improvements in or learning about the decision outcomes of inclusive institutions. Two possible explanations remain. One is that the main treatment effect is driven by a reduction of the social costs and psychological efforts associated to taking part in face-to-face deliberations. The other one is that, in line with classic economic models of habit formation in consumption, experiencing a CDD program generates a taste for inclusive practices, for example by reinforcing preferences for autonomy or the legitimacy of decision outcomes when taken via a participated process. Consistently with both explanations, previous exposure to inclusive institutions increases the value associated to participatory practices because of intrinsic motives: via a reduction of the non-monetary costs associated to participatory practices (e.g. conflicts) or because of learning about their intrinsic qualities.

[62] (Cocciolo et al., 2018c) exploit a project rule that generates exogenous variation in the size of communities that receive the arsenic-mitigation program. In order to implement the CDD program in communities of manageable size, administrative units smaller than 250 households are treated as one treatment unit, and administrative units larger than 250 households as two treatment units, and so on and so forth at other thresholds which are multiples of 250. Critically, by design the number of households per offered tubewells varies smoothly across the thresholds. (Cocciolo et al., 2018c) show that the distribution of administrative units is smooth across all the thresholds, and that the predicted treatment unit size, conditional on a smooth function of administrative unit size, does not systematically predict any important baseline characteristics.

[63] Inequality preferences are elicited via an incentivized tasks where external spectators take distributive choices for other groups in their community (Ghisolfi, 2018).

7.3 Robustness checks

In Appendix ??, I show that the main results is robust to several robustness checks. First, I verify that the main findings are robust to the non-random sample selection of communities in the lab-in-the-field experiment. The first concern is related to the initial exclusion from the optimal sample of communities where the CDD program failed endogenously,[64] and their ex-post inclusion to the sample obtained via the optimization procedure described in Section 3.1 and in Appendix C. Both excluding or including the communities where the project failed endogenously from the optimal sample would bias the results, most likely in opposite directions. In my preferred specifications I use the full sample with weights that take into account the ex-ante probability of each community to be selected in the optimal sample.[65] In Table A14, I compare the main estimates with two natural robustness checks, including and excluding from the final sample the four communities where the CDD project failed endogenously and originally considered not eligible for the lab-in-the-field experiment. As expected, the main coefficient of interest is downward biased when these communities are included in the sample without the weight correction: in these cases the implementation of the CDD program was problematic, it raised problems and conflicts in the community, and ultimately we failed to deliver the intervention. It is therefore reasonable to expect targeted beneficiaries living in these communities to be skeptical about participatory decision-making approaches, as they mostly experienced the costs but not the benefits potentially associated to them. Similarly, I estimate a larger treatment effect when I exclude from the final sample these communities where the CDD program failed endogenously. These differences are marginal and go in the expected directions, supporting the choice of use weighted regressions as preferred specifications.

The second concern relates to the exclusion of communities where we were not able to deliver the CDD intervention due to hydro-geological constraints in Deuli Union. Installation failures are unlikely to be correlated with our main outcome variables, nor with the CDD treatment assignment, which is random by design. However, they are a function of geography: treated communities where installations failed due to hydro-geological constraints are mainly

[64] Originally, I considered ineligible for this project four communities where the project failed endogenously: (i) one where the community was not interested in holding the meeting; (ii) two where the community did not reach an agreement during the community meetings; (iii) one where installation failed for one tubewell and cash contributions failed for the other tubewell. I excluded TUs where the project failed "endogenously" because at that stage, in agreement with the field team, I considered unfeasible to conduct the lab-in-the-field experiment in communities where the project failed due to tensions and disagreements within the community or lack of interest in the CDD program. Although aware that this selection might bias our estimates, this choice was imposed by feasibility constraints.

[65] In order to derive the weights I repeat the optimization procedure 1,000 times on the full sample of communities in the CDD program, and I calculate the probability of each community to be included in the optimal sample.

concentrated in the South-Eastern side of Deuli Union. As a result, control and treated communities selected for the lab-in-the-field experiment are not equally distributed in the area: treated communities are mainly from the North-Western side of Deuli Union, while control communities are homogeneously spread in the area. In Table A14, I compare the results from my preferred specification with the estimates obtained by excluding Deuli Union, the only strata where we experienced issues in the implementation of the project due to hydro-geological factors. The main findings are robust to the exclusion of this strata and, if anything, the results are stronger and more significant.

The third concern arises from the optimization procedure adopted in order to identify the sample of communities where to implement the lab-in-the-field experiment, described in details in Section 3.1 and in Appendix C. The main rationale for this non-random sample selection is small sample bias reduction, a valid concern posed by the sample size consisting in less than one hundred communities. In order to correct inference, I obtain boostrapped standard errors by implementing a two-step bootstrapping procedure that replicates the optimization procedure for sample selection (Appendix C). I obtain B=350 "optimal bootstrapped samples", which I use to obtain bootstrapped standard errors of the main coefficient of interest. Each "optimal bootstrapped sample" is obtained from K=1,000 samples, bootstrapped at community level by Union and treatment status, by selecting the one with the highest pvalue from the F-test on the balance of pre-intervention observables between treated and control villages. As the bootstrapped standard errors for the main coefficient of interest are smaller (Table A15), in my preferred specification and main analysis I report the most conservative specification with unadjusted standard errors.

Finally, Table A16 confirms that the coefficient of interest is robust to the inclusion of different sets of controls, including optimal sets of controls as identified by Lasso algorithms. Since both the magnitude and the significance of the main coefficient of interest show minimal variations when controls are included in the main specification, I do exclude covariates from my preferred specification and main analysis.

8 Conclusions

In this paper I evaluate the impact of a CDD program on democratic values and practices in receiving communities. Specifically, I focus on a novel measure of procedural utility measured in a lab setting: individual preferences on the process to take collective decisions.

The majority of citizens (weakly) prefer taking common decisions via democratic and inclusive institutions. However, participation in the decision-making process is selected, with women and the elderly less likely to engage into public consultations while leaders and

more educated agents place an higher value on participation. Preferences are driven by instrumental and non-instrumental considerations, and are influenced by the outcomes and the quality of similar decision-making processes already experienced by agents.

The value of participatory decision-making increases with exposure to the CDD program. The overall effect is driven primarily by an increase in the intrinsic value of participation in response to the CDD program, as subjects in treated communities have lower expectations of the instrumental gains of participation. This suggests that the exposure to participatory governance has an impact on the value that citizens attach to inclusive decision-making practices per se, above and beyond instrumental considerations.

A remaining open question is whether my results will extend outside the lab-in-the-field experiment setting, to contexts where participatory decision-making is applied to real-world community decisions and real-world alternative decision-making processes, such as a Top-Down approach or pre-existing informal local institutions. In a companion project conducted in the same Bangladeshi communities (Cocciolo et al., 2018d), we address these considerations by eliciting truthful individual evaluations for different types of institutional arrangement with respect to the future implementation of an intervention to provide a local public good.[66] This companion project will give new insights on citizens' evaluations over different institutional arrangements and the impact of past exposure to participatory governance in a real-world setting.

The evidence presented in this paper complements the results by Fearon et al. (2015), Beath et al. (2013) and Casey et al. (2018), that stress that, even in case new inclusive and effective institutions are available to communities, it remains unclear whether and under which conditions they will choose to make use of them endogenously instead of relying on traditional pre-existing institutions. A prerequisite for the endogenous adoption of the newly created institutions is that citizens prefer them to the old institutional arrangement: because they like them intrinsically, because they think they work better, or both Casey (2018). In my paper I provide evidence on the existence of this channel. Are these changes in citizens's value of inclusive institutions and participation are sufficient in order to induce changes in

[66] We offer communities the possibility to participate in a future development programs to install a new a communal source of safe drinking water. We offer participants the possibility to choose, under different subsidy levels, between three alternative decision-making processes: (i) a top-down approach, where project staff takes key decisions; (ii) an unregulated community participation process, where communities take decisions under their own local institutions; and (iii) a consensus-based community participation process, where project decisions are taken by unanimous consensus during community meetings at the presence of project staff, under the same rules as the CDD program implemented by Cocciolo et al. (2018a). We incentivize the elicitation procedure by randomly selecting a subset of communities to truly receive the future project, and defining the implementation rules by taking into account respondents' answers in the WTP elicitation procedure (majority rule). Because each community has a positive probability of receiving the possibility to install the new safe water source, respondents should truthfully report their preferences, as long as they believe there is a non-zero probability that their preferences influence the final decision.

individual participation choices and, ultimately, on local governance? In line with the existing literature, preliminary results suggest that this is not the case in the context of this study (Table 14).

Why are institutions persistent despite individual preferences and values do respond to exogenous shocks, such as the exposure to democratic and inclusive decision-making processes? One possible explanation is that, while experiencing inclusive institutions increases the value that citizens attach per se on being involved in decision-making, it also induces more realistic expectations on the personal benefits from participation, with an ambiguous effect on the overall demand for institutional reforms. An alternative explanation is that the exposure to democratic and inclusive institutions can change social values for participatory practices in receiving communities, but these changes will not translate into realized institutional reforms because institutions are persistent and constrained by the existing social and political structures within a society. This explanation would have significant policy implications, as it would suggest that interventions aimed at fostering institutional development should focus on relaxing such potential constraints. These questions are beyond the scope of this paper, but they create important avenues for future work.

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Figures

Figure 1: Timeline of the experiment

- **Task 1** ("Contribution task" or "Redistribution task")
- **WTP elicitation** w.r.t. to Task 1:
  - Elicitation of WTP for participatory decision-making
  - Beliefs elicitation
- **Task 2** ("Contribution task" or "Redistribution task")
- **WTP elicitation** w.r.t. to Task 1:
  - Elicitation of WTP for participatory decision-making
  - Beliefs elicitation
- **Task 3** according to the decision taken during the WTP elicitation

Figure 2: Distribution of WTP for participatory decision-making

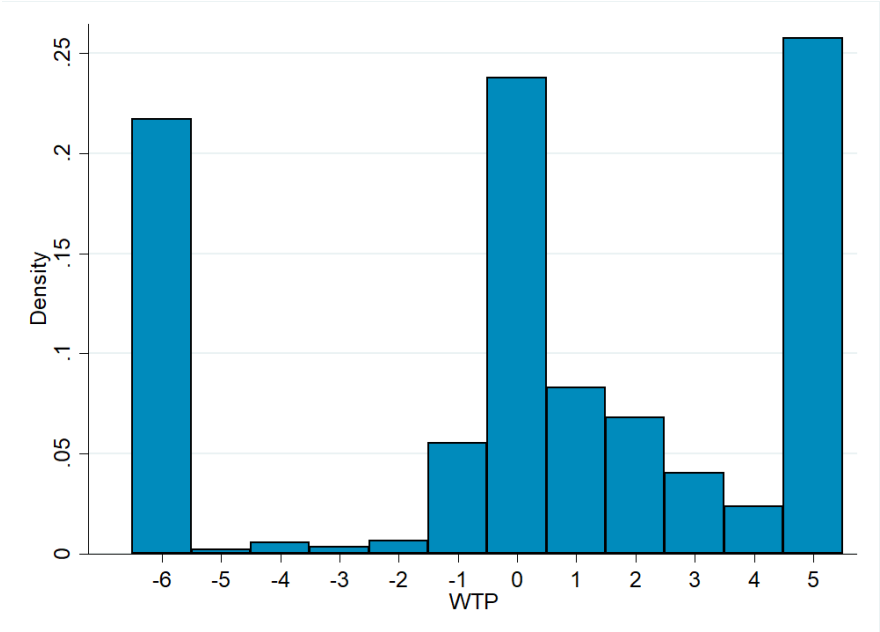


Figure 3: Instrumental value of participatory decision-making

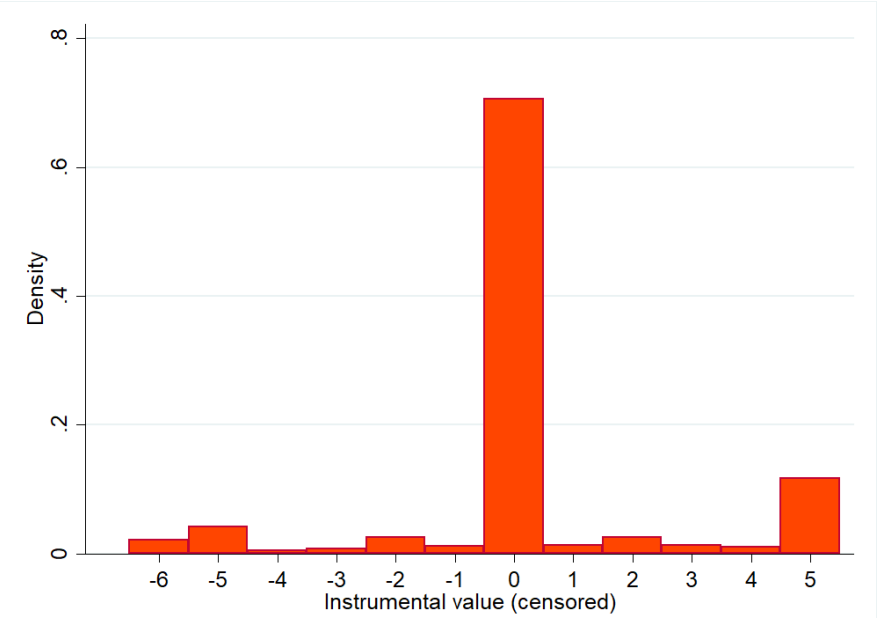


Figure 4: Intrinsic value of participatory decision-making

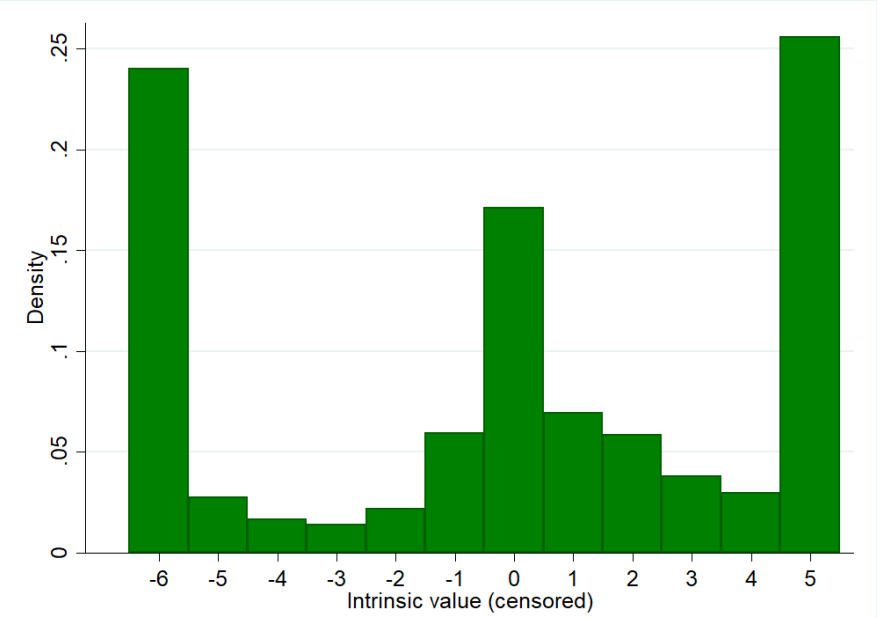


Figure 5: Intrinsic value of participatory decision-making

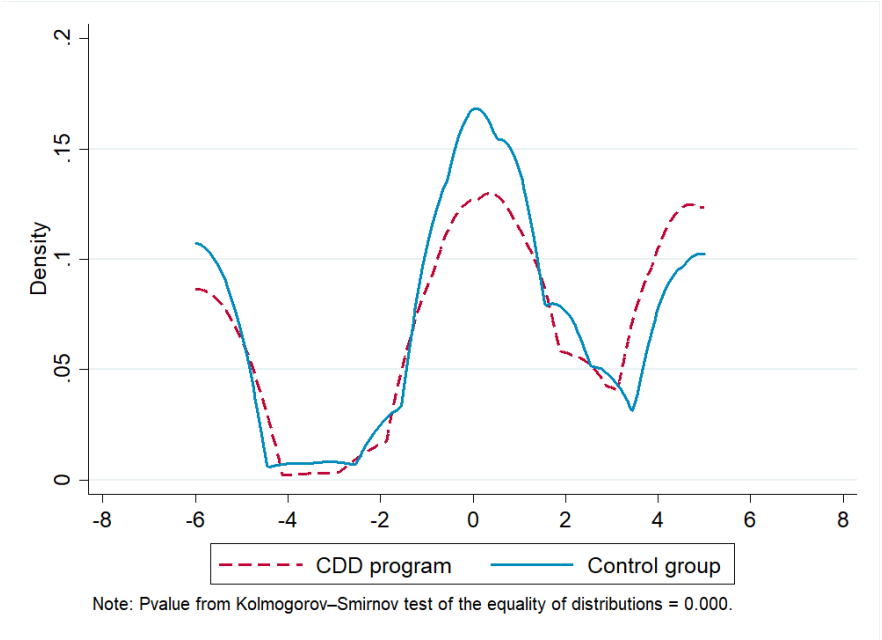


Figure 6: Intrinsic value of participatory decision-making

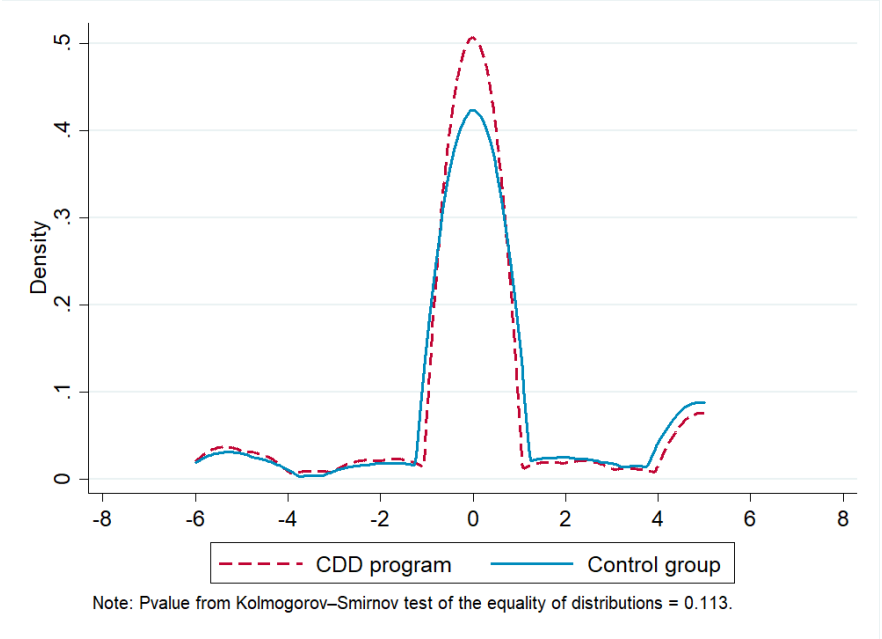
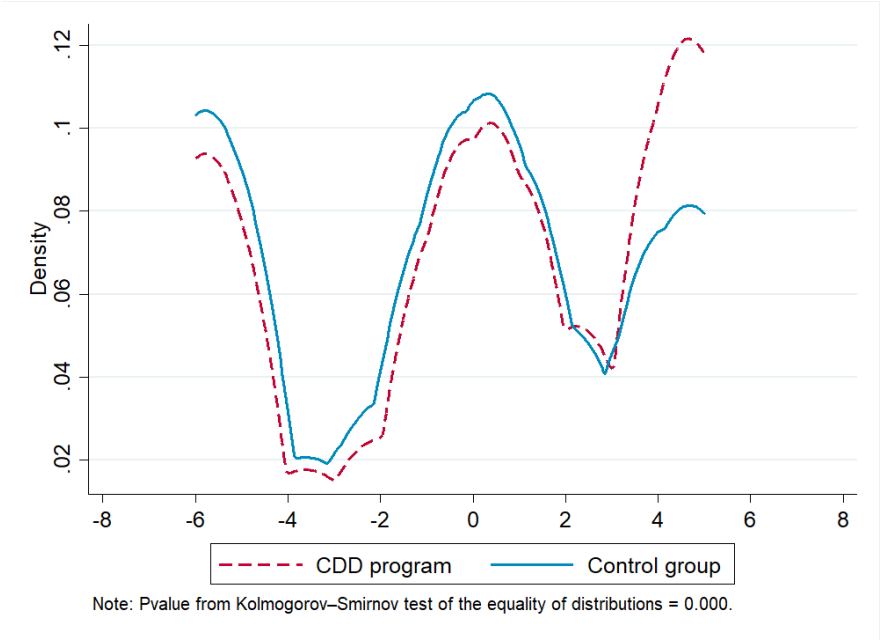


Figure 7: Intrinsic value of participatory decision-making



Tables

Table 1: Price list for the elicitation procedure

Choice	Alternative A	Alternative B
1	Participatory decision-making	Assigned distribution
2	Participatory decision-making - 1	Assigned distribution
3	Participatory decision-making - 2	Assigned distribution
4	Participatory decision-making - 3	Assigned distribution
5	Participatory decision-making - 4	Assigned distribution
6	Participatory decision-making - 5	Assigned distribution
7	Participatory decision-making + 1	Assigned distribution
8	Participatory decision-making + 2	Assigned distribution
9	Participatory decision-making + 3	Assigned distribution
10	Participatory decision-making + 4	Assigned distribution
11	Participatory decision-making + 5	Assigned distribution

Table 2: Sample stratification for players in the WTP elicitations

	Women	Men	Total
Total participants	576	576	1152
Participants from a leader household (planned)	145(192)	180(192)	325(384)

Table 3: Sample balance among final and prospective participants

Dependent variable: CDD program	(1)	(2)	(3)	(4)
Bacteria contaminated household	-0.06*	-0.05	-0.06	-0.05
Arsenic contaminated household	0.00	-0.00	0.00	-0.00
Poverty score - 2 USD	-0.00	0.00	-0.00	0.00
Indegree centrality	-0.01	-0.03	-0.01	-0.03
Outdegree centrality	0.03	0.04*	0.03	0.04*
Leader household	-0.04	-0.03	-0.03	-0.02
Share of not educated people in the household	0.13*	0.06	0.12*	0.06
Literacy rate in the household	0.12*	0.02	0.11*	0.05
Household size	-0.00	0.01	-0.00	0.01
Muslim household	-0.06	-0.01	-0.06	-0.01
Decision on a new public safe water source - unanimity	-0.06	0.03	-0.05	0.03
Decision on a new public safe water source - majority	0.02	-0.01	0.03	0.00
Decision on a new public safe water source - government	-0.01	-0.15*	-0.02	-0.15*
Decision on a new public safe water source - village leaders	0.03	0.07	0.02	0.06
Decision on a new public safe water source - ngo	0.05	0.14**	0.06	0.14**
WTP (cash) for new public safe WS in most preferred location	0.00	0.00	0.00	0.00
WTP (cash) for new public safe WS in socially optimal location	0.00	-0.00	0.00	-0.00
WTP (time) for new public safe WS in most preferred location	-0.00	-0.00	-0.00	-0.00
F-test (pvalue)	0.185	0.452	0.130	0.477
Player sample	Final	Final	Accepted	Accepted
Participation task only		✓		✓
Pre-specified	✓		✓	
N	3208	1054	3358	1105

Notes: Standard errors clustered at community level. Union FE are included in all regressions.

Table 4: Correlations with previous experience with experimental tasks

	WTP	WTP≥0	Always participate	Instrumental value	Expected outcome participation	Expected outcome non participation	Intrinsic value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Outcome in previous round	0.08**	0.01***	0.00	0.17***	0.20***	0.04	-0.09*
	(0.03)	(0.00)	(0.00)	(0.04)	(0.05)	(0.03)	(0.05)
Inequality in previous round	0.71	0.01	0.06	1.21**	2.04***	0.83	-0.50
	(0.59)	(0.07)	(0.06)	(0.51)	(0.73)	(0.61)	(0.73)
Bargaining time (mins)	-0.03	-0.00	-0.00	0.14***	0.22***	0.08**	-0.17***
	(0.04)	(0.00)	(0.00)	(0.05)	(0.06)	(0.04)	(0.06)
Tense bargaining	0.02	-0.01	0.00	-0.02	0.59**	0.62***	0.04
	(0.19)	(0.02)	(0.03)	(0.17)	(0.25)	(0.19)	(0.25)
Pre-specified							
N	2302	2302	2302	2302	2302	2302	2302

Notes: Standard errors clustered at community level. Union FE and enumerator FE are included in all regressions.

Table 5: Correlations with demographic characteristics

	WTP	WTP≥0	Always participate	Instrumental value	Expected outcome participation	Expected outcome non participation	Intrinsic value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Secondary education	0.09	0.03	-0.01	0.35	0.20	-0.15	-0.25
	(0.23)	(0.02)	(0.03)	(0.23)	(0.23)	(0.20)	(0.32)
Age	-0.03***	-0.00**	-0.00**	0.00	-0.00	-0.00	-0.03***
	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
Poverty score	0.52	0.03	0.11*	0.09	-0.02	-0.10	0.43
	(0.56)	(0.07)	(0.06)	(0.58)	(0.58)	(0.41)	(0.70)
Female	-0.20	0.01	-0.06***	-0.15	0.33	0.48***	-0.05
	(0.19)	(0.02)	(0.02)	(0.18)	(0.20)	(0.15)	(0.27)
Leader household	0.54*	0.06*	0.03	0.17	0.92***	0.75***	0.37
	(0.30)	(0.03)	(0.03)	(0.28)	(0.28)	(0.22)	(0.40)
Indegree centrality	0.03	0.00	0.00	0.04	-0.01	-0.04	-0.01
	(0.10)	(0.01)	(0.01)	(0.08)	(0.10)	(0.07)	(0.12)
Outdegree centrality	-0.01	0.00	0.00	0.05	-0.03	-0.07	-0.05
	(0.12)	(0.02)	(0.01)	(0.11)	(0.12)	(0.11)	(0.15)
Pre-specified							
N	2090	2090	2090	2090	2090	2090	2090

Notes: Standard errors clustered at community level. Union FE and enumerator FE are included in all regressions.

Table 6: Main treatment effect

	WTP		WTP relative to endowment	WTP<0	WTP>0	Always participate
	(1)	(2)	(3)	(4)	(5)	(6)
CDD program	0.58**	1.17**	0.07**	-0.04	0.07*	0.10***
	(0.27)	(0.52)	(0.03)	(0.03)	(0.03)	(0.03)
Mean (control)	-0.02	-0.02	-0.01	0.32	0.44	0.20
Pre-specified	✓					
ML for censored data		✓				
N	2304	2304	2304	2304	2304	2304

Notes: Standard errors clustered at community level. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection.

Table 7: Treatment effect on instrumental and intrinsic value of participatory decision-making

	WTP	Instrumental value	Intrinsic value
	(1)	(2)	(3)
CDD program	0.58**	-0.52**	1.10***
	(0.27)	(0.21)	(0.31)
Mean (control)	-0.02	1.02	-1.04
Pre-specified	✓	✓	✓
N	2304	2304	2304

Notes: Standard errors clustered at community level. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection.

Table 8: Treatment effect on the dynamics and outcomes of participatory decision-making

	Realized inequality	Total contributions	Bargaining time	Tense bargaining
	(1)	(2)	(3)	(4)
CDD program	0.01	-0.94	3.43	-0.05**
	(0.01)	(0.64)	(8.36)	(0.02)
Mean (control)	0.12	24.23	104.94	0.35
Contribution task only		✓		
Pre-specified	✓	✓	✓	✓
N	2302	1152	2304	2304

Notes: Standard errors clustered at community level. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection.

Table 9: Treatment effect on beliefs and expectations

	Expected outcome from participating	Expected outcome from not participating	Expect to be influential	Negotiation skills
	(1)	(2)	(3)	(4)
CDD program	-0.57*	-0.05	-0.03	-0.06**
	(0.31)	(0.23)	(0.02)	(0.02)
Mean (control)	22.20	21.18	0.12	0.85
Pre-specified				✓
N	2304	2304	2304	1074

Notes: Standard errors clustered at community level. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection. Union FE included in all regressions. Variable definition: "Negotiation skills" = agree to be very good in negotiating with other people.

Table 10: Treatment effect on correct beliefs on participation outcomes

	Underestimate participation outcome	Correct beliefs	Overestimate participation outcome
	(1)	(2)	(3)
CDD program	0.00	0.08*	-0.09*
	(0.03)	(0.05)	(0.05)
Mean (control)	0.10	0.49	0.41
Pre-specified			
N	653	653	653

Notes: Standard errors clustered at community level. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection. Union FE included in all regressions. Regressions estimated on the endogenous sample of players that completed the negotiation task in the last stage of the experimental session.

Table 11: Treatment effect by baseline water quality

Dependent variable: WTP	(1)	(2)	(3)	(4)	(5)
CDD program	0.58**	0.80*	0.59*	0.58**	0.58**
	(0.27)	(0.48)	(0.32)	(0.27)	(0.26)
CDD program * Bacteria contaminated HH		-0.47			
		(0.59)			
CDD program * Arsenic contaminated HH (BD)			-0.11		
			(0.58)		
CDD program * % Bacteria contaminated WSs				-0.15	
				(2.16)	
CDD program * % Arsenic contaminated WSs (BD)					0.20
					(1.41)
Pre-specified	✓				
N	2304	2132	2148	2304	2304

Notes: Standard errors clustered at community level. Union FE are included in all regressions. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection. "% Bacteria contaminated WSs" and "% Arsenic contaminated WSs (BD)" are demeaned.

Table 12: Treatment effect by community decisions and household benefits from the program

Dependent variable: WTP	(1)	(2)	(3)	(4)
Any accepted site on private land	0.041			
	(0.444)			
Distance accepted sites-optimal locations		0.002***		
		(0.001)		
Distance HH-closest accepted site			0.000	0.001
			(0.001)	(0.001)
Distance HH-closest accepted site * Arsenic contaminated HH				-0.001
				(0.002)
Treated only	✓	✓	✓	✓
Pre-specified	✓*	✓*	✓*	✓*
N	1324	1324	1314	1314

Notes: Standard errors clustered at community level. Union FE are included in all regressions. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection.

Table 13: Treatment effect by dynamics of community decision-making

Dependent variable: WTP	(1)	(2)	(3)	(4)
HH attendance	-4.94**			-5.06***
	(1.86)			(1.67)
Female attendance	2.22			2.32
	(1.63)			(1.55)
Active participation in meeting	6.71			7.08*
	(4.08)			(4.20)
Meeting duration		0.01		0.01
		(0.01)		(0.01)
Discussed/offered TWs			0.47*	0.23
			(0.28)	(0.23)
Treated only	✓	✓	✓	✓
Pre-specified	✓*	✓*	✓*	✓*
N	1464	1464	1464	1464

Notes: Standard errors clustered at community level. Union FE are included in all regressions. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection.

Table 14: Treatment effect on real-world participation behavior

	Estimates	Observations
Involvement in community decision-making	0.03 (0.03)	2314
Attendance to village meetings	-0.01 (0.02)	2259
Participation in local associations	0.03 (0.02)	2236
Participation in local collective actions	0.01 (0.02)	2192

Notes: Standard errors clustered at community level. Union FE are included in all regressions. Regressions with the follow-up random sample in communities involved in the lab-in-the-field experiment. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection.

A Appendix: Figures

Figure A.1: Project timeline

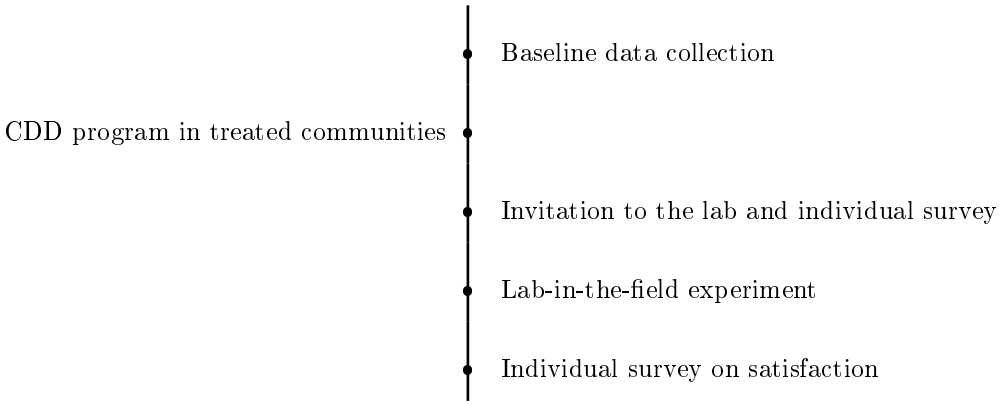


Figure A.2: Errors in beliefs on monetary outcome from participation

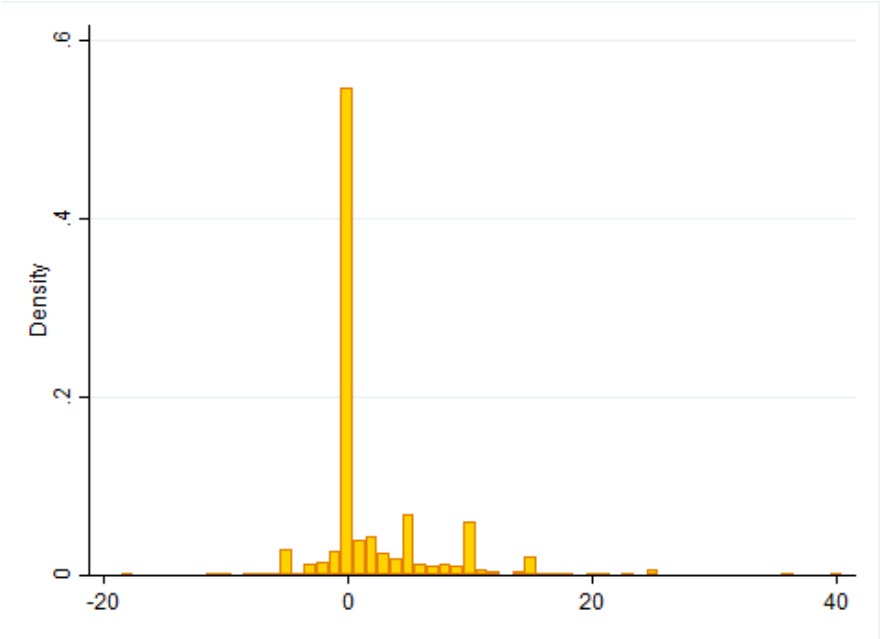


Figure A.3: Errors in beliefs on monetary outcome from participation

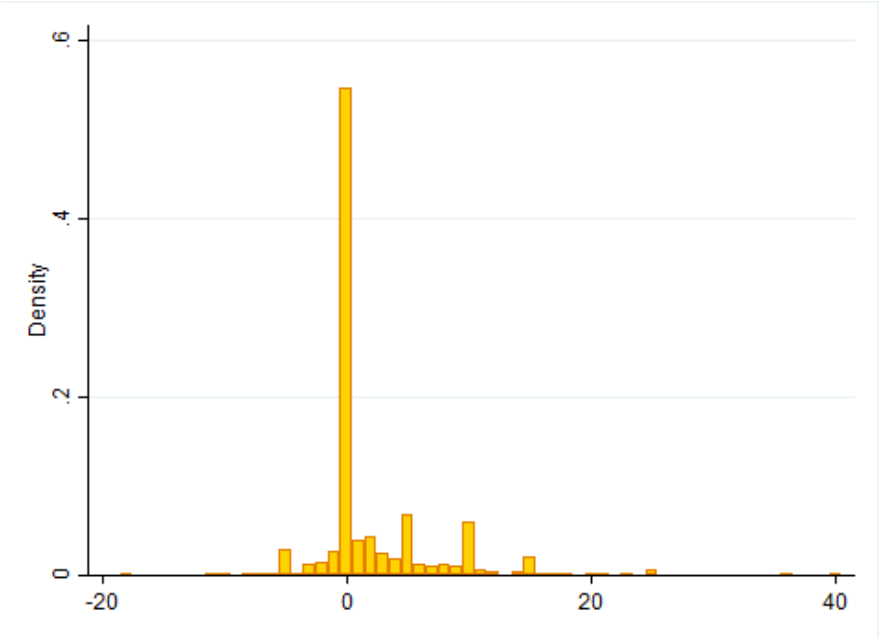
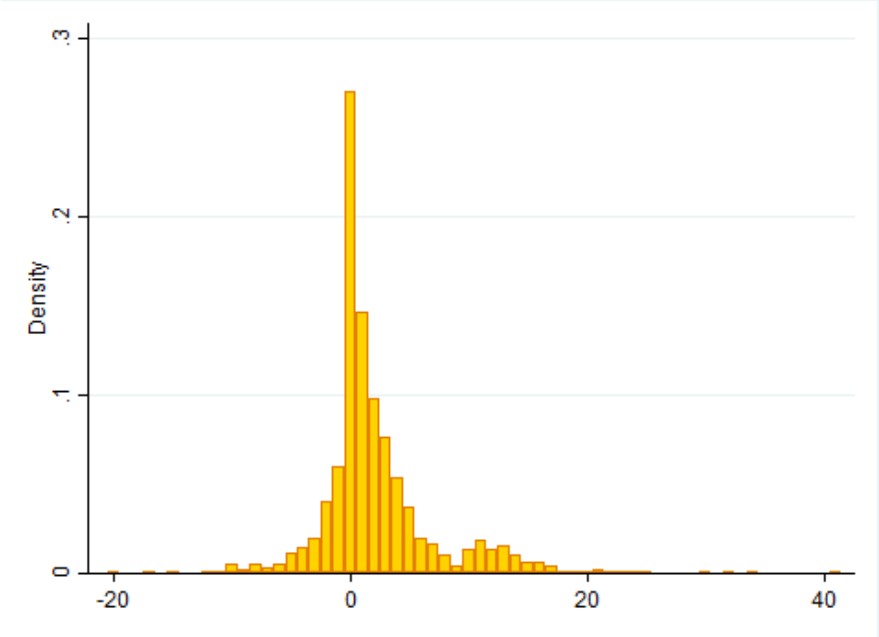


Figure A.4: Errors in beliefs on monetary outcome from non-participation



B Appendix: Tables

Table A1: Time and errors of WTP elicitation

	Stage 1	Stage 2	Overall
Instructions on WTP elicitation			
Time supervisor (mins)	1.7	0.9	1.3
Time enumerators (mins)	1.6	1.0	1.3
WTP elicitation			
Time (mins)	1.9	0.9	1.4
Initial inconsistencies	0.18	0.15	0.17
Beliefs elicitation			
Time (mins)	1.4	0.8	1.1
Correlations			
WTP elicitation and instruction time	$+^{***}$	$+^{***}$	$+^{***}$
Inconsistencies and instruction time	$+^{**}$	$+$	$+^{**}$

Table A2: Sample balance - participants

	Control group - Mean (s.e.)	Treated group - Mean (s.e.)	pvalue	Observations
Household size	3.71 (0.14)	3.69 (0.15)	0.73	3469
Poverty score - 2 USD	76.16 (2.65)	75.85 (2.27)	0.84	3445
Decision on a new public safe water source - unanimity	0.75 (0.05)	0.70 (0.05)	0.06	3469
Decision on a new public safe water source - majority	0.28 (0.04)	0.32 (0.04)	0.16	3469
Decision on a new public safe water source - government	0.06 (0.02)	0.07 (0.02)	0.55	3469
Decision on a new public safe water source - village leaders	0.24 (0.07)	0.29 (0.06)	0.24	3469
Decision on a new public safe water source - ngo	0.27 (0.09)	0.34 (0.09)	0.18	3469
WTP (cash) for new public safe WS in most preferred location	246.55 (57.54)	259.89 (49.63)	0.63	3469
WTP (cash) for new public safe WS in socially optimal location	82.31 (13.39)	85.79 (12.25)	0.74	3469
WTP (time) for new public safe WS in most preferred location	9.25 (1.64)	8.88 (1.81)	0.67	3469
Bacteria contaminated household	0.57 (0.04)	0.52 (0.03)	0.09	3448
Arsenic contaminated household	20.83 (7.10)	25.53 (7.32)	0.19	3466
Indegree centrality	1.10 (0.15)	1.12 (0.16)	0.83	3671
Outdegree centrality	2.65 (0.18)	2.80 (0.17)	0.11	3467
Leader household	0.09 (0.01)	0.09 (0.01)	0.66	3671
Share of not educated people in the household	0.40 (0.03)	0.42 (0.03)	0.31	3469
Literacy rate in the household	0.48 (0.03)	0.48 (0.03)	0.83	3460

Notes: Analysis conducted on the final sample of players participating to the experimental session. Standard errors are clustered at community level and shown in parentheses. Column 3 reports pvalues from pairwise tests of the difference between the means in the treated and control group, from a regression of the outcome variable on the treatment status, controlling for Union FE. Analysis pre-specified.

Table A3: Attrition from the lab-in-the-field experiment

Dependent variable: Drop out	(1)	(2)	(3)	(4)
Treated	0.01	-0.01	0.01	-0.02
	(0.01)	(0.02)	(0.01)	(0.02)
Attrition rate	0.05	0.06	0.05	0.06
Controls			✓	✓
In WTP elicitation		✓		✓
Pre-specified	✓		✓	
N	3374	1127	3323	1105

Notes: "Drop out" identifies players that accepted to participate in the experimental session, but ultimately did not. "Attrition rate" is the equivalent share.

Table A4: Correlations with values and attitudes

	WTP	WTP≥0	Always participate	Instrumental value	Expected outcome participation	Expected outcome non participation	Intrinsic value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Have a say	0.20	0.02	0.01	-0.37	-0.29	0.08	0.57
	(0.33)	(0.03)	(0.04)	(0.29)	(0.31)	(0.20)	(0.42)
Participation in meeting	0.27	0.00	0.02	-0.02	0.12	0.14	0.29
	(0.32)	(0.03)	(0.03)	(0.36)	(0.40)	(0.28)	(0.48)
Perceived negotiation skills	-0.38	-0.01	-0.06*	0.40*	0.68***	0.28	-0.79**
	(0.30)	(0.04)	(0.03)	(0.21)	(0.25)	(0.21)	(0.33)
Trust	-0.35	-0.02	-0.02	0.38	0.02	-0.36	-0.73*
	(0.30)	(0.03)	(0.03)	(0.34)	(0.45)	(0.27)	(0.39)
Risk aversion	0.35	0.03	0.01	-0.14	-0.14	0.00	0.49
	(0.29)	(0.03)	(0.04)	(0.29)	(0.30)	(0.23)	(0.41)
Fair contributions	-0.33	-0.01	-0.02	-0.08	0.10	0.18	-0.25
	(0.30)	(0.03)	(0.03)	(0.30)	(0.31)	(0.26)	(0.43)
Generosity	0.00	0.00	0.00	0.01	-0.00	-0.01*	-0.01
	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
Pre-specified							
N	2144	2144	2144	2144	2144	2144	2144

Notes: Standard errors clustered at community level. Union FE and enumerator FE are included in all regressions. Variable definition: "Have a say" = strong agree that people should have a say about decisions regarding their community; "Participation in meeting" = strong willingness to participate in village meetings held to decide about an issue in my community; "Trust" = strong agree that most people can be trusted; "Risk aversion" = strong agree to be very careful in trying to avoid risks; "Negotiation skills" = agree to be very good in negotiating with other people; "Fair contributions" = strong agree that richest people in the community should pay more for local public goods; "Generosity" = amount donated in dictator game (incentivized).

Table A5: Distributional change in the instrumental value of participation

	Instrumental value	Instrumental value < 0	Instrumental value > 0	High instrumental value
	(1)	(2)	(3)	(4)
CDD program	-0.52**	0.03	-0.05**	-0.03*
	(0.21)	(0.02)	(0.02)	(0.02)
Mean (control)	1.02	0.10	0.21	0.14
Pre-specified				
N	2304	2304	2304	2304

Notes: Standard errors clustered at community level. Union FE are included in all regressions. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection.

Table A6: Distributional change in the intrinsic value of participation

	Intrinsic value	Intrinsic value < 0	Intrinsic value > 0	High intrinsic value
	(1)	(2)	(3)	(4)
CDD program	1.10***	-0.09***	0.09***	0.10***
	(0.31)	(0.03)	(0.03)	(0.03)
Mean (control)	-1.04	0.43	0.40	0.20
Pre-specified				
N	2304	2304	2304	2304

Notes: Standard errors clustered at community level. Union FE are included in all regressions. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection.

Table A7: Heterogeneous treatment effects

	WTP				Always participate			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CDD program	0.47	0.41	0.39	1.11	0.11***	0.10***	0.09**	0.10
	(0.29)	(0.30)	(0.33)	(1.01)	(0.03)	(0.04)	(0.04)	(0.10)
CDD program * Female	0.23				-0.02			
	(0.41)				(0.04)			
CDD program * Leader HH		0.57				0.02		
		(0.47)				(0.06)		
CDD program * Indegree centrality			0.16				0.01	
			(0.17)				(0.02)	
CDD program * Poverty score				-0.01				-0.00
				(0.01)				(0.00)
Pre-specified	✓	✓	✓	✓				
N	2304	2304	2304	2130	2304	2304	2304	2130

Notes: Standard errors clustered at community level. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection.

Table A8: Tense bargaining

	Tense bargaining
	(1)
Bargaining time	0.00***
	(0.00)
Realized inequality	0.21***
	(0.06)
Inequality treatment	0.10***
	(0.02)
Redistribution task	-0.04**
	(0.02)
First task	0.00
	(0.02)
Pre-specified	
N	2302

Notes: Standard errors clustered at community level. Union FE and enumerator FE are included.

Table A9: Treatment effect on correct beliefs on non-participation outcomes

	Underestimate non-participation outcome	Correct beliefs	Overestimate non-participation outcome
	(1)	(2)	(3)
CDD program	-0.03	0.02	0.01
	(0.03)	(0.02)	(0.02)
Mean (control)	0.19	0.26	0.56
Pre-specified			
N	2302	2302	2302

Notes: Standard errors clustered at community level. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection. Union FE included in all regressions.

Table A10: Treatment effect by CDD program treatments

Dependent variable: WTP	(1)	(2)	(3)	(4)
CDD program	0.58**			
	(0.27)			
Cash TU		0.48		
		(0.37)		
Labour TU		0.92**		
		(0.38)		
Waiver TU		0.37		
		(0.35)		
No SMS reminder			0.57*	
			(0.33)	
SMS reminder, TU info			0.73*	
			(0.40)	
SMS reminder, HH info			0.46	
			(0.45)	
Anchoring TU				0.60*
				(0.31)
Non-anchoring TU				0.56
				(0.35)
Pre-specified	✓	✓*	✓*	✓*
N	2304	2304	2304	2304

Notes: Standard errors clustered at community level. Union FE are included in all regressions. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection.

Table A11: Treatment effect by community size

Dependent variable: WTP	(1)	(2)	(3)	(4)
CDD program	0.58**	0.49*	0.55**	0.43
	(0.27)	(0.27)	(0.27)	(0.31)
Treated * TU size		-0.00		-0.02*
		(0.01)		(0.01)
Treated * Predicted TU size			-0.01*	
			(0.01)	
Model	OLS	OLS	RF	IV
AU size controls		✓	✓	✓
Pre-specified	✓	✓*	✓*	✓*
N	2304	2304	2304	2304

Notes: Standard errors clustered at community level. Union FE are included in all regressions. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection. "TU size" and "Predicted TU size" are demeaned.

Table A12: Treatment effect on values and attitudes

	Have a say	Participation in meeting	Trust	Risk aversion	Fair contributions	Generosity	Inequality preferences
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
CDD program	-0.01	0.01	0.02	0.03	-0.06*	0.46	-0.01
	(0.03)	(0.04)	(0.03)	(0.02)	(0.04)	(0.97)	(0.01)
Mean (control)	0.16	0.35	0.31	0.11	0.34	18.59	0.18
Pre-specified	✓	✓	✓	✓	✓	✓	
N	1080	1081	1081	1080	1081	1081	3408

Notes: Standard errors clustered at community level. Union FE are included in all regressions. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection. Variable definition: "Have a say" = strong agree that people should have a say about decisions regarding their community; "Participation in meeting" = strong willingness to participate in village meetings held to decide about an issue in my community; "Trust" = strong agree that most people can be trusted; "Risk aversion" = strong agree to be very careful in trying to avoid risks; "Fair contributions" = strong agree that richest people in the community should pay more for local public goods; "Generosity" = amount donated in dictator game (incentivized); "Inequality preferences" = inequality determined by distributive choices of external spectators (incentivized).

Table A13: The socio-economic impact of the CDD program

	Estimates	Observations
Poverty score	0.46 (1.14)	3007
Share of adults in labour force	0.00 (0.01)	4029
Savings	-8677.71* (4910.81)	3983
Rooms	-0.10 (0.07)	4029
Good commuity relations	-0.01 (0.02)	2314
Trust towards other villagers	-0.01 (0.03)	2314
Trust towards local leaders	-0.02 (0.02)	2314
Outdegree centrality	-.8*** (0.31)	2280
Experienced crisis	-0.01 (0.02)	4029
Cope crisis: relatives and friends	-0.05 (0.04)	1273

Notes: Standard errors clustered at community level. Union FE are included in all regressions. Regressions with the follow-up random sample in communities involved in the lab-in-the-field experiment. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection. Variable definition: "Savings" = savings in BDT in the previous year; "Good community relations" = dummy if the household reported that residents of the community get along with each and cooperate very well; "Trust towards other villagers" = high trust towards village residents to solve problems which the village may face; "Trust towards local leaders" = high trust towards local leaders to solve problems which the village may face; "Experienced crisis" = dummy if the household experienced any crisis in the previous year; "Cope crisis: relatives and friends" = dummy if the household relied on relatives or friends to cope with any experienced crisis.

Table A14: Robustness checks: sample weights and endogenous/exogenous failures

	Full sample weighted	Full sample unweighted	Drop endogenous failures	Drop exogenous failures
Dependent variable: WTP	(1)	(2)	(3)	(4)
CDD program	0.58**	0.50*	0.61**	0.49*
	(0.27)	(0.26)	(0.26)	(0.27)
Full sample	✓	✓		
Weighted	✓			
Pre-specified	✓	✓	✓	✓
N	2304	2304	2208	1992

Notes: Standard errors clustered at community level.

Table A15: Robustness checks: correcting inference

	Full sample unweighted		Drop endogenous failures	
Dependent variable: WTP	(1)	(2)	(3)	(4)
CDD program	0.5**	0.5***	0.61**	0.61***
	(0.26)	(0.15)	(0.26)	(0.16)
Bootstrapped S.E		✓		✓
Pre-specified	✓	✓	✓	✓
N	2304	2304	2208	2208

Notes: Standard errors clustered at community level. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection. Bootstrapped standard errors are obtained from $B = 350$ "optimal samples". Each "optimal sample" is obtained from $K = 1000$ samples bootstrapped by Union and treatment status.

Table A16: Robustness checks: controls

Dependent variable: WTP	(1)	(2)	(3)	(4)	(5)	(6)
CDD program	0.58**	0.47*	0.55*	0.52*	0.60**	0.61**
	(0.27)	(0.28)	(0.28)	(0.27)	(0.27)	(0.28)
Controls		✓	✓	✓	✓	✓
Controls (favorite set)				✓	✓	
Enumerator FE			✓		✓	In Lasso
Lasso						✓
Pre-specified	✓	✓				✓
N	2304	2108	2108	2090	2090	2144

Notes: Standard errors clustered at community level. Regressions weighted by the probability of each village to be selected by the optimization procedure for sample selection.

C Appendix: Selection of control and treated villages

Within the CDD program, treated villages are further randomly assigned to different contribution requirements in terms of co-funding the project: (i) cash contribution; (ii) labour contribution; (iii) waiver. By design of the CDD program, 1/4 of communities are in the control group and 3/4 in the treated group (Table A17).

According to the initial design, selected for the lab-in-the-field experiment 92 communities: 35 from the control group and 57 from the treated group, evenly distributed across treatment arms (Table A18).

Table A17: Sample size for the CDD program

Union name	Control	Cash	Labour	Waiver	Total
Deuli	8	8	7	8	31
Saidpur	9	9	10	10	38
Balua	4	5	5	4	18
Mokamtala	9	9	9	9	36
Shibgonj	2	2	2	2	8
Maidanhata	4	4	3	4	15
Roynagar	1	1	1		3
Kichak	1	1	2	2	5
Total	38	39	39	39	155

Table A18: Sample size for lab-in-the-field experiment

Union name	Control	Cash	Labour	Waiver	Total
Deuli	5	2	2	2	11
Saidpur	9	5	5	6	25
Balua	4	2	2	2	10
Mokamtala	9	5	5	5	24
Shibgonj	2	1	1	1	5
Maidanhata	4	2	2	2	10
Roynagar	1	1	1		3
Kichak	1	1	1	1	4
Total	35	19	19	19	92

Originally, I considered ineligible for this project nine communities: (i) one where the community was not interested in holding the meeting; (ii) two where the community did not reach an agreement during the community meetings; (iii) one where installation failed for one tubewell and cash contributions failed for the other tubewell; (iv) five communities in Deuli Union where installations failed due to hydro-geological reasons.

Among eligible communities, I select the ones where to conduct the lab-in-the-field experiment in order to maximize the balance between the treatment and control group on a set of pre-intervention observables. I reiterate 1,000 times a random sampling procedure stratified by Union, and I implement the one with the highest pvalue from the F-test on the balance of pre-intervention observables between treated and control villages. We test the balance between the treatment and control group on the following set of pre-intervention observables, aggregated at village level:

- village size;
- number of clusters;
- share of arsenic contaminated water sources;
- share of bacteria contaminated water sources;
- number of offered water sources if treated;
- average poverty score (2$ poverty line);[67]

[67]The poverty score is the Progress out of Poverty Index (PPI), which uses answers to simple questions about a household's characteristics and asset ownership in order to compute the likelihood that the household

- average willingness to take part to a collective action for the construction of a new public water source;
- share of households reporting that the decision on the construction of a new public water source in their village should be taken by unanimity;
- share of households reporting that the decision on the construction of a new public water source in their village should be taken by majority;
- share of households reporting that the decision on the construction of a new public water source in their village should be taken by the government;
- share of households reporting that the decision on the construction of a new public water source in their village should be taken by village leaders;
- average self-reported willingness to pay (cash) for a new public water source in own's favourite location;
- average self-reported willingness to pay (cash) for a new public water source in the best location for the community;
- average self-reported willingness to pay (time) for a new public water source the in best location for the community;
- average network size;
- number of leader households;
- distance to the closest pharmacy;
- distance to the closest health clinic;
- share of villagers with no education;
- literacy rate.

As performed in date December 2, 2016, the best random sample has F-test with pvalue equal to 0.96.

As I reconsidered the sample selection in February 2017, I added the four communities in categories (i)-(iii) to the original sample of 92 communities selected via the optimization algorithm. In Table A19 I test for balance in the final sample of 96 communities, reporting

is living below 2$ poverty line. We refer here to the construction of the PPI for Bangladesh. Further references can be found here: `http://www.progressoutofpoverty.org/`.

the pvalues from pairwise ttests between the control and treated groups for the set of pre-intervention observables used to identify the optimal random sample.

Table A19: Balance tests of covariates between treatment and control group

	Control group - Mean (s.e.)	Treated group - Mean (s.e.)	pvalue	Observations
Number of clusters	1.10 (0.31)	1.31 (0.29)	0.315	96
Average household size	3.95 (0.09)	3.91 (0.09)	0.550	96
Number of anchors	1.11 (0.15)	1.18 (0.14)	0.528	96
Average poverty score - 2 USD	81.51 (2.30)	80.97 (2.17)	0.737	96
Participation to a collective action to provide a new public safe water source	0.98 (0.01)	0.97 (0.01)	0.932	96
Decision on a new public safe water source - unanimity	0.77 (0.04)	0.73 (0.04)	0.168	96
Decision on a new public safe water source - majority	0.42 (0.04)	0.43 (0.04)	0.593	96
Decision on a new public safe water source - government	0.09 (0.03)	0.09 (0.03)	0.936	96
Decision on a new public safe water source - village leaders	0.23 (0.06)	0.27 (0.06)	0.245	96
Decision on a new public safe water source - ngo	0.17 (0.06)	0.22 (0.06)	0.203	96
WTP (cash) for installation of a new public safe water source in most preferred	247.49 (34.94)	252.97 (32.95)	0.821	96
WTP (cash) for installation of a new public safe water source in location servin	104.49 (16.49)	110.49 (15.54)	0.600	96
WTP (time) for installation of a new public safe water source in most preferred	10.37 (4.39)	8.90 (4.14)	0.627	96
Share of bacteria contaminated water sources	0.57 (0.04)	0.56 (0.04)	0.618	96
Share of arsenic contaminated water sources	0.68 (0.07)	0.73 (0.07)	0.382	96
TU size	117.35 (17.87)	125.40 (16.85)	0.516	96
Average network size	2.76 (0.13)	2.86 (0.13)	0.270	96
Number of leaders	2.69 (0.12)	2.70 (0.12)	0.852	96
Distance to the closest pharmacy (min)	18.82 (1.93)	18.84 (1.82)	0.988	96
Distance to the closest health clinic (min)	26.81 (2.70)	26.65 (2.54)	0.934	96
Share of not educated people	0.33 (0.03)	0.35 (0.03)	0.330	96
Literacy rate	0.57 (0.03)	0.57 (0.03)	0.677	96

Note: Standard errors are shown in parentheses. Column 4 reports the pvalues from pairwise tests of the mean difference between treatment and control group, from a regression of the outcome variable on indicators for the two groups (with Union fixed effects and no constant).

D Appendix: Scripts

D.1 Introduction of the project to the community

We are working for a NGO called NGO Forum for Public Health, and collaborating with researchers from Stockholm University, Sweden.

NGO Forum is conducting an arsenic mitigation program in the region. As part of that project, some months ago we tested for bacteria and arsenic all sources of drinking water in this village. Moreover, we conducted an interview with some households in this village. Remind the community people about the project and the treatment status of the village, and the progress of the project.

We now selected your village for another related project, which is called "Community Decision Making Project". The aim of this new project is to study how communities take decisions in rural Bangladesh.

What we learn from this study will help us and other organizations to improve the design of programs, like the arsenic mitigation program we are conducting in this region. This may help other communities like your own.

We randomly selected 21 households for this project, and we will invite one man and one woman per household to participate to an experimental session. Their tasks will take approximately 4-5 hours, and we will compensate participants for their time.

D.2 Invitation of participants

We are working for a NGO called NGO Forum for Public Health, and collaborating with researchers from Stockholm University.

NGO Forum is conducting an arsenic mitigation program in the region. As part of that project, some months ago we tested for bacteria and arsenic all sources of drinking water in this village. Moreover, we conducted an interview with some households in this village. We now selected your village for another related project.
We conducted a public lottery in order to decide which villages were going to receive the intervention and the possibility to construct a new public source of safe water.

Control villages: Your village was assigned to the control group, however, we are working in other nearby villages in your union in order to provide access to safe water.

Treated villages: Your village was assigned to the treatment group. We already conducted in your village the community meeting, where your community decided on where to build the new source of safe drinking water.

D.3 Informed consent

You have been asked to participate in a research study conducted by Serena Cocciolo and Selene Ghisolfi from the Institute for International Economic Studies, Stockholm University, in cooperation with NGO Forum. The purpose of the study is to learn about how groups of people who live in communities like yours take decisions.

The study is composed of an interview today and participation in an experimental session tomorrow. We expect that the interview today will take about 15 minutes, and the experimental session tomorrow will last for 4 to 5 hours. During the experimental session tomorrow you will be asked to take part in three decision-making exercises with other people from your village. Tomorrow we will explain in details the rules of the tasks you will take part in.

You were randomly selected as a possible participant in this study given your household has been previously interviewed for a related project conducted in your village on arsenic mitigation in rural Bangladesh. Please consider the following information before deciding if you consent to participate in this study:

- Participation to this study is voluntary. You have the right not to answer any question, and to stop the interview at any time or for any reason, or to leave the experimental session at any point in time.
- You will be compensated for the participation in this study. At the end of the experimental session tomorrow you will receive a payment which depends on your decisions during group exercises, and we will explain the details of it tomorrow. You can expect to receive between 200 and 400 BDT. The risks associated with this study are minimal.
- The information we will collect during interviews and during the experimental session will be confidential. We will take very good care of your information and no one who is not connected with the project will have access to your personal information, like your

name. We will only use your personal information, like your name, in carrying out this project, and if we use information from the survey in the future we will remove your name and change your location so that no one can recognize you.

- We would like to record the experimental session. W will not record the session if you do not grant permission for doing it. You have the right to revoke recording permission at any time.

This project will be completed by April 2017. All interview recordings will be stored in a secure work space until 1 year after that date. The tapes will then be destroyed.

Do you understand the procedures described above? Did I answer your questions to your satisfaction?
Do you consent to participate in this study?
Do you give permission for the experimental session to be recorded?

D.4 Individual survey

Script for questionnaire introduction:
"In the next questions we will ask you some questions about your preferences and opinion. There will be no correct answer! We are only interested in what are your personal preferences and opinions. So you can feel free to give us your true answers."

- Think about situations when your household have to take a decision about an important purchase (e.g. furniture). Are you usually involved in these kind of major decisions for the household?
  Options: I decide alone; I am involved in the decision; I am not involved in the decision; Don't know; Refused to answer.

- Please tell me how much you agree with the following statement: "Generally speaking, most people can be trusted."
  Options: Strongly agree; Agree; Neither agree nor disagree; Disagree Strongly disagree; Don't know; Refused to answer.

- Please tell me how much you agree with the following statement: "In life, people are rewarded for their efforts."
  Options: Strongly agree; Agree; Neither agree nor disagree; Disagree Strongly disagree; Don't know; Refused to answer.

- Now I will briefly describe some people. Please indicate for each description whether that person is very much like you, somewhat like you, not like you, or not at all like you: "This person is very careful in trying to avoid risks. For instance, when taking farming decisions (men), when cooking (women), when deciding about health, when in traffic, etc."
  Options: Very much like me; Like me; Not like me; Not at all like me; Don't know; Refused to answer.

- Now I will briefly describe some people. Please indicate for each description whether that person is very much like you, somewhat like you, not like you, or not at all like you: "It is important for this person to help the people nearby, to care for their well-being."
  Options: Very much like me; Like me; Not like me; Not at all like me; Don't know; Refused to answer.

- Now I will briefly describe some people. Please indicate for each description whether that person is very much like you, somewhat like you, not like you, or not at all like you: "This person is very good in negotiating with other people: he/she is not afraid about expressing his/her opinion, even when in disagreement with other people, and he/she is able to express his/her own opinion in a convincing way, and he/she is often able to make other people reconsider their position."
  Options: Very much like me; Like me; Not like me; Not at all like me; Don't know; Refused to answer.

- Please state whether you agree or disagree with the following statements about an hypothetical construction of a public infrastructure, for instance a mosque/temple: "The richest people in the village should pay more of the cost of the construction."
  Options: Strongly agree; Agree; Neither agree nor disagree; Disagree Strongly disagree; Don't know; Refused to answer.

- Please indicate whether you agree or not with the following statement: "If there was a village meeting in order to decide about an issue in my community (e.g. building a new road, school, temple/mosque, tubewell, etc), I would participate in the village meeting."
  Options: Strongly agree; Agree; Neither agree nor disagree; Disagree Strongly disagree; Don't know; Refused to answer.

- Please indicate whether you agree or not with the following statement: "I think people should have a say about decisions regarding their community."

Options: Strongly agree; Agree; Neither agree nor disagree; Disagree Strongly disagree; Don't know; Refused to answer.

- Please indicate whether you agree or not with the following statement: "If someone does me a favour, I am prepared to return it."
  Options: Strongly agree; Agree; Neither agree nor disagree; Disagree Strongly disagree; Don't know; Refused to answer.

- Please indicate whether you agree or not with the following statement: "If somebody puts me in a difficult position, I will do the same to him/her."
  Options: Strongly agree; Agree; Neither agree nor disagree; Disagree Strongly disagree; Don't know; Refused to answer.

- We have paired you with another person in your village. You do not know the identity of this person, and the other person does not know your identity. I am gifting you 50 BDT. The other person does not know about it. If you wish, you can send part of your 50 BDT to this person. In any case, the other person will never know your identity nor your choice. If you decide to gift any of the 50 BDT to this person, she will receive it tomorrow, together with the reward from the experimental session. Equally, you will receive the amount you decide to keep tomorrow, together with the reward from the experimental session. Please tell me now how many takas you wish to keep out of the 50 BDT.
  Answer: report integer.

E Appendix: Scripts for the experimental session

E.1 General introduction to the lab

Welcome everybody and thank you for coming.

This experiment is conducted by researchers from Stockholm University in cooperation with NGO Forum. NGO Forum is conducting in this region a related project in order to provide safe drinking water to communities in this region highly affected by arsenic.

We conduct this experiment in order to study how communities take decisions in rural Bangladesh. The results from this study will help to develop policies that can better serve rural villages.

This experimental session will last around 3 hours and you are going to complete 3 different tasks. At the end you will receive a reward, which will depend on the decisions taken by yourself and your group peers during all the 3 exercises.

You will complete each task in groups. The groups will be different for each task. At the beginning of each exercises we will describe exactly your task. Everything contained in these instructions and everything you hear in this session is an accurate representation of this experiment. Be sure to ask any questions that you may have during this instruction period, and ask for assistance, if needed, at any time.

You will complete the tasks using tokens. At the end of each round we will record how many tokens you have gained. The more tokens you have earned, the higher will be your final reward.

Each token will be exchanged for 5 takas. We will also reward your participation with a constant show-up fee of 30 takas.

You will be involved in three group tasks.

For the first two exercises, you will first complete a TRIAL round to familiarize with the rules, and the you will complete the REAL round. Only the REAL round will count to determine your final reward. You will complete the third task only once, without TRIAL.

At the end of the session, we will reward all participants according to the sum of tokens you obtained for each task. In order to maximize your winnings, remember to complete each task at your best throughout the whole session!

Throughout the experiment we will use lotteries in order to guarantee the fairness of the experiment for all participants. All the relevant steps are clearly documented, and follow scientific and academic standards. None of these procedures is related to gambling.

You are required to keep a tidy and calm behaviour. Any misbehaviour will be punished with the exclusion from the project and you will not receive any reward. You are explicitly not allowed to:

- Make physical threats of any kind or verbally abuse other players;
- Steal or hide tokens from your group or from the other group members;
- Remove, exchange or lose your ID codes;
- Suggest how to play to people outside your group;
- Agree to share compensations after the experiment;
- Ask other participants how much they have earned when the experiment has ended.

E.2 Contribution task

In this exercise you will start with a number of tokens of your property. You will extract a color, and your tokens will be of that color. The extracted color determines your number of initial tokens and you cannot change it. You will be assigned the same number of tokens in the TRIAL and in the REAL round. Each token has the exact same value, regardless of the color. We will also distribute 30 white tokens.

We will also distribute a timer per group.

Please do not touch the tokens nor the timer until we give you the start.

[Enumerators distribute individual and group tokens. Enumerators distribute the timers and explain how to operate it.]

Imagine now that the marked central area represents a common project you can undertake together with your group mates. Investing money in this common project results in doubling your investment. Your aim is to decide how much of your colored tokens you want to invest in this common project, and simultaneously how to divide among your group the whole amount of the project, which is double the sum of what each of you invested.

To give you a real-life example, imagine that your group has decided to build a new mosque/temple and that a donor has accepted to co-fund it. Then, your group has to decide who is contributing to the mosque/temple, and also where to place it. When you place the mosque/temple the group members who are close to it will be happier than the ones who are far from it.

In practice, during this exercise, any of you can decide to contribute any number of your own colored tokens to the project by putting them in the central area. By doing this you will be allowed to take the same number of white tokens and put them in the central area as well. This is our way to show how the investment in the common project doubles.

In the same way, you can also remove tokens of your color from the central area. When you do this, you must also remove the same number of white tokens.

There must always be the same number of colored (no matter what color) tokens and white tokens in the central area.

You will also decide how to distribute all the tokens in the central area (both the white ones and the colored ones). In order to distribute tokens, you must put the tokens in front of the person you want to give the common tokens to, but still keeping them in the central area.

Contributions to the common project are fully voluntary. However, you will have to agree with your group mates on how to divide the tokens in the central area between yourselves.

You cannot place the colored tokens of another person in the central area, if she does not want to. And you cannot remove from the central area the colored tokens of someone else, if she does not want to.

Similarly, none can take your colored tokens and put them in the central area if you do not want to. And none can take your colored tokens from the central area and place them outside

the central area if you do not want to.

You have maximum 20 minutes to reach a final agreement. In order to reach a valid agreement all group members should agree with it. If at the end of the 20 minutes you have not reached an agreement, you will lose all the white tokens and keep just the colored tokens you were given initially. After 20 minutes you will not be allowed to touch the tokens or negotiate anymore.

In case you reach an agreement before 20 minutes, raise your hand and signal that your group has reached a final decision on the distribution of the tokens. One enumerator will come to attend your group.

When you complete the task, or when the time is over, stop the timer by pressing on the "START/STOP" button.

The enumerators will accept a distribution only if everyone agrees with it. Moreover, they will check that the number of white tokens is the same as the total number of colored tokens.

The enumerator will record the sum of the tokens, both inside and outside the central areas. This represents your result for the round.

The enumerator will reorganize all the tokens as at the beginning. In the REAL round you will receive the same number of tokens of same color. You cannot keep any token from the TRIAL to the REAL round.

In order to clarify the rules, we will now give you some examples:

- Control question 1:
  If everyone in the group contributes all his/her tokens, at the end you will have 60 tokens to split across your group. Please raise your hand if this is right.

  [Verify EVERYONE has their hand raised. If someone did not understand, clarify.]

- Control question 2:
  If everyone in the group contributes no tokens, at the end you will have no tokens to split across your group. Please raise your hand if this is right.

  [Verify EVERYONE has their hand raised. If someone did not understand, clarify.]

- Control question 3:
  If everyone in the group contributes just 5 tokens, at the end you will have 30 tokens to split across your group. Please raise your hand if this is right. [Verify EVERYONE has their hand raised. If someone did not understand, clarify.]

You will complete this task two times. The first time is a TRIAL, for you to learn the rules. The second time is the REAL round, and the number of tokens will be used to calculate your final reward. We start now with the TRIAL round, you will complete the REAL round after this.

Remember to press the button "START/STOP" when you complete the task or the time is over.

E.3 Redistribution task

In this exercise you will start with a number of tokens of your property. You will extract a color, and your tokens will be of that color. The extracted color determines your number of initial tokens and you cannot change it. You will be assigned the same number of tokens in the TRIAL and in the REAL round. Each token has the exact same value, regardless of the color. We will also distribute 30 white tokens in the central area.

We will also distribute a timer per group.

Please do not touch the tokens nor the timer until we give you the start.

[Enumerators distribute individual and group tokens. Enumerators distribute the timers and explain how to operate it.]

Your task is to agree with your group mates on how to distribute the white tokens among yourselves.

You can take the white tokens from the center and distribute them in the marked central area, in front of the member of your group you want to assign them to. Anyone in your group can move the white tokens. You can always touch and distribute all the white tokens, and you must leave them in the marked central area. You cannot put your own colored tokens in the central area or give them to other players in the group.

To give you a real-life example, imagine that someone has decided to donate to your group to build a new mosque/temple. Then, your group has to decide where to place it. When you place the mosque/temple the group members who are close to it will be happier than the ones who are far from it.

You have 20 minutes to reach a final agreement on how to split the white tokens. After that, you will not be allowed to touch the tokens or negotiate anymore. If at the end of the 20 minutes you have not reached an agreement, the whole group will lose all the white tokens and everyone will just keep the initial colored tokens.

In case you reach an agreement before 20 minutes, raise you hand and signal that your group has reached a final decision on the distribution of the tokens. One enumerator will then come to attend your group.

When you complete the task, or when the time is over, stop the timer by pressing on the "START/STOP" button.

The enumerators will accept a distribution only if everyone agrees with it. Moreover, they will check that colored tokens have not been distributed among players.

The enumerator will record the sum of the tokens, both inside and outside the central areas. This represents your result for the round.

The enumerator will reorganize all the tokens as at the beginning. In the REAL round you will receive the same number of tokens of same color. You cannot keep any token from the TRIAL to the REAL round.
In order to clarify the rules, we will now give you some examples:

- Control question 1:
  Your group can decide to split the tokens equally among you. Since the total number of tokens to share is 30, this means that everyone of you can have 10 tokens more than what you started with. If everyone in your group agrees with this distribution, this can be done. Please raise your hand if this is right.

  [Verify EVERYONE has their hand raised. If someone did not understand, clarify.]

- Control question 2:
  Your group can decide to split the tokens such that at the end of the task everyone has

the same number of tokens, either colored or white. This means that some people will have more white tokens, and some people less white tokens. If everyone in your group agrees with the distribution, this can be done. Please raise your hand if you think this is right.

[Verify EVERYONE has their hand raised. If someone did not understand, clarify.]

You will complete this task two times. The first time is a TRIAL, for you to learn the rules. The second time is the REAL round, and the number of tokens might be used to calculate your final reward. We start now with the TRIAL round, you will complete the REAL round after this.

Remember to press the button "START/STOP" when you complete the task or the time is over.

E.4 WTP Elicitation

As the instructions are identical for Task 1 and Task 2, for simplicity in the next paragraphs we describe it referring to Task 1 only.

E.4.1 Scripts for the field supervisor

- With all participants:

  We are now starting the third part of Task 1. For this part we have formed new groups, different from the groups you just played with. Each group face the same situation as in the Task 1.

  We selected randomly one person per group to play this part of the task. This person to decide how he/she wants that her group will take decisions. We will explain the details to each participant later.

  During Task 3 of the experimental session, some of the groups might play again Task 1. This will depend on the choices made by the group representative in this part of the task.

  According to the choice expressed by the group representative, some groups will play again, and some others will not. In all cases, all of you will receive receive some payment for Task 3.

It is important for all of you to know that the persons selected for this first part of the task should feel free to choose whatever they prefer. At the end you should not ask them which choices they took. Also, you should know that it will not be possible for anyone to understand from the final results of the task which choices they took.

We will now tell you who should stay for this part of the task.

- With only participants selected for the task:

  Consider that each group face the same situation as in Task 1. Remind the rules for Task 1.

  This time, you have been extracted in order to decide how this group decision will be taken.

  The first option is to play again the bargaining stage as in the previous round. This means that you will seat again with your group members and will bargain until you reach a common agreement. You will be paid for Task 3 according to the decision taken with your new group.

  The other option is to not participate in the decision. In this latter case, we will impose a decision. We will assign to your group the agreement taken by another group in the previous REAL round of Task 1 that we just played. We will do this assignment using a lottery. Each person in your group will receive the final number of tokens obtained by the person in the assigned group with the same color. In this way we will define your payment for TASK 3. For example the person with the yellow tokens in your new group will receive the same number of tokens obtained by the person with the yellow tokens in the assigned group. This means that, in case you will not play again with your group, you can expect to receive the same number of tokens as a standard player with your same colour in Task 1. This outcome will be definitive and it will not be possible to change it.

  According to your choices, your group might play again Task 1. In case of playing again, you and your group will play during the third round.

Each of you will complete this part of the task with one enumerator.

For this part of the task there will NOT be a trial round. The decisions you will take are final.

Remember that we will keep secret all your answers. The other group members will never know your choices at this stage.

Remember that we already formed new groups, but you do not know the identity of your new group peers.

The rule under which you will play the last round will depend on your choices. Therefore, it is always better for you to carefully pick the option you truly prefer.

In order to clarify the rules, we will now give you some examples:

- Control question 1:
  Please raise your hand if you think that the following sentence is correct: "You will be asked to choose between, on one side, performing the Task 1 again and, on the other side, be assigned the outcome of another group."
  [Verify EVERYONE has their hand raised. If someone did not understand, clarify.]
- Control question 2:
  Please raise your hand if you think that the following sentence is correct: "In both cases, if you play again Task 1, and if you do not, you will always receive some payment for TASK 3. The two payments might be different.
  [Verify EVERYONE has their hand raised. If someone did not understand, clarify.]

E.4.2 Scripts for the enumerators

I will now present you different choices in which you have to choose between two alternatives.

The first alternative will always be repeat Task 1 as you have just done with new group peers. If you take part again in Task 1, you will be in group with different team mates than before.

The second alternative will be to NOT repeat Task 1 with new group peers.

What will happen in Task 3 will depend on your answers. Before Task 3 we will extract one choice, and the choice you made in that case will be final.

Each choice can be extracted. Therefore, it is always better for you to tell me your true answer. The lottery guarantees that no one will be able to understand your choices. And I will keep secret all your answers. Therefore you can feel free to express your true opinions.

When you choose whether you prefer to complete Task 1 again with new group peers or not you might think at different factors. For example:

- Do you remember how much did you get in the real round you just completed? How much?
  [Remind the correct answer.]
- In the previous two rounds, did you enjoy completing Task 1(2) with your group?
- Consider to play again Task 1(2) with your newly assigned initial tokens. How much do you think you will be influential in the group in order to determine the final outcome?

Elicitation procedure of WTP and beliefs:

- Choice 1:
  The first alternative is to complete Task 1 again with new group peers.

  The second alternative is to not complete Task 1 with new group peers.

  Remember that in case we will extract this choice, your new group will complete Task 1 again or not according to your answer. Your decision will be final.
- Choice 2-6:
  The first alternative is to complete Task 1 again with new group peers AND lose 1-5 token.

  The second alternative is to not complete Task 1 with new group peers.

  In case you choose to first alternative, you will complete Task 1 with your initial tokens. We will deduct 1-5 token (5-25 BDT) from your final total compensation.

  Remember that in case we will extract this choice, your new group will complete Task 1 again or not according to your answer. Your decision will be final.
- Choice 7-11:
  The first alternative is to complete Task 1 again with new group peers AND win 1-5 tokens.

The second alternative is to not complete Task 1 with new group peers.

In case you choose to first alternative, you will complete Task 1 with your initial tokens. We will add 1-5 token (5-25 BDT) to your final total compensation.

Remember that in case we will extract this choice, your new group will complete Task 1 again or not according to your answer. Your decision will be final.

- Guess under the participatory option:
  Consider your initial tokens. Imagine to complete again Task 1(2) with new group members. How many tokens IN TOTAL do you think you will get?

- Guess under the group-extraction option:
  Imagine you do not complete again Task 1(2), and instead receive the outcome of a player with your initial tokens from another group. How many tokens IN TOTAL do you think you will get? You will win 30 takas if you answer correctly to this question!!

E.5 Individual survey after the experimental session

Script for intro:
"Thank you for your participation in the study!
In conclusion, we would like you to ask you few questions on your perceptions of the tasks. All your responses will be kept confidential: we will not share your answers with anyone outside the research team.
You will receive your compensation from the tasks after this short survey. The answers in this short survey will not change your compensation."

- How much are you satisfied with your outcome in the 1st round?
  Options: Very satisfied; Satisfied; Neither satisfied or dissatisfied; Dissatisfied; Very dissatisfied; Don't know; Refused to answer.

- How much are you satisfied with your outcome in the 2nd round?
  Options: Very satisfied; Satisfied; Neither satisfied or dissatisfied; Dissatisfied; Very dissatisfied; Don't know; Refused to answer.

- How much are you satisfied with your outcome in the 3rd round?
  Options: Very satisfied; Satisfied; Neither satisfied or dissatisfied; Dissatisfied; Very dissatisfied; Don't know; Refused to answer.

- After which round were you most satisfied with your outcome?
  Options: Task 1; Task 2; Task 3.

- What is the maximum amount all your group could have won in the contribution task?
  Answer: report integer.
- How could you reach this maximum amount? (do not probe)
  Options: We could have won the maximum if everyone had contributed everything; Other; Don't know; Refused to answer.