# Discrimination in the Provision of Social Services to the Poor: A Field Experimental Study

by

Juan-Camilo Cárdenas*
Natalia Candelo*
Alejandro Gaviria*
Sandra Polanía*
Rajiv Sethi**

*Universidad de los Andes
**Barnard College, Columbia University

April 2008

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**Abstract**[1]

This paper uses an experimental field approach to investigate the pro-social preferences and behavior of social services providers and the behavior of potential beneficiaries in Bogota, Colombia. Field experiments were conducted using games including a newly designed Distributive Dictator Game in order to examine traits and mechanisms guiding pro-sociality. Replicating the patterns of previous studies, individuals showed a preference for fair outcomes, positive levels of trust and reciprocity, and willingness to punish unfair outcomes. The results provide evidence that the poor trigger more pro-social behavior from all citizens, including public servants, but the latter display strategic generosity. Additional observations include a bias in favor of women and households with more dependents, but discriminatory behavior against stigmatized groups.[2]

# 1. Introduction

State provision of social services to the poor is contained in an exchange relationship where one could expect that a local officer, representing the state's social welfare function, delivers services to the poor, based on limited resources that need to be allocated according to criteria compatible with the state's priorities. In turn, the state's priorities are supposed to reflect the social choice preferences of citizens-voters with respect to redistribution and assistance to the poor.

Because of the nature of this relationship, where private information and coordination failures can emerge, the quality and distribution of those services are subject to potential problems of efficiency and equity when local officers deliver services that are not compatible with the social welfare function. For instance, providers may include particular groups that should not receive services, or exclude others that should be covered. Further, there is room for corruption and misallocation of resources for private interests. In general, there is a principal-agent problem, and observation of the provider's actions can be costly.

We therefore rely to some extent on the moral, normative, and self-regulatory systems in the individual preferences of the local officer. The (private) decisions by the local officer are mediated by her individual social preferences with respect to altruism, reciprocity, trust and distributive justice towards the beneficiaries of social programs. These traits and mechanisms, we believe, capture most of the important aspects of pro-social behavior that provide the basis of the social contract and public policies aimed at helping the most vulnerable groups in society.

If the social preferences of the local officers are well aligned with the social welfare function of the policy being implemented, the outcomes will be socially desirable in terms of efficiency and equity. Otherwise, scarce resources targeted at the poor can be misallocated affecting the effectiveness of the policy.

This study is precisely aimed at the understanding of the micro foundations of the interactions involved in the provision of social services to the poor. In particular, the study uses an experimental field approach to better understand the preferences and behavior of both individuals involved in the provision of social services and the behavior of those potential beneficiaries, the poor.

Pro-social preferences are essential for understanding behavior in social exchanges where there is room for strategic use of private information, which may lead to losses in social efficiency and equity. Such is the case when agents (e.g., public officials) have to deliver

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services to the poor on behalf of the principal (e.g., policymakers and citizen-voters). Thus, we have chosen to implement a battery of canonical experiments used for measuring social preferences (Bowles, 2004; Camerer and Fehr, 2004) in order to capture a series of components of pro-sociality, namely, distributive justice, altruism, reciprocity, reciprocal altruism, fairness, trust and social sanctioning. These are all essential elements within a social contract that, as in Colombia, expects to deliver social services to the more vulnerable groups of society.

We want to explore the foundations of pro-social behavior by public officials as well as the poor in the delivery of social services (education, health services and nutrition). Dimensions like altruism, reciprocity, inequity aversion, trust, distributive justice and social sanction are all important in the understanding the reasons why as a society we target resources towards the poor. However, these dimensions might be influenced by factors that should—and others that should not—guide the allocation of resources (e.g., level of education or number of dependents as opposed to race or marital status). Discretion on the part of public officials might lead to discrimination against certain groups, creating social losses in terms of equity and efficiency in the allocation of scarce public resources. In addition, the poor who are actual or potential beneficiaries of the social programs might also self-discriminate if their expectations about such processes of discrimination affect their expectations or application towards such services.

Our experimental strategy emerges from the hypothesis that allocation of resources to the poor is mediated by a) the social preferences and behavior of the local officials in charge of the provision, and b) the preferences and behavior of the potential beneficiaries that could affect self-selection and self-discrimination. The overall null hypothesis is that public officials will allocate resources according to the constitutional mandate and the objectives of the particular features of the specific public policy, which is, based on the attributes of the recipients that guide the redistributive goal of the social policy. The null hypothesis also implies that according to the constitutional mandate there should be no discrimination against certain groups based on their race, ethnicity, occupation, marital status or other particular conditions (e.g., being displaced— *desplazado*—by violence from their previous residence to the city).

Using the experimental designs and the collection of data on recruited subjects, we are able to capture a significant portion of public officials' motivations when allocating resources, as well as the motivations of the poor when expressing their expectations and observing their realized outcomes both outside our lab and during our experiments.

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We designed a battery of five two-person games where there are players 1 who represent public officials who allocate resources to provide social assistance or aid to players 2 (the poor) based on the socio-demographic characteristics of the latter. The games designed for the study were a "Distributive Dictator Game (DDG), a Dictator Game (DG), Strategy Method Ultimatum Game (UG), Trust Game (TG), and a Third Party Punishment game (3PP).[3]

As far as we can recollect, there are no previous experimental studies on other-regarding or pro-social behavior with such samples of participants (actual public officials and actual beneficiaries of these programs). Each of our participants took part in a session with all five games, but interacted with different people in each game, on only a few occasions repeating the interaction with the same player. All games were played as one-shot interactions, with no communication or pre-play interaction among players. In all cases players had partial information about the socio-demographic characteristics of each other.

We recruited both **target** (actual public officials) and **control** subjects (students, government and private sector employees, etc) for players 1. Likewise, we had target and control samples of subjects for players 2 who receive the transfers of resources from players 1. Target participants were recruited in welfare programs' waiting lines, on the streets and in various neighborhoods in the lower income groups. Controls were recruited among students and employees. We also had a fifth game where there is a third player who judges and allocates resources to punish behavior considered anti-social. These third players were recruited among the overall population.

The target sample participating in the study comes from public officials working for different government organizations and from beneficiaries from education, health, nutrition and childcare programs in different locations in the city of Bogota. The data for the entire set of experimental and survey data contains information on a total sample of 513 subjects who attended the entire set of experimental activities. Although we recruited a total of 568 people, for various reasons 55 of them did not show up for the games stage. All recruited people were given US$0.60 as part of their show-up fee in order to induce credibility and to subsidize the transportation cost from their homes or workplace to the campus site we assigned for the experiments stage. Once they decided to participate and attended their sessions, they were paid

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[3] All but the last experiment involve a player 1 (provider) and a player 2 (beneficiary). For the Third-Party Punishment game there is a third player who decides whether to punish at a personal cost player 1 when the latter has acted unfairly against player 2.

the rest of their earnings based on the decisions in the experiments. An additional US$0.60 was paid to each participant to cover her transportation cost back home. On average each participant in the role of player 1 was paid US$6.60, and US$3.75 was paid to players 2 and 3.

As an overview of the main findings, the experiments provide evidence for the following results:

- Our average participant showed pro-social behavior,[4] consistent with most of the behavioral and experimental literature, including,
  - Distributive justice towards the more vulnerable (favoring the weakest or more in need);
  - Altruism (unselfish transfers towards others at one's own cost);
  - Reciprocal altruism and reciprocity (willingness to treat others as one would expect towards self);
  - Trust followed by reciprocity (people being trusted showed higher levels of reciprocity by returning with positive returns the initial investment);
  - Social sanctioning (willingness to sanction third parties at a personal cost because of unfair behavior).
  - As in most experimental literature with non-student samples, the 50/50 split of endowments for the Dictator, Ultimatum and Third-Party Punishment games was the most frequent division.
- When our players 1 and 2 were both from target samples 2) such levels of pro-social behavior were statistically larger in favor of the poor, if compared with our control samples. We believe this provides evidence of the internal validity of the experimental design, and confirms that our design was clear for players 1 with respect to the social needs of their counterparts.
- When players 2 were from our target sample, pro-sociality increased for all players 1, target and controls.
- However, when our senders or players 1 were controls and players 2 were targets, offers and pro-social actions in general were even greater than when players 1 were from our target samples, namely, public servants. This result

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[4] Including traits and mechanisms related to other-regarding preferences such as altruism, reciprocal altruism, reciprocity, fairness, trust and altruistic (social) punishment.

raised an interesting question: why would target players 1 (actual public servants) be less generous than their controls? We do not believe that public officials engaged in social services to the poor are less pro-social, but instead, that they incorporate more strategic factors into their decisions regarding the recipients of transfers. For instance, public officials reward education and shorter time of unemployment among players 2. Further, using a survey questionnaire for estimating an index of humanitarian-egalitarian preferences, and for Protestant work ethic (Fong et al., 2005; Katz and Hass, 1989), we found that our target public officials showed higher levels of these two indicators than their controls.

- When explaining variation in offers and pro-social actions by players 1 we found a set of attributes from players 2 that triggered or reduced pro-social behavior from the former to the latter:

  o Women, with larger numbers of dependents, more so if minors, received higher altruistic offers than men.

  o Black and indigenous people received higher or equal offers but never lower offers than other racial groups.

  o Occupation, social condition or current activity seemed to affect offers. The unemployed as well as those with less education were treated with more generosity, but street recyclers and street vendors were often sent lower offers, confirming anecdotal evidence of stigmatization and suspicion towards certain activities.

  o The political conflict manifests itself in the results. People displaced from violence were given higher offers, while ex-combatants were given lower offers, controlling for the rest of the socio-demographic characteristics of these particular samples.

  o In fact, we found a systematic discrimination against ex-combatants not only in the offers sent to them in the Dictator and Ultimatum games, but also when third parties were less willing to punish unfair behavior towards ex-combatants.

- Our target groups of players 2 showed higher levels of conformism than their controls. First, they were willing to accept more unfair offers in the Ultimatum game, that is, their rejection rates were lower for unfair offers.

- We also found that on average expected offers by players 2 from players 1 were slightly but consistently lower than actual offers. However, in all games the expected and actual offers were positively correlated.

Overall, we have been able to replicate the pattern of similar experiments regarding pro-social behavior such as altruism, reciprocity, fairness, altruistic punishment and social norms across the world (Henrich et al., 2004, 2006; Gintis et al 2005; Fehr and Gachter, 2002; Cárdenas and Carpenter, 2006). However, we have explored a particular context of social exchange in which states undertake tasks of helping the poor through local officials' decisions and how their individual preferences may affect outcomes.

## 2. Discretion and Discrimination in the Provision of Social Services

Discrimination and social exclusion in various domains of economic life can create losses in terms of efficiency and equity. Particular characteristics of individuals, many of which they did not choose during their lives but had for different genetic or acquired reasons, cause them to be excluded from receiving the benefits of certain social exchange situations regarding the market, the state, or their life in community. Such exclusion creates efficiency losses in many cases, and equity problems in general, as credit, land and labor markets are subject to discrimination and exclusion. The political arena can also exclude people from expressing their preferences and affecting the outcomes on their favor.

Much of the theoretical and empirical literature can be classified into two major approaches, "statistical discrimination" (Arrow, 1973; Phelps, 1972) and the "taste for discrimination" (Becker, 1971) which have focused on imperfect markets where room for discrimination can affect economic outcomes.[5] The housing and labor markets are among the most frequently studied domains in the discrimination literature. Experiments, audit studies, surveys and other methods have been used for exploring how workers can be discriminated against in labor contracts and job application processes. Race and gender have been

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[5] See Chaudhury and Sethi (2003) for a survey of the Arrow-Phelps literature on stereotypes and statistical discrimination.

systematically tested as characteristics where discrimination can occur and create equity and efficiency losses. Housing and credit markets have also been subject to different inquiries regarding discrimination.

Less studied, however, have been issues of discrimination in the non-market domains of social services provision, particularly to the poor. Social programs aimed at improving access to education, health, and childcare for the poor are good examples of these settings. As in imperfect markets, the provision of public goods and social services by the state can also be subject to discrimination, with certain individuals treated in a less favorable way than others with equivalent constitutional rights or under the same provider and location. Unfortunately, being poor often coincides with having some of the characteristics for which individuals are discriminated against and excluded. Indigenous and Afro-descendents frequently appear among the poorest and excluded in the Latin American region, and therefore are more vulnerable. Migrants (*campesinos*) from rural areas additionally suffer various kinds of discrimination when seeking access to the same services that others have received in the past.

Latin America, as one of the world's most unequal regions but also one of the most diverse in terms of race, ethnicity, and social backgrounds, imposes special challenges with respect to discrimination and social exclusion. Furthermore, the region is undergoing a dramatic transformation in terms of urban-rural dynamics that create particular problems we have yet to understand in depth. Persistent rural poverty and inequality, the economic changes in the agricultural sector, cultural change, political conflicts and civil wars have created a migration to the cities that imposes a challenge to the provision of public goods and social services by the state, particularly to the poorest, who are increasing the metropolitan populations of the region. Meanwhile, decentralization and devolution of the state create also greater challenges to local governments in providing these services to the poor in cities that are evolving into worlds within worlds, with wealthy neighborhoods and slums with severe social needs to be fulfilled. Thus, political tensions in the developing and developed world emerge when the excluded can observe within their cities that others have access to public goods and social services.

Governments have responded with systems of focalization to target the very poor, creating survey procedures and algorithms to rank poor households for the distribution of such social services. Many of those programs, labeled as SISBEN[6] (Irarrázabal, 2004) are in place in

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[6] Sistemas Unicos de Información sobre Beneficiarios en América Latina.

the region, as mechanisms for the targeting of social protection programs. In fact, those programs are aimed at targeting the most vulnerable in an attempt to positively discriminate with redistributive goals. Yet room remains for negative discrimination and exclusion. Irarrázabal (2004) recognizes this as one of the two risks of these indices of focalization of beneficiaries when some individuals remain excluded because of manipulation of the information emerges, and his estimations suggest that these problems may exist in the cases of Chile and Colombia. Some of these could occur because of discrimination, but the evidence cannot be used to support. Núñez and Espinosa (2005) also find statistical support from the Encuesta de Calidad de Vida 2004 in Colombia that there might be errors of inclusion (households that should not and are receiving subsidies) and errors of exclusion (households in need excluded), discriminating against households with elderly persons and persons displaced by violence, as well as households heads with low levels of education.

Gaviria and Ortiz (2005) provide statistical evidence for Colombia suggesting that minorities may be asymmetrically assisted, for instance, in the subsidized health program. Using self-reported data for ethnicity, they find that the indigenous have higher likelihoods of being included in the state-subsidized health program[7] than Afro-descendants, controlling for other factors such as location, education, age, consumption and employment. The causalities, however, are still undefined. One plausible reason is that greater amounts of national government transfers flow to areas with larger fractions of indigenous groups if compared to those with Afro-descendants. Also, the indigenous have a longer tradition of social cohesion and organization for asserting their rights before the government when compared to Afro-descendants who only during the new constitutional process have engaged in social organization and collective action. There is the possibility that discrimination explains a process in which Afro-descendants are less likely than others to enter the social protection program given the steps involved in targeting, enrollment and service delivery.

Further, there is documented evidence in sentences from the Constitutional Court in Colombia[8] using the mechanism of the *tutela,*[9] where individuals who have been classified erroneously argue that their rights and the principle of equality have been violated in their classification into the SISBEN indexing system.

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[7] Régimen Subsidiado en Salud, based on SISBEN rankings.
[8] http://www.ramajudicial.gov.co, http://200.21.19.133/sentencias/
[9] "writ of protection of constitutional rights"

In general, there are behavioral issues that are at the core of the problem. For instance, if there is a "taste for discrimination," those who generate discrimination (e.g., employers) will have to show it in their other-regarding preferences, which could be validated empirically, or experimentally. Bertrand and Mullainathan (2004) have devised a clever experiment in the field, randomly sending constructed resumes in response to newspaper ads for job postings, and observing the probability of being called for an interview to test for discrimination in the labor markets based on prejudices emerging from the names used, and without photos or ethnic background. The results were astonishing: not only did being identified as Black decrease the probability of getting an interview, but the marginal gains from other characteristics such as education and home location mattered more strongly for resumes with a "white" name. The application of those results, however, would be limited to explaining the thoughts and behaviors of those deciding to call applicants for an interview.

As for the case of government programs that provide social protection to the poor, rather little has been said about the behavioral aspects of local officials' decision-making. We can agree that programs and policies aimed at helping the poor are based on pro-social preferences of the majority that vote and thus elect and appoint officials that will run those programs. Still, the contract between officials and the electorate is incomplete and subject to asymmetries of information. In addition, the individual preferences of those in government and executing the programs are in many cases unobservable.

Yet if we recognize that we are in a world of imperfect markets and public goods problems, the role of the state, as evidenced by its representatives' behavior and preferences, is crucial. As eloquently stated by Bowles and Gintis (2000) *"Many are now convinced that John Stuart Mill's injunction that we must devise rules such that the 'duties and the interests' of government officials would coincide should be shelved, along with the assumptions of the Fundamental Theorem of Welfare Economics, in the museum of utopian designs."*

## 3. Motivations from the Field

Previous to the experimental sessions, we reviewed at least two important sources of data regarding violations of constitutional rights based on discrimination. One is the Constitutional Court, and the other is the *Defensoría del Pueblo*. Both of these gave us an idea of the type of framing we wanted to construct in our protocols and also in the design of the recruitment strategy

across public agencies and geographical locations in the city.[10] These data show an increase in the number of cases that allege discriminatory actions from the state and provide some clues for the kind of characteristics we may include in the treatment and control variables for our experiments.

In regards to the purpose of this study and based on the results, we introduce into the random sample shares of demographic features that are subject to discrimination. Between those shares, we decide to include in the sample the category of *"Reinsertados,"*[11] because in the process of this inquiry we found numerous cases in which this population has experienced social exclusion when they applied for a social service.

The experimental strategy for this project emerges from the hypothesis that discrimination in the provision of social services to the poor is mediated by a) the social preferences and behavior of the local officials in charge of the provision, and b) the preferences and behavior of the potential beneficiaries that could affect self-selection and self-discrimination. Therefore, we need to design an experiment where these two players (service providers and beneficiaries) interact and are informed by the characteristics that might be affecting the strategic behavior in the interaction. Some of those characteristics are supposed to guide the decisions of the providers in the correct direction, i.e., aligned with a social welfare function that reflects their society's preferences, but there are characteristics that may bias behavior towards discriminatory outcomes and against the constitutional mandate.

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[10] The Constitutional Court has made a number of rulings based on the mechanism of the *tutela*, to command public institutions to guarantee social services to the poor. We found the following type of sentences: 1) individuals who have been classified erroneously in SISBEN arguing that their rights and the principle of equality have been violated in their classification into the SISBEN indexing system; 2) displaced people who argue for equal treatment when asking for social services such as health care and medicines, education for their children, housing and economic stabilization programs and child care; 3) displaced people who argue for registration as displaced (to obtain the *Sistema Único de Registro de Desplazados*); 4) people who have been denied treatment with no reason by health care institutions.

The Colombian Ombudsman (*Defensoría del Pueblo*) has heard a number of allegations in which poor people claimed to be subject of social exclusion in the provision of social services. We found 100 accusations out of 1,123 that described possible circumstances in which poor people could have experienced discrimination by local officials involved in providing social services. Among the cases of alleged discrimination, 52 percent involved institutions that provide health care, 20 percent involved educational institutions, 20 percent featured problems with SISBEN surveyors, 6 percent involved claims with institutions that provide nutrition, and 2 percent involved disputes with child care institutions. Those who allege discrimination possess the following socio-demographic characteristics (totals add up to more than 100 percent because of multiple characteristics): 64 percent were women, 46 percent were unemployed or working at home, 9 percent were displaced, 30 were handicapped, citizens, and 7 percent were from other parts of the country and/or indigenous or Afro-descendants.

[11] *"Reinsertados"* is a common name used to identify ex-combatants from irregular armed forces who are in a process of reinsertion into civil life through government programs that provide support of various kinds.

The context and frame of the game is rather simple: a government program, inspired by a constitutional mandate and a policy design, involves a social welfare function that needs to be executed by local officials who will aim at improving the well-being of the target population, in this case, the poor, through their privately observed actions. These local officials will allocate scarce resources and that allocation will affect beneficiaries' wellbeing. In some cases, the latter will have room for strategic responses that may affect their own outcomes or even those of local officials.

Any local official's behavior is expected to reflect the social welfare function of the government plan, but such officials, as agents whose behavior is only partially observable to the principal (the government agency), may not act entirely according to the social objective and may include behavioral responses that reflect their own personal social preferences and biases. In particular, preferences towards social equity, ethnic or racial equity, among others, can affect the behavior of local officials during the process of application and provision of social services to the poor.

In various ways, local officials act as bounded dictators who assign resources to beneficiaries of social programs within a certain set of rules but also with some discretion in their actions. Their choices—only partially observable to the principal—affect the way funds are allocated and distributed among different social target groups subject to discrimination and biases of various kinds. On the other hand, the social preferences of the poor can also be factors that influence the possibilities of discrimination. Social groups that expect to be discriminated against may be more tolerant of unfair or unequal allocations. If in equilibrium such norms are replicated and widespread spread, local officials can find morally acceptable to act accordingly and sustain current levels of discrimination without personal costs.

### 3.1 Norms and Behavioral Mechanisms: Distributive Justice, Altruism, Inequity Aversion, Trust and Reciprocity

There are various dimensions that lie at the core of the social exchange that occurs in the process of providing social services to the poor. These dimensions are critical in the interactions among the government program (the Principal), the local official (the Agent) that is in charge of executing the program, and the beneficiary (the recipient) of the social service. These dimensions include altruism, distributive justice, inequity aversion, trust, and reciprocity. Altruism and

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inequity aversion are at the core of the justification for pro-poor redistributive programs. The voter preferences are thus reflected in the design of government programs and the local officials are expected to implement such programs that increase the well-being of the poorest and that reduce social inequalities. However, that process can be affected by discrimination against certain social groups (e.g., racial or ethnic group). Such discrimination, which in theory should not occur if the programs are designed in accordance with the constitutional mandate, can in fact occur because of the discretionary role that local officials have in the application, approval and provision process.

Trust and Reciprocity are important mechanisms in a relationship that involves the possibility of gains or losses because of coordination failures, interdependence or externalities. The provision of public goods, or the co-financing of public projects between the state and the community, depends on mutual trust for the optimization of available resources. Reciprocity can sustain cooperation or destroy it in the provision of public goods that are crucial to the poor. Once again, preferences that involve discrimination against certain groups can limit trust or trigger negative reciprocity, reducing the social efficiency of pro-poor programs.

In this study we conduct standard and modified experiments in the field that have been used widely for detecting and measuring degrees of altruism, inequity aversion, trust and reciprocity. Through these field experiments we will observe and measure the degrees of discrimination that may affect these dimensions by conducting treatment and control sessions where we provide information to players about features of their counterparts in the experiment (e.g., gender, status, race, ethnicity, origin, occupation, family composition).

However, our protocols include a mild framing in every task where players are told that the game situation is similar to that where people request social services at local public agencies. We expect both the providers and the recipients to be familiar with such interactions, though from a different standpoint. Nevertheless, decisions remain private and confidential, maintaining the discretionary nature of allocation decisions on the part of public officials as well as response strategies on the part of beneficiaries. The five experiments selected and the reasons for including them are as follows:

- **(DDG) Distributive Dictator Game:**[12] Player 1 receive a fixed payment of, say, $10 as a salary for performing the following allocation task: She needs to rank five players 2 in the order in which they will receive each a fixed payment or voucher of $10 determined by a random distribution from one to five possible payments. The random number of vouchers between one and five will decide the first $N$ players 2 who will receive the $10. The remaining players receive nothing. Player 1 observes cards for the five players 2 that include a picture of their faces and basic information on those players' demographic and socio-economic conditions.
  - o With this game we aim at measuring preferences for distributive justice, mediated by the characteristics of the beneficiaries, including those not associated with deservedness but rather discrimination.
- **(DG) Dictator Game (Kahneman, Knetsch and Thaler 1986; Forsythe et al. 1994)**: Player 1 decides on the distribution of a fixed amount of $20 and sends a fraction to player 2, who receives that amount. Player 1 keeps the remaining part for herself.
  - o This game provides information about pure altruism, that is, willingness to decrease one's well-being for increasing the well-being of another.
- **(UG) Ultimatum Game (Güth et al., 1982):** Player 1 (proposer) decides on the distribution of a fixed amount and sends a fraction to player 2 (responder) who receives that amount. If accepted by the responder, the distribution happens; if rejected, both players receive zero and the money returns to the experimenter.
  - o The Ultimatum Game provides information on equity, reciprocal fairness and reciprocity as mechanisms for enforce social norms. Negative reciprocity and conformism can be critical for understanding the social preferences of both local officers and beneficiaries of social programs.
- **(TG) Trust Game (Berg et al., 1995):** Both players 1 and 2 are endowed with $8. Player 1 (proposer) can send a fraction of her initial endowment to

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[12] The design for this game has been the result of a valuable exchange with the research team and Catherine Eckel (University of Texas at Dallas).

player 2 (responder). The amount sent is tripled before it reaches Player 2, who then decides how to split the tripled amount plus her initial endowment between herself and player 1.

- o The Trust or Investment Game offers critical information on trust and trustworthiness, which is critical in augmenting efficiency in the provision of public goods.

- **(3PP) Third-Party Punishment (Fehr and Fischbacher, 2004)**: This game is based on the Dictator Game (above) but includes a third party, player 3, who receives an additional endowment she can keep for herself or use for punishing player 1 if player 3 considers the action of player 1 as punishable due to fairness or justice considerations. Player 3 can punish by spending part of her endowment to reduce the payoffs of Player 1.

- o This game captures preferences for costly punishment of socially undesirable outcomes and willingness to punish unfair actions.

For any pair of players, each of these games are conducted as one-shot (1 round) with an exit survey on demographic, behavioral and psychological questions for control of the individual behavior observed in the experiments. All players 1 made decisions on all five games, and all players 2 were involved in each of the five games. Players 3 participated only in the last game (3PP). Below we describe in detail how the experimental sessions were conducted. The Appendix includes a detailed description of the experimental design of one session, information on the lab setting, and the samples. Protocols are available from the authors upon request.

## 4.1  Data and Results

### 4.1 Sample of Participants

We contacted a total of 568 people as players 1, 2, and 3, including both target and control subjects. Of the 568 recruited, 55 people ( 9.7 percent) did not show up for the game stage although they had received Col.$2,000 as part of the show-up fee, which represented a sign of commitment on the part of the researchers and provided assistance for the cost of commitment and help for transportation costs to the games location. For various reasons some did not show up. We attempted to contact them again, and some had reported false phone numbers, could not

come at the time because of unexpected family or work events, or expressed to friends or other participants that they believed the study was a hoax.[13] In fact, almost 18 percent of the recruited players 2 did not show up. Also, these people had to make the longest trips across the city to attend the games and would be more likely to have doubts regarding the exercise's credibility.

Summarizing the five games, Table 1 illustrates the number of observations obtained in our sample, the players involved and the Nash equilibria prediction for each game based on backward induction for self-oriented (selfish) players.

**Table 1. Summary of the Sessions**

| Games | Distributive Dictator DDG | Dictator DG | Ultimatum UG | Trust TG | Third Party Punishment 3PP |
|---|---|---|---|---|---|
| Total Observations | 1,130 | 729 | 729 | 728 | 486 |
| Players involved in the game | 1, A,B,C,D,E | 1,2 | 1,2 | 1,2 | 1,2,3 |
| Maximum social efficiency ($COL) | $60,000 | $20,000 | $20,000 | $32,000 | $30,000 |
| Self-oriented maximizer prediction for Player 1 offers (Nash equil) | N.A. | $0 | $1,000 | $0 | $0 |

TRM: 1US$=COL$2,490.66 (Monthly mean average for May to July 2006. http//:www.banrep.gov.co)
*Source:* Authors' compilation.

This table above should be used as the benchmark point for each of the games. Depending on the game the maximum social efficiency is achieved depending on chance (DDG), player 1's choice (TG), player 2's choice (UG) or automatically (DG, 3PP). Likewise, the level of equality achieved will depend on chance (DDG), player 1's choices (DG, UG, TG, 3PP) or player 2's choices (UG, TG). Players 3 decide on both efficiency and equity when choosing whether to punish players 1.

Based on these benchmarks, we report below the descriptive statistics for the offers sent by players 1, followed by average behavior for players 2 and 3. Later we will explore how

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[13] We have, however, data for the 55 people who did not attend.

variation in these decisions could be explained by the attributes of the participants in the experiments.

## 4.2 Average Offers: Target vs. Control Groups

The following four-panel figure compares the results of average amounts offered by players 1 to players 2, in percentages of the initial endowment, by type of sub-sample (target vs. control), and across the four games that involved sending an amount from an initial endowment (DG, UG, TG, 3PP). The panels also include the average amount offered by player 1 and the expected offer that player 2 reported before knowing the actual value. We have also included the average reported for several international studies with these experiments, as reported in Cárdenas and Carpenter (forthcoming). The upper left panel (target-target) corresponds to the interactions where both player 1 and the player 2 were our target samples of public officials and the poor, respectively.

An overview of the amounts offered suggests that for all treatments there is a strong trend towards fairness: DG, UG and 3PP games involve a player 1 who decides how much to send from an initial endowment of Col$20,000. Offers fall within a 40 percent to 60 percent range for these three games. Further, the Ultimatum game, as expected, increased offers from Dictator given the possibility of punishment by player 2 who could reject the offer and "burn" the entire amount. The trust game (TG) illustrates another dimension of pro-sociality where player 1 can trust player 2 and expect the latter to reciprocate, creating a larger and fairly distributed pie. In the case of the third-party punishment we observe again generosity from player 1, but mediated by the possibility of a player 3 who could punish player 1.

Notice that in general the offers observed are higher than the international averages observed for such games. The reader must remember that our design involves a framing of providing services to the poor and that our non-random sample of players 2 should on average trigger generosity from players 1 if compared with the canonical design of these games where the interactions happen among peers.[14]

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[14] Brañas (2006) is an exception.

**Figure 1. 2x2 Offers and Expected Amounts of Money**
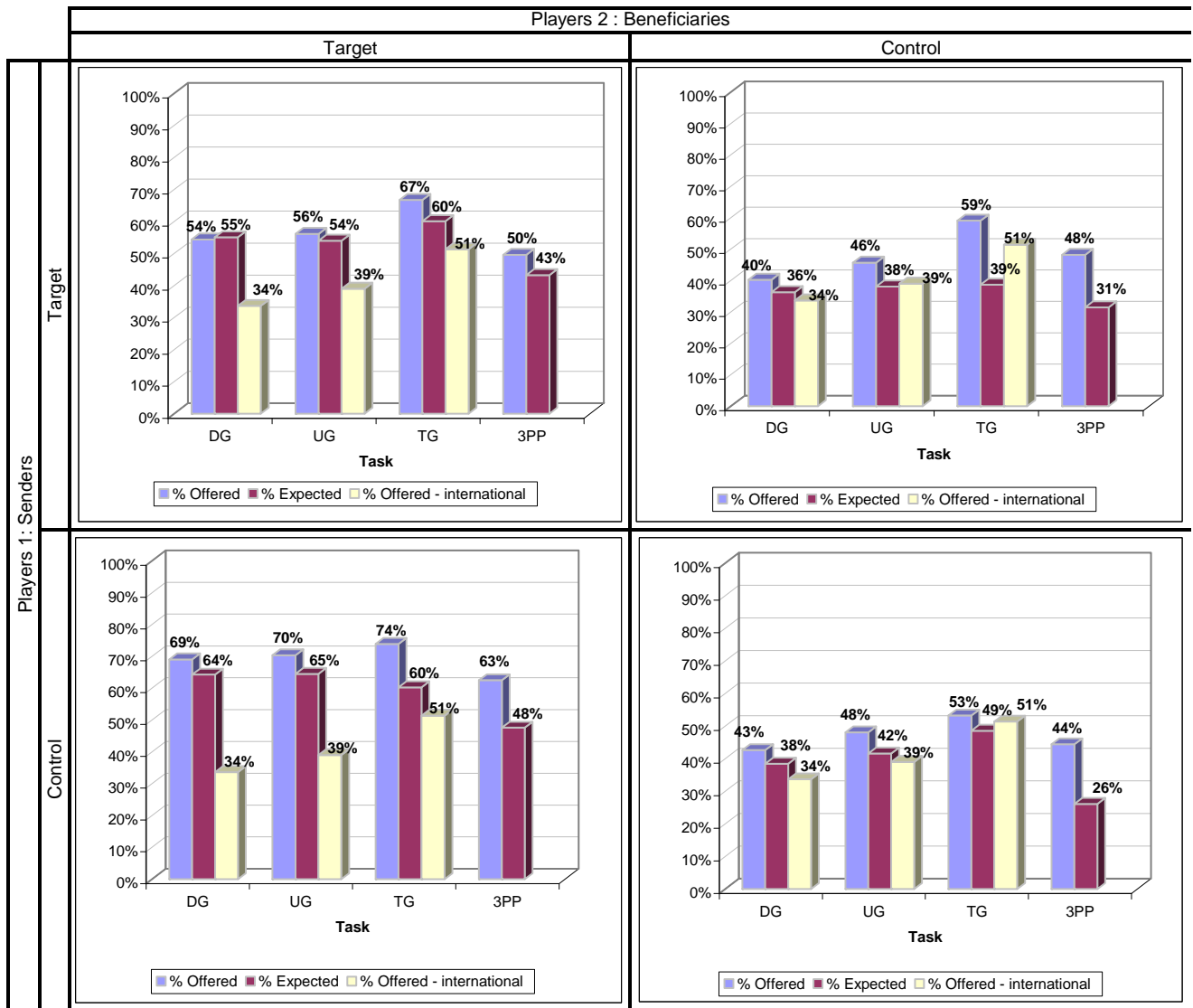


*Source:* Authors' compilation. International offers were calculated through data presented by Cárdenas and Carpenter (2006).

We find that when players 2 belong to the target group, the amount of money received is higher than the amounts received by their control groups. On the other hand, control players 1 send more money than target players 1 to target players 2. It is interesting to note that players 2's expectations also follow this pattern, that is, the target players 2 expect more money from the control players 1 than from target players 1.

Our four-treatment design appears to be internally valid. Pro-sociality was higher when players 2 were from the target samples than from the controls. Both control and target players 1 sent higher amounts to players 2 belonging to the target sample. The experimental protocol, which was framed within the situation of a social service provision program, was successful because players 1 were able to distinguish between control and target players 2 (see the Appendix for protocols). Control players 2 had the same expectations as target players 2 since they expected less money from target players 1 than control players 1. It remains an open question whether lower expected offers by target players 1 were based on pro-social motivations on the part of players 2 or on lower expectations because of lower pro-social motivations expected by players 2 about players 1. It is also important to notice that offers and expectations in this project are higher than the international offers when target players 2 are involved in the interaction. Nonetheless, offers for control players 2 do not differ greatly from international reports.

### 4.3 Were Expectations Met Regarding Offers?

In general, we can observe that Players 2's expectations regarding the amounts of money sent by players 1 are lower than the real amount of money sent for most of the games. However, the two variables are positively correlated, as shown in the next table, with small but significant coefficients. The regression analysis further ahead will provide more clues for the reasons and behavioral motivations for these results.

**Table 2. Correlations between Offers and Expected Values**

| Variables | Correlation |
|---|---|
| DG offered | |
| DG expected | 0.1398* |
| UG offered | |
| UG expected | 0.1318* |
| TG offered | |
| TG expected | 0.1473* |
| 3PP offered | |
| 3PP expected | 0.1339* |

\* 1% Level of significance.
*Source:* Authors' compilation.

It is quite remarkable how players 2 were able to partially predict their received offers. We will further discuss this result along with others in order to explore how there might be certain norms of fair and unfair treatment towards certain social groups.

### 4.4 Reciprocity and Reciprocal Altruism

The rates of rejections in the Ultimatum Game are also key variables for explaining how social preferences affect behavior. If players 1 expect players 2 to have stronger social preferences towards altruism, fairness and equity, players 1 should increase their offers in comparison to the Dictator game.

The next figure shows the rejection rates of the Ultimatum game for all four treatments. Given that we conducted the game using the Strategy Method, we were able to capture schedules of decisions by each player 2 for each possible offer from player 1.

**Figure 2. Rate of Rejection in UG**
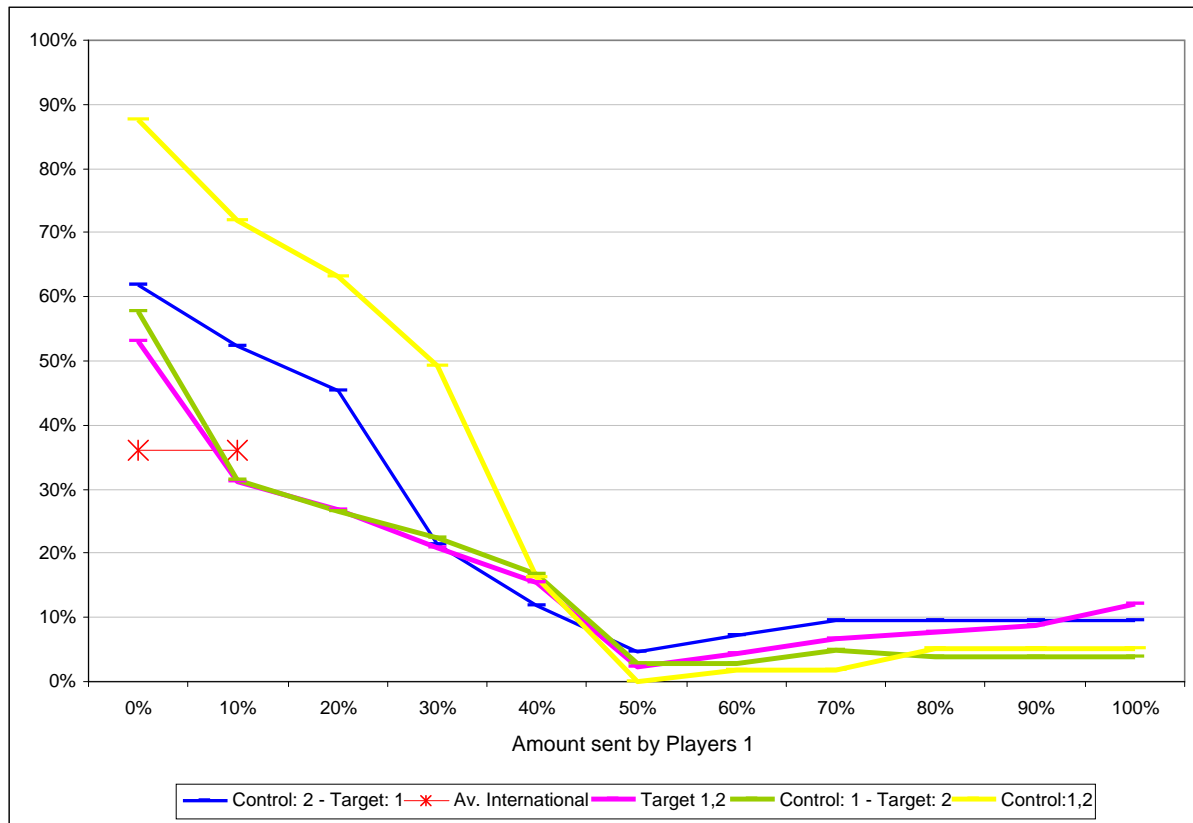


*Source:* Authors' compilation. The average of international rejections was calculated through data presented by Cárdenas and Carpenter (2006).

As in the existing literature, rejection rates are quite high for very unfair offers from players 1. Such rejection rate decreases as offers increase, and reach the minimum level for the most fair offer of 50/50. Notice that the rejection rate slightly increases with offers being excessively generous (see Henrich et al., 2004, for a discussion of hyper-fairness in small-scale societies).

We additionally observe a higher level of rejection rates for the treatment where both players 1 and 2 were controls. In other words, when players 2 were target (poor) we observed lower levels of rejection, that is, higher levels of conformism with unfair outcomes. Recall that in our previous result we showed that players' expectations were correlated with actual offers. If players 1 think strategically that players 2 were more or less tolerant towards certain offers, the offers in this game would be generally accepted.

## 4.5 Trust and Reciprocity

In the following figure we show the amounts returned by players 2 as a response to different offers sent by players 1. Both are shown in percentages to allow for comparability. The results once again replicate most of the literature (Berg, Dickhaut and McCabe, 1995; Cárdenas and Carpenter, 2006). On average, trust from player 1 is rewarded with higher returns from player 2 to player 1. With these percentages it is easy to see that for all cases the rate of return on the investment is greater than unity. However, the controls returned higher amounts to players 1 than target players 2. This could be interpreted as meaning that target players 2 claim more rights the transferred amounts given the framing of the experiment where these transactions were capturing social service provision programs towards the poor. It is also interesting, however, that players 2 (target) were also more generous than their controls when sending back money to players 1 when amounts sent were low.

**Figure 3. Amount Returned by Player 2, TG.**



Legend: Target 1,2 — Control 1-T2 — Control 1,2 — Target 1-C2 — Av. International
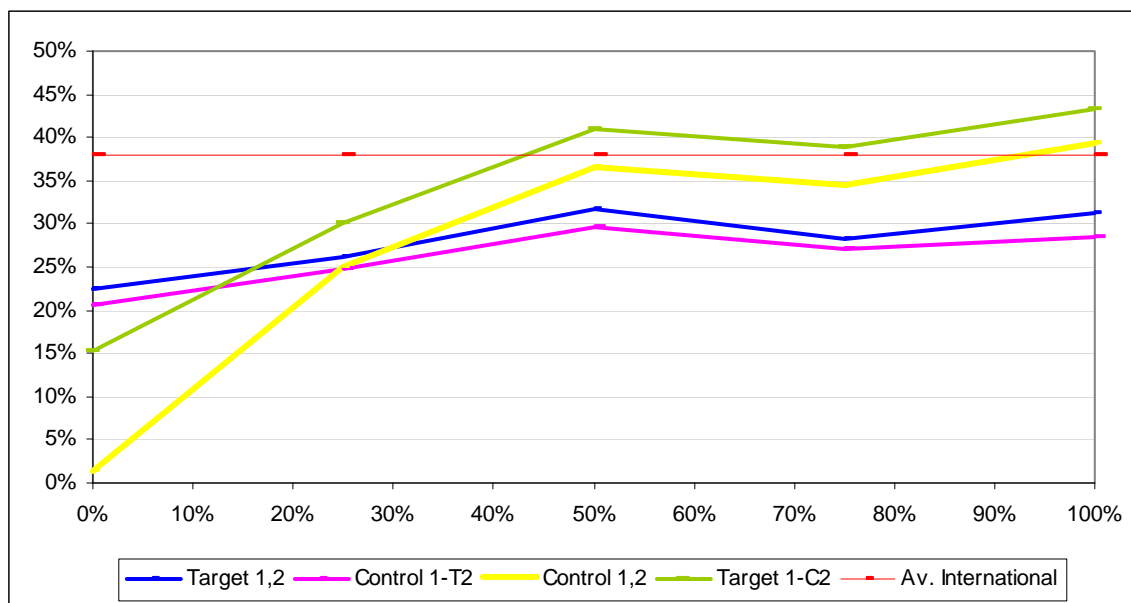
*Source:* Authors' compilation. The average of international returns was calculated through data presented by Cárdenas and Carpenter (2006).

### 4.6 Third Party Punishment: Altruistic Punishment

Finally, we present the results for the rates of punishment by players 3. Recall that players 3 only played this game and no other. They were showed the offers by players 1 to players 2 and then decided or not to punish at a cost. (They could spend $2,000 pesos of their $10,000 endowment to have the experimenter take away from player 1 $6,000). The sample of players 3 were recruited from among the overall population, including both students and non-students.

The figure shows the rates of punishment observed for different levels of offers by players 1. These data resulted from playing the game using the strategy method asking players 3 if they would punish or not for each possible level of offers from players 1.

**Figure 4. Punish Rate in 3PP**
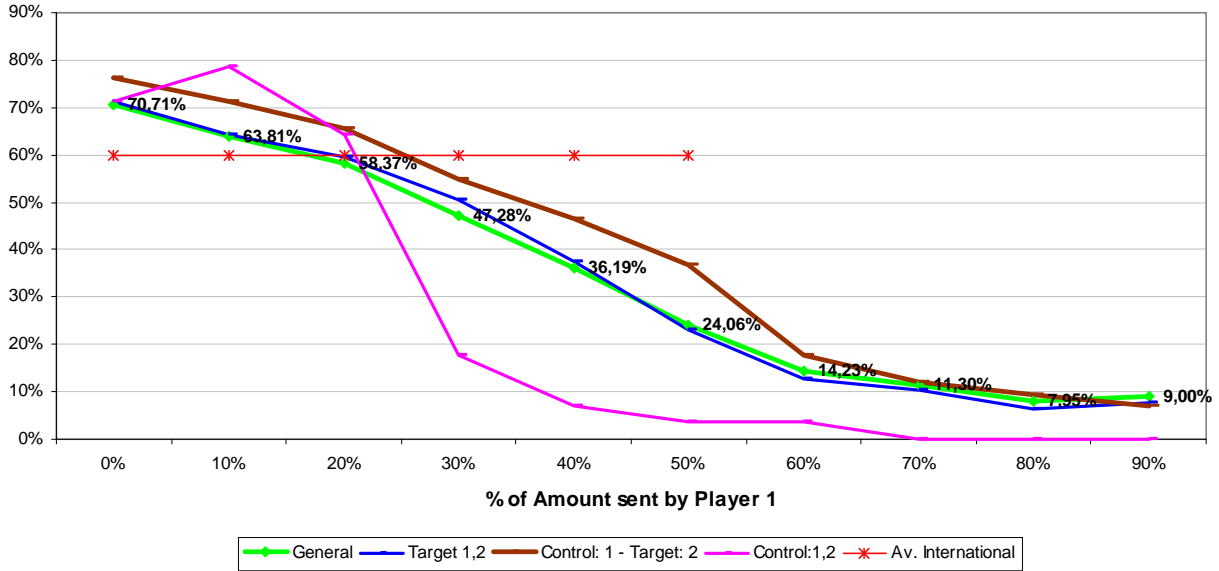


*Source:* Authors' compilation. The average of international punishment rates was calculated through data presented by Berg, Dickhaut and McCabe (1995).

The results are also consistent with existing literature on this game (Henrich et al., 2006; Fehr and Fischbacher, 2004)). Third parties are willing to sacrifice their own personal material income to punish unfair behavior by reducing the income of those engaging in unfair actions towards others. The rate of rejection starts at a level of 70 percent when players 1 keep their entire endowment and decrease as offers are larger. Interestingly, the rate of rejection drops more rapidly for the control-control groups while remaining steady and higher for the target groups. In fact, even at quite high divisions in favor of players 2, there is a percentage of players 3 willing to punish that players 1 who would not send most of their endowments. This result would complete the overall picture of socially accepted norms of fairness towards the poor and suggests that citizens would reject and even punish unfair behavior.

### 4.7 Explaining Variations in Pro-Social Behavior

The following OLS regressions are aimed at explaining variation in the experimental behavior as a function of the attributes of player 2, and also as a function of the attributes of player 1 that players 2 observed of players 1.

We tested as dependent variables the following, all measured as a percentage of the total possible amount in each game:

- Average ranking obtained in the DDG by player 2 from the rankings given by all players 1 who ranked that particular player 2
- Amounts offered by players 1 to players 2 in the DG, UG, TG and 3PP
- Punishments rates of players 3
- Also, in the Appendix we report the same regressions for the amounts expected by players 2.

## Table 3. Design of Field Sessions

| | | Method | OLS | | |
| | | Dependent Variable | *Player 2's rank in Distributive Dictator Game* | | |
|---|---|---|---|---|---|
| | | Independent Variables | (1) | (2) | (3) |
| Socio-demographic | | 1 if Player 2 is a woman | 0.470* | | 0.467* |
| | | Player 2's age | 0.008* | | 0.004 |
| | | 1 if Player 2 is single | -0.197** | | -0.185** |
| | | 1 if Player 2 is in common law | -0.139** | | -0.088 |
| | | Player 2's years of education | -0.092* | | -0.135* |
| | | Player 2's number of minor people in charge | 0.279* | | 0.239* |
| | | 1 if Player 2 is unemployed | 0.452* | | 0.177* |
| Discriminatory | | 1 if Player 2 considers herself black | | 0.128 | 0.186* |
| | | 1 if Player 2 considers herself indigenous | | 0.493* | 0.239* |
| | | 1 if Player 2 is Displaced | | 0.854* | 0.287* |
| | | 1 if Player 2 is an Ex-combatant | | -0.649* | -0.222** |
| | | 1 if Player 2 is a Recycling worker | | -0.373* | -0.722* |
| | | 1 if Player 2 is a Street vendor | | -0.026 | -0.13 |
| | | Player 1' - Player 2's Household expenses per capita (in Colombian thousand pesos) | 0.000* | | 0.000** |
| | | Constant | 2.451* | 2.860* | 2.760* |
| | | Interactions | 1087 | 1087 | 1087 |
| | | R-squared | 0.441 | 0.258 | 0.494 |

+ significant at 10%; ** significant at 5%; * significant at 1%     A Cluster with Player 1's decisions is included.
*Source:* Authors.

**Table 4. Stages of Field Session**

| | Method | | | | | | OLS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dependent Variable | | | | | *Percentage of the allocation offered by Player 1 to Player 2 in DG* | | | | | | | |
| **Independent Variables** | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
| 1 if player 1 is Target | -0.055 | 0.042 | | | | | -0.314+ | 0.021 | -0.450+ | | | | |
| 1 if player 2 is Target | 0.268* | 0.289* | | | | | | | | | | | |
| 1 if player 1&2 are Target | -0.119+ | -0.143** | | | | | | | | -0.277 | 0.160** | -0.293 | |
| **Player 1's data — Socio-demographic:** 1 if player is woman | | -0.002 | | | | | | | | | | | -0.042 |
| Age | | -0.005* | | | | | | | | | | | -0.003+ |
| Player's level of education | | 0.051* | | | | | | | | | | | 0.028** |
| Natural logarithm of Player's household expenses per capita | | | | | | | | | | | | | 0.031 |
| 1 if Player works in a Health institute | | | | | | | | | | | | | 0.120* |
| 1 if Player works in an Education institute | | | | | | | | | | | | | 0.035 |
| 1 if Player works in a Nutrition institute | | | | | | | | | | | | | -0.070** |
| Player's time worked multiplied by dummy of Target P1 | | 0.007** | | | | | | | | | | | |
| Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | 0 | 0.000** | | 0.000** | 0.000+ | 0 | | 0 | 0 | | 0 | 0.000** |
| **Player 2's data — Socio-demographic:** 1 if Player 2 is a woman | | | 0.075* | | 0.065** | 0.044 | 0.084 | | 0.071 | 0.052 | | 0.062 | |
| Player 2's age | | | 0.001 | | 0 | 0.001 | 0 | | -0.001 | 0 | | 0 | |
| 1 if Player 2 is single | | | 0.029 | | 0.029 | 0.021 | -0.031 | | -0.027 | -0.008 | | -0.017 | |
| 1 if Player 2 is in common law | | | 0.018 | | 0.022 | -0.012 | 0.009 | | -0.016 | 0.042 | | 0.019 | |
| Player 2's years of education | | | -0.029** | | -0.040* | -0.036* | -0.052* | | -0.075* | -0.058* | | -0.070* | |
| Player 2's number of minor people in charge | | | 0.029* | | 0.029* | 0.009 | 0.02 | | -0.005 | 0.025+ | | 0.017 | |
| 1 if Player 2 is unemployed | | | 0.056 | | 0.041 | 0.046 | 0.226* | | 0.232* | 0.223* | | 0.247* | |
| **Discriminatory:** 1 if Player 2 considers herself black | | | | 0.039 | 0.045 | 0.043 | | -0.023 | 0.072 | | 0.037 | 0.097+ | |
| 1 if Player 2 considers herself indigenous | | | | 0.068 | 0.021 | 0.012 | | 0 | 0 | | 0 | 0 | |
| 1 if Player 2 is Displaced | | | | 0.062 | -0.033 | -0.037 | | 0.214* | 0.073 | | 0.061 | -0.032 | |
| 1 if Player 2 is an Ex-combatant | | | | -0.069** | -0.041 | -0.031 | | -0.105 | -0.128 | | -0.072** | -0.025 | |
| 1 if Player 2 is a Recycling worker | | | | -0.027 | -0.091+ | -0.024 | | 0.041 | -0.012 | | -0.032 | -0.086+ | |
| 1 if Player 2 is a Street vendor | | | | -0.044 | -0.071 | -0.02 | | -0.016 | -0.065 | | -0.028 | -0.051 | |
| **Games:** Percentage of the allocation expected by Player 2 from Player 1 in DG | | | | 0.053 | 0.135** | 0.056 | 0.002 | 0.097 | 0.251* | 0.066 | 0.118 | 0.377* | 0.13 |
| Player 2's rank given by Player 1 in DDG | | | | | | 0.059* | | | | | | | |
| **Dummy of Target P1 per P2's data:** 1 if Player 2 is a woman | | | | | | | -0.041 | | -0.036 | | | | |
| Player 2's age | | | | | | | 0.002 | | 0.003 | | | | |
| 1 if Player 2 is single | | | | | | | 0.072 | | 0.062 | | | | |
| 1 if Player 2 is in common law | | | | | | | 0.038 | | 0.071 | | | | |
| Player 2's years of education | | | | | | | 0.052** | | 0.069** | | | | |
| Player 2's number of minor people in charge | | | | | | | 0.007 | | 0.039 | | | | |
| 1 if Player 2 is unemployed | | | | | | | -0.180** | | -0.180** | | | | |
| Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | | | | | 0.000* | | 0.000* | | | | |
| 1 if Player 2 considers herself black | | | | | | | 0.088 | | -0.026 | | | | |
| 1 if Player 2 considers herself indigenous | | | | | | | 0.097+ | | 0.01 | | | | |
| 1 if Player 2 is Displaced | | | | | | | -0.187** | | -0.160+ | | | | |
| 1 if Player 2 is an Ex-combatant | | | | | | | 0.051 | | 0.131 | | | | |
| 1 if Player 2 is a Recycling worker | | | | | | | -0.069 | | -0.096 | | | | |
| 1 if Player 2 is a Street vendor | | | | | | | 0 | | 0 | | | | |
| Percentage of the allocation expected by Player 2 from Player 1 in DG | | | | | | | -0.123 | -0.196+ | -0.1 | | | | |
| **Dummy of Target P1 & Target P2 per P2's data:** 1 if Player 2 is a woman | | | | | | | | | | 0 | | -0.018 | |
| Player 2's age | | | | | | | | | | 0.001 | | 0.002 | |
| 1 if Player 2 is single | | | | | | | | | | 0.041 | | 0.047 | |
| 1 if Player 2 is in common law | | | | | | | | | | 0.001 | | 0.027 | |
| Player 2's years of education | | | | | | | | | | 0.050+ | | 0.056** | |
| Player 2's number of minor people in charge | | | | | | | | | | -0.001 | | 0.008 | |
| 1 if Player 2 is unemployed | | | | | | | | | | -0.176** | | -0.216* | |
| Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | | | | | | | | 0.000* | | 0.000* | |
| 1 if Player 2 considers herself black | | | | | | | | | | | 0.009 | -0.06 | |
| 1 if Player 2 considers herself indigenous | | | | | | | | | | | 0.075 | 0.015 | |
| Percentage of the allocation expected by Player 2 from Player 1 in DG | | | | | | | | | | -0.144 | -0.383* | -0.161 | |
| Constant | 0.433* | 0.252* | 0.461* | 0.461* | 0.526* | 0.409* | 0.687* | 0.454* | 0.834* | 0.659* | 0.364* | 0.713* | 0.145 |
| Interactions | 534 | 534 | 534 | 534 | 534 | 487 | 534 | 534 | 534 | 534 | 534 | 534 | 451 |
| R-squared | 0.095 | 0.189 | 0.137 | 0.051 | 0.151 | 0.21 | 0.213 | 0.1 | 0.24 | 0.212 | 0.08 | 0.227 | 0.191 |

+ significant at 10%; ** significant at 5%; * significant at 1%     A Cluster with Player 1's decisions is included.

*Source:* Authors.

**Table 5. Contents of Players' Cards Shown to Each Other**

| | | Method | | | | | | | | OLS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dependent Variable | *Percentage of the allocation offered by Player 1 to Player 2 in UG* | | | | | | | | | | | | |
| Independent Variables | | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
| 1 if player 1 is Target | | | -0.018 | 0.045 | | | | | -0.027 | 0.110+ | -0.056 | | | | |
| 1 if player 2 is Target | | | 0.206* | 0.209* | | | | | | | | | | | |
| 1 if player 1&2 are Target | | | -0.116** | -0.118** | | | | | | | | -0.027 | 0.198* | -0.04 | |
| Player 1's data — Socio-demographic — 1 if player is woman | | | | -0.037 | | | | | | | | | | | -0.007 |
| Age | | | | -0.002 | | | | | | | | | | | 0 |
| Player's level of education | | | | 0.042* | | | | | | | | | | | 0.027* |
| Natural logarithm of Player's household expenses per capita | | | | | | | | | | | | | | | 0.015 |
| 1 if Player works in a Health institute | | | | | | | | | | | | | | | 0.024 |
| 1 if Player works in an Education institute | | | | | | | | | | | | | | | 0.017 |
| 1 if Player works in a Nutrition institute | | | | | | | | | | | | | | | -0.094** |
| Player's time worked multiplied by dummy of Target P1 | | | | 0.005+ | | | | | | | | | | | |
| Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | | 0 | 0.000* | | 0.000* | 0.000* | 0 | | 0 | 0 | | 0 | 0 |
| Player 2's data — Socio-demographic — 1 if Player 2 is a woman | | | | | 0.039** | | 0.032 | 0.003 | 0.054+ | | 0.049 | 0.04 | | 0.039 | |
| Player 2's age | | | | | 0 | | 0 | 0 | 0.001 | | 0.001 | 0 | | 0 | |
| 1 if Player 2 is single | | | | | -0.028 | | -0.029 | -0.042 | -0.001 | | -0.001 | 0.011 | | 0.016 | |
| 1 if Player 2 is in common law | | | | | -0.037 | | -0.044 | -0.063+ | -0.037 | | -0.03 | -0.03 | | -0.015 | |
| Player 2's years of education | | | | | -0.016+ | | -0.022** | -0.023** | -0.039* | | -0.045* | -0.045* | | -0.051* | |
| Player 2's number of minor people in charge | | | | | 0.028* | | 0.027* | 0.016+ | 0.009 | | -0.002 | 0.01 | | 0.01 | |
| 1 if Player 2 is unemployed | | | | | 0.057** | | 0.059+ | 0.054+ | 0.046 | | 0.056 | 0.04 | | 0.058 | |
| Discriminatory — 1 if Player 2 considers herself black | | | | | | 0.017 | 0.038 | 0.03 | | -0.026 | 0.048 | | -0.014 | 0.051 | |
| 1 if Player 2 considers herself indigenous | | | | | | 0.056 | 0.01 | 0.004 | | -0.157** | -0.122 | | -0.121 | -0.133 | |
| 1 if Player 2 is Displaced | | | | | | 0.067** | -0.024 | -0.043 | | 0.120** | 0.05 | | 0.068** | -0.032 | |
| 1 if Player 2 is an Ex-combatant | | | | | | -0.060** | -0.027 | -0.039 | | -0.013 | -0.026 | | -0.059** | -0.004 | |
| 1 if Player 2 is a Recycling worker | | | | | | 0.022 | 0.001 | 0.008 | | 0.067 | 0.058 | | 0.034 | 0.017 | |
| 1 if Player 2 is a Street vendor | | | | | | -0.045 | -0.029 | 0.136 | | -0.013 | -0.003 | | -0.011 | 0.015 | |
| Games — Percentage of the allocation expected by Player 2 from Player 1 in UG | | | | | 0.002 | 0.102+ | 0.005 | -0.001 | 0.161+ | 0.282* | 0.129 | 0.180** | 0.376* | 0.177** | |
| Player 2's rank given by Player 1 in DDG | | | | | | | | 0.024* | | | | | | | |
| Dummy of Target P1 per P2's data — 1 if Player 2 is a woman | | | | | | | | | -0.032 | | -0.038 | | | | |
| Player 2's age | | | | | | | | | -0.001 | | 0 | | | | |
| 1 if Player 2 is single | | | | | | | | | -0.032 | | -0.04 | | | | |
| 1 if Player 2 is in common law | | | | | | | | | 0.024 | | 0.006 | | | | |
| Player 2's years of education | | | | | | | | | 0.034+ | | 0.039+ | | | | |
| Player 2's number of minor people in charge | | | | | | | | | 0.023 | | 0.039+ | | | | |
| 1 if Player 2 is unemployed | | | | | | | | | 0.02 | | 0.03 | | | | |
| Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | | | | | | | 0.000+ | | 0.000+ | | | | |
| 1 if Player 2 considers herself black | | | | | | | | | | 0.074 | 0.002 | | | | |
| 1 if Player 2 considers herself indigenous | | | | | | | | | | 0.242* | 0.135 | | | | |
| 1 if Player 2 is Displaced | | | | | | | | | | -0.063 | -0.117 | | | | |
| 1 if Player 2 is an Ex-combatant | | | | | | | | | | -0.052 | 0.018 | | | | |
| 1 if Player 2 is a Recycling worker | | | | | | | | | | -0.035 | -0.062 | | | | |
| 1 if Player 2 is a Street vendor | | | | | | | | | | 0 | 0 | | | | |
| Percentage of the allocation expected by Player 2 from Player 1 in UG | | | | | | | | | -0.266** | -0.313* | -0.229** | | | | |
| Dummy of Target P1 &Target P2 per P2's data — 1 if Player 2 is a woman | | | | | | | | | | | | -0.015 | | -0.024 | |
| Player 2's age | | | | | | | | | | | | 0 | | 0 | |
| 1 if Player 2 is single | | | | | | | | | | | | -0.053 | | -0.072 | |
| 1 if Player 2 is in common law | | | | | | | | | | | | 0.014 | | -0.016 | |
| Player 2's years of education | | | | | | | | | | | | 0.034 | | 0.041+ | |
| Player 2's number of minor people in charge | | | | | | | | | | | | 0.022 | | 0.022 | |
| 1 if Player 2 is unemployed | | | | | | | | | | | | 0.027 | | 0.017 | |
| Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | | | | | | | | | | 0.000** | | 0.000** | |
| 1 if Player 2 considers herself black | | | | | | | | | | | | | 0.066 | 0.009 | |
| 1 if Player 2 considers herself indigenous | | | | | | | | | | | | | 0.193** | 0.148 | |
| Percentage of the allocation expected by Player 2 from Player 1 in UG | | | | | | | | | | | | -0.297* | -0.465* | -0.302* | |
| Constant | | | 0.482* | 0.290 | 0.554* | 0.501* | 0.586* | 0.568* | 0.590* | 0.437* | 0.619* | 0.606* | 0.385* | 0.622* | 0.271 |
| Interactions | | | 535 | 535 | 535 | 535 | 535 | 489 | 535 | 535 | 535 | 535 | 535 | 535 | 450 |
| R-squared | | | 0.075 | 0.189 | 0.143 | 0.052 | 0.148 | 0.168 | 0.179 | 0.096 | 0.193 | 0.188 | 0.099 | 0.198 | 0.12 |

+ significant at 10%; ** significant at 5%; * significant at 1%     A Cluster with Player 1's decisions is included.

*Source:* Authors.

**Table 6. Location of Participants' Households**

| | | | Method | | | | OLS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Dependent Variable | | | | *Percentage of the allocation offered by Player 1 to Player 2 in TG* | | | | | | | |
| Independent Variables | | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
| 1 if player 1 is Target | | | 0.097 | 0.141** | | | | | 0.102 | -0.012 | -0.182 | | | | |
| 1 if player 2 is Target | | | 0.219* | 0.211* | | | | | | | | | | | |
| 1 if player 1&2 are Target | | | -0.176* | -0.184* | | | | | | | | 0.159 | 0.126** | 0.127 | |
| Player 1's data — Socio-demographic | 1 if player is woman | | | -0.062+ | | | | | | | | | | | -0.063 |
| | Age | | | -0.001 | | | | | | | | | | | 0 |
| | Player's level of education | | | 0.039* | | | | | | | | | | | 0.029** |
| | Natural logarithm of Player's household expenses per capita | | | | | | | | | | | | | | -0.01 |
| | 1 if Player works in a Health institute | | | | | | | | | | | | | | 0.02 |
| | 1 if Player works in an Education institute | | | | | | | | | | | | | | -0.109** |
| | 1 if Player works in a Nutrition institute | | | | | | | | | | | | | | -0.107** |
| | Player's time worked multiplied by dummy of Target P1 | | | 0.006 | | | | | | | | | | | |
| | Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Player 2's data — Socio-demographic | 1 if Player 2 is a woman | | | | 0.03 | | 0.029 | 0.009 | 0.074+ | | 0.061 | 0.065 | | 0.090** | |
| | Player 2´s age | | | | 0.001 | | 0.001 | 0.001 | 0.003+ | | 0.001 | 0.002 | | 0.002 | |
| | 1 if Player 2 is single | | | | -0.022 | | -0.02 | -0.026 | 0.048 | | 0.056 | 0.009 | | 0.02 | |
| | 1 if Player 2 is in common law | | | | 0.019 | | 0.018 | -0.006 | 0.054 | | 0.029 | 0.028 | | -0.014 | |
| | Player 2's years of education | | | | -0.024** | | -0.027+ | -0.026+ | -0.037** | | -0.063* | -0.029 | | -0.036+ | |
| | Player 2's number of minor people in charge | | | | 0.009 | | 0.002 | -0.006 | 0.034** | | 0.014 | 0.029** | | 0.018 | |
| | 1 if Player 2 is unemployed | | | | 0.128* | | 0.102* | 0.100** | 0.123** | | 0.091+ | 0.127* | | 0.143* | |
| Player 2's data — Discriminatory | 1 if Player 2 considers herself black | | | | | 0.034 | 0.047 | 0.035 | | -0.036 | 0.044 | | 0.028 | 0.089+ | |
| | 1 if Player 2 considers herself indigenous | | | | | 0.124** | 0.079 | 0.062 | | 0.135* | 0.235** | | 0.253* | 0.243* | |
| | 1 if Player 2 is Displaced | | | | | 0.108* | 0.021 | 0.005 | | 0.207* | 0.055 | | 0.111* | 0.018 | |
| | 1 if Player 2 is an Ex-combatant | | | | | -0.045 | -0.011 | -0.01 | | -0.130** | -0.144 | | -0.046 | 0.005 | |
| | 1 if Player 2 is a Recycling worker | | | | | 0.076 | 0.049 | 0.071 | | -0.007 | -0.051 | | 0.079 | 0.062 | |
| | 1 if Player 2 is a Street vendor | | | | | -0.131** | -0.164* | -0.167 | | -0.119+ | -0.142** | | -0.119+ | -0.148** | |
| Player 2's data — Games | Percentage of the allocation expected by Player 2 from Player 1 in TG | | | | 0.068 | 0.097** | 0.072 | 0.069 | 0.151+ | 0.134 | 0.132 | 0.218* | 0.263* | 0.215* | |
| | Player 2's rank given by Player 1 in DDG | | | | | | | 0.030* | | | | | | | |
| Dummy of Target P1 per P2's data | 1 if Player 2 is a woman | | | | | | | | -0.073 | | -0.055 | | | | |
| | Player 2's age | | | | | | | | -0.002 | | 0.001 | | | | |
| | 1 if Player 2 is single | | | | | | | | -0.074 | | -0.088 | | | | |
| | 1 if Player 2 is in common law | | | | | | | | -0.014 | | 0.009 | | | | |
| | Player 2's years of education | | | | | | | | 0.031 | | 0.066** | | | | |
| | Player 2's number of minor people in charge | | | | | | | | -0.033+ | | -0.017 | | | | |
| | 1 if Player 2 is unemployed | | | | | | | | 0.011 | | 0.024 | | | | |
| | Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | | | | | | 0 | | 0 | | | | |
| | 1 if Player 2 considers herself black | | | | | | | | | 0.101 | 0.017 | | | | |
| | 1 if Player 2 considers herself indigenous | | | | | | | | | -0.006 | -0.149 | | | | |
| | 1 if Player 2 is Displaced | | | | | | | | | -0.126** | -0.052 | | | | |
| | 1 if Player 2 is an Ex-combatant | | | | | | | | | 0.112 | 0.186+ | | | | |
| | 1 if Player 2 is a Recycling worker | | | | | | | | | 0.105 | 0.144 | | | | |
| | 1 if Player 2 is a Street vendor | | | | | | | | | 0 | 0 | | | | |
| | Percentage of the allocation expected by Player 2 from Player 1 in TG | | | | | | | | -0.101 | -0.051 | -0.076 | | | | |
| Dummy of Target P1&Target P2 per P2's data | 1 if Player 2 is a woman | | | | | | | | | | | -0.068 | | -0.092+ | |
| | Player 2's age | | | | | | | | | | | -0.001 | | -0.001 | |
| | 1 if Player 2 is single | | | | | | | | | | | -0.046 | | -0.059 | |
| | 1 if Player 2 is in common law | | | | | | | | | | | 0.015 | | 0.056 | |
| | Player 2's years of education | | | | | | | | | | | 0.001 | | 0.011 | |
| | Player 2´s number of minor people in charge | | | | | | | | | | | -0.026 | | -0.023 | |
| | 1 if Player 2 is unemployed | | | | | | | | | | | 0.012 | | -0.031 | |
| | Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | | | | | | | | | 0.000+ | | 0.000+ | |
| | 1 if Player 2 considers herself black | | | | | | | | | | | | 0.01 | -0.052 | |
| | 1 if Player 2 considers herself indigenous | | | | | | | | | | | | -0.129*¹ | -0.163+ | |
| | Percentage of the allocation expected by Player 2 from Player 1 in TG | | | | | | | | | | | -0.221** | -0.258* | -0.212** | |
| Constant | | | 0.528* | 0.360* | 0.632* | 0.582* | 0.619* | 0.567* | 0.512* | 0.591* | 0.694* | 0.536* | 0.504* | 0.519* | 0.726** |
| Interactions | | | 537 | 537 | 537 | 537 | 537 | 491 | 537 | 537 | 537 | 537 | 537 | 537 | 450 |
| R-squared | | | 0.042 | 0.118 | 0.114 | 0.078 | 0.135 | 0.144 | 0.14 | 0.095 | 0.173 | 0.149 | 0.091 | 0.171 | 0.083 |

+ significant at 10%; ** significant at 5%; * significant at 1%     A Cluster with Player 1's decisions is included.

*Source:* Authors.

**Table 7. Recruitment and Attendance of Experimental Sessions**

| | Method | | | | | | | OLS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dependent Variable | | | | | | *Percentage of the allocation offered by Player 1 to Player 2 in 3PP* | | | | | | | |
| Independent Variables | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
| 1 if player 1 is Target | | -0 | 0.036 | | | | | -0.301+ | -0.03 | -0.29 | | | | |
| 1 if player 2 is Target | | 0.138* | 0.134** | | | | | | | | | | | |
| 1 if player 1&2 are Target | | -0.123* | -0.115** | | | | | | | | -0.192 | 0 | -0.182 | |
| **Player 1's data — Socio-demographic** | | | | | | | | | | | | | | |
| 1 if player is woman | | | -0.071** | | | | | | | | | | | -0.06 |
| Age | | | -0.001 | | | | | | | | | | | -0.001 |
| Player's level of education | | | 0.033* | | | | | | | | | | | 0.016 |
| Natural logarithm of Player's household expenses per capita | | | | | | | | | | | | | | 0.002 |
| 1 if Player works in a Health institute | | | | | | | | | | | | | | 0.048 |
| 1 if Player works in an Education institute | | | | | | | | | | | | | | 0.027 |
| 1 if Player works in a Nutrition institute | | | | | | | | | | | | | | -0.078+ |
| Player's time worked multiplied by dummy of Target P1 | | | 0.006+ | | | | | | | | | | | |
| Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | 0 | .000** | | 0.000* | 0.000+ | 0 | | 0 | 0 | | 0 | 0.000** |
| **Player 2's data — Socio-demographic** | | | | | | | | | | | | | | |
| 1 if Player 2 is a woman | | | 0.092* | | | 0.088' | 0.080* | 0.105** | | 0.101+ | 0.075+ | | 0.064 | |
| Player 2´s age | | | 0.003** | | 0 | 0.002 | 0.003 | | | 0.006 | 0.004 | | 0.004 | |
| 1 if Player 2 is single | | | 0 | | 0 | 0.024 | -0.026 | | | 0.002 | -0.036 | | -0.035 | |
| 1 if Player 2 is in common law | | | -0 | | -0 | -0.04 | -0.142+ | | | -0.174+ | -0.151+ | | -0.142+ | |
| Player 2´s years of education | | | 0 | | -0 | -0.02 | -0.035 | | | -0.01 | -0.031 | | -0.028 | |
| Player 2´s number of minor people in charge | | | 0 | | -0 | -0.01 | -0.041 | | | -0.05 | -0.036 | | -0.05 | |
| 1 if Player 2 is unemployed | | | 0.081** | | 0.1 | 0.051 | 0.075 | | | 0.102 | 0.072 | | 0.091 | |
| **Discriminatory** | | | | | | | | | | | | | | |
| 1 if Player 2 considers herself black | | | | -0.006 | -0 | -0.02 | | -0.114 | | -0.09 | | -0.133* | -0.097 | |
| 1 if Player 2 considers herself indigenous | | | | -0.049 | -0 | 0.001 | | -0.171 | | 0.01 | | -0.13 | -0.045 | |
| 1 if Player 2 is Displaced | | | | 0.077** | 0.1 | 0.058 | | 0.05 | | 0.086 | | 0.112* | 0.084+ | |
| 1 if Player 2 is an Ex-combatant | | | | -0.090* | -0 | -0.07 | | 0.003 | | 0.067 | | -0.060+ | -0.009 | |
| 1 if Player 2 is a Recycling worker | | | | -0.062 | -0 | -0.03 | | 0.045 | | 0.207 | | -0 | 0.018 | |
| 1 if Player 2 is a Street vendor | | | | 0.007 | 0 | 0.163 | | 0.042 | | 0.036 | | 0.06 | 0.048 | |
| **Game** | | | | | | | | | | | | | | |
| Percentage of the allocation expected by Player 3 from Player 1 in 3PP | | | | 0.1 | 0.097+ | 0.1 | 0.057 | 0.190+ | 0.233** | 0.190+ | 0.202** | 0.248* | 0.198** | |
| Player 2's rank given by Player 1 in DDG | | | | | | | 0.001 | | | | | | | |
| **Dummy of Target P1 per P2's data** | | | | | | | | | | | | | | |
| 1 if Player 2 is a woman | | | | | | | | -0.024 | | -0.04 | | | | |
| Player 2´s age | | | | | | | | 0 | | -0.01 | | | | |
| 1 if Player 2 is single | | | | | | | | 0.065 | | 0.041 | | | | |
| 1 if Player 2 is in common law | | | | | | | | 0.146+ | | 0.184+ | | | | |
| Player 2´s years of education | | | | | | | | 0.060+ | | 0.028 | | | | |
| Player 2´s number of minor people in charge | | | | | | | | 0.057 | | 0.053 | | | | |
| 1 if Player 2 is unemployed | | | | | | | | 0.005 | | -0.08 | | | | |
| Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | | | | | | 0.000** | | 0.000** | | | | |
| 1 if Player 2 considers herself black | | | | | | | | 0.176+ | | 0.124 | | | | |
| 1 if Player 2 considers herself indigenous | | | | | | | | 0.15 | | -0.01 | | | | |
| 1 if Player 2 is Displaced | | | | | | | | 0.056 | | -0 | | | | |
| 1 if Player 2 is an Ex-combatant | | | | | | | | -0.102 | | -0.14 | | | | |
| 1 if Player 2 is a Recycling worker | | | | | | | | -0.083 | | -0.239+ | | | | |
| 1 if Player 2 is a Street vendor | | | | | | | | 0 | | 0 | | | | |
| Percentage of the allocation expected by Player 3 from Player 1 in 3PP | | | | | | | | -0.200+ | -0.214+ | -0.19 | | | | |
| **Dummy of Target P1&Target P2 per P2's data** | | | | | | | | | | | | | | |
| 1 if Player 2 is a woman | | | | | | | | | | | 0.006 | | 0.01 | |
| Player 2's age | | | | | | | | | | | -0.001 | | -0.002 | |
| 1 if Player 2 is single | | | | | | | | | | | 0.074 | | 0.068 | |
| 1 if Player 2 is in common law | | | | | | | | | | | 0.160+ | | 0.155+ | |
| Player 2's years of education | | | | | | | | | | | 0.026 | | 0.028 | |
| Player 2's number of minor people in charge | | | | | | | | | | | 0.053 | | 0.058+ | |
| 1 if Player 2 is unemployed | | | | | | | | | | | 0.025 | | -0.04 | |
| Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | | | | | | | | | 0.000** | | 0.000** | |
| 1 if Player 2 considers herself black | | | | | | | | | | | | 0.214*' | 0.156+ | |
| 1 if Player 2 considers herself indigenous | | | | | | | | | | | | 0.11 | 0.035 | |
| Percentage of the allocation expected by Player 3 from Player 1 in 3PP | | | | | | | | | | | -0.235** | -0.269*' | -0.228** | |
| Constant | | 0.482* | 0.324* | .312' | 0.481* | .359' | 0.450* | 0.532* | 0.499* | 0.338 | 0.509* | 0.466* | 0.504* | 0.46 |
| Interactions | | 428 | 428 | 428 | 428 | 428 | 388 | 428 | 428 | 428 | 428 | 428 | 428 | 282 |
| R-squared | | 0.04 | 0.14 | 0.1 | 0.072 | 0.1 | 0.16 | 0.175 | 0.134 | 0.2 | 0.178 | 0.12 | 0.194 | 0.102 |

+ significant at 10%; ** significant at 5%; * significant at 1%       A Cluster with Player 1's decisions is included.

*Source:* Authors.

## Table 8. Player 1's Affiliation and Public Service Sector

| | | Method | *Probit* | | |
|---|---|---|---|---|---|
| | | Dependent Variable | *Punish rate - 1 if Player 3 pays for punishing Player 1* | | |
| | | | *dF/dx* | | |
| Independent Variables | | | (1) | (2) | (3) |
| Player 1´s data | | % of money sent by P1 | -0.873* | -0.877* | -0.898* |
| | | 1 if player is woman | -0.005 | | 0.005 |
| | | Age | -0.002 | | -0.004** |
| | | Player's level of education | 0.038* | | 0.037* |
| Player 2´s data | Socio-demographic | 1 if Player 2 is a woman | | 0.038 | 0.024 |
| | | Player 2´s age | | -0.003+ | -0.003 |
| | | 1 if Player 2 is single | | 0.06 | 0.073+ |
| | | 1 if Player 2 is in common law | | 0.119 | 0.145 |
| | | Player 2's years of education | | -0.064* | -0.059* |
| | | 1 if Player 2 is unemployed | | 0.059 | 0.068 |
| | | 1 if P2 has 4 or more people in charge | | -0.019 | -0.005 |
| | | Player 2's stratum | | 0.032 | 0.027 |
| | Discriminatory | 1 if Player 2 considers herself black | | -0.038 | -0.059 |
| | | 1 if Player 2 considers herself indigenous | | -0.02 | -0.003 |
| | | 1 if Player 2 is Displaced | | -0.023 | -0.034 |
| | | 1 if Player 2 is an Ex-combatant | | -0.141** | -0.135** |
| | | 1 if Player 2 is a Recycling worker | | 0.021 | 0.07 |
| | | 1 if Player 2 is a Street vendor | | -0.017 | 0.059 |
| Player 3´s data | | 1 if player is woman | | | -0.043 |
| | | Age | | | 0.002 |
| | | Player's level of education | | | 0.032** |
| | | Player´s number of minor people in charge | | | -0.013 |
| | | Preferences for Fairness and income distribution | | | 0.031+ |
| Interactions | | | | 4760 | |
| R-squared | | | 0.2039 | 0.2099 | 0.2382 |

+ significant at 10%; ** significant at 5%; * significant at 1%

A Cluster with Player 3's decisions is included.

*Source:* Authors.

## 5. Lessons Based on the Results

Several lessons may be derived from this study. Some of them relate to using these methods to explore questions such as the economics of poverty, discrimination and of pro-social behavior that can be of use for other organizations and researchers. There are also lessons regarding designing and implementing pro-poor social policies and the role of public servants as deliverers of services targeted to the poor when there is room for discretionary power.

Recall that our framed experiment offers a context of pro-sociality towards poor or vulnerable groups. We expect that our recipients will trigger generosity and pro-sociality in general among our providers, both public officials and controls. A study by Pablo Brañas (2006) confirms that framing, and the attributes of the recipients of Dictator Game experiments matter greatly. Having actually poor recipients and even going to the extreme of having the donations of the dictators convert into medicines for poor nations resulted in very high offers and about two-thirds of players 1 sending their entire endowments.

Our study falls in between the conventional designs of unframed games among anonymous students and the strongly framed Brañas design. Nevertheless, what is remarkable in our design is not that we achieve higher than average levels of generosity, but the degree of variation we still observe towards the same groups of beneficiaries, and the fact that our target groups of public officials and the poor display several behaviors that seem to respond to the individual attributes of senders and recipients.

### 5.1 Do Social Preferences Affect Public Officials' Behavior?

We think so. In general citizens and those public officials whose work is related to the provision of social services to the poor do manifest pro-social behavior, confirming that fairness, altruism, trust and social punishment are mechanisms and traits that are determinant of behavior when dealing with the more vulnerable. However, such behavior is affected by the characteristics of the recipients of the social services, and in some cases by the attributes of the providers. In some cases the factors that trigger greater levels of altruism and fairness are consistent with social policy, and in others they are not it, which raises concerns.

In particular, we find that citizens (public officials and non-public officials) favor women and in particular households with lower levels of education and more minor dependents. This seems to be a reasonable strategy if the strengthening of human capital among the poor has been

proven a cost-effective strategy and if women seem to be guarantors of building such human capital within the household. Also, people seem to favor displaced people, also consistent with the country's political context and a recent constitutional mandate by the Constitutional Court.

On the other hand, certain attributes of recipients decreased pro-social behavior by players 1. Those attributes are related with occupation, marital status and background, none of which should result in differentiated or discriminatory treatment; being an ex-combatant, a street recycler, a street vendor or in common-law relationships decreased generosity from players 1. Interestingly, people in common-law also expected lower offers, confirming the actual amounts sent, but with no legal or moral foundation for such behavior and expectations. These are all attributes that do not necessarily decrease the deservedness of recipients of social services but do seem to shape the preferences of public officials and non-public officials when making their choices.

Such results would open a question on whether social programs should monitor the level and quality of social services towards certain groups. Then again, it might be important to reduce or hide the collection of information on social services applicants that might be irrelevant to the allocation or delivery of such services when public servants make micro decisions about allocating scarce resources (e.g., assigning available spaces in medical attention, education, child care or nutrition services).

The levels of conformism expressed in lower expected offers and lower levels of rejection of unfair offers for our target groups (the poor) also deserve some attention. Such conformism can create an equilibrium of lower levels of commitment in the provision of certain social services. We wonder if greater emphasis in explaining the rights of the most vulnerable groups in society can increase the demand for fairness in the delivery of services by creating stronger social norms in favor of fairness.

There are particular groups that emerged as subject to discriminatory treatment and of particular importance. The population of street dwellers and homeless persons working in informal garbage recycling activities is significant in major cities,[15] and that population suffers from particular conditions of vulnerability regarding enrollment in social services, household basic conditions and access to health and education. Meanwhile, our results confirm a cultural

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[15] The National Association of Recyclers (http://www.anr.org.co/) has an estimate of about 50,000 families that depend on recycling garbage from the streets.

stigma towards them that deserves further attention. Despite the stigma, it is interesting to notice that their activity and income are not based on altruistic transfer (such as begging) but on self-employment and the provision of environmental services (recycling and reduction of disposed garbage); furthermore, they have been working with governmental and non-governmental organizations in the strengthening of self-governing institutions such as cooperatives and associations.

As for the case of ex-combatants, the social punishment and lower pro-social behavior observed towards these groups, after controlling for their age, gender, and levels of education, deserves some attention. There is a current state program for the reinsertion of these young people into civil life based on welfare programs, but such programs contradict the social norm of redistributive justice that seems to be present in the society and clearly manifested across our samples. Favoring displaced people and punishing ex-combatants reflects the social climate of the junction of the country with respect to the search for peace and negotiations within an ongoing conflict.

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# APPENDIX

## a. Field Lessons and the Use of Experimental Methods in the field

Through this project we learned that working with urban subjects as public officers and beneficiaries is quite different than a rural project. The first 12 sessions were the most critical and showed us those differences and the need to implement changes in order to adjust the protocols, the recruitment plan, the conduct of experiments and the disbursement of payments after the exercise.

One of the main issues we encountered that many players 1 were inaccessible due to bureaucratic obstacles to access to the public institutions, and even when we did surmount those obstacles many rejected our invitations. In fact, this made the recruitment of players 1 more intensive than a normal process of enrollment; nonetheless, the possibility of having field assistants that knew social services officials facilitated contact. There were additionally cases in which players 1 agreed to participate in the study but, after filling out the social preferences survey, refused to participate. We then had to review the nature of the study and the use of information.

We also encountered difficulties involving players 2. Some players 2 did not believe us, others did not want to be photographed, and still others took the show up fee and did not attend. However, we explained to every recruited person that the pictures were only for academic purposes. First, some people failed in showing up at the time and location we had appointed them because it was difficult to call them one day before the session (i.e., they did not have a telephone number or provided false contact information). In fact, most target group members most did not have a phone number or contact information. In addition, it was necessary to provide a snack in the middle of the sessions: given their limited means and in some instances lengthy commutes to and from the games location, most players 2 had not had eaten for a considerable time before the session and would have to wait for two to three hours after the session until they could eat again.

Field assistants additionally needed to be trained to face the extreme poverty of the recruited samples with calm and tolerance. As many players 2 belonged to vulnerable and excluded groups, the administration of the demographic survey could bring to mind disturbing facts and memories (as in the case of displaced persons), and some questions related to individuals' pasts could infringe on privacy (as in the case of ex-combatants). In addition, the

level of education of the target players 2 and their unfamiliarity with some concepts and definitions involved in the provision of social services made it difficult for them to understand some of the questions—itself a reflection of the gravity of the problems surrounding the effective provision of social services. Finally, it was very important to exercise a high level of caution in the recruitment of ex-combatants and displaced persons, both of whom have been affected by the country's political conflict. In order to avoid any kind of altercation we chose a location as neutral as possible for both groups.

The neutrality of the experimenter presented an ongoing concern because of the risk of bias in individuals' decisions when experimenters provide cues to participants. Experimental leaders consequently supervised and followed field assistants' proceedings not only inside the sessions but also in the recruitment process.

## b. *Design of the Sessions*

The following table shows the sequence and components of the experimental sessions. The original design proposed for the study involved 24 people per session. Unfortunately, this design was very difficult to implement because of the number of people who failed to show up at the appointed time and location. Four sessions of 24 participants each were conducted under the 24-participant design for a total of 96 people. After that we split the design in two and ran sessions with 12 people each from then on (Designs II and III in the table). Design III is essentially the same as Design II except that there were more people recruited and attending such sessions and these persons were allowed to participate.

These changes did not affect the basic protocol design or the instructions. First, the DDG game where one player 1 made decisions based on 5 players 2 remained unaltered throughout. Secondly, all other games (DG, UG, TG and 3PP) involved the same number of interactions and decisions across the designs.

**Table 3. Stages of the Field Sessions**

| DESIGN | Sessions | Number of sessions | Number of people | People by Roles | | Total of participants |
|---|---|---|---|---|---|---|
| **Design I** | 1,2,4 | 3 | 24 | J1 | 10 | 72 |
| | | | | J2 | 10 | |
| | | | | J3 | 4 | |
| **Design II** | 3, 5-12 | 9 | 12 | J1 | 5 | 108 |
| | | | | J2 | 5 | |
| | | | | J3 | 2 | |
| | 13-21 (each one of 24 people) | 18 | 12 | J1 | 5 | 216 |
| | | | | J2 | 5 | |
| | | | | J3 | 2 | |
| **Design III** | 22-28 (each one of 26 people) | 13 | 12 or 13 | J1 | 5+1 | 163 |
| | | | | J2 | 5 | |
| | | | | J3 | 2 | |
| **Total** | | | | | | 559 |

*Source:* Authors' compilation.

The following table shows the sequence and components of a single experimental session run with 12 players.

**Table 4. Stages for One Field Session**

| STAGE | ACTIVITY | LOCATION | DATA PRODUCED |
|---|---|---|---|
| **Stage I** | Recruitment of 5 players 2 (J2) | Streets, centers for the attention of target populations | Invitation, Photo, Pre-game demographics J2, received Col.$2,000 for transportation as part of their show-up fee. |
| | Build Cards A-B-C-D-E (J2s) from demographics | | J2 Cards |
| **Stage II** | Recruitment of 5 players 1 (J1) | Service providers (health centers, public schools, daycare centers, community kitchens) | Invitation, Pre-game demographics J1, received Col. $4,000 (show up fee) |
| | Game decisions (5 activities) J1s | Workplace (80%) or campus lab (off-hours) (20%) | Game choices J1s |
| | Build Cards 1-2-3-4-5 (J1s) from demographics | | J1 Cards |
| **Stage III** | Recruitment of 2 players 3 (J3) | | Pre-game demographics J3 |
| | Game decisions (Activity-5) J3s | | Game choices J3s |
| | Matching of choices by J1s, J3s | Workplace, streets, campus | Game outcomes |
| | Payments and exit survey J3s | | Receipts (Col.$4000, show-up fee) and post-game survey |
| **Stage IV** | Game decisions (5 activities) J2s | Campus (70%) or centers for the attention of targeted populations (30%) | Game choices J2s |
| | Matching of choices by J1s, J2s | | Game outcomes |
| | Payments and exit survey J2s | | Receipts and post-game survey, Col$2,000 for bus |
| **Stage V** | Payments and exit survey J1s | Workplace | Receipts and post-game survey |

*Note:* Session involved 12 participants.
*Source:* Authors' compilation.

### c. Lab Setting

The following figure describes, for one of the activities (the Ultimatum game, or activity 2) the basic setup of the experimental design. All other games were conducted in same manner. In this case, based on the card of player 2, player 1 decides how much to send of the Col. $20,000 given

as endowment for the pair. Player 2 decides weather to accept or reject such offer. Depending on that decision the funds are allocated as initially proposed and, if the offer is rejected, no payment is made to either player.

Players 1 are in one location, and they are informed that players 2 are in another location. They do not see each other at any time, and their identities and decisions are kept confidential. Players 1 are seated at their desks and record their decisions privately on a decisions sheet (paper). Players 2 are invited the next day to come to campus. At that time, Players 2 are seated in a waiting room and called one at a time to a desk where a monitor verbally asks for decisions and records them on a decisions sheet (paper). The monitor then writes the decisions of each player 2 in each activity. At the end of the five activities all decisions are matched for determining the earnings in each interaction and activity. For the case of the Ultimatum game each player 1 will send three different offers to three players 2. An illustrative example is shown in Figure 1 below.

## Figure 1. Lab Setting for the Ultimatum Game



| First day<br>**YESTERDAY**<br>**Player 2**<br>Invitation,<br>Photo,<br>Pre-game demographics<br>Col.$2,000 for bus | Second day<br>**TODAY**<br>**Player 1**<br>Invitation,<br>Pre-game demographics,<br>Col. $4,000 (show up fee)<br>Game choices | Third day<br>**TOMORROW**<br>**Player 2**<br>Players come to campus. |
| --- | --- | --- |
| J2 Cards | Game choices<br> J1 Cards | Game choices<br>Game outcomes<br>Receipts and post-game survey,<br>Col. $2000 for bus |
| **Fourth day** | **Player 1** | Receipts and post-game survey |

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At the end of the session we selected randomly for each player at least one activity that would be paid in cash on top of the show-up fee that is paid to cover the transportation costs of each participant. On average players were paid for more than one activity, and this was common information for all players (see the protocols section of this in Appendix for details). Prior to making their decisions, players 1 and 2 received information about the other player in the particular interaction through the cards mentioned above.

**Figure 2. General Lab Setting**



Site 1 (public servants)
Computer lab (room 1) on campus

Site 2 (beneficiaries) Room 2
Campus
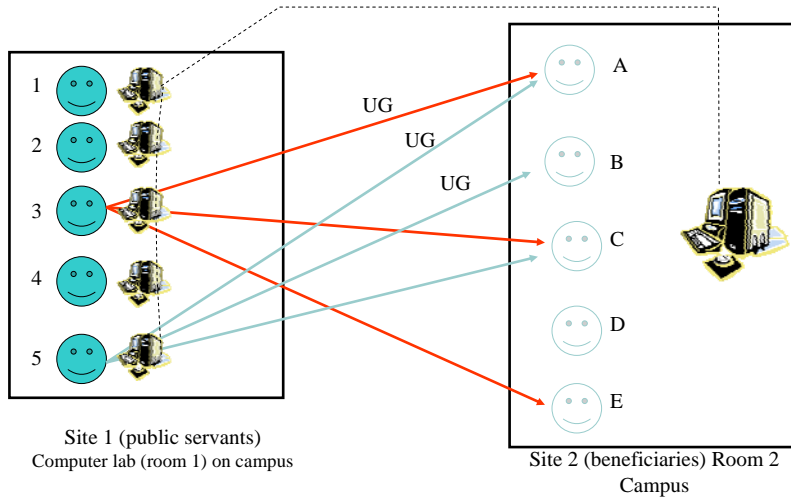
Service providers (health centers, public schools, daycare centers, community kitchens): Workplace (80%) or campus lab (off-hours)

Campus (70%) or centers for the attention of targeted populations (30%) (20%)

The information that each player had on the other player in each interaction is shown in Table 5 below.

**Table 5. Information for the Players**

| What Player 1 observed in Player 2 card | What Player 2 observed in Player 1 card |
|---|---|
| Photo | Age |
| Birthplace and age | Gender |
| Marital status | Education level (highest degree |
| Occupation and time in it | obtained) |
| District, location and district | Service provider (health, |
| stratification | education, child care, food) |
| Number of dependents | Years working in it |
| Dependents that are minors | Position |
| Last year of education | |
| SISBEN | |

Source: Authors' compilation.

Based on this information, the players were asked to make their decisions in each of the games. Recall that each participant played the same game with three different people.

### d. Sampling and Recruitment

We conduct these experiments among the groups described in the proposal including local officials and beneficiaries of social services, as well as control groups. In most cases Player 1 roles will be assigned to local officials and comparable control subjects, and the role of recipients will be played by people sampled from poor populations who are currently or potentially beneficiaries of social services.

From now on we will use the terms "**target**" and "**control**" for our experiment participants. For "target" we will refer to those individuals involved in the direct process of application and delivery of social services. In the case pf players 1 the target sample will refer to those employed in the public service agencies to interact directly with the potential or actual beneficiaries of social services to the poor. These will include white-collar and blue-collar employees at the four types of agencies involved (education, health, child care and nutrition programs). Players 2 will be people who are applying, are eligible to apply or actually receive social services of these kinds. As for the controls, we will recruit citizens of the city with

different levels of education, income, occupation, and location of residence who can serve as control groups for players 1, 2 and 3.

For the recruitment of the participants we visited neighborhoods where potential beneficiaries apply for these social services or where they actually receive them. We additionally recruited local officials or employees for these government programs. Examples include health services for the poorest citizens, public pre-school and day care centers, and community kitchens and nutritional government programs. The groups to be included in the subject pool are:

- Potential, applicant and current beneficiaries of social protection services from populations.
- Local officials in Bogotá's agencies that provide social services such as education, health, day care and nutrition.
- Surveyors usually hired by private contractors who conduct the SISBEN survey process for large cities and metropolitan areas.
- Controls (other government officials and citizens with demographic characteristics equivalent to those of the groups above).

The following map shows the locations of the public agencies that we visited for recruiting Players 1. Later on there are more details of the types of agencies visited and the numbers of subjects recruited by agency. In general, these are the locations of the offices where potential and actual beneficiaries of social services attend to request or receive a service. They include offices for application to the programs or the actual delivery of them. In these locations we found delivery of social services including health, education, child care and food centers or kitchens, run by the national or municipal government.

In the case of local officials, the confidentiality and privacy of data represent one of local officials is one of our major concerns in order to guarantee the revealing of preferences regarding fairness, altruism, and discrimination. Therefore, the identities of the local officials or their decisions are never revealed to the other players,and could not be observed by their superiors. In fact, we have tried to recruit more than one officer from each service provider we visited in the sample.

**Figure 3. Recruitment of J1 in Bogotá by Geographical Location**
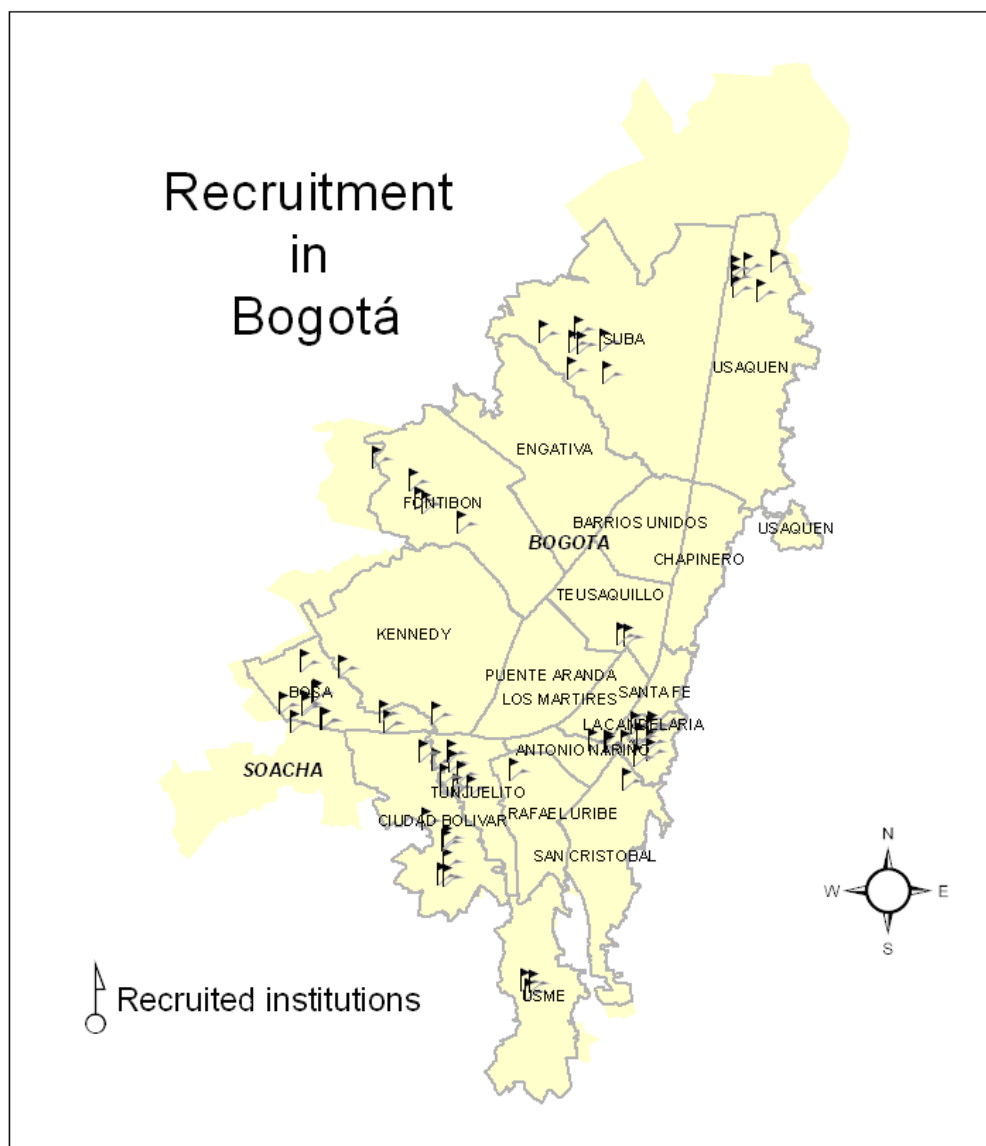
For players 2 recruitment took place among the poor and more vulnerable groups around these and other locations in the city, based on its existing stratification for the city.

The next table shows the geographical location (*localidad*) of the household for the entire sample of participants, and the percentages by player role.

**Table 6. Geographical Location of Participants' Households**

| Localidad | N | j3 | j2 | j1 |
|---|---|---|---|---|
| Antonio Nariño | 20 | 0.0 | 85.0 | 15.0 |
| Barrios Unidos | 6 | 33.3 | 16.7 | 50.0 |
| Bosa | 17 | 5.9 | 58.8 | 35.3 |
| Candelaria | 1 | 0.0 | 100.0 | 0.0 |
| Chapinero | 54 | 25.9 | 59.3 | 14.8 |
| Ciudad Bolívar | 33 | 0.0 | 51.5 | 48.5 |
| Engativá | 43 | 32.6 | 7.0 | 60.5 |
| Fontibón | 26 | 19.2 | 7.7 | 73.1 |
| Kennedy | 35 | 25.7 | 17.1 | 57.1 |
| Mártires | 5 | 20.0 | 40.0 | 40.0 |
| Puente Aranda | 15 | 20.0 | 20.0 | 60.0 |
| Rafael Uribe | 14 | 0.0 | 50.0 | 50.0 |
| San Cristóbal | 38 | 0.0 | 71.1 | 28.9 |
| Santafé | 39 | 10.3 | 64.1 | 25.6 |
| Suba | 43 | 30.2 | 18.6 | 51.2 |
| Teusaquillo | 25 | 28.0 | 20.0 | 52.0 |
| Tunjuelito | 37 | 0.0 | 40.5 | 59.5 |
| Usaquén | 36 | 33.3 | 16.7 | 50.0 |
| Usme | 11 | 0.0 | 45.5 | 54.5 |
| Alrededores | 15 | 40.0 | 20.0 | 40.0 |
| **TOTAL** | **513** | **17.7** | **38.0** | **44.2** |

*Source:* Authors' compilation.

**Table 7. Players Who Attended the Sessions by Role**

| Player Role | N | % of total recruited | % Target Group | %Control Group |
|---|---|---|---|---|
| **1** | 227 | 90.8 | 75.33 | 24.67 |
| **2** | 195 | 82.28 | 84.1 | 15.9 |
| **3** | 91 | 97.85 | 100% | |
| **TOTAL: 513** | | **568 recruited** | | |

*Source:* Authors' compilation.

In the following three tables we show the composition of our sample for Players 1, 2 and 3 for both the target and controls to give an idea of the locations and occupations they have.

## Table 8. Players 1 by Groups

| Target Group | | | Control Group | | |
|---|---|---|---|---|---|
| **Local Officers** | **N** | **%** | | **N** | **%** |
| Mayor's office | 3 | 1.75 | College Students | 27 | 48.21 |
| Education[1] | 31 | 18.13 | Private sector[5] | 9 | 16.07 |
| Health[2] | 34 | 19.88 | Government (Central)[6] | 10 | 17.86 |
| Nutrition[3] | 28 | 16.37 | Government (District)[7] | 10 | 17.86 |
| Child Care[4] | 44 | 25.73 | | | |
| Surveyers SISBEN | 31 | 18.13 | | | |
| **Total** | **171** | **100** | | **56** | **100** |

[1] Public schools and CADELs (Local Administrative Center for Education). [2] ARSs (Administradora del Régimen Subsidiado), UPAs (Unidad Primaria de Atención), UBAs (Unidad Básicas de Atención), CAMIs (Centros de Atención Médica Inmediata). [3] Community kitchens and COLs (Local Operative Center). [4] *Hogares comunitarios*, daycare centers, kindergarten, Casas Vecinales, nursery schools.
[5] Universities and NGOs. [6] DNP (Departamento Nacional de Planeación)
[7] SGD (Secretaría de Gobierno Distrital), SHD (Secretaría de Hacienda Distrital)
*Source:* Authors' compilation.

## Table 9. Players 2 by Groups

| Target Group | | | Control Group | | |
|---|---|---|---|---|---|
| | **N** | **%** | | **N** | **%** |
| Displaced people | 43 | 26.22 | Students | 27 | 87.10 |
| People with disabilities | 4 | 2.44 | Private sector[1] | 4 | 12.90 |
| Indigenous | 1 | 0.61 | Black | 6 | 19.35 |
| Excombatiente | 34 | 20.73 | SISBEN | 3 | 9.68 |
| Recycler | 18 | 10.98 | | | |
| Street vendor | 12 | 7.32 | | | |
| Black | 25 | 15.24 | | | |
| SISBEN | 107 | 65.24 | | | |
| **Total** | **164** | | | **31** | |

[1] Universities and NGOs.
Source: Authors.

## Table 10. Players 3 by Groups

| Target Group | | | Control Group | | |
|---|---|---|---|---|---|
| **Officers** | **N** | **%** | | **N** | **%** |
| Government (Central)[1] | 38 | 90.48 | Students | 30 | 61.22 |
| Government (District)[2] | 1 | 2.38 | Private sector[5] | 13 | 26.53 |
| Congress | 1 | 2.38 | Street | 6 | 12.24 |
| Internacional Organizations[3] | 2 | 4.76 | | | |
| **Total** | **42** | **100** | | **49** | **100** |

*Source:* Authors' compilation.
[1] Ministerio de Comunicaciones, Ministerio de Hacienda, Ministerio de Minas y Energía, Super Intendencia Financiera, DIAN (Dirección de Impuestos y Aduanas Nacionales), CGR (Contraloría General de la República), FOSYGA (Fondo de Solidaridad y Garantías).
[2] SGD (Secretaria de Gobierno Distrital)
[3] CEPAL (Comisión Económica para América Latina)
[5] Universities and NGOs

To give an idea of the socio-economic status of the players recruited, we show in the tables below the household expenditures (Col. Pesos and in US dollars) reported by players for both the target and control sub samples.

**Table 11. Players' Monthly Household Expenditures by Role (US$)**

| Role Player | Target | | | Control | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 1 | 2 | 3 |
| Mean | 293.22 | 135.19 | 678.25 | 906.10 | 580.10 | 1,147.70 |
| Min | 20.08 | 7.23 | 120.45 | 120.45 | 120.45 | 100.38 |
| Max | 3,613.50 | 401.50 | 2,409.00 | 4,015.00 | 2,409.00 | 6,022.50 |
| Desvest | 309.11 | 698.14 | 502.21 | 817.35 | 490.16 | 1,434.74 |

TRM: 1US$=COL$2490,66 (Monthly mean average for May to July 2006, according to http//:www.banrep.gov.co)
*Source:* Authors' compilation.

It is also interesting to observe the kind of aid and welfare benefits our players 2 receive from the government through different social services programs. The following table shows these benefits, based on the demographic survey we filled for each participant (see appendix for the questionnaire)

**Table 12. Welfare Benefits of Target population (Players 2)**

| | Target | Control |
|---|---|---|
| **1. Possession of an aid program certificate** | | |
| SISBEN Certificate | 52.63 | 9.67 |
| Ex- combatant Certificate | 29.82 | 0 |
| Displaced aid program Certificate | 11.4 | 0 |
| *Familias en Acción* Program | 3.51 | 0 |
| **2. Use of welfare programs** | | |
| **People receiving benefits from public programs** | 79.27 | 29.03 |
| Education[1] | 56.92 | 88.89 |
| Nutrition[2] | 29.23 | 0 |
| Health[3] | 84.62 | 33.33 |
| Child Care[4] | 17.05 | 0 |

[1] Public schools and CADELs (Local Administrative Center for Education)
[2] Community kitchens and COLs (Local Operative Center)
[3] ARSs (Administradora del Régimen Subsidiado), UPAs (Unidad Primaria de Atención), UBAs (Unidad Básicas de Atención), CAMIs (Centros de Atención Médica Inmediata)
[4] *Hogares comunitarios*, daycare centers, kindergarten, Casas Vecinales, nursery schools.
*Source:* Authors' compilation.

*d.* **Socio-Demograhic Characteristics of Players**

The following pages show a series of characteristics for the samples of participants. Recall that only the information in the card (see sample) was known to the other player. The rst of the data provided completes the characterization of our samples.

**Table 13. Players 2 Characteristics Observed by Players 1**

Card sample:

| A | Código Jugador S9J2054A |
|---|---|
| La siguiente información es de la persona de la foto con la cual usted está jugando: | |
| Lugar de nacimiento y Edad | San Martin, 52 años |
| Estado civil | Unión libre, vive con su cónyuge |
| Oficio y tiempo en el oficio | Desempleado hace 6 meses |
| Estrato, Barrio y Localidad en el cual vive | Estrato 2, Kennedy, Kennedy |
| Grupo de SISBEN al cual pertenece | Ninguno |
| Total personas a cargo | 3 |
| Último nivel educativo aprobado | Básica secundaria |
| Menores a cargo | 2 |
| Otro | Desplazado |

| | | | Target | Control |
|---|---|---|---|---|
| **Gender** | Women | | 57,93 | 58,06 |
| | Male | | 42,07 | 41,94 |
| **Race** | Black | | 15,24 | 19,35 |
| | Indigenous | | 7,93 | 0 |
| | Meztizo | | 76,83 | 80,65 |
| **SISBEN** | Yes | Mean | 65,24 | 9,68 |
| | No | | 34,76 | 90,32 |
| **SISBEN group** | 0 | | 43,4 | 0 |
| | 1 | | 39,62 | 0 |
| | 2 | | 13,21 | 33,33 |
| | 3 | | 3,77 | 33,33 |
| | 4 | | 0 | 33,33 |
| **Education** | **Level** | Mean | 2,62 | 5,35 |
| | | Min | 0 | 4 |
| | | Max | 6 | 8 |
| | | SD | 0,79 | 0,8 |
| | **Years** | Mean | 8,15 | 17,26 |
| | | Min | 0 | 15 |
| | | Max | 18 | 20 |
| | | SD | 3,57 | 0,77 |
| **Other** | | | | |
| Displaced people | | | 38,39 | 0 |
| People with disabilities | | | 3,57 | 0 |
| Excombatiente | | Mean | 30,36 | 0 |
| Indigenous | | | 0,89 | 0 |
| Recycler | | | 16,07 | 0 |
| Street vendor | | | 10,71 | 0 |

| | | | Target | Control |
|---|---|---|---|---|
| **Age** | | Mean | 31,98 | 22,39 |
| | | Min | 65 | 32 |
| | | Max | 16 | 18 |
| | | SD | 12,87 | 3,56 |
| **Marital Status** | single | | 39,63 | 96,77 |
| | married | | 7,93 | 3,23 |
| | union | | 36,59 | 0,00 |
| | Divorced | | 3,66 | 0 |
| | Widow | | 12,2 | 0 |
| **Activity** | Working | | 51,22 | 16,13 |
| | Studying | | 15,85 | 83,87 |
| | looking for a job | | 21,95 | 0 |
| | home work | Mean | 7,93 | 0 |
| | Disabled | | 1,83 | 0 |
| | Other | | 1,22 | 0 |
| **Employment** | Private sector | | 27 | 100 |
| | Jornalero o peón | | 1,12 | 0 |
| | For the government | | 2,25 | 0 |
| | Home worker | | 6,74 | 0 |
| | Professional worker | | 1,12 | 0 |
| | Independent worker | | 59,55 | 0 |
| | no payment | | 2,25 | 0 |
| **Time in that activity** | | Mean | 4,78 | 10,26 |
| | | Min | 0 | 0,02 |
| | | Max | 40 | 21 |
| | | SD | 8,29 | 7,67 |
| **Estrato** | 0 | | 13,5 | 0 |
| | 1 | | 26,99 | 3,23 |
| | 2 | | 25,77 | 9,68 |
| | 3 | Mean | 17,79 | 54,84 |
| | 4 | | 15,95 | 19,35 |
| | 5 | | 0 | 6,45 |
| | 6 | | 0 | 6,45 |
| **Dependents** | | Mean | 1,98 | 0,00 |
| | | Min | 0 | 0 |
| | | Max | 7 | 0 |
| | | SD | 1,85 | 0,00 |
| **Children** | | Mean | 1,54 | 0,00 |
| | | Min | 0 | 0 |
| | | Max | 6 | 0 |
| | | SD | 1,58 | 0,00 |

*Source:* Authors' compilation.

Table 14. Players 1 Characteristics Observed by Players 2

| 1 | Código Jugador S10J10041 |
|---|---|
| La siguiente información es de la persona de la foto con la | |
| Edad | 21 años |
| Género | Femenino |
| Nivel Educativo | Universitario sin título |
| Funcionario público de | Colegio Distrital |
| Cuántos años lleva trabajando allí | 10 años |
| Cargo que desempeña en la institución | Seguridad |

| Service Provider | Only Target | N | % |
|---|---|---|---|
| | **Officers** | 176 | 77,53 |
| | **Education**[1] | 35 | 19,89 |
| | CADEL | | 22,86 |
| | CED | | 60,00 |
| | **Nutrition**[3] | 28 | 15,91 |
| | COL | | 21,95 |
| | DABS | | 39,29 |
| | IDIPRON | | 25,00 |
| | **Health**[2] | 34 | 19,31 |
| | CAMI | | 17,65 |
| | UBA | | 29,41 |
| | UPA | | 26,47 |
| | **Child Care**[4] | 54 | 30,68 |
| | jardinDABS | | 61,11 |
| | hogarICBF | | 38,89 |
| | **Surveyers SISBEN** | 31 | 13,66 |

| | | | Target | Control |
|---|---|---|---|---|
| **Age** | | Mean | 34,3 | 25,9 |
| | | Min | 55 | 54 |
| | | Max | 17 | 17 |
| | | SD | 8,43 | 8,79 |
| **Gender** | Women | Mean | 57,93 | 58,06 |
| | Male | | 42,07 | 41,94 |
| **Education** | **Level** | Mean | 4,46 | 5,71 |
| | | Min | 2 | 3 |
| | | Max | 8 | 8 |
| | | SD | 1,63 | 1,36 |
| | **Years** | Mean | 14,53 | 17,45 |
| | | Min | 4 | 12 |
| | | Max | 20 | 20 |
| | | SD | 3,91 | 1,66 |
| **Time in the activity** | | Mean | 5,49 | 3,48 |
| | | Min | 0,08 | 0,03 |
| | | Max | 33 | 22 |
| | | SD | 5,88 | 4,88 |
| **Position** | Private sector[5] | | 18,13 | 6,90 |
| | For the government[6] | | 81,87 | 93,10 |
| | Blue collar | | 36,43 | 7,14 |
| | White collar | | 63,57 | 92,59 |
| | Students | | 0,00 | 48,21 |

[1] Public schools and CADELs (Local Administrative Center for Education)
[2] ARSs (Administradora del Régimen Subsidiado), UPAs (Unidad Primaria de Atención), UBAs (Unidad Básicas de Atención), CAMIs (Centros de Atención Médica Inmediata)
[3] Community kitchens and COLs (Local Operative Center)
[4] *Hogares comunitarios*, daycare centers, kindergarten, Casas Vecinales, nursery schools.
[5] Universities and NGOs
[6] DNP (Departamento Nacional de Planeación), SGD (Secretaría de Gobierno Distrital), SHD (Secretaría de Hacienda Distrital)
*Source:* Authors' compilation.

*Payments*

As noted above, each player received her earnings from at least one of the five games and a maximum of three games, randomly selected. The final frequency of each game being paid to each player is reported in the table below. Since in the 3PP game we needed to pay at least player 3, and we wanted to pay all players when a game was selected, all players 1 and 2 involved in the

3PP were paid. Those players who were not paid the 3PP were paid for one of the other activities.

**Table 15. Frequency of Payments by Activity**

| Role Player | Activity DDG | DG | UG | TG | 3PP |
|---|---|---|---|---|---|
| **1** | 19.33 | 14.29 | 18.07 | 13.03 | 39.08 |
| **2** | 59.09 | 14.05 | 16.94 | 12.81 | 39.26 |
| **3** | - | - | - | - | 100.00 |
| **Total** | 33.04 | 11.89 | 14.69 | 10.84 | 48.95 |

*Source:* Authors' compilation.

The final earnings, without show-up fee, are reported in the following tables. Overall, US$2,700 were paid to the 513 people who participated. Every player received also a show-up fee of Col.$4,000 (US$1.6).

**Table 16. Earnings (US$) by Role[1]**

| Type Player | Mean | Max | Min | Sum | Desvest |
|---|---|---|---|---|---|
| **1** | 3.71 | 10.40 | 0.00 | 862 | 1.80 |
| **2** | 6.60 | 16.00 | 0.00 | 1.504 | 3.07 |
| **3** | 3.84 | 4.00 | 3.20 | 354 | 0.32 |
| **Total** | 4.93 | 16.00 | 0.00 | 2.719 | 2.69 |

[1] An activity was not paid for when the participant did not attend the session. Earnings do not include the show-up fee ($4.000 = US$1.60) paid to each participant.
*Source:* Authors' compilation.

### e.   *Social Efficiency and Equity across Games*

The tables below report the social efficiency and equity statistics for each of the games and for the two major types of (player 1-player 2) interactions by samples. These interactions consist of, target-target, control-control, target-control and control-target.

**Table 18. Social Efficiency and Equity in DG, UG, TG, 3PP**

| General | | | | | | |
|---|---|---|---|---|---|---|
| *Number of Observations* | | 557 | 558 | 559 | 444 | 2,118 |
| **Real social efficiency** | Mean | 100% | 89% | 83% | 93% | 91% |
| | Maximum | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | Minimum | 1.00 | 0.00 | 0.50 | 0.73 | 0.00 |
| | Standard Deviation | 0.00 | 0.30 | 0.13 | 0.11 | 0.18 |
| **Player 2´s Equity** | Mean | 54% | 62% | 61% | 36% | 53% |
| | Maximum | 1.00 | 1.00 | 1.00 | 0.66 | 1.00 |
| | Minimum | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Standard Deviation | 0.28 | 0.24 | 0.17 | 0.15 | 0.24 |
| *Target: Players 1. 2* | | | | | | |
| *Number of Observations* | | 364 | 360 | 363 | 283 | 1,370 |
| **Real social efficiency** | Mean | 100% | 89% | 83% | 92% | 91% |
| | Maximum | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | Minimum | 1.00 | 0.00 | 0.50 | 0.73 | 0.00 |
| | Standard Deviation | 0.00 | 0.30 | 0.13 | 0.11 | 0.18 |
| **Player 2´s Equity** | Mean | 52% | 62% | 61% | 35% | 52% |
| | Maximum | 1.00 | 1.00 | 1.00 | 0.66 | 1.00 |
| | Minimum | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Standard Deviation | 0.27 | 0.23 | 0.17 | 0.15 | 0.24 |
| *Control: Players 1. 2* | | | | | | |
| *Number of Observations* | | 52 | 57 | 53 | 28 | 190 |
| **Real social efficiency** | Mean | 100% | 80% | 76% | 99% | 88% |
| | Maximum | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | Minimum | 1.00 | 0.00 | 0.50 | 0.73 | 0.00 |
| | Standard Deviation | 0.00 | 0.30 | 0.12 | 0.05 | 0.24 |
| **Player 2´s Equity** | Mean | 42% | 61% | 57% | 32% | 48% |
| | Maximum | 1.00 | 1.00 | 0.93 | 0.66 | 1.00 |
| | Minimum | 0.00 | 0.30 | 0.13 | 0.00 | 0.00 |
| | Standard Deviation | 0.25 | 0.21 | 0.16 | 0.12 | 0.22 |
| *Control: Players 1 - Target: Players 2* | | | | | | |
| *Number of Observations* | | 98 | 99 | 99 | 84 | 380 |
| **Real social efficiency** | Mean | 100% | 94% | 87% | 93% | 94% |
| | Maximum | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | Minimum | 1.00 | 0.00 | 0.50 | 0.73 | 0.00 |
| | Standard Deviation | 0.00 | 0.22 | 0.12 | 0.11 | 0.14 |
| **Player 2´s Equity** | Mean | 70% | 71% | 68% | 44% | 62% |
| | Maximum | 1.00 | 1.00 | 1.00 | 0.66 | 1.00 |
| | Minimum | 0.00 | 0.10 | 0.35 | 0.00 | 0.00 |
| | Standard Deviation | 0.28 | 0.23 | 0.16 | 0.16 | 0.24 |

*Source:* Authors.

**TABLE 26.**

| | Method | | | | | OLS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dependant Variable | | | | *Percentage of the allocation expected by Player 2 from Player 1 in UG* | | | | | | | |
| **Independent Variables** | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| 1 if player 1 is Target | | -0,03 | -0,049 | | | | -0,193 | -0,034 | -0,206 | | | |
| 1 if player 2 is Target | | 0.225* | 0.214* | | | | | | | | | |
| 1 if player 1&2 are Target | | -0,071 | -0,059 | | | | | | | -0,167 | -0,022 | -0,129 |
| **Player 1´s data — Socio-demographic** | | | | | | | | | | | | |
| 1 if player is woman | | | -0,024 | | | | | | | | | |
| Age | | | 0.002+ | | | | | | | | | |
| Player's level of education | | | -0,003 | | | | | | | | | |
| Player's time worked multiplied by dummy of Target P1 | | | -0,002 | | | | | | | | | |
| Player 1´s - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| **Player 2´s data — Socio-demographic** | | | | | | | | | | | | |
| 1 if Player 2 is a woman | | | | -0,019 | | -0,013 | -0,06 | | -0,052 | -0,052 | | -0,041 |
| Player 2´s age | | | | 0 | | 0 | | | 0,001 | 0 | | 0,001 |
| 1 if Player 2 is single | | | | -0.130* | | -0.139* | -0.115+ | | -0,115 | -0,101 | | -0.106+ |
| 1 if Player 2 is in common law | | | | -0.060+ | | -0.070** | -0.150+ | | -0,141 | -0,138 | | -0,128 |
| Player 2´s years of education | | | | -0.017+ | | -0,01 | -0.040* | | -0.034+ | -0.041* | | -0.031** |
| Player 2´s number of minor people in charge | | | | 0,016 | | 0,013 | 0.022+ | | 0,01 | 0.026** | | 0,018 |
| 1 if Player 2 is unemployed | | | | 0,038 | | 0,04 | 0.166** | | 0.160+ | 0.157** | | 0.160+ |
| **Player 2´s data — Discriminatory** | | | | | | | | | | | | |
| 1 if Player 2 considers herself black | | | | | 0,031 | 0.056+ | | -0,042 | 0,013 | | -0,014 | 0,017 |
| 1 if Player 2 considers herself indigenous | | | | | -0,06 | -0.098** | | -0,061 | -0,05 | | -0,021 | -0,055 |
| 1 if Player 2 is a Displaced | | | | | 0.150* | 0,064 | | 0.233* | 0,094 | | 0.151* | 0,065 |
| 1 if Player 2 is an Ex-combatant | | | | | 0,013 | 0,052 | | 0,039 | 0,02 | | 0,015 | 0,055 |
| 1 if Player 2 is a Recycling worker | | | | | 0,054 | 0,028 | | 0,13 | 0,062 | | 0,06 | 0,05 |
| 1 if Player 2 is a Street vendor | | | | | 0.131* | 0.118** | | 0.141* | 0.127** | | 0.141* | 0.133** |
| **Dummy of Target P1 per P2's data** | | | | | | | | | | | | |
| 1 if Player 2 is a woman | | | | | | | 0,038 | | 0,032 | | | |
| Player 2´s age | | | | | | | 0 | | 0 | | | |
| 1 if Player 2 is single | | | | | | | -0,019 | | -0,032 | | | |
| 1 if Player 2 is in common law | | | | | | | 0,126 | | 0,099 | | | |
| Player 2´s years of education | | | | | | | 0,028 | | 0,033 | | | |
| Player 2´s number of minor people in charge | | | | | | | -0,013 | | 0,003 | | | |
| 1 if Player 2 is unemployed | | | | | | | -0.146+ | | -0,133 | | | |
| Player 1´s - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | | | | | 0 | | 0 | | | |
| 1 if Player 2 considers herself black | | | | | | | | 0.108+ | 0,072 | | | |
| 1 if Player 2 considers herself indigenous | | | | | | | | 0,01 | -0,034 | | | |
| 1 if Player 2 is a Displaced | | | | | | | | -0,111 | -0,049 | | | |
| 1 if Player 2 is an Ex-combatant | | | | | | | | -0,032 | 0,052 | | | |
| 1 if Player 2 is a Recycling worker | | | | | | | | -0,081 | -0,022 | | | |
| 1 if Player 2 is a Street vendor | | | | | | | | 0 | 0 | | | |
| **Dummy of Target P1&Target P2 per P2's data** | | | | | | | | | | | | |
| 1 if Player 2 is a woman | | | | | | | | | | 0,033 | | 0,02 |
| Player 2´s age | | | | | | | | | | 0 | | -0,001 |
| 1 if Player 2 is single | | | | | | | | | | -0,031 | | -0,045 |
| 1 if Player 2 is in common law | | | | | | | | | | 0,113 | | 0,077 |
| Player 2´s years of education | | | | | | | | | | 0.037+ | | 0,034 |
| Player 2´s number of minor people in charge | | | | | | | | | | -0,017 | | -0,01 |
| 1 if Player 2 is unemployed | | | | | | | | | | -0,141 | | -0,146 |
| 1 if Player 2 considers herself black | | | | | | | | | | | 0,076 | 0,079 |
| 1 if Player 2 considers herself indigenous | | | | | | | | | | | -0,042 | -0,017 |
| Constant | | 0.416* | 0.389* | 0.657* | 0.489* | 0.609* | 0.809* | 0.513* | 0.746* | 0.767* | 0.502* | 0.682* |
| Interactions | | 578 | 578 | 578 | 578 | 578 | 578 | 578 | 578 | 578 | 578 | 578 |
| R-squared | | 0,112 | 0,122 | 0,156 | 0,103 | 0,204 | 0,206 | 0,129 | 0,254 | 0,203 | 0,109 | 0,251 |

+ significant at 10%; ** significant at 5%; * significant at 1%     A Cluster with Player 2's decisions is included.     Source: Authors.

**TABLE 27.**

| | Method | | | | | OLS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dependant Variable | | | | | *Percentage of the allocation expected by Player 2 from Player 1 in TG* | | | | | | |
| Independent Variables | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| 1 if player 1 is Target | | -0,078 | -0,089 | | | | -0,167 | -0,006 | -0,161 | | | |
| 1 if player 2 is Target | | 0.110+ | 0,093 | | | | | | | | | |
| 1 if player 1&2 are Target | | 0,078 | 0,099 | | | | | | | -0,209 | 0,036 | -0,16 |
| *Player 1's data — Socio-demographic* | | | | | | | | | | | | |
| 1 if player is woman | | | -0,009 | | | | | | | | | |
| Age | | | 0,002 | | | | | | | | | |
| Player's level of education | | | 0.017** | | | | | | | | | |
| Player's time worked multiplied by dummy of Target P1 | | | -0,001 | | | | | | | | | |
| Player 1´s - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| *Player 2's data — Socio-demographic* | | | | | | | | | | | | |
| 1 if Player 2 is a woman | | | | | -0,018 | 0,003 | -0,071 | | -0,098 | -0,065 | | -0,064 |
| Player 2´s age | | | | | 0,001 | 0,001 | 0,002 | | 0,003 | 0,001 | | 0,002 |
| 1 if Player 2 is single | | | | | -0,035 | -0,034 | -0,017 | | 0,054 | 0,007 | | 0,002 |
| 1 if Player 2 is in common law | | | | | 0,003 | 0,003 | -0,131 | | -0,12 | -0,104 | | -0,106 |
| Player 2´s years of education | | | | | -0,014 | -0,001 | -0,031 | | -0,032 | -0,043** | | -0,03 |
| Player 2´s number of minor people in charge | | | | | 0,019 | 0,008 | 0,004 | | 0,002 | 0,007 | | -0,002 |
| 1 if Player 2 is unemployed | | | | | 0,027 | 0,001 | 0,049 | | -0,015 | 0,042 | | 0,004 |
| *Player 2's data — Discriminatory* | | | | | | | | | | | | |
| 1 if Player 2 considers herself black | | | | | -0,048 | -0,037 | -0,074 | | -0,072 | -0,053 | | -0,031 |
| 1 if Player 2 considers herself indigenous | | | | | 0,052 | 0,035 | 0,238 | | 0.309+ | 0.272+ | | 0.268+ |
| 1 if Player 2 is a Displaced | | | | | 0.168* | 0.132* | 0,153 | | 0,116 | 0.156* | | 0.127* |
| 1 if Player 2 is an Ex-combatant | | | | | 0,001 | 0,04 | 0,003 | | -0,078 | -0,013 | | 0,015 |
| 1 if Player 2 is a Recycling worker | | | | | 0.099** | 0.083+ | 0.180** | | 0.244+ | 0.086+ | | 0,084 |
| 1 if Player 2 is a Street vendor | | | | | 0,107 | 0,081 | 0,109 | | 0,08 | 0,09 | | 0,088 |
| *Dummy of Target P1 per P2's data* | | | | | | | | | | | | |
| 1 if Player 2 is a woman | | | | | | | | 0,071 | 0,117 | | | |
| Player 2´s age | | | | | | | | 0 | -0,002 | | | |
| 1 if Player 2 is single | | | | | | | | -0,026 | -0,094 | | | |
| 1 if Player 2 is in common law | | | | | | | | 0,147 | 0,139 | | | |
| Player 2´s years of education | | | | | | | | 0,022 | 0,033 | | | |
| Player 2´s number of minor people in charge | | | | | | | | 0,016 | 0,011 | | | |
| 1 if Player 2 is unemployed | | | | | | | | -0,023 | 0,024 | | | |
| Player 1´s - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | | | | | | 0.000* | 0.000* | | | |
| 1 if Player 2 considers herself black | | | | | | | | 0,04 | 0,037 | | | |
| 1 if Player 2 considers herself indigenous | | | | | | | | -0,205 | -0,299+ | | | |
| 1 if Player 2 is a Displaced | | | | | | | | 0,016 | -0,005 | | | |
| 1 if Player 2 is an Ex-combatant | | | | | | | | -0,01 | 0,117 | | | |
| 1 if Player 2 is a Recycling worker | | | | | | | | -0,093 | -0,192 | | | |
| 1 if Player 2 is a Street vendor | | | | | | | | 0 | 0 | | | |
| *Dummy of Target P1&Target P2 per P2's data* | | | | | | | | | | | | |
| 1 if Player 2 is a woman | | | | | | | | | | | 0,072 | 0,089 |
| Player 2´s age | | | | | | | | | | | 0 | -0,002 |
| 1 if Player 2 is single | | | | | | | | | | | -0,045 | -0,033 |
| 1 if Player 2 is in common law | | | | | | | | | | | 0,12 | 0,123 |
| Player 2´s years of education | | | | | | | | | | | 0.049+ | 0,047 |
| Player 2´s number of minor people in charge | | | | | | | | | | | 0,012 | 0,009 |
| 1 if Player 2 is unemployed | | | | | | | | | | | -0,021 | -0,002 |
| 1 if Player 2 considers herself black | | | | | | | | | | | 0,009 | -0,008 |
| 1 if Player 2 considers herself indigenous | | | | | | | | | | | -0,253 | -0,245+ |
| Constant | | 0.486* | 0.357* | 0.574* | 0.528* | 0.497* | 0.707* | 0.534* | 0.651* | 0.700* | 0.511* | 0.614* |
| Interactions | | 580 | 580 | 580 | 580 | 580 | 580 | 580 | 580 | 580 | 580 | 580 |
| R-squared | | 0,049 | 0,067 | 0,07 | 0,087 | 0,103 | 0,103 | 0,095 | 0,148 | 0,095 | 0,097 | 0,133 |

+ significant at 10%; ** significant at 5%; * significant at 1%    A Cluster with Player 2's decisions is included.    Source: Authors.

**TABLE 28.**

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Method | *OLS* | | | | | | | | | | |
| Dependant Variable | *Percentage of the allocation expected by Player 3 from Player 1 in 3PP* | | | | | | | | | | |
| **Independent Variables** | | | | | | | | | | | |
| 1 if player 1 is Target | 0,061 | 0,091 | | | | -0,227 | -0,009 | -0,386 | | | |
| 1 if player 2 is Target | 0.210* | 0.206* | | | | | | | | | |
| 1 if player 1&2 are Target | -0,099 | -0,096 | | | | | | | -0,173 | 0,035 | -0,131 |
| **Player 1's data — Socio-demographic** | | | | | | | | | | | |
| 1 if player is woman | | -0,025 | | | | | | | | | |
| Age | | 0 | | | | | | | | | |
| Player's level of education | | 0.016+ | | | | | | | | | |
| Player's time worked multiplied by dummy of Target P1 | | -0,003 | | | | | | | | | |
| Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | 0,000 | 0,000 | | 0,000 | 0,000 | | 0,000 | 0,000 | | 0,000 |
| **Player 2's data — Socio-demographic** | | | | | | | | | | | |
| 1 if Player 2 is a woman | | | 0,032 | | 0,028 | -0,002 | | -0,02 | 0,049 | | 0,053 |
| Player 2's age | | | 0 | | 0 | -0,001 | | -0,001 | -0,001 | | 0 |
| 1 if Player 2 is single | | | 0,013 | | 0,014 | -0,035 | | -0,03 | -0,067 | | -0,053 |
| 1 if Player 2 is in common law | | | 0,029 | | 0,018 | 0 | | 0,009 | -0,015 | | -0,064 |
| Player 2's years of education | | | -0,019 | | -0,016 | -0,041 | | -0,054 | -0,025 | | -0,026 |
| Player 2's number of minor people in charge | | | 0.034* | | 0.034* | 0,014 | | -0,012 | 0,016 | | 0,008 |
| 1 if Player 2 is unemployed | | | 0,014 | | 0,037 | 0.163+ | | 0.170+ | 0.160+ | | 0,158 |
| **Player 2's data — Discriminatory** | | | | | | | | | | | |
| 1 if Player 2 considers herself black | | | | -0,039 | -0,032 | | -0,139 | -0,091 | | -0,023 | 0,001 |
| 1 if Player 2 considers herself indigenous | | | | -0,005 | -0,045 | | 0,073 | 0,03 | | 0,116 | 0,119 |
| 1 if Player 2 is a Displaced | | | | 0.073** | -0,006 | | 0.164** | 0,103 | | 0.064+ | 0,013 |
| 1 if Player 2 is an Ex-combatant | | | | -0,032 | 0,003 | | -0,035 | -0,093 | | -0,045 | -0,023 |
| 1 if Player 2 is a Recycling worker | | | | 0.139* | 0.096** | | -0,017 | -0,082 | | 0.125* | 0.088+ |
| 1 if Player 2 is a Street vendor | | | | -0,005 | -0,021 | | -0,002 | -0,009 | | -0,021 | -0,02 |
| **Dummy of Target P1 per P2's data** | | | | | | | | | | | |
| 1 if Player 2 is a woman | | | | | | 0,034 | | 0,05 | | | |
| Player 2's age | | | | | | 0,001 | | 0,002 | | | |
| 1 if Player 2 is single | | | | | | 0,051 | | 0,036 | | | |
| 1 if Player 2 is in common law | | | | | | 0,036 | | 0,007 | | | |
| Player 2's years of education | | | | | | 0,039 | | 0,059 | | | |
| Player 2's number of minor people in charge | | | | | | 0,023 | | 0,051 | | | |
| 1 if Player 2 is unemployed | | | | | | -0.184+ | | -0,152 | | | |
| Player 1's - Player 2's Household expenses per capita (in Colombian thousand pesos) | | | | | | 0,000 | | 0,000 | | | |
| 1 if Player 2 considers herself black | | | | | | | 0,132 | 0,076 | | | |
| 1 if Player 2 considers herself indigenous | | | | | | | -0,085 | -0,083 | | | |
| 1 if Player 2 is a Displaced | | | | | | | -0,109 | -0,123 | | | |
| 1 if Player 2 is an Ex-combatant | | | | | | | 0,000 | 0,115 | | | |
| 1 if Player 2 is a Recycling worker | | | | | | | 0.181** | 0.207+ | | | |
| 1 if Player 2 is a Street vendor | | | | | | | 0,000 | 0,000 | | | |
| **Dummy of Target P1&Target P2 per P2's data** | | | | | | | | | | | |
| 1 if Player 2 is a woman | | | | | | | | | -0,028 | | -0,037 |
| Player 2's age | | | | | | | | | 0,001 | | 0 |
| 1 if Player 2 is single | | | | | | | | | 0,101 | | 0,096 |
| 1 if Player 2 is in common law | | | | | | | | | 0,058 | | 0,102 |
| Player 2's years of education | | | | | | | | | 0,033 | | 0,032 |
| Player 2's number of minor people in charge | | | | | | | | | 0,022 | | 0,027 |
| 1 if Player 2 is unemployed | | | | | | | | | -0.187+ | | -0,163 |
| 1 if Player 2 considers herself black | | | | | | | | | | -0,024 | -0,067 |
| 1 if Player 2 considers herself indigenous | | | | | | | | | | -0,149 | -0.176+ |
| Constant | 0.261* | 0.186* | 0.410* | 0.394* | 0.388* | 0.572* | 0.401* | 0.686** | 0.498* | 0.379* | 0.471* |
| Interactions | 455 | 455 | 455 | 455 | 455 | 455 | 455 | 455 | 455 | 455 | 455 |
| R-squared | 0,05 | 0,066 | 0,076 | 0,047 | 0,095 | 0,094 | 0,064 | 0,125 | 0,094 | 0,052 | 0,116 |

+ significant at 10%; ** significant at 5%; * significant at 1%    A Cluster with Player 2's decisions is included.    Source: Authors.