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"DISCRIMINATION IN THE PROVISION OF SOCIAL SERVICES TO THE POOR: A FIELD EXPERIMENTAL STUDY"

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Abstract

We use an experimental field approach to understand better the pro-social preferences and behavior of both individuals involved in the provision of social services (public servants) and the behavior of those potential beneficiaries, the poor. We conducted field experiments using the Dictator, Ultimatum, Trust and Third Party Punishment games, and a newly designed Distributive Dictator Game. With these, we want to understand the traits and mechanisms that guide pro-sociality including altruism, reciprocal altruism, reciprocity, trust, fairness, inequity aversion, and altruistic (social) punishment. We recruited in Bogotá, Colombia more than 500 public servants and beneficiaries from welfare programs associated with health, education, childcare and nutrition. The overall results replicate the patterns of previous studies with these experimental designs, that is, individuals showed a preference for fair outcomes, positive levels of trust and reciprocity, and willingness to punish -at a personal cost, unfair outcomes if against themselves or if against third parties. By using more information about our participants we were able however to explain the observed variations in these behaviors. The results provide evidence that the poor trigger more pro-social behavior from all citizens including public servants, but the latter show more strategic generosity by graduating their pro-social behavior towards the poor depending on attributes of the beneficiaries or recipients of offers in these games. We observed a bias in favor of women and households with more number of dependents, but discriminatory behavior against particularly stigmatized groups in society such as ex-combatants from the political conflict, or street recyclers[2].

Keywords: Distributive dictator game, Dictator Game, Ultimatum game, Trust Game, Third-Party Punishment game, pro-social behavior, public officials, field experiments.

JEL Classification: H3, H83, I3, D6, C93

DISCRIMINACION EN LA PROVISION DE SERVICIOS SOCIALES A LOS MÁS POBRES: UN ESTUDIO EXPERIMENTAL EN CAMPO

Resumen

En este estudio utilizamos un enfoque experimental en campo para estudiar las preferencias sociales y el comportamiento de los individuos involucrados en la provisión de servicios sociales hacia los más pobres, incluyendo servidores o funcionarios públicos y los beneficiarios de estos servicios. Realizamos experimentos en campo usando los juegos de Dictador, Ultimatum, Confianza y Castigo de Terceros, así como un Nuevo juego diseñado para el proyecto denominado el Dictador Distributivo. Con estos juegos queremos comprender los elementos y mecanismos que guían el comportamiento pro-social incluyendo altruismo, altruismo recíproco, reciprocidad, confianza, justicia y equidad, aversión a la desigualdad y la sanción social (altruista) de terceros. Convocamos en Bogotá, Colombia mas de 500 servidores públicos y beneficiarios de las poblaciones mas pobres en programas de bienestar social asociados con la salud, educación, cuidado de niños y nutrición. Los resultados generales replican los patrones observados en estudios previos con estos diseños experimentales tales como las preferencias por resultados justos, niveles positivos de reciprocidad y confianza, y la disponibilidad a sancionar –a un costo personal, resultados injustos hacia si mismos y hacia terceros. Al utilizar mas información personal acerca de los participantes pudimos sin embargo explicar una fracción superior de la variación en el comportamiento. Los resultados sugieren que la pobreza genera un comportamiento más pro-social que en los controles, pero los servidores públicos muestran un comportamiento más estratégico hacia los más pobres al graduar su generosidad en función de los atributos de los beneficiarios de las ofertas en estos juegos. Observamos un sesgo a favor de las mujeres y de hogares con mas número de personas dependientes, a favor de los desplazados, pero también observamos comportamientos discriminatorios contra de grupos particularmente estigmatizados en la sociedad como los excombatientes del conflicto armado, o los recicladores de las calles.

Palabras clave: Juego de Dictador Distributivo, Juego de Dictador, Juego de Ultimátum, Juego de Confianza, Juego de Castigo de Terceros, comportamiento pro-social, servidores o funcionarios públicos, experimentos económicos en campo.

Clasificación JEL: H3, H83, I3, D6, C93

I. Introduction.

The state provision of social services to the poor is contained in an exchange relationship where one could expect that a local officer, representing a 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, these state's priorities are supposed to reflect the social choice preferences of the citizens-voters with respect to redistribution and help to the poor.

Because of the nature of such 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 the local officers deliver services that are not compatible with the social welfare function. For instance, the providers may include particular groups that should not receive the 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 the social programs. These traits and mechanisms, we believe, capture most of the important aspects of pro-social behavior over which is founded a 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 to understand behavior in social exchanges where there is room for strategic use of private information creating potential losses in social efficiency and equity. Such is the case when agents (e.g. public officials) have to deliver services to the poor on behalf of the principal (e.g. policy makers 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) aimed at capturing 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 both aspects that should and others that should not guide the allocation of resources, e.g. level of education or number of dependents vs. race or marital status. The discretion on the part of the public officials might discriminate against certain groups creating social losses in terms of equity and efficiency in the allocation of scarce public resources. Secondly, the poor being presently 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 according to their race, ethnicity, occupation, marital status or other particular conditions (e.g. being displaced (*desplazado*) from violence to the city).

With the experimental designs and the collection of data we did for the subjects pools recruited we are able to capture a significant amount of these aspects at the foundations of the motivations for public officials when allocating resources, and the motivations of the poor when expressing their expectations and observing their realized outcomes both outside our lab and during our experiments.

We designed a battery of five two-person games where there are players 1 who represent public officials who allocate resources to provide social 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 with 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, the streets and 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 as anti-social. These third players were recruited among the overall population.

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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 or not player 1 when the latter has acted unfairly against player 2.

The target sample of people that participated in the study comes from public officials working for different government organizations and from beneficiaries from education, health, nutrition and childcare programs in different geographical locations of the city of Bogotá. The data for the entire set of experimental and survey data contains information from a total sample of 513 subjects who did attend the entire set of experimental activities. We recruited a total of 568 people but 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, 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 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. In average each participant in the role of player 1 were paid US$6,60 and US$3.75 for 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,
    o Distributive justice towards the more vulnerable (favoring the weakest or more in need);
    o Altruism (unselfish transfers towards others at one's cost);
    o Reciprocal altruism and reciprocity (willingness to treat others as one would expect towards self);
    o Trust followed by reciprocity (people being trusted showed higher levels of reciprocity by returning with positive returns the initial investment);
    o Social sanctioning (willingness to sanction third parties at a personal cost because of unfair behavior).
    o As in most experimental literature with non-students 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. This we believe provide evidence of
- 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 opened 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 less time under unemployment of players 2. Further, using a survey questionnaire for estimating an index of humanitarian-egalitarian preferences, and for protestant work ethics (Fong et.al. 2005; Kats & Haas, 1989), we found that our target public officials showed higher levels of these two indicators than their controls.

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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.

- 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:
  - Women, with larger numbers of dependents, more so if minors, received higher altruistic offers than men.
  - Black and indigenous people received higher or equal offers but never less offers than the rest of racial groups.
  - 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 anecdotic evidence of stigmatization and suspicion towards certain activities.
  - 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 socio-demographics characteristics of these particular samples.
  - In fact we found a systematic discrimination against excombatents 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 excombatents.
- 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 in 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; Cardenas and Carpenter, forthcoming). However, we have explored a particular context of social exchange in which states undertake tasks of helping the poor through decisions of local officials and how their individual preferences may affect the outcomes.

II. 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, make them 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. 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 in two major approaches, 'statistical discrimination' (Arrow,1973; and 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

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

labor contracts and job application processes. Race and gender have been 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 and having some of the characteristics for which individuals are discriminated against and excluded, coincide. Indigenous and afro-descendent frequently appear among the poorest and excluded in the Latin American region, and therefore are more vulnerable. Migrants (*campesinos*) from the rural areas 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 most unequal regions but also one of the most diverse in terms of race, ethnicity, social backgrounds, imposes special challenges with respect to discrimination and social exclusion. Also, the region is suffering a dramatic transformation in terms of their urban-rural dynamics that create particular problems we are 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 that expand the metropolitan areas 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. Much of those programs labeled as SISBEN[6] (Irarrázabal, 2004) are in place in 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, there is room for discrimination and exclusion. Irarrázabal (2004) does recognize this as one of the two risks of these indices of focalization of beneficiaries when some individuals that should be included, remain excluded, when manipulation of the information emerges. His estimations might suggest that at least for the cases of Chile and Colombia there might be room for suspecting such problems. Some of these could occur because of discrimination, but the evidence cannot be used to support. Nuñez 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, displaced from violence and also households heads with low levels of education.

Gaviria and Ortiz (2005) provide statistical evidence for Colombia suggesting that minorities may be asymmetrically attended, for instance, in the subsidized health program. Using self-reported data for ethnicity, they find that indigenous have higher likelihoods of being included

[6] Sistemas Unicos de Informacion Sobre Beneficiarios en America Latina

in the state subsidized health program[7] than afro descendants or blacks, 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 blacks. Also, indigenous have a longer tradition of social cohesion and organization to claim their rights with the government than afro descendants who only during the new constitutional process have shown attempts for social organization and collective action. Still there is the possibility that discrimination explains a process where blacks are less likely to enter the social protection program given the steps involved in targeting, affiliating and delivering the services.

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.

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 the 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 CVs 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 as not only being identified as black decreased the probability of getting an interview, but also the marginal gains from other characteristics like education and home location would matter more strongly if you had a white name. However, their results would be limited for explaining the behavioral process in the minds 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. But the contract between officials and the electorate is incomplete and subject to asymmetries of information. Further, the individual preferences of those in government and executing the programs are unobservable in many cases.

Particularly if we recognize that we are in a world of imperfect markets and public goods problems, the role of the state through their representatives' behavior and preferences is crucial. As eloquently said by Bowles & 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."*.

III. Motivations from the field.

Previous to the experimental sessions, we visited at least two important sources of data regarding violations of constitutional rights based on discrimination. One is the Constitutional

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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"

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 argue 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 the purpose of this study and based on the results, we introduce in 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 the society's preferences, but there are characteristics that may bias behavior towards discriminatory outcomes and against the constitutional mandate.

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 such allocation will affect the well-being of the beneficiaries. In some cases, the latter will have room for strategic responses that may affect their own outcomes or even the outcomes of the local officers.

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

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[10] The Constitutional Court has a number of sentences emerging from 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 an 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 a registration as a displaced (to obtain the *Sistema Único de Registro de Desplazados*); 4) people who has been treated with no reason for health care institutions.
The Colombian Ombudsmen (*Defensoría del Pueblo*) has 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 1123 that described possible circumstances in which poor people could have experienced discrimination by the local officials, who attend in the provision of social services. In the diverse cases of discrimination, there were 52% that dealt with institutions that provide health, 20% referred to institutions of education, 20% stressed problems with surveyors who made SISBEN survey, 6% illustrated claims with institutions that provide nutrition and 2% showed impasses with child care institutions. Trying to see socio-demographic features that present people who are discriminated we found the following: 64% of people who displayed denounces were women, 46% were unemployed or working at their houses, 9% were displaced citizens, 30% were handicapped citizens, 7% belonged to people who are from other parts of the country or fit in an indigenous or black group.
[11] "*Reinsertados*" is a common name used to identify ex-combatants from irregular armed forces and who are in a process of reinsertion into civil life through government programs that provide support of various kinds.

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 that assign resources to benefit recipients 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 may be more tolerant to unfair or unequal allocations. If in equilibrium such norms are replicated and widely spread, local officials can find morally acceptable to act accordingly and sustain the levels of discrimination without personal costs.

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 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, such process can be affected by discrimination against certain social groups (e.g. racial or ethnic). Such discrimination, which in theory should not occur if the programs are designed in accordance to the constitutional mandate, can in fact happen in the process because of the discretionary role that the 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 such 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 having 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 type of interactions, just from a different stand point. Nevertheless, decisions remain private and confidential, maintaining the discretional nature of the allocation decisions on the part of the

public officials as well as response strategies on the part of beneficiaries. The five experiments selected are next, followed by the reasons for them to be included in our design:

- **(DDG) Distributive Dictator Game[12]**: Player 1 gets 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 1 to 5 possible payments. The random number of vouchers between 1 and 5 will decide the first N players 2 who will receive the $10. The remaining players get nothing. Player 1 observes cards for the five players 2 that include a picture of the face, and basic demographic and socio-economic conditions of the player.
  - ○ With this game we aim at measuring preferences for distributive justice, mediated by the characteristics of the beneficiaries, including those not associated to deservedness but discrimination.

- **(DG) Dictator Game (Kahneman, Knetsch and Thaler 1986; Forsythe et al. 1994)**: Player 1 decides over the distribution of a fixed amount of $20 and sends a fraction to player 2 who receives such amount. Player 1 keeps the remaining part for herself.
  - ○ 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 (Guth et.al 1982):** Player 1 (proposer) decides over the distribution of a fixed amount and sends a fraction to player 2 (responder) who receives such amount. If accepted by the responder, the distribution happens, if rejected both players receive zero and the money returns to the experimenter.
  - ○ The Ultimatum Game provides information about equity, reciprocal fairness and reciprocity as mechanisms to enforce social norms. Negative reciprocity and conformism can be critical to 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 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.
  - ○ The Trust or Investment Game offers critical information about trust and trustworthiness, critical in the augmenting of 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.
  - ○ 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 5

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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 (U.Texas at Dallas).

games, and all players 2 were involved in each of the 5 games. Players 3 participated only on the last game (3PP). Next we describe in detail how the experimental sessions were run.

In the appendix we have included a detailed description of the experimental design of one session and details about the lab setting, and our samples. Protocols are available from the authors.

IV. Data and Results

Our sample of participants

We contacted a total of 568 people as players 1, 2, and 3, including both target and control subjects. A percentage of them did not show up for the next stage of the study where we conducted the actual experiments. Of the total 568 recruited, 55 people (9.7%) did not show up for the game stage although they had received a Col.$2,000 as part of the show-up fee and as a 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 for unexpected events with family or work, or manifested to friends or other participants that they did not believe this was for real or it was a hoax[13]. Notice in the table that almost 18% 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 probably would find more reasons to show lack of credibility for this exercise.

As a summary of the five games or activities, the following table 1 illustrates the number of observations obtained in our sample, the players involved and the Nash equilibria prediction for each game if we based a behavioral prediction 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	1130	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$2490,66 (Monthly mean average for May to July 2006. http//:www.banrep.gov.co)
Source: Authors.

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 over both efficiency and equity when choosing or not 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 variation in these decisions could be explained by the attributes of the participants in the experiments.

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

Average offers: target vs control groups.

The following graph with four panels compare the results of average amounts offered by players 1 to player 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 graphs 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, and reported in Cardenas and Carpenter (forthcoming). The upper left panel (target-target) corresponds to the interactions where both the 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% to 60% 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 or not 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 in 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 exemption.

Figure 1. 2x2 Offers and Expected amounts of money
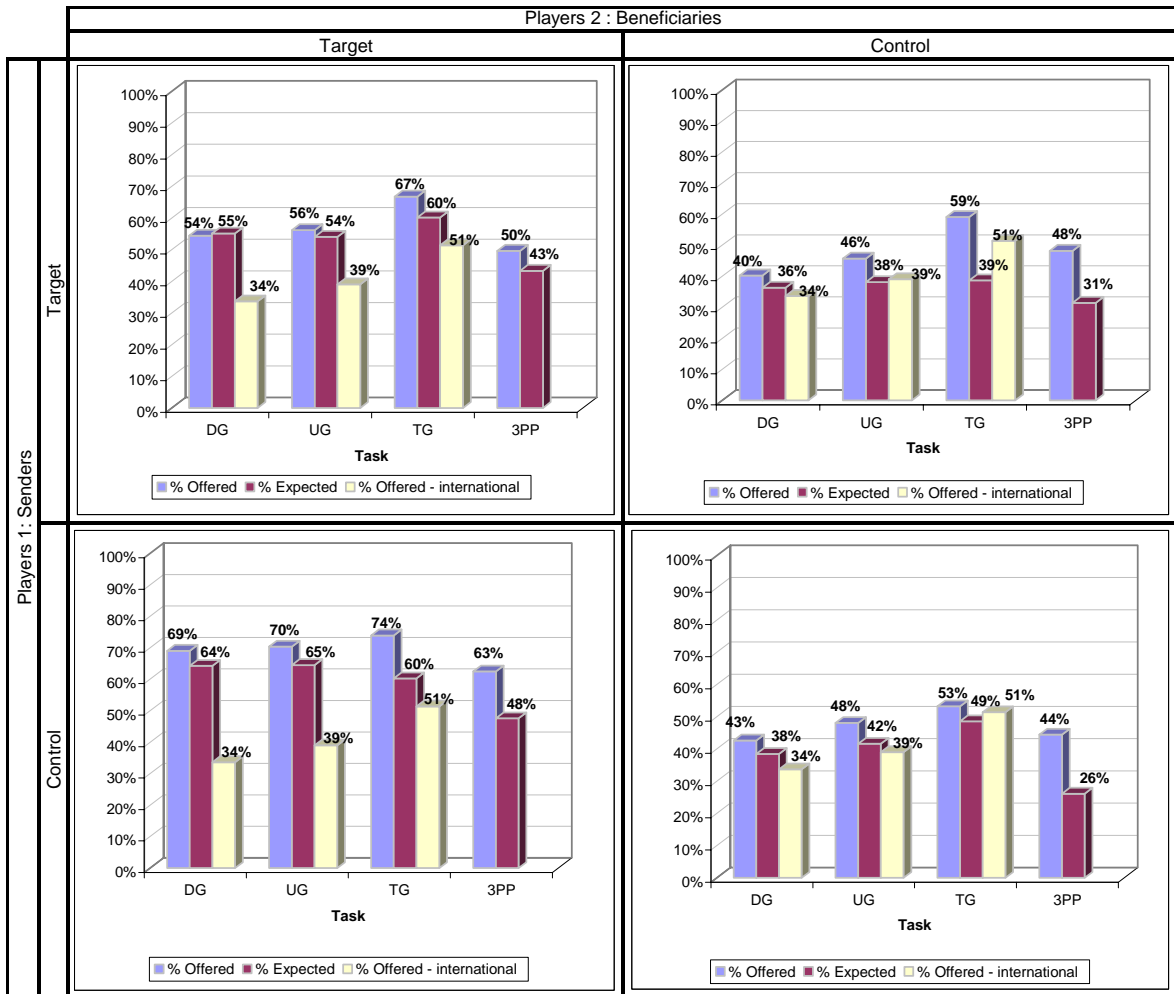
Source: Authors. International offers were calculated through data presented by Carpenter & Cárdenas (2006).

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 check 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 4 treatments design seems 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 send 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 have equivalent expectations as target players 2 since they expected less money from target players 1 than control players 1. It is still open to inquiry weather lower expected offers by target players 1 were based on pro-social

motivations on the part of players 2, or from 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. But the offers for control players 2 are not so far from the international reports.

Were expectations met regarding offers?

In general, we can observe that Players 2´s expectations about 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.

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

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, if compared 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
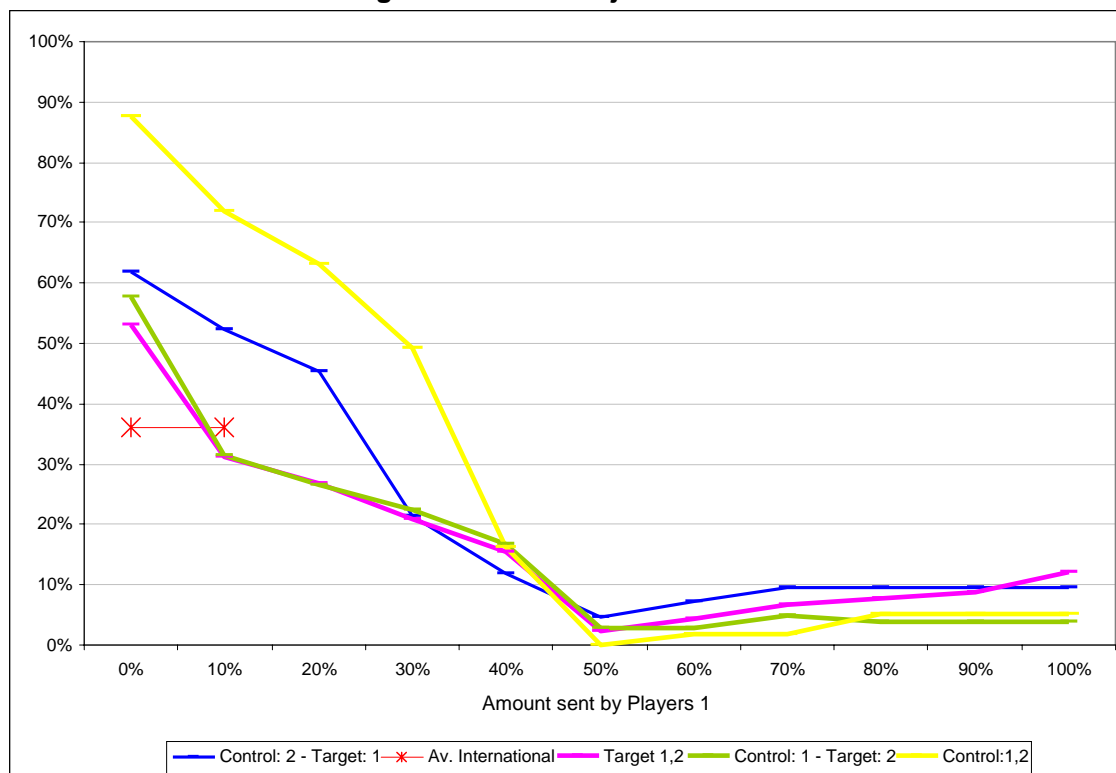
Source: Authors. The average of international rejections was calculated through data presented by Carpenter & Cárdenas (2006).

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 rejection rate slightly increases with offers being excessively generous (See Henrich et.al (2005) for a discussion on hyper-fairness around small scale societies).

Further, we observe a higher level of rejection rates for the treatment where both players1 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 the 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.

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 et.al 1995; Carpenter and Cardenas, 2006). In average trust from player 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 target players 2 claiming more rights over the transferred amounts given the framing of the experiment where these transactions were capturing social service provision programs towards the poor. But also interesting, notice 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.
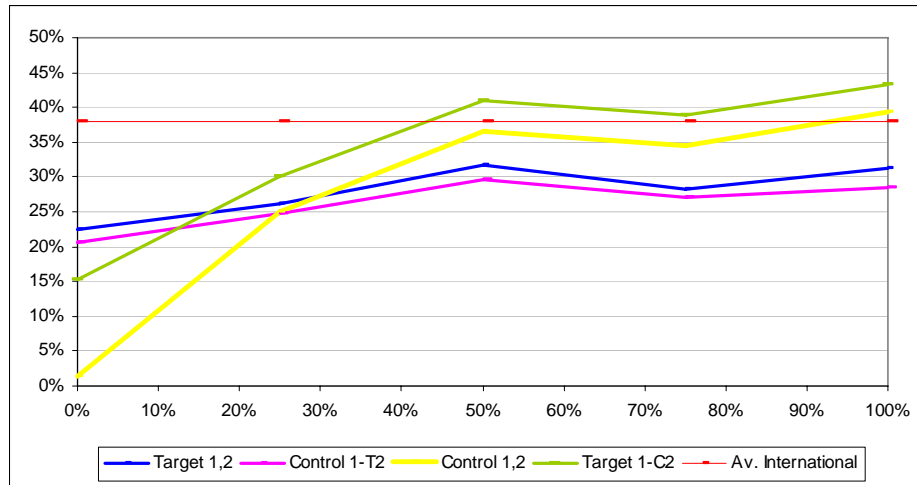
Third party punishment: altruistic punishment

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 among the overall population, including and non-students 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
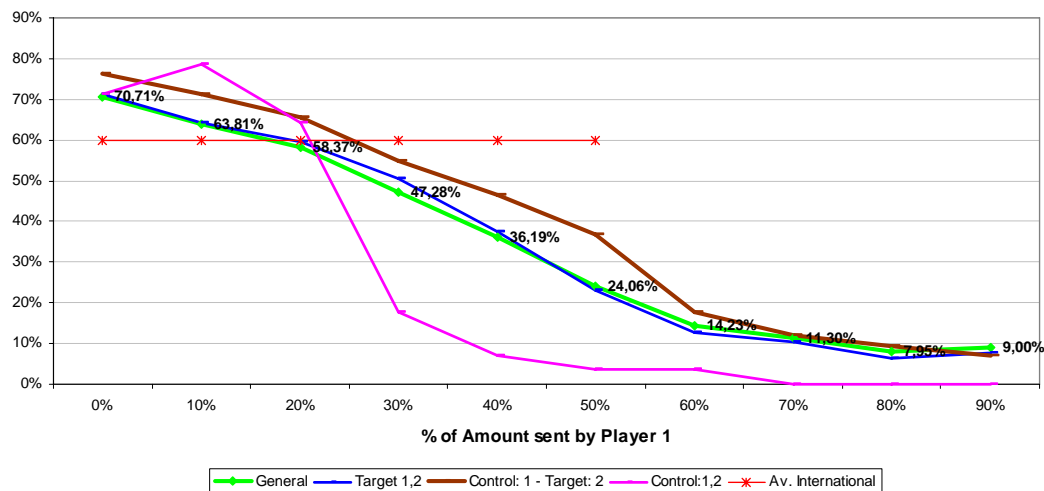
The results are also consistent with existing literature on this game (Henrich et.al (2006); Fehr et.al (2004)). Third parties are willing to sacrifice their own personal material income to punish unfair behavior by reducing the income of those originating in their actions unfair actions towards others. The rate of rejection starts at a level of 70% 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 remains 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 that consider punishable that players 1 would not send most of their endowments. This result would complete the overall picture of socially accepted norms of fairness towards the poor and that citizens would reject and even punish unfair behavior.

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 % 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.

		Method	OLS		
		Dependant 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 a 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´s - 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.

Method							OLS						
Dependant 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*	
Player 2's data — 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 a 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	
Player 2's data — 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 a 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.

TABLE 5.

	Method							OLS						
	Dependant 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	
Player 2´s data — 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 a 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	
Player 2´s data — 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 a 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.

TABLE 6.

	Method	OLS											
	Dependant 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
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 a 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 a 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**	-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.

TABLE 7.

	Method	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Dependant Variable	*OLS — Percentage of the allocation offered by Player 1 to Player 2 in 3PP*												
Independent Variables														
1 if player 1 is Target		-0.006	0.036					-0.301+	-0.03	-0.294				
1 if player 2 is Target		0.138*	0.134**											
1 if player 1&2 are Target		-0.123**	-0.115**								-0.192	0.002	-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	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**		0.002	0.002	0.003		0.006	0.004		0.004	
1 if Player 2 is single				0.013		0.023	0.024	-0.026		0.002	-0.036		-0.035	
1 if Player 2 is in common law				-0.035		-0.02	-0.037	-0.142+		-0.174+	-0.151+		-0.142+	
Player 2´s years of education				0.005		-0.002	-0.018	-0.035		-0.013	-0.031		-0.028	
Player 2´s number of minor people in charge				0.005		-0.003	-0.01	-0.041		-0.051	-0.036		-0.05	
1 if Player 2 is unemployed				0.081**		0.057	0.051	0.075		0.102	0.072		0.091	
Discriminatory — 1 if Player 2 considers herself black					-0.006	-0.011	-0.019		-0.114	-0.086		-0.133**	-0.097	
1 if Player 2 considers herself indigenous					-0.049	-0.017	0.001		-0.171	0.01		-0.125	-0.045	
1 if Player 2 is a Displaced					0.077**	0.058	0.058		0.05	0.086		0.112*	0.084+	
1 if Player 2 is an Ex-combatant					-0.090*	-0.035	-0.073		0.003	0.067		-0.060+	-0.009	
1 if Player 2 is a Recycling worker					-0.062	-0.018	-0.03		0.045	0.207		-0.004	0.018	
1 if Player 2 is a Street vendor					0.007	0.005	0.163		0.042	0.036		0.056	0.048	
Games — Percentage of the allocation expected by Player 3 from Player 1 in 3PP				0.073	0.097+	0.074	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		-0.036				
Player 2´s age								0		-0.005				
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		-0.078				
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	-0.014				
1 if Player 2 is a Displaced									0.056	-0.001				
1 if Player 2 is an Ex-combatant									-0.102	-0.144				
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												0.106	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*	0.312*	0.481*	0.359*	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		0.044	0.14	0.128	0.072	0.136	0.16	0.175	0.134	0.2	0.178	0.124	0.194	0.102

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

TABLE 8.

	Method	Probit		
	Dependant 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
Player 2´s data — 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 a 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.

V. Lessons based on the results

There are some lessons 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 do expect that our recipients trigger generosity and pro-sociality in general by our providers, both public officials and controls. A study by Pablo Brañas (2006) does confirm that framing and the attributes of the recipients of Dictator Game experiments does matter a lot. 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 Brañas strongly framed 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 do show some particular behaviors that seem to respond to the individual attributes of the senders and the recipients.

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 in general and confirm 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 against it, increasing concern.

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 dependants. 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 a political context and a recent constitutional mandate by the Constitutional Court.

On the other hand there are certain attributes of recipients that decreased pro-social behavior by players 1, and have to do with occupation, marital status and background, all which should not be subject to differentiated or discriminatory treatment: being an ex-combatant, a street recycler, street vendor or in common law decreased generosity from players 1. Interestingly, people in common law showed also lower expected 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 be in 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. Or instead, it might be important to reduce or hide the amount of information collected about 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 working on informal garbage recycling activities is significant in major cities[15]. Such population suffers from particular conditions of vulnerability regarding affiliation to social services, household basic conditions and access to health and education. Meanwhile, there is a cultural stigma towards them confirmed in our results that deserves further attention. Despite the stigma it is interesting to notice that their activity and income sources is not based on altruistic transfer (such as begging) but on self-employment and the provision of environmental services (recycling and reduction of disposed garbage); further, they have been working with government and non government organizations in the strengthening of self-governed 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 to civil life based on welfare programs. But such programs run against the social norms 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 ambient climate of the junction of the country with respect to the search for peace and negotiations within an ongoing conflict.

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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.

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APPENDIX

i. 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 twelve sessions were the most critical and showed us all those differences and the need to implement changes in order to adjust the protocols, the recruitment plan, the conducting of the experiments and the payments after the exercise to be successful.

One of the main issues we managed was that a lot of players 1 were inaccessible due to bureaucratic obstacles to access to the public institutions. And in case we crossed the obstacle a lot of them 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 the officers of the social services facilitated the contact.

There were cases in which players 1 accepted to participate in the study and after they filled out the social preferences survey, they refused to participate. Then we had to reaffirm the nature of the study and the use of the information.

With players 2 we also had difficulties: some player 2 did not believed us, others did not want to be photographed, and 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 phone number or the give us false contact information). On one hand, the target group had particular characteristics to take into account: most of them din not have a phone number or contact information. It was necessary to give a snack in the middle of the sessions. Most of the Players 2 had not had eaten and had to wait for two to three hours for the session to be completed.

The field assistants needed to be trained to face the extreme poverty of the recruited samples with calm and tolerance. Many players 2 belonged to vulnerable and exclude groups and the application of the demographic survey could bring them to their minds facts and sad memories (i.e. displaced people); some questions related with their past could infringe player 2's privacy (i.e. ex combatants). In addition, the level of education of the target players 2 and their unfamiliarity with some concepts and definitions concerned to the provision of social services made difficult the questions to be understood. That is a solid reflection of the seriousness of the problem of the ineffectiveness of the provision of social services. Finally, it was very important to keep a high level of caution in the recruitment of people from two vulnerable groups that are confronted by political conflict such as the ex combatants and the displaced people. In order to avoid any kind of altercation we chose the location as neutral as possible to both groups.

The neutrality of the experimenter is a permanent goal in mind because of the risk of bias in the individual's decisions when experimenters' provide cues to the participants. Given that,

experimental leaders supervised and followed the field assistant's proceedings not only inside the sessions but also in the recruitment process.

ii. 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 these design was very difficult to conduct because of the number of people who failed in showing up at the time and location we had appointed them. 4 sessions of 24 people each were conducted under the 24 people 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 equal to design II except for that there were more people recruited and attending such sessions and these 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 9. Stages for 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.

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

Table 10. 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 $2000 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 $4000 (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) Game decisions (Activity-5) J3s Matching of choices by J1s, J3s Payments and exit survey J3s	Workplace, streets, Campus	Pre-game demographics J3 Game choices J3s Game outcomes Receipts ($4000, show up fee) and post-game survey
Stage IV	Game decisions (5 activities) J2s Matching of choices by J1s, J2s Payments and exit survey J2s	Campus (70%) or centers for the attention of targeted populations (30%)	Game choices J2s Game outcomes Receipts and post-game survey, $2000 for bus
Stage V	Payments and exit survey J1s	Workplace	Receipts and post-game survey

For 12 people. Source: Authors.

iii. 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 $20,000 given as endowment for the pair. Player 2 decides weather to accept or reject such offer. Depending on such decision the funds are allocated as initially proposed and if rejected, no payment is made to either player.

Players 1 are in one location, they do not see Players 2 and it has been told that Players 2 are located in another place. They do not see each other at any moment and identities and decisions are kept confidential. Players 1 are seated in their desk and enter their decisions privately in their respective spots. Decisions are written in a decisions sheet (paper).
Player 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 asks the decisions verbally and write them in 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 3 different offers to three players 2. An illustrative example is shown below (See figure 1).

Figure 5. Lab Setting for the Ultimatum Game

Firts day **YESTERDAY** **Player 2** Invitation, Photo, Pre-game demographics $2000 for bus	Second day **TODAY** **Player 1** Invitation, Pre-game demographics, $4000 (show up fee) Game choices	Third day **TOMORROW** **Player 2** They assist to campus
	 Allocate $20000 Accept / Reject	
J2 Cards	Game choices J1 Cards	Game choices Game outcomes Receipts and post-game survey, $2000 for bus
Forth day	**Player 1**	Receipts and post-game survey

At the end of the session we selected randomly for each player at least one activity that will be paid in cash on top of the show up fee that is paid to cover the transportation costs of each participant. In average players were paid more than one activity, and this was common information for all players (See protocols in the appendix for details).

Previous to the decisions, players 1 and 2 received information about the other player in the particular interaction, through the cards mentioned before.

Figure 6. General Lab Setting

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

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

Site 2 (beneficiaries) Room 2 Campus

Campus (70%) or centers for the attention of targeted populations (30%) (20%)
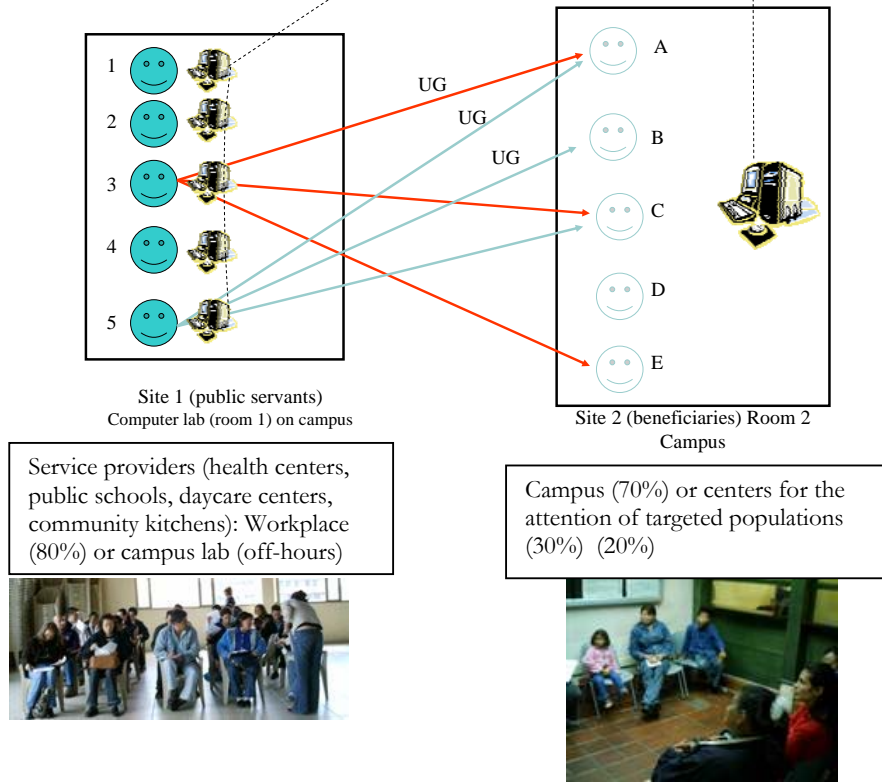
The information that each player had available of the other player in each interaction is shown in the table below:

Table 11. 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 obtained)
Occupation and time in it	Service provider (health, education, child care, food)
District, location and district stratification	
Number of dependents	Years working in it
Dependents that are minors	Position
Last year of education	
SISBEN	

Source: Authors

Based on such information, the players were asked to make their decisions in each of the games. Recall that each participant played the same game with 3 different people.

iv. 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. Most of the 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 that are already 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. For 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 4 types of agencies (education, health, child care and nutrition programs). As for the players 2, these 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, location of residence who can serve as control groups for both 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. Also we recruited local officials or employees for these government programs. Examples include health services for the poorest, 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 equivalent demographic characteristics as 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 or kitchens, run by the national or municipal state.

The confidentiality and privacy of data for the case 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 7. Recruitment of J1 in Bogotá by geographical location
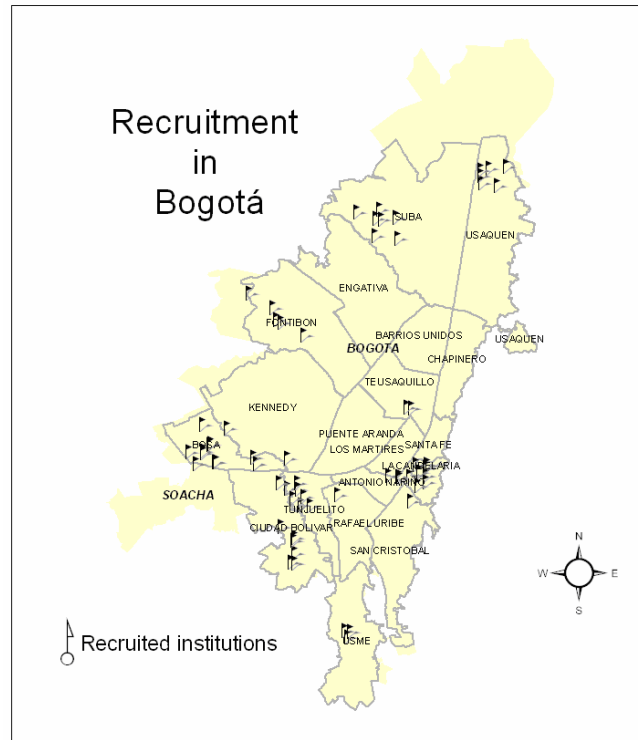
For players 2 the recruitment was made among the poor and more vulnerable groups around these and other locations in the city, based on existing stratification for the city.
The next table shows the geographical location (*localidad*) of the household for the entire sample of participants, and the percentages by player role.

Table 12. Geographical location of the household's attendants

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.

Table 13. 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.

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 14. 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.

Table 15. 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 16. 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. [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 17. 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 (Montly mean average for May to July 2006. http//:www.banrep.gov.co)

Source: Authors.

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

Table 18. 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.

v. Socio-Demographic Characteristics of the 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 19. Players 2 Characteristics observed by Players 1

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	Total personas a cargo	
Ninguno	3	
Último nivel educativo aprobado	Menores a cargo	
Básica secundaria	2	
Otro		
Desplazado		

			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

			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

Source: Authors.

Table 20. Players 1 Characteristics observed by Players 2

	Código Jugador
1	S15J10041
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	

	Only Target	N	%
Service Provider	**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
	Surveyors 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.

Payments

As mentioned before, 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 be 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 one of the other activities.

Table 21. 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.

The final earnings, without show-up fee, are reported in the next 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 22. 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]Any activity was not paid when the participant do not attend the session. These Earnings do not include the show up fee ($4.000 = US$1.60) paid to each participant.
Source: Authors.

vi. 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. That is, target-target, control-control, target-control and control-target.

Table 23. Social efficiency and equity in DG, UG, TG, 3PP

General						
Number of Observations		557	558	559	444	2118
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	1370
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 24.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Method						OLS					
Dependant Variable					*Percentage of the allocation expected by Player 2 from Player 1 in DG*						
Independent Variables											
1 if player 1 is Target	-0,023	-0,062				-0,229	0,006	-0,142			
1 if player 2 is Target	0.251*	0.234*									
1 if player 1&2 are Target	-0,066	-0,046							-0,252	0,02	-0,234
Player 1´s data — Socio-demographic											
1 if player is woman		0,03									
Age		0,002									
Player's level of education		0.012+									
Player's time worked multiplied by dummy of Target P1		0,004									
Player 1´s - Player 2's Household expenses per capita (in Colombian thousand pesos)		0	0.000**		0.000**	0		0	0		0
Player 2´s data — Socio-demographic											
1 if Player 2 is a woman			0,001		0,003	-0,045		-0,025	-0,032		-0,026
Player 2´s age			0		0,001	0,001		0,002	0,001		0,001
1 if Player 2 is single			-0.134*		-0.131*	-0,089		-0,06	-0,086		-0,09
1 if Player 2 is in common law			-0.111*		-0.102**	-0,138		-0,152	-0,128		-0,127
Player 2´s years of education			-0,018		-0,016	-0,051*		-0,046**	-0,054*		-0,050*
Player 2´s number of minor people in charge			0,005		0,004	-0,002		-0,017	0		-0,005
1 if Player 2 is unemployed			0.100*		0,096**	0,164+		0,177	0,163+		0,165
Player 2´s data — Discriminatory											
1 if Player 2 considers herself black				-0,018	0,015		-0,058	0,031		-0,05	0,006
1 if Player 2 considers herself indigenous				-0,053	-0,099+		-0,036	-0,028		0,007	-0,041
1 if Player 2 is a Displaced				0.125*	0,035		0,207**	0,115		0,116*	0,038
1 if Player 2 is an Ex-combatant				-0,007	0,04		0,023	0,013		-0,015	0,019
1 if Player 2 is a Recycling worker				-0,006	-0,007		0,187+	0,202		-0,014	0,003
1 if Player 2 is a Street vendor				-0,006	-0,01		-0,009	-0,016		-0,017	0
Dummy of Target P1 per P2's data											
1 if Player 2 is a woman						0,048		0,026			
Player 2´s age						-0,001		-0,001			
1 if Player 2 is single						-0,045		-0,073			
1 if Player 2 is in common law						0,044		0,067			
Player 2´s years of education						0,054**		0,048+			
Player 2´s number of minor people in charge						0,007		0,026			
1 if Player 2 is unemployed						-0,074		-0,082			
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							0,059	-0,014			
1 if Player 2 considers herself indigenous							-0,01	-0,075			
1 if Player 2 is a Displaced							-0,109	-0,115			
1 if Player 2 is an Ex-combatant							-0,043	0,029			
1 if Player 2 is a Recycling worker							-0.224**	-0,238			
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									0,041		0,029
Player 2´s age									0		0
1 if Player 2 is single									-0,034		-0,031
1 if Player 2 is in common law									0,039		0,035
Player 2´s years of education									0,075*		0,070*
Player 2´s number of minor people in charge									0,004		0,007
1 if Player 2 is unemployed									-0,079		-0,091
1 if Player 2 considers herself black										0,054	0,031
1 if Player 2 considers herself indigenous										-0,069	-0,039
Constant	0.382*	0.250*	0.661*	0.516*	0.618*	0.805*	0.513*	0.684*	0.776*	0.508*	0.746*
Interactions	578	578	578	578	578	578	578	578	578	578	578
R-squared	0,098	0,125	0,115	0,047	0,131	0,141	0,062	0,165	0,141	0,051	0,153

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

A Cluster with Player 2's decisions is included.

Source: Authors.

TABLE 25.

	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		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 26.

	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
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.

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TABLE 27.

	Method				OLS							
	Dependant Variable				*Percentage of the allocation expected by Player 3 from Player 1 in 3PP*							
Independent Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
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.