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Fairness norms and  
value of participation



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# Mechanisms of Participatory Development: Fairness Norms and Value of Participation

IGC working paper  
(Preliminary and not for citations)

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## Abstract

Community-Driven Development, by relying on community participation and delegating decisions to program beneficiaries, is thought to be the solution to information asymmetries and to correctly target the neediest members of society. However, its effectiveness depends on the quality and level of community participation and on the norms guiding societal decision-making. In this project we rely on a lab-in-the-field experiment conducted in rural Bangladesh in order to identify and examine these two mechanisms, critical for the success of participatory processes. During the experimental sessions we involve participants in novel group-bargaining games that replicate a community decision-making process. Our experimental design allows us to elicit preferences for participation and the fairness norms guiding distribution of resources with and without contribution requirements. Our findings indicate the existence of two separate mechanisms behind the risk of elite capture. First, we observe that agents positively self-select into group decision-making, suggesting that endogenous participation into public consultations might cause an unequal representation of the interest of all social groups. Second, since “typical” sharing norms in our sample feature both egalitarian concerns and status quo bias, initial inequalities are maintained, and the introduction of contribution requirements implies suboptimal incentives for voluntary contributions to the public good and, at the same time, it exacerbates existing inequalities. These mechanisms vary with the details of the collective action problem faced by the agents.

Our findings have direct policy implications, suggesting that implementation rules of CDD programs should avoid contribution requirements and instead specifically require activities for community mobilization and decision rules that protect social groups with less bargaining power.

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# 1 Introduction

Since the 1990s, with the crisis of “top-down” approaches and the vigorous case made by influential economists such as Sen and Ostrom for a more “bottom-up” and deliberative vision of development, a paradigm shift occurred in the development sector, bringing a renewed interest by donors and government in community-based development, decentralization, and participation (Mansuri and Rao, 2013). As a result, participatory practices started to be seen as effective ways to incorporate local knowledge into project planning, implementation and monitoring, and to reinforce stakeholders’ sense of ownership over project assets. Through these channels, participation should facilitate the identification of community’s needs and priorities<sup>1</sup>, improve targeting, empower the poor and enhance sustainability. At the same time, shifting the decision-making power from an external actors to the main stakeholders introduces conflicts of interests among participants - who become both decision-makers and recipients of project benefits - and allows for misrepresentations of community needs and misallocations.

This paradigm shift and these contrasting expectations on the potential of participatory development to improve the delivery of public goods and services motivated a growing literature on the effectiveness of Community-Driven-Development (CDD). The existing evidence provides mixed results, and successful experiences of community mobilization<sup>2</sup> are counterbalanced by projects which outcomes are distorted in favor of local elites.<sup>3</sup>

Reconciling this heterogeneous evidence is a hard task, since the existing studies are characterized by different local contexts, settings, policy designs and implementation rules. These factors determine how development interventions interact with the existing structure of power in receiving communities, and to what extent citizens are given a chance to participate in the decision-making process. Banerjee et al. (2010) and Mansuri and Rao (2013) suggest that these details are crucial to predict whether community participation can improve public service provision, and to understand why proposed solutions to avoid elite capture<sup>4</sup> are not universal solutions and are successful only in specific circumstances.<sup>5</sup> These considerations pose severe methodological challenges for future evaluations investigating how and under which conditions Community-Driven Development can deliver the desired improvement in the delivery of public goods and services. Relying on Randomized-Control-Trials might not be a feasible strategy in order to evaluate which features of the policy design and implementation are key to

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<sup>1</sup>Alatas et al. (2013)

<sup>2</sup>For example, Besley et al. (2005) show that community meetings are typically highly attended by the more disadvantaged social groups and that holding such meetings improves the targeting of resources towards the neediest groups; Ban et al. (2012) report that community councils, rather than being mere talking shops or being entirely captured by elites, seem instead to be both democratically representative and to be assigning roles to credible agents in their deliberative processes; despite community-targeting slightly underperforms a government-PMT (proxy mean test) method in targeting the poor for a cash transfer program, Alatas et al. (2012) argue that this is not driven by elite capture but instead by information and a different concept of poverty applied by communities, and therefore resulting in higher satisfaction with the program; Björkman and Svensson (2009) document large increases in utilization of health facilities and improved health outcomes from NGO-led efforts to involve and empower communities in monitoring the state of health service provision.

<sup>3</sup>Baird et al. (2013) stress the risk of a regressive demand of Community-Driven Development, with better off communities/households more likely to be informed and apply for community funds; Labonne and Chase (2009) find that preferences of households that are more involved in communal activities are more strongly represented during the community meeting and that more politically active villages are more likely to receive funds; Beath et al. (2017) report that elites exert a relevant influence over resource allocation decisions in consultation meetings; both Beath et al. (2017) and Olken (2010) find that secret-ballot votes boost satisfaction and perceived legitimacy of project outcomes, potentially by increasing participation in the decision-making process and reducing elite capture of project benefits; Olken (2007) shows that grassroots participation in project monitoring had little impact on corruption, reducing diversion of project funds only in situations with limited free-rider problems and limited elite capture; Banerjee et al. (2010) estimate a null effect of three interventions to encourage beneficiaries’ participation in the monitoring of education services in their communities on community involvement, quality of school services or education outcomes.

<sup>4</sup>Such as local elections (Foster and Rosenzweig, 2004) or the involvement of facilitators (Platteau and Gaspart, 2003).

<sup>5</sup>Wong (2010) describes in details how the risk of elite capture cannot be addressed by simply excluding or including the elites from the decision-making process.

the success of CDD projects, since randomly varying multiple aspects of the intervention requires large sample sizes and may not be ethically or practically desirable.

In this paper we use a lab-in-the-field experiment in order to separately explore two critical steps where participatory processes might fail: failure to include all relevant decision makers in the community consultation and failure to identify and approve the optimal resource allocation via a public and unregulated negotiation. To analyze these two mechanisms, we provide novel evidence on citizen's preferences over decision-making processes and self-selection into participatory practices and we shed a light on the distributional outcomes from group bargaining and how they are influenced by features of the program design. In order to separately observe and measure these outcomes, we designed a lab-in-the-field experiment that mimics the characteristics and dynamics typical of a CDD program. During our experiment, participants: (i) bargain to redistribute a common pool of resources among them, with and without the requirement of contributing their initial endowment to create such pool; (ii) choose, under different price conditions, whether the outcomes for their groups for the subsequent round should be determined through a group negotiation process or not. In order to explore how the policy setting interacts with participation attitudes and fairness norms, we experimentally vary two dimensions that are critical for most participatory development interventions: contribution requirements and leader participation.<sup>6</sup>

Our preliminary results elucidate interesting mechanisms related to participatory decision-making. First, we find that the large majority of subjects display at least a weak preference for retaining group decision rights, and almost half of them are willing to pay some positive amount for it. The value of participation in group decision-making is driven both by instrumental and non-instrumental considerations, with agents taking into account both their expected monetary benefits from the negotiation stage, but also time and psychological costs associated to face-to-face discussion dynamics. We find evidence of both factors highlighted in Mansuri and Rao (2004) and Mansuri and Rao (2013): while 45% of our participants assign a positive intrinsic value to participatory practices,<sup>7</sup> for a significant share, 38%, the exercise of voice and choice is mainly perceived as a net cost.<sup>8</sup>

Second, we find evidence of endogenous self-selection into public consultations. Women and the elderly display a lower value for retaining group decision rights, while subjects with higher education or belonging to leader households place a higher value on participation, although the coefficients are only marginally significant. This is in line with the positive self-selection of beneficiaries in community meetings often observed during the implementation of CDD programs. Interestingly, the disfavour of

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<sup>6</sup>These features are far from being uncontroversial. Requiring targeted beneficiaries to contribute to construct public goods or provide public services - in terms of cash, material goods, or physical labor - is a typical feature CDD programs. These requirements are supposed to improve targeting, reinforce 'buy-in' from the community, create a 'sense of ownership' over project assets, and reduce the cost of project implementation. However, these requirements might also exclude the poorest communities or groups from the project, reinforce existing inequalities, and distort the resource allocation away from the social optimum. These considerations are still debated, and explored for instance in a recent field-experiment by Cocciolo et al. (2017).

The effects of elite and leaders participation in community decision-making are also multifaceted. Leaders and elite, being often the more educated and well connected members of a community, can be more informed about community funds and opportunities, can play a crucial role in the decision-making process ensuring that a consensus is reached, can have economic possibilities to fulfill cash-contribution requirements, and the necessary skills for completing the formal procedures related to the project administration. On the other hand, leaders might capture the discussion dynamic and project resources, exploiting asymmetric bargaining power and hierarchical social structures.

<sup>7</sup>Mansuri and Rao (2013) stress that beneficiaries seem to value being consulted and involved, and deliberative processes might create a sense of legitimacy for the resource allocation.

<sup>8</sup>Mansuri and Rao (2004) suggest that the exercise of voice and choice can be costly, for instance because of the monetary value of the time dedicated to participation, and the material/social costs when participation requires taking positions that are contrary to the interests of powerful groups. As documented in Alatas et al. (2012), decision-making during community meetings is an onerous exercise, and the quality of decisions taken via this process can be compromised by extended effort and fatigue.

women and the elderly for participatory processes seems to be mainly driven by considerations related to time and psychological costs of being involved in face-to-face discussion dynamics, while leaders and those with higher education value participation mainly because of instrumental motives.

The examination of the bargaining outcomes also yields interesting and novel insights on the allocation process and how it varies with contribution requirements and the presence of a leader in the group. When the group bargains over redistributing a fixed amount, without contribution requirements, we observe that different “typical” sharing rules exist: in case of initial equality, they prescribe perfect equality of outcomes, and are applied in 80% of the groups; in case of initial inequality, 42% of groups apply a perfect final equality rule, while 26% of groups do not take into account personal endowments and redistribute the common pool equally, thus maintaining higher final inequality (29% adopt a rule in-between, dampening initial inequality without eliminating it).<sup>9</sup>

Furthermore, we observe that introducing contribution requirements is harmful towards poorer players on two dimensions: total final outcomes shrink due to suboptimal contribution levels, and final inequality rises as higher-endowment players contribute less in relative terms to the common good. We find some evidence of elite capture in our sample, as leaders and secondary educated players manage to obtain higher final outcomes without additional contributions. When starting from initial inequality, high-endowment players do not contribute more in relative terms than poorer players, and generally get remunerated much less for their contribution: while each token contributed by the poorer players returns to the contributor tripled, each token contributed by the richer players brings back just 1.2 tokens.<sup>10</sup> This decreases the incentives for contributions.

The main goal of the paper is to deepen the existing understanding on the determinants of mis-allocation in participatory development processes, finalized at informing the design of project rules to prevent elite capture. Recent studies have used experimental games<sup>11</sup> to examine the problems posed by community-driven development, such as: the use of punishment mechanisms towards elites (D’Exelle and Riedl, 2008); how reciprocity varies across elite and non-elite groups (Breza et al., 2013); how elites follow fairness considerations in a self-serving way (D’Exelle and Berg, 2014); how corruption and elite capture undermine incentives for voluntary contributions to local public goods (Beekman et al., 2014). In this project we follow this emerging literature and rely on a lab-in-the-field experiment in order to examine two specific mechanisms linked to the risk of elite capture in participatory processes: failures to include all relevant decision-makers and failure to identify and approve the optimal resource allocation.

In addition, our lab-in-the-field experiment allows us to make few other interesting contributions to the experimental and behavioral literature. First, we complement the growing behavioral literature that studies whether agents have preferences for being in control of their own decision in the context of individual decision-making. The existing evidence indicates that agents evaluate 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), Bartling et al. (2014), Owens et al. (2014), Neri and Rommeswinkel (2014)]. With this paper, we extend the existing literature to group decision-making, a setting that has not been explored before in relation to procedural utility.

Second, we provide evidence on how fairness norms are shaped by the details of the collective action problem faced by the agents.<sup>12</sup> Specifically, we focus on two fairness norms pertaining resource

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<sup>9</sup> This is in line with the observation of endowment effects in the behavioural literature. See for example Cherry et al. (2005), even when attributed by chance, indicating a bargaining setting does not fully eliminate initial inequality, even if enough resources are available.

<sup>10</sup> We do not see what is described in Platteau and Gaspart (2003), which finds that the community legitimizes elite capture due to the elite’s ability to exert more effort, i.e. in our setting to the possibility to contribute more.

<sup>11</sup> Mainly dictator games with an initial contribution phase and/or a final punishment phase similar to the one described in this paper.

<sup>12</sup> The importance of fairness norms in determining who benefits from social programs has been acknowledged in most

allocations previously examined in the literature: equity, defined as “proportionality of rewards to contributions”<sup>13</sup> and equality, defined as “identical final outcomes for all participants”. Agents have been found to be inequality averse: they value allocations that allow all agents to have the same final amount of resources [Allison et al. (1992), Fehr and Schmidt (1999), Charness and Rabin (2002)]. At the same time, agents also value equity in outcomes [Cappelen et al. (2010), Durante et al. (2014)]. The literature comparing the importance of the two norms have found that their relative importance depends on the gender of the respondents (Kahn et al., 1980), the expectation of future interactions (Shapiro, 1975), and the country specific environment (Steiner et al., 2006). Our lab-in-the-field experiment contributes to this discussion by reporting evidence on the importance of both equality and equity considerations and, most importantly, highlighting how the balance between the two varies depending on the details of the collective action problem.

The findings presented in this paper are relevant for the design of participatory development projects as well as decentralization reforms, which often assign a preeminent role to institutional settings similar to the ones adopted in CDD programs. Because participation in community meetings is highly selected and more marginalized groups encounter higher costs in raising their voices and exercising their decision rights, it is crucial that implementation rules of CDD programs include initiatives to mobilize and actively involve all socio-economic groups in the decision-making process. In addition, our evidence does not support the adoption of contribution requirements in a free bargaining setting, which has the effect of raising inequality while decreasing the overall amount of project resources. Our results also provide interesting avenues for future research, such as on the formation and development of preferences for participatory practices, and on the effect in real-world settings of contribution requirements on the overall impact and sustainability of community interventions (Cocciolo et al., 2017).

The remaining of the paper is structured as follows: in Section 2 we describe in detail our lab-in-the-field experiment; sample size and representativeness are discussed in Section 3; Section 4 presents our main findings. Section 5 concludes by discussing the significance of our results and the way forward.

## 2 Lab-in-the-field experiment

The purpose of the lab-in-the-field experiment is to measure two novel dimensions of social preferences: (i) the bargaining outcomes given by the “typical” sharing norms ; (ii) the value of participatory decision-making. The choices and behaviours observed during the lab will allow us to elucidate two interesting mechanisms related to participatory practices: endogenous self-selection into group negotiation and the decision-making dynamics for endogenous allocation of group resources.

The experiment is divided in two main parts, each pertaining to one of the two mechanisms: a bargaining game, and a willingness to pay elicitation procedure.

Within each experimental session we engage 36 participants. All participants, divided in groups of three<sup>14</sup>, complete two (or three) “Group bargaining tasks” (Section 2.1), consisting of bargaining to redistribute a common pool of resources among them, with and without the requirement of contributing their initial endowment to create such pool (“Group bargaining tasks”, Section 2.1). One third of subjects (randomly selected) also complete two “Participation tasks”, where they choose, under different price conditions, whether the outcomes for their groups for the subsequent round should

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settings [Alesina and Angeletos (2003), Benabou and Tirole (2005)]. It has also been shown that individuals value fairness along with self interest, or implement fairness norms for status considerations (Jakiela, 2011).

<sup>13</sup>As in Konow et al. (2009)

<sup>14</sup>Groups are pre-formed, and are different for each task. We reveal group formation only at the beginning of each task.

be determined through a group negotiation process or not (Section 2.2). Table 1 shows the timeline of the full experimental session. Players complete each part of the experimental session using colored tokens as money.

Throughout the whole experimental session, instructions are provided verbally by our field supervisors and enumerators. This is motivated by the low literacy rate in the communities where we conduct our study. The field supervisor introduces the lab-in-the-field experiment to all participants and gives the main instructions for each task. Enumerators provide additional clarifications, if needed, to their assigned groups, and explain in details the procedure to elicit the value of participatory decision-making. Enumerators play a crucial role in ensuring that all participants fully understand the rules of each task.

Table 1: Timeline of the experimental session

•	<p><b>Task 1</b> (“Contribution task” or “Redistribution task”):</p> <ul style="list-style-type: none"> <li>• Trial round</li> <li>• Real round</li> </ul>
•	<p>“<b>Participation task</b>” in relation to Task 1:</p> <ul style="list-style-type: none"> <li>• Elicitation of WTP for participatory decision-making</li> <li>• Beliefs elicitation</li> </ul>
•	<p><b>Task 2</b> (“Contribution task” or “Redistribution task”):</p> <ul style="list-style-type: none"> <li>• Trial round</li> <li>• Real round</li> </ul>
•	<p>“<b>Participation task</b>” in relation to Task 2:</p> <ul style="list-style-type: none"> <li>• Elicitation of WTP for participatory decision-making</li> <li>• Beliefs elicitation</li> </ul>
•	<p><b>Task 3</b> according to the decision taken during the Participation tasks:</p> <ul style="list-style-type: none"> <li>• Price and task extraction</li> <li>• Bargaining task OR assigned outcome</li> </ul>

## 2.1 Group bargaining tasks

The “Group bargaining tasks” (Task 1, Task 2 and Task 3) are designed in order to mimic closely the decision making-process and implementation rules in standard CCD programs. Each player is given a private endowment and the participants are asked to bargain and reach an agreement over the final distribution of group resources they are additionally provided with. The discussion is face-to-face, as in a real-life decision process, where people from the same village know each other before and will meet each other after the bargaining process.

Each group will complete two group decision-making exercises, the “Contribution task” and the “Redistribution task”<sup>15</sup>: (i) during the “Redistribution task”, after receiving their individual endowment,

<sup>15</sup>The order in which the “Contribution task” and the “Redistribution task” are played is randomized across exper-

participants negotiate on how to redistribute among themselves a group endowment of 30 tokens; (ii) in the “Contribution task”, participants simultaneously 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 negotiate on how to split it.<sup>16</sup>

In both games we require group decisions to be taken by unanimous consensus: everyone in the group must agree on how to redistribute the group resources (and on the contribution array, in the “Contribution task”). Groups have 20 minutes to reach an agreement. In case the group fails to agree, players are only entitled to keep their initial endowment.

We randomly vary between groups the initial level of inequality among players, i.e. their initial endowments. Within each experimental session we randomly pre-assign half of the groups to the equality/inequality treatment:

- Equality: before each task, all participants receive an initial endowment of 10 tokens.
- Inequality: before each task, each player is asked to randomly pick a token from a black bag containing a red, a yellow or a green token. According to the color of the extracted token, the player receives an endowment of 15, 10 or 5 tokens respectively. All participants know that the initial endowment is due only to luck.

We will use this experimental variation in order to assess whether participation decisions are influenced by initial experimental wealth and whether more homogeneous groups ex-ante reach more equal distribution of final wealth. In addition, we will test if richer players exploit their possibility to contribute more to demand more out of the common pool.

Participants play one training round of the “Contribution task” and the “Redistribution task”, and one round with real money at stake. Before starting the trial round we verify that all participants understand the rules of the tasks and how their final rewards are calculated. The tasks are designed in order to enable all players, even those with poor numerical skills, to effectively take part in the group discussion.

## 2.2 Participation tasks

During the “Participation task”, we conduct an elicitation procedure in order to measure willingness to pay for participatory decision-making (WTP) relative to the group bargaining task just completed. In this way we obtain two measures of willingness to pay for participatory decision-making, one relative to the “Contribution task” and one relative to the “Redistribution task”. We conduct this part of the experimental session with one third of participants, one randomly extracted player per group, individually assisted by one enumerator.<sup>17</sup>

First we assign to these players their initial individual endowment for Task 3. We explain to these players 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. During the “Participation task” players decide how they want their group to take decisions during Task 3. The first option is to take part again in the bargaining stage as in the previous round. The other option is to not participate in the decision and receive a given distribution of tokens. In this latter case we assign to the group the agreement taken during that group task by another group, randomly extracted, with the same equality/inequality treatment. 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.

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imental sessions. As instructions are given by the field supervisor at the same time to all participants attending the experimental session, it is not possible to randomize the order of the tasks across groups within the same session.

<sup>16</sup>The maximum possible winning is the same in the two games.

<sup>17</sup>We select the same players to complete the elicitation procedure after both Task 1 and Task 2.



We measure individual willingness to pay for participatory decision-making adopting a binding auction design. We start by presenting participants with a hypothetical choice between “participatory decision-making” and “assigned distribution” with zero price. We present to all participant ten other choices by varying the price attached to the participatory option, ranging from -5 tokens to +5 tokens (Table 2). We define individual WTP as the highest price attached to the participatory option at which the participant does not choose the “assigned distribution” option. We constraint answers to be coherent throughout the full elicitation procedure.<sup>18</sup>

Table 2: Price list for WTP elicitation

Choice	Alternative A	Alternative B
1	Participate in group task	Assigned distribution
2	Participate in group task - 1	Assigned distribution
3	Participate in group task - 2	Assigned distribution
4	Participate in group task - 3	Assigned distribution
5	Participate in group task - 4	Assigned distribution
6	Participate in group task - 5	Assigned distribution
7	Participate in group task + 1	Assigned distribution
8	Participate in group task + 2	Assigned distribution
9	Participate in group task + 3	Assigned distribution
10	Participate in group task + 4	Assigned distribution
11	Participate in group task + 5	Assigned distribution

The decision rule for Task 3 is determined by randomly selecting the game (“Contribution task” or “Redistribution task”) and one price between -5 tokens and +5 tokens. Players in the “Participation task” with a WTP equal or higher than the extracted price complete Task 3 together with their new group peers, and pays/receives the extracted price. Players in the “Participation task” with a WTP lower than the extracted price, as well as their assigned group peers, receive an “assigned distribution” by randomly extracting one group (excluding their own) within the same equality/inequality treatment.

The design presents several advantages. First, since we present all price conditions to all participants and we 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. Second, by design players do not know the identity of their group members for Task 3, ensuring that their choices are not driven by characteristics of their group peers. Third, 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.<sup>19</sup> Forth, the random extraction of the price ensures that individual choices are not fully revealed by the decision-making process implemented during Task 3.

<sup>18</sup>Players do make mistake during the elicitation procedure. 61% of players provide incoherent answers throughout the elicitation procedure. In this cases enumerators explain the error, check understanding and review previous and current answers. This process proved to be essential in order to guarantee that participants truly understand the procedure and that the collected data are meaningful.

<sup>19</sup>Enumerators take several steps in order to ensure understanding from all participants during the group tasks and during the “Participation tasks”. Before the WTP elicitation, enumerators verify individual understanding for each participant on the two decision-making processes and on how their final outcome is determined under the “participatory decision-making” option and under the “assigned distribution” option. Enumerators stress that it is best for participants to truthfully report their preferences, that their 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 results in the previous round with money at stake, ask them whether they liked or disliked the bargaining stage and how much they expect to be influential in the last round given their initial tokens.

Most importantly, an average player should expect by design to receive the same outcome under the “participatory decision-making” option and under the “assigned distribution” option. This feature allows to interpret, for players that expect to receive average outcomes from the group negotiation, the WTP measure as the intrinsic value of participation in group decisions. In order to specifically take into account participants’ expectations, we elicit players’ beliefs on their expected outcomes under the two decision-rules relative to the “Contribution task” and the “Redistribution task”.<sup>20</sup> We incentivize their choices by awarding a small 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.

### 2.3 Compensation of participants

At the end of the experimental session, we reward participants with a fixed show-up fee of 40 Bangladeshi Takas (1 BDT = 0.013 USD in November 2016).<sup>21</sup>

We compensate participants with an additional bonus equal to the sum of their outcomes from the real round with money at stake during Task 1, Task 2 and Task 3. For players completing the “Participation task” we add/subtract the price from the extracted scenario, in case they chose the “Participatory decision-making” option under that scenario. We award a prize of 30 BDT for correct beliefs on outcomes under the “assigned distribution” option. We convert 1 token to 5 BDT.

Participants can expect a total reward between 250 BDT and 500 BDT, .

## 3 Sample

We carry out the lab-in-the-field experiment in 96 rural Bangladeshi communities in the Bogra region, already involved in an arsenic mitigation program conducted within the research project by Cocciolo et al. (2017), “Community contributions, participatory decision-making and local public goods: A field experiment in Bangladesh” (CCLPG).<sup>22</sup>

In each community we invite 36 people to participate in one experimental session, 18 men and 18 women. In order to facilitate participation among women as well as the invitation process, we invite one man and one woman per household, randomly selected among the households interviewed during the CCLPG baseline household survey.<sup>23</sup> Our sample consists of 3,456 participants: 1,152 groups assigned to the “Group bargaining tasks”, 1,152 agents (one per group) in the “Participation task”.

Within each experimental session we assign the same number of men and women to the equality/inequality treatments. We stratify our sample by two demographics we plan to consider in the empirical analysis: gender and leadership status. In order to stratify our sample on leadership status, in each community we invite two households reported as leader by other households in their community. In Table 3 we report the realized and planned sample balance by equality/inequality treatment,

<sup>20</sup>The belief elicitation is performed after the WTP elicitation.

<sup>21</sup>Since the Bangladeshi law requires a flat 10 BDT tax from those with a daily income larger than 400 BDT, we compensate for it by awarding a 50 BDT show up fee to participants whose outcome is larger than 400 BDT, such that the final amount received by each player is consistent.

<sup>22</sup>Our sample of communities is specifically selected for receiving the arsenic mitigation program within the CCLPG research project, that target communities with high level of arsenic contamination. Our sample is therefore non representative of Bangladeshi rural communities. We implement the lab-in-the-field experiment for this project on this selected sample in order to be able to use the rich baseline household data collected within the CCLPG research project before the implementation of the intervention. Moreover, we expect arsenic contamination to be unrelated with fairness norms and preferences for participation, and therefore we believe the generalizability of our results to remain unaffected.

<sup>23</sup>However, we accommodate cases when only one member from the household accepts to participate. Enumerators are instructed to invite household members that can actively participate to the experimental session and understand the rules of the different tasks, giving priority to the household head and his spouse.

gender and leadership status.<sup>24</sup>

Table 3: Sample balance for players in the group bargaining tasks

	Women		Men		Total
	Equality	Inequality	Equality	Inequality	
Groups	288	288	288	288	1152
Groups with a leader (planned)	61(96)	107(96)	96(96)	104(96)	368(384)

We select players in the “Participation task” using a stratified randomization which ensures that, within each equality/inequality treatment, gender and leadership status are balanced among players in the “Participation task” (Table 4).

Table 4: Sample balance for players in the “Participation tasks”

	Women		Men		Total
	Equality	Inequality	Equality	Inequality	
Players in the “Participation task”	288	288	288	288	1152
Players in the “Participation task” from a leader household (planned)	48(96)	97(96)	86(96)	94(96)	325(384)

## 4 Empirical analysis

### 4.1 Participation

In this project we study a novel measure of procedural utility that describes individual preferences for participatory decision-making. Despite the widespread adoption of participatory development, the question of whether agents value collective decision-making rights, or instead the time costs of being involved in a participatory process and the social and psychological costs of exercising voice and decision rights prevail, has not been explored before.

Figure 1 shows the distribution of the WTP measure in our sample. Preferences are polarized on three main focal points, characterizing three types of agents. 26% of agents have an “absolute preference” for participatory decision-making: under any price condition, they prefer that decisions for their groups are determined through an open negotiation 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 the 0 price condition, but not at positive prices. 22% of agents display a strong disfavor for participatory decision-making, being willing to forgo any offered compensation in order to avoid the next group bargaining round. Overall, the large majority of participants (71%) display at least a weak preference for retaining group decision rights in the last stage of the experiment ( $WTP \geq 0$ ), and 47% of them are willing to pay some positive amount

<sup>24</sup>In case one or two members from the household do not accept to participate, enumerators select a replacement household/player within the same community, following a pre-determined (randomized) order. In order to maintain the desired balance between leader and non-leader households taking part in the experiment we instruct our enumerators to replace households within the same leadership status. However, in some communities it might happen that the enumerators are not able to successfully invite to the experimental session all leader households required by our protocol. In these cases we allow to replace leader households with non-leader households, resulting in a non-perfect balance by leadership status.

for it ( $WTP > 0$ ). This is in line with the consensus emerging from the behavioral literature, where several studies show that agents evaluate 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 (2014)].

By design, the WTP range is constrained between +5 and -5 tokens, corresponding to +25 and -25 BDT, respectively a decrease/increase of 8% relative to the average daily income in rural Bangladeshi communities.<sup>25</sup> Despite these amounts are small in absolute terms, they represent the 25% of the average outcome from each group bargaining round, approximately equal to 20 tokens. The average WTP is 0.3 tokens, corresponding to the 2% of the expected outcome from the next group bargaining round, and 26% of players prefer to forgo 25% of their expected next group bargaining outcome in order to retain group decision rights.

Figure 1: WTP for participatory decision-making and socio-economic groups

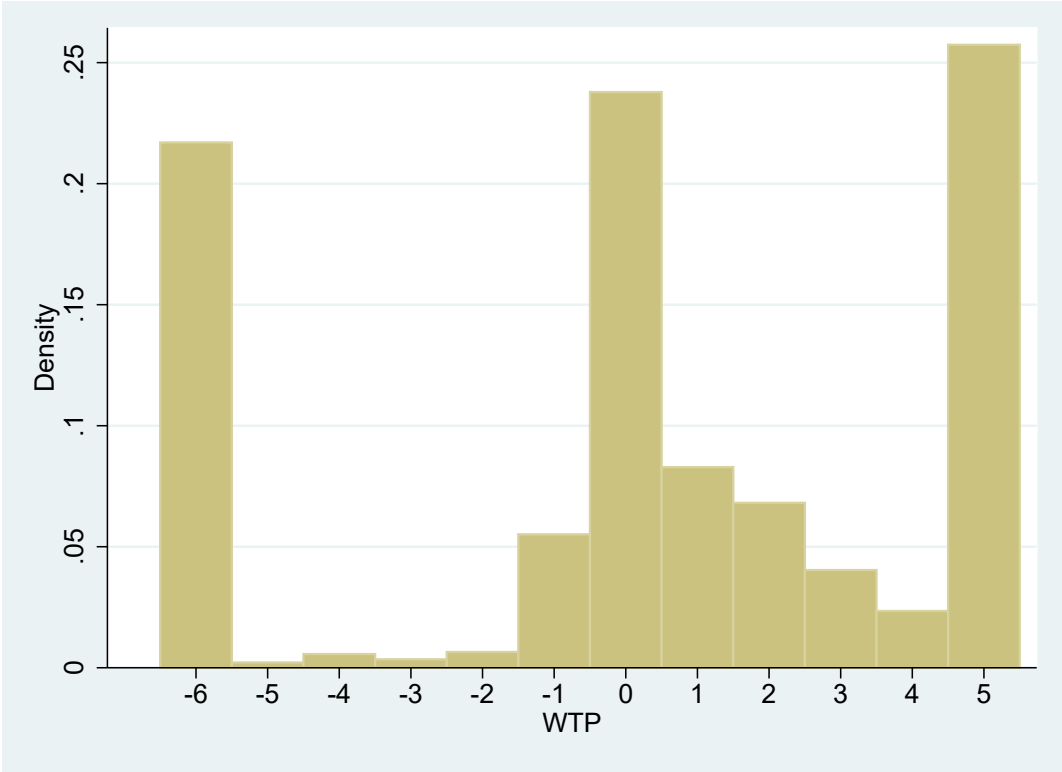


Figure 3 shows that preferences for participatory practices correlate with some demographic characteristics. Women and the elderly display a lower value for retaining group decision rights, while subjects with higher education or belonging to leader households seem to place an higher value on participation, although the coefficients are only marginally significant. This is in line with the positive self-selection of beneficiaries in community meetings often observed during the implementation of CDD programs.

In the context of rural Bangladesh, informal decision-making processes are often restricted to elites and influential individuals, and women rarely play an active role in the public sphere. It is reasonable to expect these traditional institutions and practices to influence the actual implementation of

<sup>25</sup> Approximately 300 BDT.

community-driven development programs, with women less likely to self-select into the consultation stage and an over-representation of the more educated and more influential persons in the community. These findings confirm the observations of practitioners in the development sectors, and they encourage implementation rules that specifically target the more marginalized groups and guarantee to all community members equal voice and decision rights.

Figure 2: Distribution of WTP by socio-economic groups

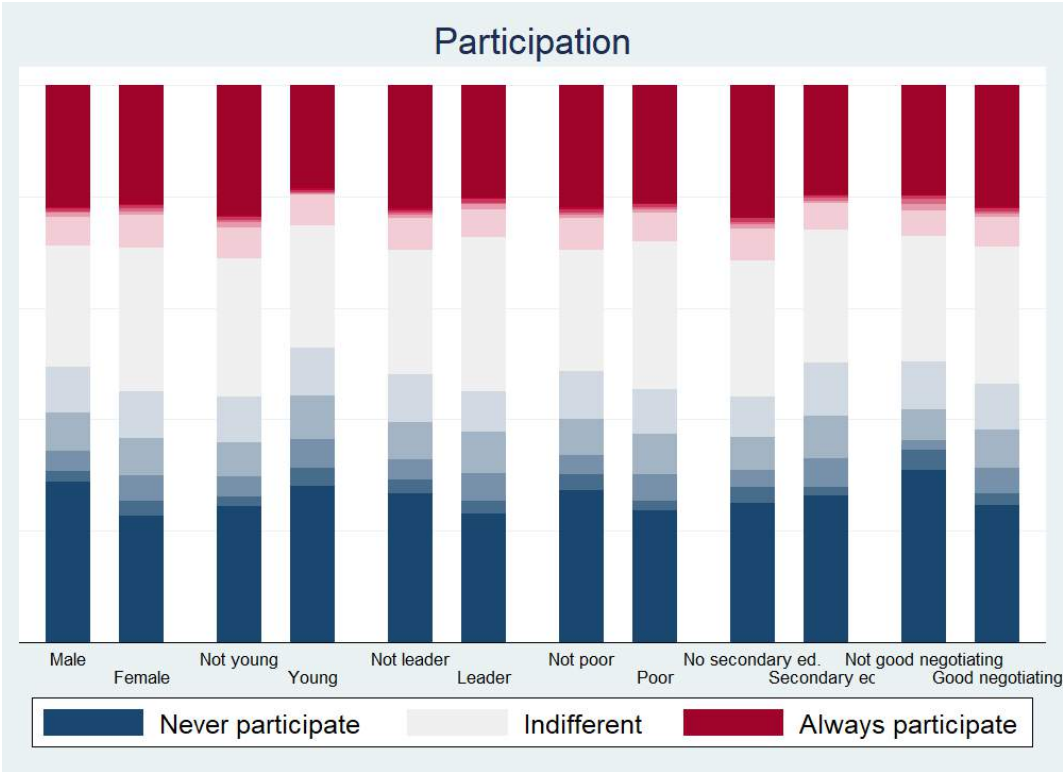
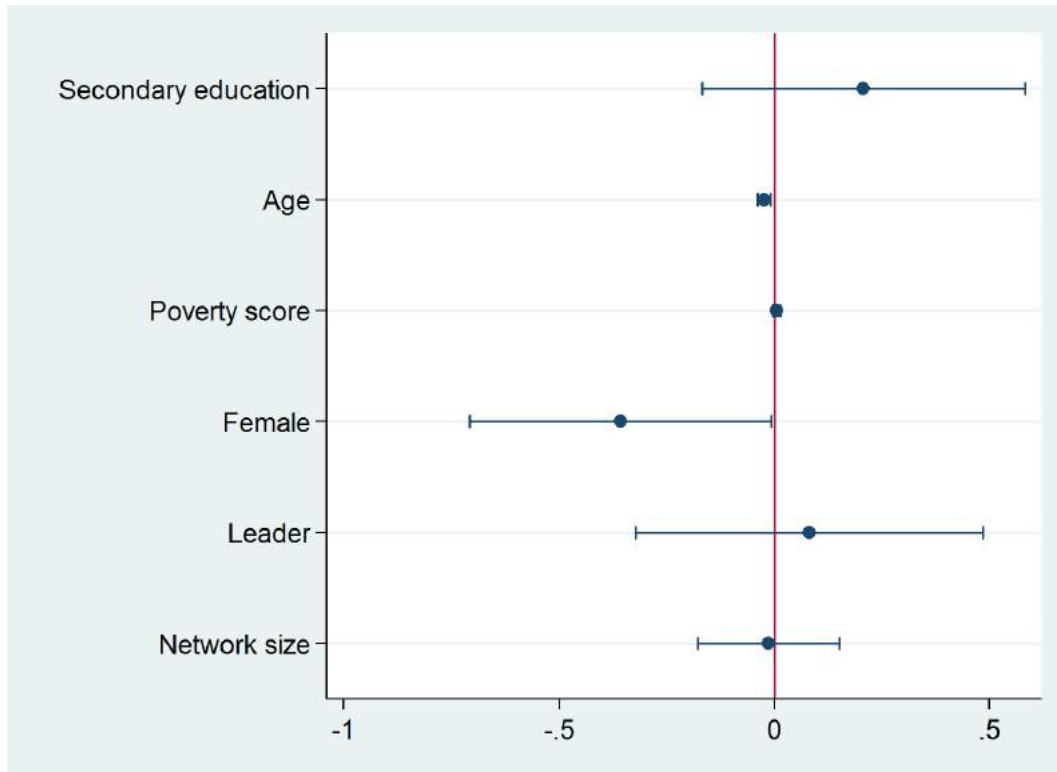


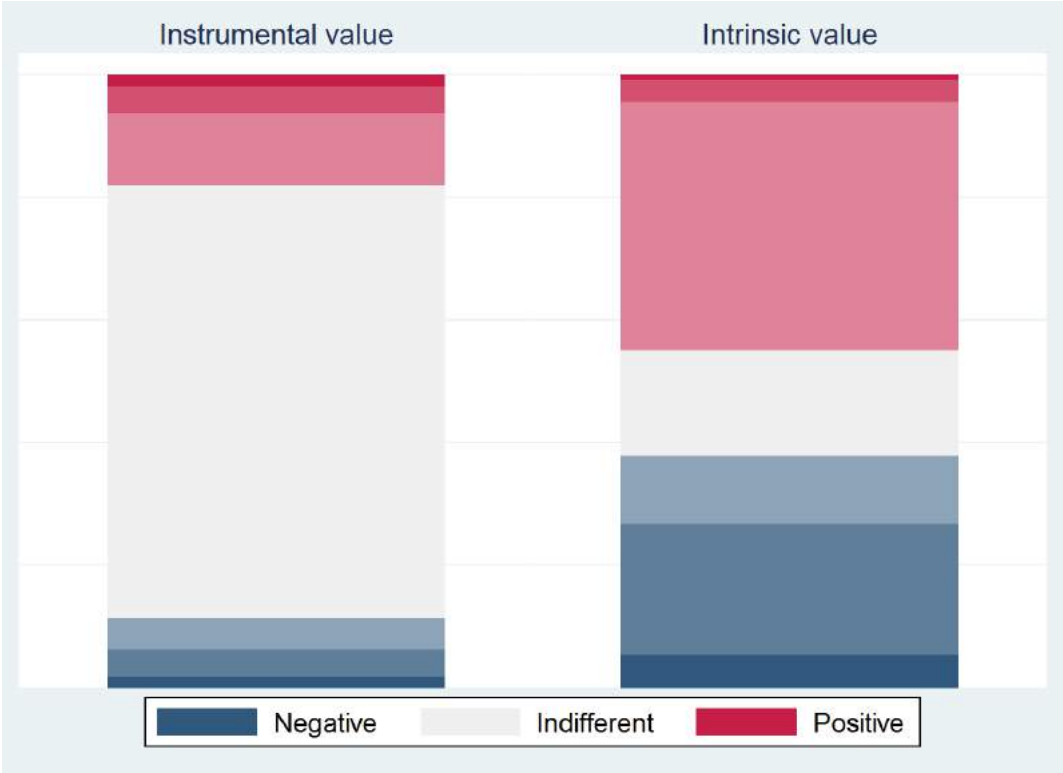
Figure 3: Regression coefficients for WTP



Next, we make use of the belief elicitation procedure, which allows us to obtain explicit measures of the instrumental and intrinsic value of participatory decision-making. We follow Bartling et al. (2014) and define the instrumental value of decision rights as the expected outcome deriving from remaining in control of own decision, and the intrinsic value of decision rights as the utility beyond the instrumental value of providing the power to enforce preferred outcomes. We calculate the instrumental value of participatory decision-making as the difference in expected outcomes under the “participatory decision-making” option and the “assigned distribution” alternative. Within this framework, the WTP measure is interpreted as the sum of the instrumental and intrinsic value of participatory decision-making. Therefore, we obtain the intrinsic value of participatory decision-making by subtracting its instrumental value from the WTP measure. In Figure 4 we show the distribution of the instrumental and intrinsic value of participatory decision-making. As guaranteed by the experimental design, the large majority of participants (71%) expect to receive the same outcome for the next group task under the “participatory decision-making” option and the “assigned distribution” alternative, while 11% of them expect to be penalized from retaining groups decision rights and 18% to benefit from the group discussion. The average instrumental value for participatory decision-making in the overall sample is 0.7 tokens, which implies that on average participants place a negative intrinsic value (-0.4 tokens) on retaining group decision rights. This result is mainly driven by the negative skewness of the intrinsic value distribution, with 38% and 45% of agents assigning, respectively, a negative and a positive intrinsic value to participatory decision-making. We observe that the sample is significantly polarized, with a large share of participants preferring to take decisions for their group within a face-to-face inclusive negotiation, beyond instrumental considerations, but also a large share of agents for whom the time costs and psychological effort required by the group discussion dynamic prevail. We find

evidence of both factors highlighted in Mansuri and Rao (2004) and Mansuri and Rao (2013): on the one hand beneficiaries seem to value being consulted and involved, and deliberative processes might create a sense of legitimacy for the resource allocation (Mansuri and Rao, 2013); on the other hand the exercise of voice and choice can be costly, for instance because of the monetary value of the time dedicated to participation, and the material/social costs when participation requires taking positions that are contrary to the interests of powerful groups (Mansuri and Rao, 2004). As shown in Alatas et al. (2012), these considerations have direct implications for the implementation of participatory programs, as the quality of the decisions taken during community meetings can be compromised by the extended effort and fatigues invested by participants in the process.

Figure 4: Instrumental and intrinsic value for participatory decision-making



As we can observe from Figure 5, preferences for participatory decision-making are driven by different rationales for different socio-economic groups. The disfavor of women and the youth for participatory processes seems to be mainly driven by considerations related to time and psychological costs of being involved in face-to-face discussion dynamics, while leaders and those with higher education value participation mainly because of instrumental motives. The estimates reported in Figure 6 suggest that the group dynamic and the quality of the negotiation process experienced in the previous round are also critical factors in shaping preferences for participatory decision-making. Factors representing the expected monetary benefits of the negotiation stage, such as higher individual outcome from the previous round or larger bargaining possibilities associated to the “Contribution task”, are positively related to the instrumental value of participatory decision-making. The intrinsic value of participatory decision-making instead is mainly explained by the time and psychological costs of entering the next group bargaining stage. For instance, it is higher for the first group task, when

participants still did not invest much time and mental energies in the experimental session, and for good bargainers, plausibly because for them the face-to-face negotiation does not require high effort and the group tasks represent an enjoyable activity. Interestingly, we notice that the inequality in the distribution of outcomes realized in the previous round is positively related with the instrumental value of participatory decision-making, but negatively with its intrinsic value. One plausible interpretation of this result is that on the one hand subjects respond to the monetary incentives created by settings where the admitted inequality is higher and therefore it is possible to extract larger gains from the group discussion dynamic. But on the other hand inequality does not seem to be the social norm in our sample, with subjects placing a negative intrinsic value for participatory practices that might lead to high final inequality.

Figure 5: Regression coefficients for WTP, instrumental and intrinsic value of participation

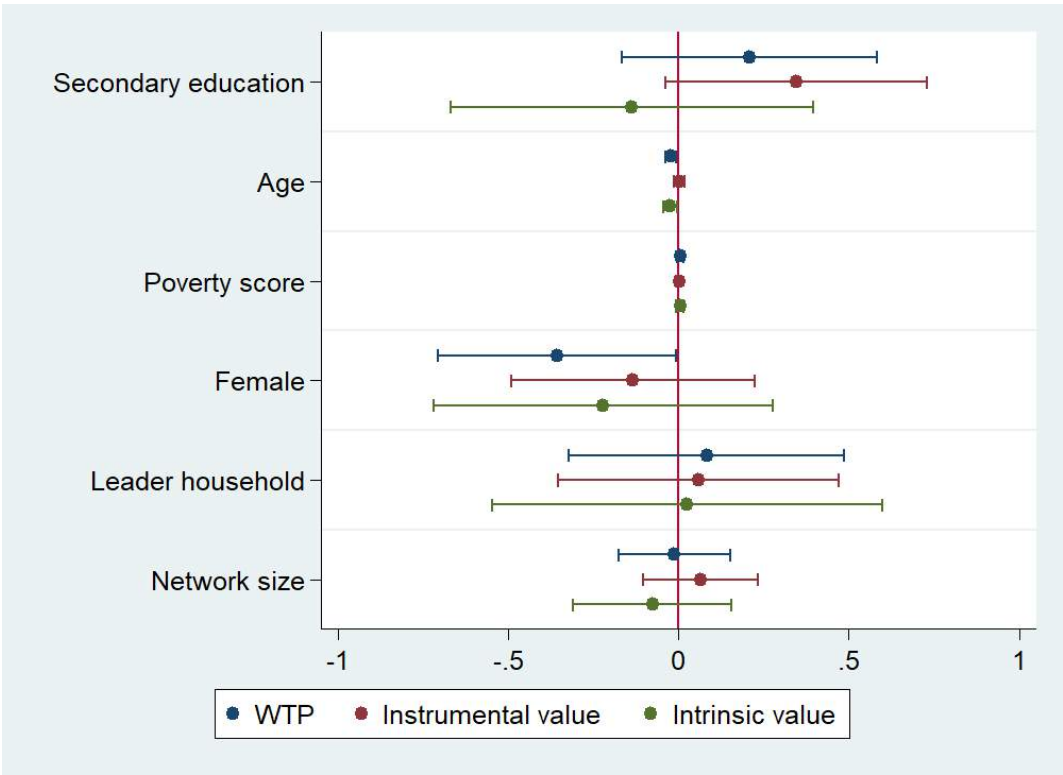
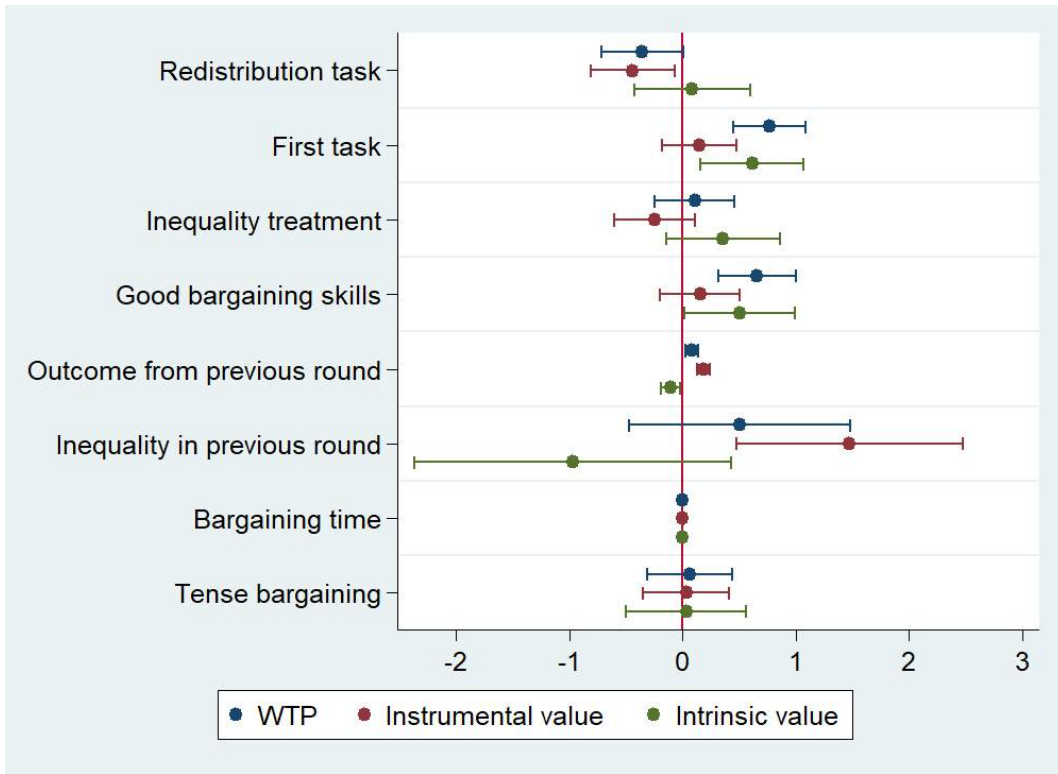




Figure 6: Regression coefficients for WTP, instrumental and intrinsic value of participation

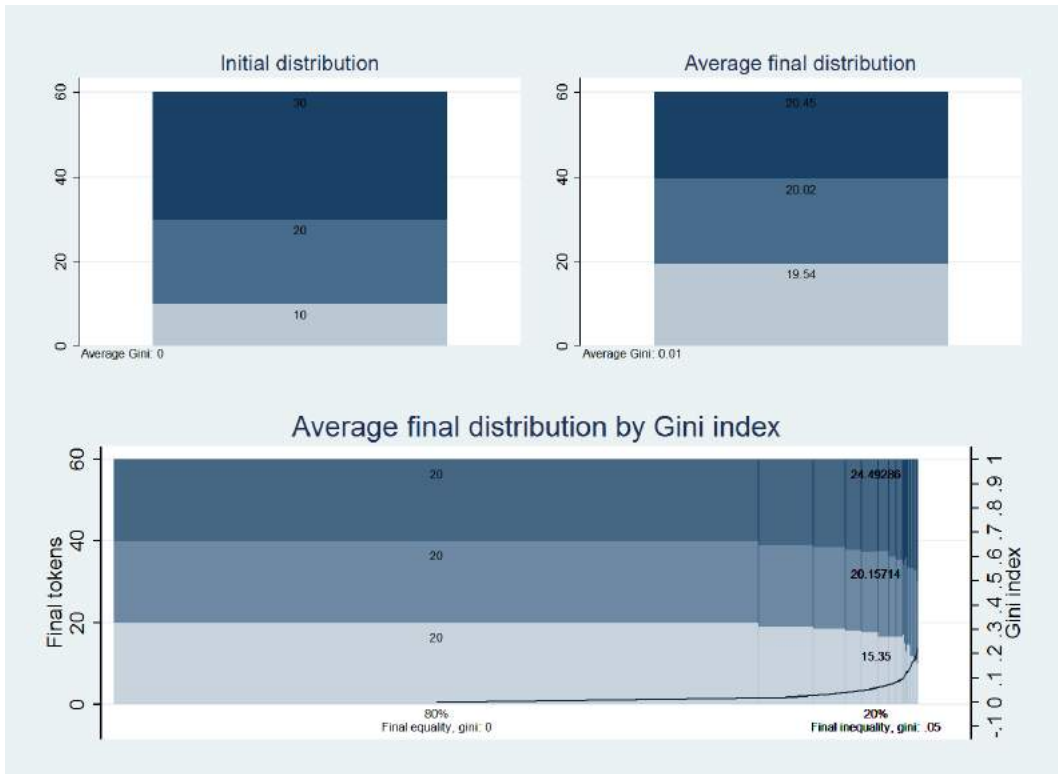


## 4.2 Negotiation outcomes - equality

The subsequent graphs show the final outcomes from the bargaining games starting with equal initial endowments. They represent the average number of tokens for one player in the group.

We start from analysing the outcomes of the Redistribution game (no contribution requirements) with Initial Equality - Figure 7. Since players all start with the same number of tokens, the color of the players is assigned “ex post”, i.e. we display the averages of the player with the highest final outcome of the group in dark blue, the player with the lowest final outcome with light blue, and the player with the middle final outcome in mid blue.

Figure 7: Inequality in outcomes in “Redistribution task” with Equal initial endowments

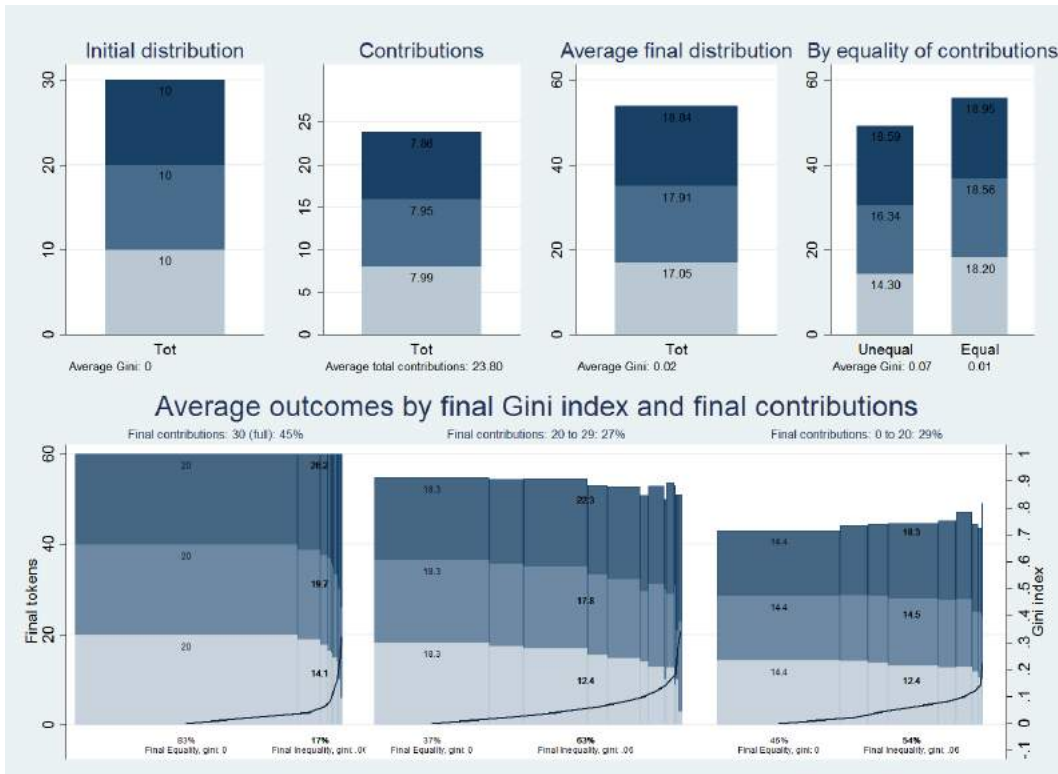


The initial distribution (top left plot, “Initial distribution”) shows that the light blue, the mid blue and the dark blue player have 10 tokens each at the beginning, while at the end (top right plot, “Average final distribution”), we see that the dark blue players on average have 20.45 tokens, the mid blue players have 20.02 tokens and the light blue players have 19.54 tokens. This indicates that there are few groups in the sample that decide to introduce final inequality despite starting off with perfect equality.

We focus now on the bottom graph of Figure 7, “Average final distribution by Gini index”. The graph reports the average final outcome for each of the three group members by the Gini index displayed in the final distribution. The bars width is the percentage of groups whose final distribution displays a certain Gini index, while the coloured height represents the amount of tokens for each player. The line (to be read on the right y-axis) represents the Gini index for each bar.

The graph clearly shows how the majority of groups adhere to the equality norm when splitting, and 80% of groups starting with equal endowments end with equal outcomes, while in the remaining 20% of them the average inequality at the end is higher than at the start (average Gini index: 0.05). The most unequal groups (just 3 groups) manage to reach the maximum Gini index of 0.22, by having one player finish with 10 tokens, one with 20 tokens and one with 30 tokens. Figure 9 shows how females and secondary educated people are more likely to implement final equality, while groups with leaders and more connected people are less egalitarian. As we would expect in a setting where there is elite capture, the increase in inequality in groups with leaders is given by the leader’s ability to obtain higher final outcomes in the end.

Figure 8: Inequality in outcomes in “Contribution task” with Equal initial endowments

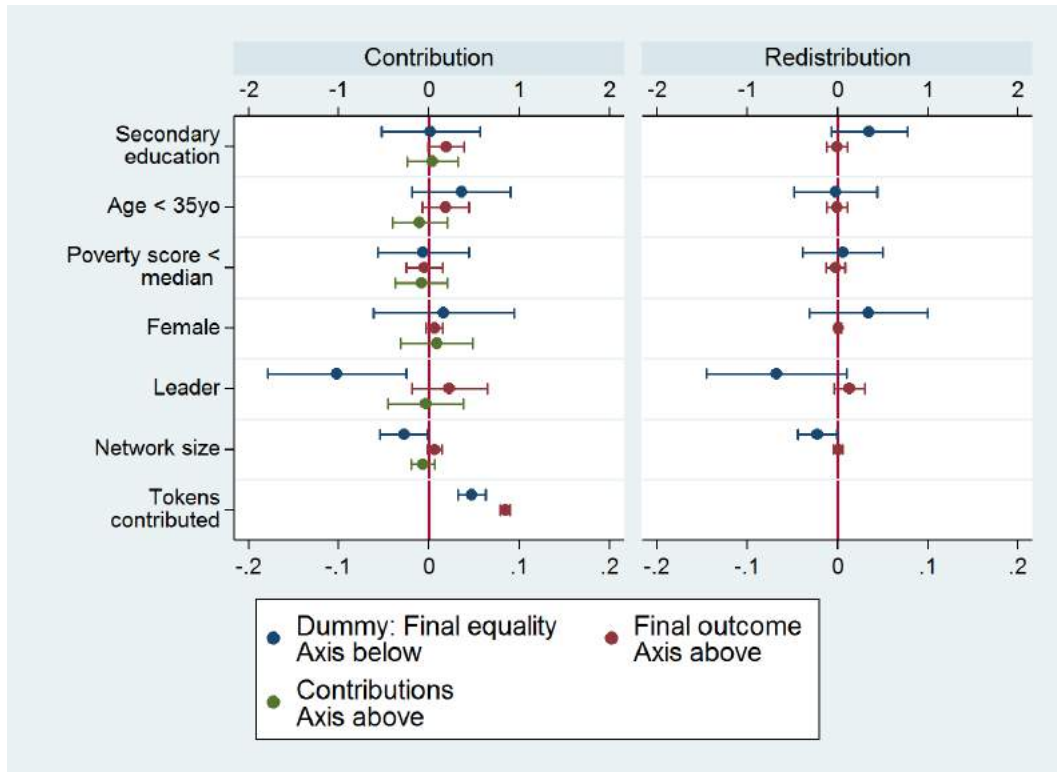


Introducing contribution requirements doubles final inequality, mainly due to the possibility to contribute unequally and the decrease of the total pie to share: players in the end get on average 2 tokens less than in the redistribution case. This difference arises since players do not contribute fully to the common pool, which averages at slightly less than 24 tokens (versus the fixed amount of 30 tokens in the “Redistribution Task”).

The contribution strategy determines the likelihood of a final equal split: 45% of groups manage to raise full contribution to create a common pool of 30 tokens, and their behaviour in redistribution is very similar to the one of the “Redistribution task”: 83% choose to divide equally the pool, while only 17% choose not to and reach an inequality Gini index of 0.06. When instead groups do not manage to reach full contribution, they reach complete equality only in 41% of cases. This correlation between total group contributions and

Moreover, we find that the difference in final inequality exists only when players contribute unequally to the pool. We observe from Figure 8, on the top right graph showing average final distribution by equality of contributions, that 71% of groups opt for equality, and in these groups the Gini coefficient is equal to the one found in the “Redistribution task”, 0.01 (85.5% of the equal contributions groups perform equal split, more than the 80% in the “Redistribution task”), while none of the groups who are contributing unequally is finishing with complete equality, and their average Gini index is 0.07. Moreover, the total contributions are much higher when players contribute equally than when they contribute unequally, although still lower than the maximum (i.e. the social optimum). In the former case, groups contributed on average 25.70 tokens, while in the latter they on average contribute 19.22 tokens.

Figure 9: Coefficients of regression of outcomes in tasks with Equal initial endowments



As we stated, final outcomes are mostly determined by contributions. A regression of the final number of tokens possessed on the number contributed has an R-squared of 0.54 and a coefficient of 0.84. Therefore, as shown in Figure 9 players are remunerated for their contributions, but slightly less than they should be: an additional token contributed, although increasing the common pool by 2, increases the number of tokens received by the contributor by 1.84. This gives us a measure of the importance of equity vs equality: when there was no possibility to contribute participants used total equality as a benchmark, while when contributions are required the benchmark becomes rewarding contributions. We can further examine the relative weight of equity and equality norms in the decision: 35% of the groups receiving unequal contributions decide to give back to each player the double of her own contribution, thus featuring only equity in their sharing norms, while 65% display some interest for equality and remunerate players' contributions by returning only 76% of the tokens given, thus rendering contributions suboptimal.

Demographic characteristics are also correlated with final outcomes, contributions and the likelihood of final equality. Groups with young people are more likely to reach final equality, while groups with leaders and more connected people (higher network size) are less likely to do so. Young and secondary educated people, and (not significantly) leaders and connected people obtain a higher final outcome than other players (controlling for contributions). There is no significant effect of demographics on private contribution levels, however groups with young people and females are more likely to reach equal and full contributions, while leaders and more connected people are the opposite. Furthermore, leaders and important people in the community (those with higher network size) are also reported as more skilled bargainers.

The picture we paint is therefore the following: prominent people in the community exploit their superior bargaining skills obtain higher final outcomes both with and without contribution requirements (in the former case, they also contribute less). In the “Contribution task”, their behaviour is twice detrimental to the common good: not only it introduces inequality in outcomes, but also discourages cooperation from the group in reaching full and equal contributions. This is the opposite of what it is usually found in public goods games in developing countries’ setting<sup>26</sup>, which usually find that leaders not only contribute more, but also induce other players to contribute more. This behaviour might be induced by the bargaining aspect of our task, which is usually absent in public goods games, and, to our knowledge, it is reported in this work for the first time.

### 4.3 Negotiation outcomes - inequality

We now repeat the analysis for groups starting from final inequality, to assess whether the leaders’ behaviour is to be ascribed to their skills and status or to their wealth outside the game<sup>27</sup>. The first observation is that in the “Redistribution task”, initial inequality causes final inequality to rise considerably, as shown in Figure 10. We compare here the starting point (top left plot) to the average final distribution (top right plot). As shown, the “richer” player, starting with 15 red tokens, on average has 22.21 tokens in the end, while the “poorer” player, starting with 5 green tokens, usually obtains 17.95 tokens. The player starting with 10 yellow tokens is on average given an additional 9.84 tokens in the end.

Looking at the bottom plot of Figure 10, “Average final distribution by Gini index”, we see that only in 43% of groups the bargaining outcome is equality of final outcome (in the equality treatment, 80% of groups follow this strategy). This is particularly striking since the unequal initial outcomes are randomly allocated by a lottery performed by the players themselves, thus it is clear to them that the initial allocation does not reward anything but pure luck. This denotes either an unbalance in bargaining power introduced by the different endowment, or a strong status quo bias from the decision makers.

25% of groups opt instead for an equal split of the 30 tokens of the group endowment, which leads to a higher inequality (Gini index: 0.11), while 29% divide the group endowment creating less inequality than the equal split. Only 3% of groups opt for a division rule more unequal than the equal split.

Interestingly, 56 out of 1,152 groups somehow reverse the initial inequality and reach a distribution where either the initially poorest player has more than the initially richest (11 out of 575 groups), or more than the initially median (40 groups), or the initially median ends with more than the initially richest (19 groups).

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<sup>26</sup>See for example Carpenter et al. (2004); D’Adda (2012)

<sup>27</sup>in our sample well connected households and leaders are richer than average

Figure 10: Inequality in outcomes in “Redistribution task” with Unequal initial endowments

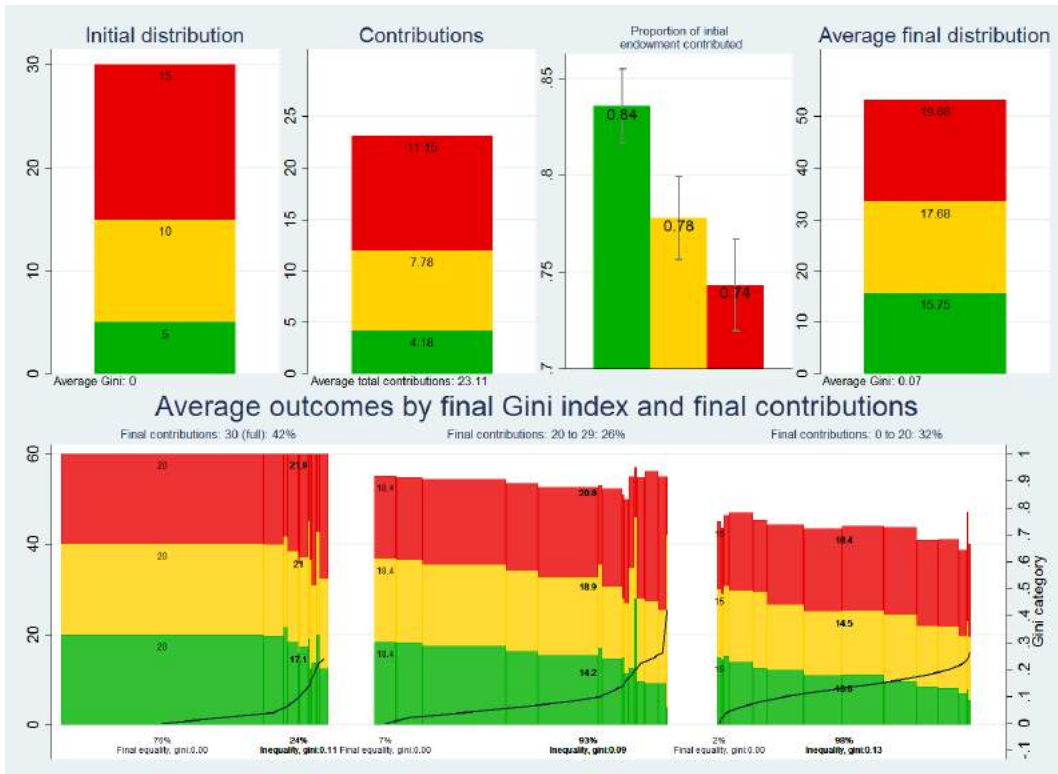


Looking at Figure 13, we see how demographics of the players do not play an important role in explaining the adoption of different strategies (Final equality vs Equal split), nor do they explain the difference in final outcomes. The only important exception is the fact that female groups are much less likely to end up with final equality and prefer the equal split of the common endowment, thus displaying a higher status quo bias than males. Additionally, (not shown in the Figure), we find that final inequality and the likelihood of an equal split vs final equality is increased when leaders start with the highest possible endowment vs when they start with the lowest possible endowment. This is consistent with the elite “following fairness considerations in a self-serving way”<sup>28</sup>.

Still, final outcomes are mostly explained by the initial endowments of players.

<sup>28</sup>D’Exelle and Berg (2014)

Figure 11: Inequality in outcomes in “Contribution task” with Unequal initial endowments



Although full contribution is a dominant strategy in the game, in most groups players do not contribute fully to the common pool of resources, and they contribute slightly less than in the Contribution game under equality of initial endowments: the total final contributions decrease by 0.79 tokens in groups starting with initial inequality.

Contributing behaviour is very interesting in the inequality setting: 42% of groups reach full contributions (only slightly lower than in the equality case), and in only 3% of groups players contribute the same number of tokens (versus 71% in the initial equality setting), although contributing the same share of tokens is hardly comparable in the two settings. 44% of groups instead contribute the same share of initial endowments, again to be compared to 71% in the equality setting, therefore we can claim that initial inequality leads to more unequal contributions both in terms of absolute numbers and of shares.

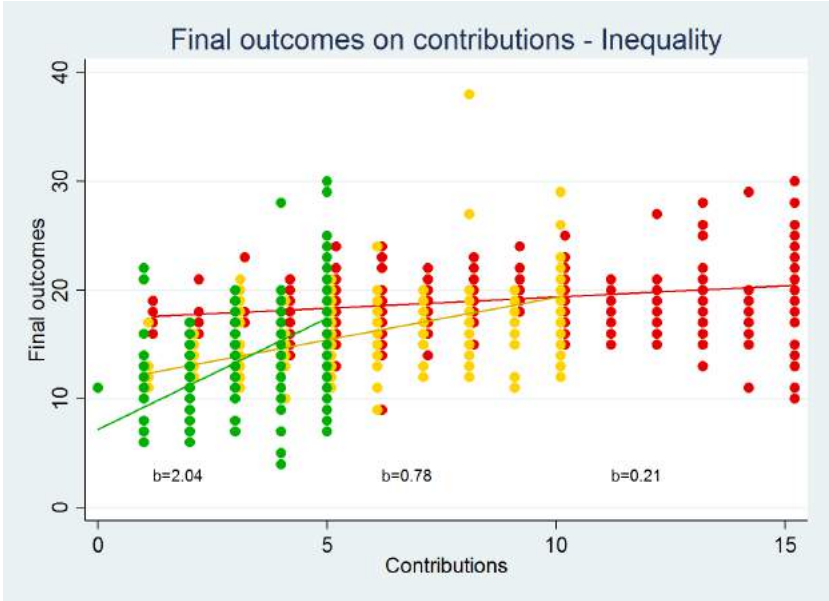
Among those groups where everyone contributes the same share of initial endowment, 73% split equally, while only 4% split equally in the other groups.

Who does usually contribute more? As shown in Figure 11 in the “Proportion of initial endowment contributed” plot, the players starting with lower initial endowments contribute a significantly higher percentage than the players starting with higher initial endowments.

As shown in Figure 12, they also get remunerated much more for their contributions - one contributed token increases the number of tokens received by 3 for the poorest player, by 1.8 for the mid player and by a mere 1.2 for the richest player (coefficients in Figure 12 report the increase in final outcomes, net of the loss of 1 token contributed). If these rules were somehow shared by the community

and internalized in the contribution decisions, we would understand why the richer player contribute relatively less than the poorer players. This is consistent with what we also saw in the Equality treatment: full reward for contributions is even rarer in this setting, only 5% of groups decide that players should receive twice what they've contributed, and thus contributions are not fully incentivized.

Figure 12: Reward for contributions in “Contribution task” with Unequal initial endowments



Leaders contribute significantly less than other participants, especially when they start with the higher initial endowment, and their groups are more likely to implement final equality if they start with the lower initial endowment. However, they do not have significantly higher payoffs than other participants. As shown in Figure 13, which reports the coefficients for the regression of final inequality and outcomes on the reported variables and on the initial amounts of tokens, round and union fixed effects, also females and young people contribute on average less.

As we also saw in the “Redistribution Task”, in female groups the probability of reaching final equality lower: the final inequality is therefore higher. Since in the equality treatment females reached a much lower final inequality than males, we can infer that in female groups the status quo bias is much stronger. Again, secondary educated people obtain a higher final outcome without increasing their contributions.



Figure 13: Coefficients of regression of outcomes in tasks with Unequal initial endowments

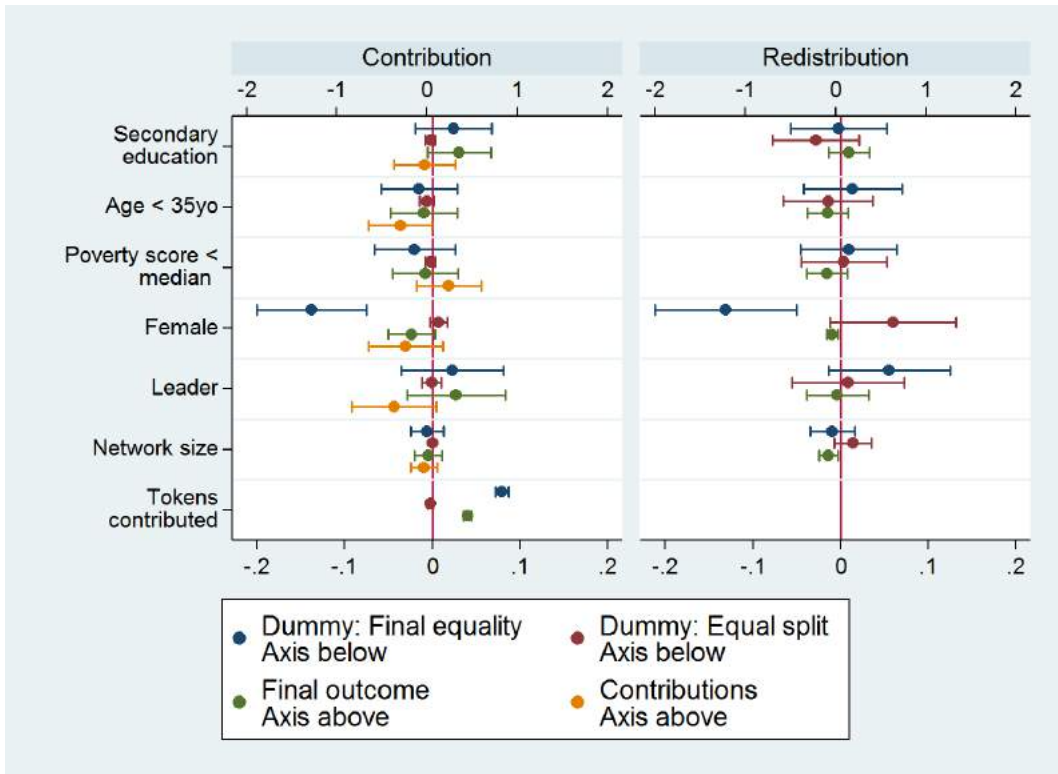
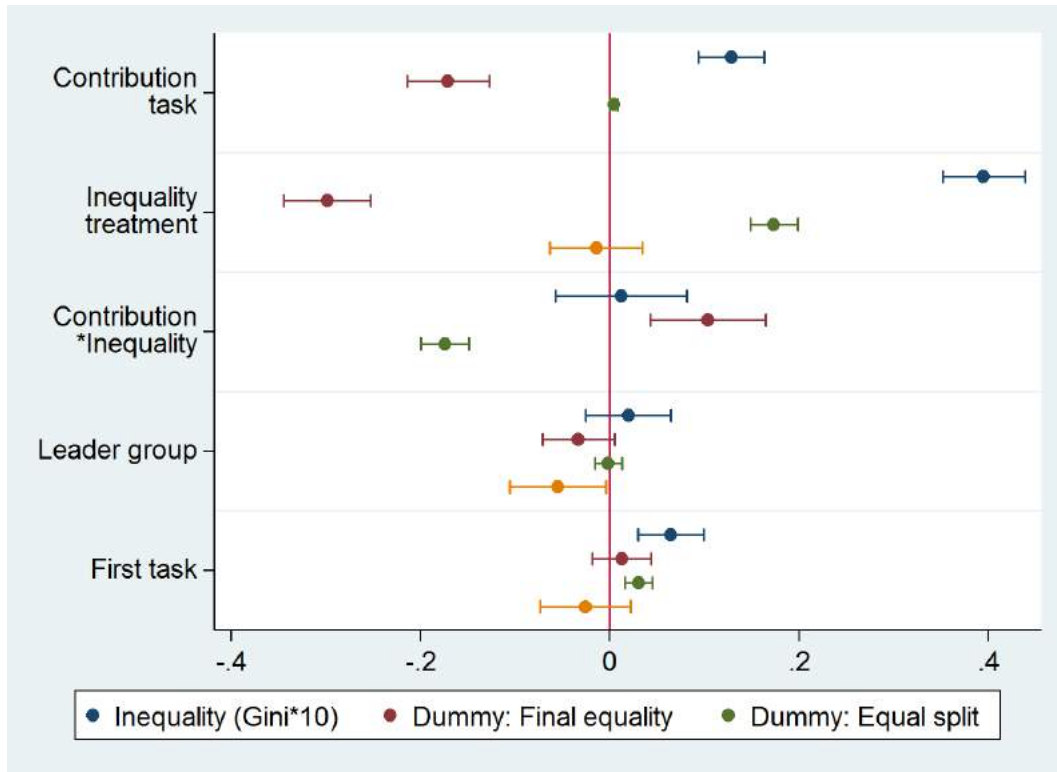


Figure 14: Effects of experimental variation on final distribution



To sum up the effects of our experimental treatments on the bargaining outcomes of the tasks we look at Figure 14.

Inequality in the final distribution increases with the introduction of contribution requirements on average by 0.012 points of the Gini Index, slightly more for groups playing under initial inequality. For the groups starting with equal endowments, the final Gini index increases with contribution requirements by 0.018 points due to the decrease in the common pool, therefore the groups who manage to reach full contributions do not increase final inequality.

However the percentage of groups who manage to reach full contributions is pretty similar to those playing under equality, although among these significantly less reach perfect equality in the final outcome (76 vs 83%), due to the fact that full contributions also means unequal contributions in the inequality treatment. Among those groups not reaching maximum contributions, only 4% reach final equality when starting from unequal endowments, against 42% in the equal endowment treatment.

We can therefore conclude that contribution requirements do not in this setting push higher endowed players in contributing more in order to get more benefits out of the common pool, but they do increase final inequality due to the fact that richer people contribute less than their share, and keep their endowment to themselves. This suggest their higher final outcomes are not to attribute to higher bargaining power given by their higher contributions, but rather to an endowment effect.

## 5 Conclusions

This paper shows that mechanisms of public participation and decision-making are extremely multifaceted and difficult to pin down, even in a very abstract and simplified laboratory setting which mimics a Community-Driven Development process. Both selection into participation and bargaining outcomes are dependent in various degrees from demographic characteristics and the experimental variation in the program features.

Our results suggest that 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. These preferences are driven by instrumental and non-instrumental considerations. We find evidence that the disfavour of women and the elderly for participatory process is mainly driven by the time and psychological costs of being involved in face-to-face discussion dynamics, while leaders and those with higher educations value participation mainly because of instrumental motives.

Once the participants are asked to decide in a setting with no contribution requirements, they display inequality aversion (as described in Starmans et al. (2017)). We also observe a strong endowment effect, while players' wealth outside the game is not taken into account for the allocation of experimental resources. The introduction of contribution requirements changes the bargaining dynamic significantly as we clearly observe the trade-off between equity and equality considerations. On the one hand, groups partly incentivize voluntary contributions. On the other hand, groups partly redistribute the common pool of resources raised by voluntary contributions in favor of players with lower initial endowment. Because the fairness norms in our sample are more equality oriented than incentive compatible, making voluntary contribution to the public good is a suboptimal choice for players with higher initial endowment. Compared with a setting without contribution requirements, the interaction between equity and equality norms leads to suboptimal equilibria under both criteria: the final common pool of resources to reallocate among players is smaller and, at the same time, the final inequality is higher.

The findings presented in this paper are relevant for the design of participatory development projects as well as decentralization reforms, which often assign a preeminent role to institutional settings similar to the ones adopted in CDD programs. Because participation in community meeting is highly selected and more marginalized groups encounter higher costs in raising their voices and exercising their decision rights, it is crucial that implementation rules of CDD programs include initiatives to mobilize and actively involve all socio-economic groups in the community in the decision-making process. Given the heavy status quo bias displayed by the distribution outcomes of the bargaining games, and the fact that leaders and more educated participants are able to gain more from the bargaining dynamics, this study advocates for expedients to dampen elite capture during the community consultation. In addition, our evidence does not support the adoption of contribution requirements, which raises inequality while decreasing the overall amount of project resources.

Our results also provide interesting avenues for future research, such as on the formation and development of preferences for participatory practices, and on the effect in real-world settings of contribution requirements on the overall impact and sustainability of community interventions (Cocciolo et al., 2017).

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## A Appendix: Individual survey before the experimental session

Script for intro:

“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.



## B Appendix: 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.

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