



*INTER-AMERICAN DEVELOPMENT BANK  
BANCO INTERAMERICANO DE DESARROLLO (BID)  
RESEARCH DEPARTMENT  
DEPARTAMENTO DE INVESTIGACIÓN  
WORKING PAPER #668*

**DO WELFARE PROGRAMS DAMAGE  
INTERPERSONAL TRUST?  
EXPERIMENTAL EVIDENCE FROM  
REPRESENTATIVE SAMPLES FOR FOUR LATIN  
AMERICAN CITIES**

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**INTER-AMERICAN DEVELOPMENT BANK**

JANUARY 2009



**Cataloging-in-Publication data provided by the  
Inter-American Development Bank  
Felipe Herrera Library**

Chong, Alberto.

Do welfare programs damage interpersonal trust? : experimental evidence from representative samples for four Latin American cities / by Alberto Chong, Hugo Ñopo, Vanessa Ríos.

p. cm. (Research Department Working Papers ; 668)  
Includes bibliographical references.

1. Public welfare—Latin America. 2. Welfare recipients—Latin America. 3. Interpersonal relations—Latin America. 4. Social capital (Sociology)—Latin America. I. Ñopo, Hugo. II. Ríos, Vanessa. III. Inter-American Development Bank. Research Dept. IV. Title. V. Series.

HV110.5 .C47 2009

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Washington, DC 20577

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## **Abstract\***

This paper argues that welfare programs are linked with the destruction of social capital, as measured by interpersonal trust in laboratory games. The paper employs experimental data for representative samples of individuals in four Latin American capital cities (Bogota, Lima, Montevideo, and San Jose), finding that participation in welfare programs damage trust. This result is robust to the inclusion of individual risk measures and a broad array of controls. The findings also support the notion that low take-up rates may be due to stigma linked with trust and social capital, rather than transaction costs.

**JEL Classification Code:** D01, O12, O10

**Key Words:** Experiments, Surveys, Social Programs, Trust, Stigma, Latin America

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## **1. Introduction**

More than ever, social welfare programs are playing a critical role as a policy instrument to help cushion the negative impact of market frictions or failures, macroeconomic downturns and structural adjustment on the poor. The proliferation of such programs in developing countries in particular, such as cash transfers, nutritional programs, educational programs and the like, have been heavily employed by policymakers under the premise that they will help the poor transition through rough economic conditions. In fact, the abundance of welfare programs in the developing world has inspired numerous academic papers that seek to evaluate their impact and effectiveness which, in turn, has generated ever-improving waves of new such programs aimed at better targeting the neediest.

Whereas social programs have become widely accepted as a tool to effectively reach and positively impact the poor, there is a debate on the issue of stigma related to such programs, which has been posed as a possible explanation for the fact that take-up rates tend to be much lower than the eligible population (Moffitt, 1983; Levinson and Rahardja, 2004). As important as this issue may be, a rather relevant related question—and one largely overlooked by policymakers and economists alike—is that stigma resulting from participation in welfare programs may well be linked with additional negative externalities. Of particular importance is the destruction of trust and social capital, as repeatedly shown in research in other disciplines such as social psychology and sociology. In fact, researchers in these disciplines have long studied the issue of stigma and its impact in terms of social interactions (see, among others, Crocker, Major, and Steele, 1998, and Watson and Corrigan, 2003). In particular, they have distinguished between public stigma, or ways in which the general public reacts to stigma attached to a group, and self-stigma, or the reactions which individuals turn against themselves because they are members of a stigmatized group (Augoustinos and Ahrens, 1994; Judd and Park, 1993; and Krueger, 1996). They have also identified several behaviors associated with public stigma, all leading to discrimination, prejudice, and loss of trust and social capital. According to this literature, stigmatized individuals are blamed for their handicaps, which are seen as arising from problems of their own creation. Thus, help is withheld and avoidance follows as people choose not to interact with a stigmatized person, as she is believed to be responsible for her lot in life (Watson and Corrigan, 2003). Furthermore, stigmatized individuals are viewed as incompetent and thus requiring authority figures to care for them, which also leads

to prejudice as well as discrimination (Hilton and von Hippel, 1996; Devine, 1995; Crocker, Major and Steele, 1998). Isolation and difficulties in social interactions thus follow, which leads to a loss in trust and social capital (Stuber et al., 2000; Watson and Corrigan, 2003).

Individuals from stigmatized groups tend to be aware of the beliefs about their groups so much that a sizeable fraction of them interiorize the stigma and apply it against themselves. As a result of this sort of self-stigmatization, they end up suffering diminished self-esteem, self efficacy, and isolation (Bowden, Schoenfeld, and Adams, 1980; Kahn, Obstfeld, and Heiman, 1979; Gronfein, Owens and Wright, 2000). As in the case with public stigma, people perceiving or feeling stigmatization are less likely to interact with other individuals, which reinforce the negative feelings of the stigmatized to the point that sentiments of marginalization, hatred, resentment, and lack of trust become predominant. Paradoxically, entitlement programs that are designed to help excluded groups of people may end up further marginalizing them as the social construct or social capital of the society becomes structurally damaged.

Along the lines above, in this paper we focus on the possible link between participation in social welfare programs and interpersonal trust as a result of individual stigma associated with participation in such programs. To do this, we employ new data from specifically designed experimental games, in four Latin American capital cities, namely, Bogota, Lima, Montevideo, and San Jose. While the experimental literature so far has placed great emphasis on experimental protocols and design, it has not yet put enough attention on the sampling design that would grant external validity to the results. In this paper we employ samples for the four cities cited above that are extracted following sampling procedures guaranteeing representativeness at the city level. In addition, participants respond to a specifically designed survey to capture basic socio-economic characteristics as well as the type and extent of the social programs, if any, in which they are enrolled. In order to place the focus of our research squarely on our question of interest, we explicitly apply a simple, well-known, and straightforward trust game where a “tried and true” protocol and methodology has been widely applied, and where the expected findings of such a game are considered well established in the literature (Burks et al., 2003; Berg et al., 2005; Levitt and List, 2007)

The paper is organized as follows. The next section describes the sample and the experimental design. Section 3 describes the empirical methodology applied. Section 4 provides

evidence on the possible link between participation in social programs and interpersonal trust. Finally, Section 5 summarizes and concludes.

## **2. Data**

The full sample consists of more than 2,000 individuals from Bogota, Lima, Montevideo and San Jose.<sup>1</sup> Not only do we believe that this is the most comprehensive experimental dataset in the region to date, but also a unique one, since the samples are representative at the city level. In particular, the data collected combine detailed socio-economic and demographic background with behavioral information.

The samples were selected using a stratified random sampling applied at the city level. The strata were chosen on the basis of education, average family income of the districts or the territorial units that make up each city, gender and age.<sup>2</sup> Each experimental session, which lasted between two and three hours, followed the exact same protocol, with the exact same sequence of activities as a team of researchers with experience in survey and field methods was selected to undertake the sample design and conduct the experiments and surveys in each city.<sup>3</sup> In order to guarantee homogeneity in the application of experimental protocols, researchers participated in a training workshop at the launching of this project in Bogota during the first quarter in 2007. This workshop provided a uniform approach to implementation and related fieldwork details such as sampling procedures, writing style and jargon in the Spanish protocol, timing of actions (i.e., invitations, pre-survey, experiments, post-surveys), elements to be included in experimental sessions and the construction of questionnaires (See Appendix 5 for further details).<sup>4</sup>

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<sup>1</sup> Buenos Aires and Caracas were also surveyed. However, these cities were excluded from our sample as the percentage of the population receiving social programs was too low compared to the other four cities and thus did not provide enough within-city variation. In fact, less than five percent of the population in Buenos Aires received social programs and less than ten percent in Caracas did so. In contrast, 16 percent of the population in San Jose and 54 percent of the population of Lima was enrolled in at least one social program. The overall results do not vary much when including these two cities, in particular Caracas. Appendix 1 provides information on individuals' participation in social programs and expenditures of countries.

<sup>2</sup> Age was grouped in four intervals: 17-27; 28-38; 39-59 and 60-72.

<sup>3</sup> The day of the sessions the participants were welcomed by teams in each city and at the agreed time sessions started. Following the batteries of experiments, participants completed a socio-economic survey. To reduce idiosyncratic measurement error due to individuals' reading ability, the surveys were administered by the coordinators of the experiments and supported by a group of pollsters especially trained for these purposes. After participants completed the surveys, the payoffs from the experiments were computed and the participants received their payments.

<sup>4</sup> A translation of the questionnaire and protocols, originally made in Spanish, is available from the authors upon request.

Information on the socio-economic composition of the groups in each particular session was made as the sessions progressed. The participants met throughout the session in one room where they were able to see each other, although they were not allowed to communicate during the session. During the recruitment process we avoided having two people who knew each other within one session.

The sessions consisted of four activities each, all played in the same order. For this paper we focus on the results of the first activity: a straightforward Trust Game, which was applied using the strategy method (Burks, Carpenter and Verhoogen, 2003; Carpenter, Harrison and List, 2005). As is well known, in this game session participants are randomly assigned in pairs: half assume the role of player 1 and the other half, that of player 2. Both groups are simultaneously located in different rooms, and identities of the pairs are never revealed, although each player receives information on key demographic characteristics of their partners (sex, age, schooling level and socio-economic stratum). Both players receive an equal endowment, and player 1 is then asked to decide how much of this endowment he or she wants to send to player 2, knowing that player 2 will then receive three times that amount on top of the initial endowment everyone initially receives. In another room, player 2 is asked to decide the amount to be returned to player 1 for each possible offer from player 1, from a discrete set of fractions of amounts sent (0 percent, 25 percent, 50 percent, 75 percent and 100 percent). Immediately before making their decisions, individuals are also asked to predict the decisions to be made by the other player, i.e., the amount expected by player 2 from player 1, and player 1's expected returned amount from player 2. After both players make their decisions, the matching of their choices is made. Replications of this game around the world have shown that people on average send half of the initial endowment to player 2, and that the returns from player 2 to player 1 generate a net positive return for player 1 of about 10 to 20 percent from what was originally sent (Carpenter, Harrison and List, 2005; Ashraf, Camerer and Loewenstein, 2005).

Provided that individuals' attitudes towards risk may be a crucial determinant of a player's offering in this game, we also use information from a related experimental activity based on the simple risk games first applied by Binswanger (1980) and later by Barr (2003). In this activity (which was the third activity of the experimental sessions), each player makes individual decisions over three games that measure individual attitudes on risk, ambiguity, and losses. In this paper we only use information that measures attitudes towards risk, derived from a



game where participants are given a set of outcomes for six 50/50 lotteries that go from a sure low payoff to an all-or-nothing higher expected payoff. The lotteries in between gradually increase both in expected value and in the spread between the low and high payoff. Based on the outcomes of this game, we classify participants into three groups: low, medium and high risk-aversion. We use this information as control variables in our empirical specifications.<sup>5</sup>

### 3. Methodology

Following the standard interpretation of the trust experimental exercise, we use the offer of the first player to the second player as our dependent variable. We include a vector of measures of welfare participation as our key variables of interest along with basic controls as described below. Thus, our reduced form follows the specification:

$$Offer_i = \alpha + \beta_1 X_i + \beta_2 Z_i + \beta_3 M_i + \beta_4 W_i + \varepsilon_i \quad (1)$$

where  $Offer_i$  represents the offer of the particular individual  $i$  in the trust game. As explained above, the outcome used in the empirical specifications comes from the offer of the first player in the trust game. In particular, we use the percentage of the initial endowment that player 1 offered to player 2. Additionally,  $X_i$  is a vector of individual characteristics that includes age, schooling, gender, and socio-economic level. Vector  $Z_i$  captures information obtained from the experimental sessions, in two dimensions: attitudes towards risk and (pre-game) expectations of the behavior of the matched players. The vector  $M_i$  contains socio-economic information on the matched players: we control for gender and for differences between the matched players in schooling, age, and socio-economic level. Our variable of interest,  $W_i$ , a measure of individuals' participation in social welfare programs, is defined in three alternative ways: (i) a simple dummy variable that captures whether the individual is participant in a social welfare program; (ii) a variable defined as the percentage of social programs (out of the list of social programs that the survey comprised) of which the participants are beneficiaries; and (iii) an index that ranges from 0 to 4 depending on the groups of social programs from which individuals receive benefits.<sup>6</sup> For example, if the participant is beneficiary of social programs related to only health and education,

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<sup>5</sup> The exclusion of these control variables among our controls, available upon request, delivers qualitatively similar results.

<sup>6</sup> The list of social programs is divided in four general groups: education, health, nutrition and child care. For more details, see Table 1. Appendix 1 shows coverage of social welfare programs by country

then his or her index will be 2. The exact definitions of these and all the other variables used in the paper are presented in Table 1. Finally,  $\varepsilon_i$  is a residual term.

Table 2 presents summary statistics. Table 3 shows simple pair-wise correlations including their corresponding statistical significance. Related to the basic characteristics of the sample, we find that the average age is 38, there is a reasonable gender balance in the sample (54 percent are women), 50 percent reside in a low socio-economic level neighborhood and 33 percent in a medium-level neighborhood, and almost 50 percent of the participants have attained incomplete secondary incomplete education or less (Cárdenas et al., 2008).

#### **4. Findings**

General findings from the experimental activities and the survey can be found in Cárdenas et al. (2008). As mentioned above, in this paper we focus on the outcomes of the trust game and their link to participation in social programs. Table 4 shows the results obtained for the first player's offer when running ordinary-least-squares regressions. All our regressions include city dummies and have robust standard errors that are computed clustered at the session level.<sup>7</sup> Participation in social programs is negatively linked to the amount offered by player 1, interpreted as a measure of trust from the individuals to their corresponding pairs. This result is statistically significant at conventional levels, and it is found regardless of the proxy employed to capture social welfare participation. Thus, our finding is consistent with the idea that social welfare beneficiaries are associated with lower levels of interpersonal trust, *ceteris paribus*.

On the other hand, most of the controls are not statistically significant, with a few exceptions. If the participant is female and the second player is male, the participant will make a higher offer compared to the case in which the first player is male and the second player is female. Furthermore, if the participant belongs to a higher socio-economic-level than the second player, then he or she will make an offer that is statistically significant higher. In line with previous results by Rabin (1993), the expectation of generosity of the matched individual (e.g., the second player) appears to matter as well. Finally, individuals with medium risk aversion appear to offer around seven extra percentage points to player 2, relative to individuals with low risk aversion.<sup>8</sup>

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<sup>7</sup> Results do not change when using ordered probits instead.

<sup>8</sup> Similar results are obtained when we repeat the exercise at the country level. Based on the last specification in Table 4, they are presented in Appendix 2.

One may argue about the endogeneity of participation in social welfare programs as an explanatory variable for interpersonal trust. At the extreme, one could argue that higher trust may drive higher participation in social programs. While the extent to which this may be the case is debatable, such a possibility cannot be ruled out. On the one hand, our OLS results show that participation in social programs appears to damage trust; and, on the other, it can be expected that more interpersonal trust drives higher participation in social programs. In order to correct for this we use an instrumental variables approach where the instrument chosen is the percentage of household members that receive labor income. Chances are that households with more members receiving labor income will have a lower probability of participating in social programs. In fact, the simple correlation between being a beneficiary of a social program, using any of our three measures of participation is about -0.3 (statistically significant at one percent). On the other hand, there appears to be no reason to expect that households with more working members will show different patterns of interpersonal trust in comparison to households with fewer working members. If there is such an effect, one may argue that such correlation could go in either direction, depending on the type of job, the individual match, or satisfaction with the job.<sup>9</sup> Finally, we apply corresponding under-identification LM tests on whether the equation is identified, namely, that the excluded instruments are relevant or correlated with the endogenous regressor. The null hypothesis is that the equation is under-identified. Our main results hold when using our instrumental variables approach, as shown in Table 5.<sup>10</sup>

We find that our three measures of participation in welfare social programs continue to yield coefficients that are negative and statistically significant at conventional levels. The instrumented estimators for the role of social programs in trust show higher magnitudes than the OLS estimators. With respect to the other control variables, we find that gender and socioeconomic level compared to the matched player, the return offer expected from the second player, and medium risk aversion are all still statistically significant.

We go a step further and explore the linkages between social program participation and interpersonal trust for three different domains separately: education, health, and nutrition programs.<sup>11</sup> The results are shown in Table 6. We find the same result of negative linkages

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<sup>9</sup> The simple correlation between our instrument and the percentage offered to player 2 is 0.051.

<sup>10</sup> First stages of all our instrumental variables regressions are presented in Appendix 3.

<sup>11</sup> We do not consider the category child care programs because of lack of variation. In fact, less than two percent of our sample indicates being enrolled in that type of program.

between trust and social program participation for two domains: education and health. Interestingly, the magnitudes differ considerably. However, the concern for endogeneity may also be raised for these results.

As before, we repeat the exercise of correcting possible endogeneity with instrumental variables. The results are shown in Table 7. Interestingly, not only do we confirm our findings with respect to education and health, but we also obtain a negative and statistically significant coefficient for the nutritional domain. The IV estimates deliver evidence of stronger linkages between social program participation and trust than the original OLS estimators. Based on these instrumental variables findings, it can be claimed that they are consistent with the fact that participation in certain welfare programs is viewed in different ways depending on the tradition of entitlement in a specific society. In Latin America, for example, basic free education is viewed as a right, typically written in the Constitution of the countries. In this sense, stigma associated with receiving educational programs, and even education-related goods, such as books or uniforms, is less than that associated with programs such as free milk for children, or government-subsidized health services.<sup>12</sup>

## **5. Summary and Conclusions**

We argue that welfare programs are linked with the destruction of social capital, as measured by interpersonal trust. To do this we employ experimental data for representative samples of individuals in four Latin American capital cities (Bogota, Lima, Montevideo, and San Jose). Our findings touch on the debate on whether low take up rates are due to transaction costs of stigma and provide supporting evidence that it is due to the latter for stigma has been linked with trust and social capital, but not with transaction costs. The results are robust to both the inclusion of individual risk measures and to changes in specification.

While, to the best of our knowledge, this is the first paper that addresses the issue of welfare participation and social capital, the policy implications of this research may be even vaster. On the one hand, promoting higher take-up rates would not necessarily be sound policy, as the tradeoff of damaging social capital would have to be taken into account. In the context of

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<sup>12</sup> For the sake of completeness, in Appendix 4 we run our reduced form (1) but employ the offer of the second player. Unsurprisingly, we find that in this case, social participation in welfare programs have no bearing on reciprocity although the percentage expected to be received from matched player and the gender (both female) do matter.

Latin American countries, where social capital is already low, there is a real risk that social programs may be depleting such capital. On the other hand, under the assumption that our dependent variable better reflects stigma rather than administrative costs, “one-stop shopping” for social services would not be advisable.

In this paper a trust game is held among representative samples in four Latin American cities with the aim of testing the extent to which being a beneficiary of social programs is linked with a decrease in interpersonal trust. Additionally, our findings may be simply reflecting the fact that the questions used to construct our pro-social index appear to be better suited to capture the corresponding aims of both the public good game and the risk-sharing game rather than the trust game. Furthermore, this paper studies only one aspect of trust: interpersonal trust between two agents. It is unclear whether trustworthiness issues may be affected, or trust in the recipient of the trust game, which at least in theory appears to be at least as relevant, if not moreso, than trust in the sender of the games.

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**Table 1. Definition of Variables**

| Variable                                                                                       | Definition                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Individual's socio-demographic characteristics</i>                                          |                                                                                                                                                                                                                                                                                                                                                                      |
| Age                                                                                            | Age of the participant.                                                                                                                                                                                                                                                                                                                                              |
| Gender                                                                                         | Dummy variable that takes the value of 1 when the participant is a female, and zero otherwise                                                                                                                                                                                                                                                                        |
| Schooling                                                                                      | Number of years of education of the participant.                                                                                                                                                                                                                                                                                                                     |
| Socio-economic level                                                                           | Categorical variable that indicates the socio-economic level of the participant: low, medium or high. Each category was converted to a dummy variable. In all regressions, the first category (low socio-economic level) was the omitted dummy.                                                                                                                      |
| City                                                                                           | Categorical variable that indicates the city where each participant was surveyed: Bogota, Buenos Aires, Caracas, Lima, San Jose and Montevideo. Each category was converted into a dummy. In all regressions, "City: Bogota" was the omitted dummy.                                                                                                                  |
| Percentage of household members that receive income                                            | It is the variable used as an instrument for participation in a social program. To calculate it, we divide the number of members who receive an income by the number of household members.                                                                                                                                                                           |
| <i>Matched players' characteristics (related to individuals)</i>                               |                                                                                                                                                                                                                                                                                                                                                                      |
| Matched player's gender                                                                        | Dummy variable that takes the value of 1 when the matched player with the participant is a female and 0 otherwise.                                                                                                                                                                                                                                                   |
| If both players are women                                                                      | Interaction variable that results from multiplying the participant's gender by the matched player's gender. It takes a value of 1, when both players are women, and 0, otherwise.                                                                                                                                                                                    |
| Age difference                                                                                 | Difference in age of the matched player with the participant.                                                                                                                                                                                                                                                                                                        |
| Schooling difference                                                                           | Difference in number of years of education of the matched player with the participant.                                                                                                                                                                                                                                                                               |
| Socio-economic level compared to the matched player                                            | Categorical variable that ranges between -2 to 2 as a result of subtracting the matched player's socio-economic level from the participant's one. Each category was converted into a dummy. In all regressions, the omitted dummy was the category "0", when there was no difference between the matched players.                                                    |
| <i>Experiment variables</i>                                                                    |                                                                                                                                                                                                                                                                                                                                                                      |
| Initial offer by Player 1                                                                      | Percentage of money offered by player 1 to player 2 in the Trust Game. From the amount received by player 1, he/she had five options: to give 0%, 25%, 50%, 75%, or 100% of his/her money to player 2.                                                                                                                                                               |
| Return offer by Player 2                                                                       | The fraction of money that player 2 decided to send at the time of her/his decision. The numerator is the monetary amount sent at her/his move. The denominator is the initial endowment plus three times the amount sent by player 1.                                                                                                                               |
| Risk aversion                                                                                  | Categorical variable that indicates the risk aversion level of the participant: low, medium or high. Each category was converted to a dummy variable. In all regressions, the first category (low risk aversion) was the omitted dummy.                                                                                                                              |
| Percentage expected to be returned by matched player (For player 1 in Trust Games regressions) | This variable can take values from 0% to 100%. It reflects player's 1 expectation of the percentage to be returned by player 2, considering the different set of options he has (that set of options depends on the percentage of money gave by player 1).                                                                                                           |
| Receives any social program                                                                    | Dummy variable that takes the value of one when the participant indicates that he/she or a member of his/her household is a beneficiary of a social program. The list of social programs is divided in four groups: education (E), health (H), nutrition, and child care (NC). The list of specific programs included in each group varies depending on the country: |

| Variable                                                                          | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                   | <ul style="list-style-type: none"> <li>• Bogota: E: “Familias en Acción”, Labor training –SENA, “Jóvenes en Acción”, “Hogares Infantiles” (ICBF or DABS), “Jardines Comunitarios”, and “Centro de Educación para Adultos”. H: “Régimen Subsidiado en Salud”, and “Jornada Nacional de Vacunación”. NC: “Comedores comunitarios”, “Comedores Escolares” (ICBF), “Hogar de Bienestar” (FAMI), “Desayunos Infantiles” (ICBF), “Adulto Mayor” (PPSAM), and “Red de Seguridad Alimentaria” (RESA).</li> <li>• Lima: E: School uniform and shoes, Textbooks and school supplies, Labor training, and PRONOEI. H: “Seguro Integral de Salud”, “Campaña Nacional de Vacunación”, “Campaña de Planificación Familiar”, and “Control de Tuberculosis”. NC: “Desayuno escolar”, “Vaso de leche”, “Comedor Popular”, “Canasta familiar”, “Alimento por trabajo”, “Comedor parroquial”, direct food aid, “Papilla u otro alimento para menores”, “Wawa Wasi”, and “Cuna”.</li> <li>• Montevideo: E: Textbooks and school supplies, School uniform and other clothing, Full time public school, “Asignaciones familiares”, and “Beca lineal”. H: “Programa de Educación Sexual y Planificación Familiar”, “Vacunación contra la gripe”, “Apoyo económico para control de embarazos”, and “Apoyo económico para control de niños”. NC: “Comedores y merenderos”, “Reparto de canasta alimenticia”, “Reparto de leche en polvo”, “Verano solidario”, and CAIF.</li> <li>• San Jose: E: “Bono escolar”, Scholarships, “Transporte escolar”, and labor training. H: “Régimen no contributivo”, and “Vacunación gratuita”. NC: “Comedor escolar”, “Comedor universitario”, “Comedor comunitario”, “CEN CINAI hogar comunitario”, “Leche”, “Paquetes de Alimentos”, and “Guardería”.</li> </ul> |
| Percentage of programs received                                                   | Percentage of social programs that the first players’ (in the trust games) households receive (out of all). If there are 10 social programs listed for that city, and the participant’s household received 2 of them, the variable value for this observation will be 20. It could take values from 0 to 100.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Reception of social programs (index)                                              | Index that takes values from 0 to 4 depending on the groups of social programs that the first players’ (in the trust games) households receive. For example, if the participant is beneficiary of social programs related to health and education, then his index will be 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Reception of social program related to education, health, nutrition or child care | Dummy variable that takes the value of one when the participant indicate that his/her household is beneficiary of a social program related to education, health, nutrition or child care in his country; and zero, otherwise.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

**Table 2. Summary Statistics**

| Variable                                                                            | Obs. | Mean  | Std. Dev. | Min | Max |
|-------------------------------------------------------------------------------------|------|-------|-----------|-----|-----|
| <i>Participation in social programs</i>                                             |      |       |           |     |     |
| Receives any social program <sup>1/</sup>                                           | 1041 | 45.66 | 0.50      | 0   | 1   |
| Percentage of programs received by the players' household (%)                       | 1041 | 5.45  | 8.29      | 0   | 61  |
| Reception of social programs (index)                                                | 1041 | 0.74  | 0.94      | 0   | 3   |
| Receives a social program related to education <sup>1/</sup>                        | 1041 | 26.47 | 0.44      | 0   | 1   |
| Receives a social program related to health <sup>1/</sup>                           | 1041 | 30.38 | 0.46      | 0   | 1   |
| Receives a social program related to nutrition <sup>1/</sup>                        | 1041 | 15.47 | 0.36      | 0   | 1   |
| Receives a social program related to child care <sup>1/</sup>                       | 1041 | 2.45  | 0.15      | 0   | 1   |
| <i>Individuals' socio-demographic characteristics</i>                               |      |       |           |     |     |
| Gender: Female <sup>1/</sup>                                                        | 1041 | 53.75 | 0.50      | 0   | 1   |
| Age                                                                                 | 1040 | 37.22 | 13.40     | 17  | 80  |
| Years of education                                                                  | 1041 | 10.64 | 3.96      | 0   | 22  |
| Socio-economic level: medium <sup>1/</sup>                                          | 1040 | 31.96 | 0.47      | 0   | 1   |
| Socio-economic level: high <sup>1/</sup>                                            | 1040 | 16.93 | 0.37      | 0   | 1   |
| City: Bogota <sup>1/</sup>                                                          | 1041 | 52.36 | 0.50      | 0   | 1   |
| City: Lima <sup>1/</sup>                                                            | 1041 | 39.34 | 0.49      | 0   | 1   |
| City: Montevideo <sup>1/</sup>                                                      | 1041 | 6.53  | 0.25      | 0   | 1   |
| City: San Jose <sup>1/</sup>                                                        | 1041 | 1.76  | 0.13      | 0   | 1   |
| <i>Experimental variables</i>                                                       |      |       |           |     |     |
| First player's initial offer                                                        | 1037 | 40.89 | 30.25     | 0   | 100 |
| Percentage expected to be returned by matched player                                | 1016 | 37.13 | 25.31     | 0   | 100 |
| Risk aversion: medium <sup>1/</sup>                                                 | 1041 | 33.27 | 0.47      | 0   | 1   |
| Risk aversion: high <sup>1/</sup>                                                   | 1041 | 49.36 | 0.50      | 0   | 1   |
| <i>Matched players' characteristics (related to individuals)</i>                    |      |       |           |     |     |
| If both players are men <sup>1/</sup>                                               | 1025 | 19.81 | 0.40      | 0   | 1   |
| If both players are women <sup>1/</sup>                                             | 1025 | 30.83 | 0.46      | 0   | 1   |
| If participant is a woman and her match is a man <sup>1/</sup>                      | 1025 | 23.34 | 0.42      | 0   | 1   |
| Age difference (Individual - Match)                                                 | 1022 | 0.36  | 18.42     | -54 | 53  |
| Schooling difference (Individual - Match)                                           | 1025 | -0.46 | 4.72      | -15 | 14  |
| If participant is at a lower socio-economic level than his/her match <sup>1/</sup>  | 1021 | 23.49 | 0.42      | 0   | 1   |
| If participant is at a higher socio-economic level than his/her match <sup>1/</sup> | 1021 | 20.81 | 0.41      | 0   | 1   |

1/ The variable is a dummy. We multiply its mean by 100 for presentation (i.e., to see it like a percentage). Variables are defined in Table 1.

**Table 3. Correlations Matrix**

|                                                      | First player's initial offer | Receives any social program | Percentage of programs received | Reception of social programs (index) | Receives a social program related to education | Receives a social program related to health | Receives a social program related to nutrition | Gender: Female   | Age              | Years of education | Socio-economic level: medium | Socio-economic level: high | Percentage expected to be returned by matched player | Risk aversion: medium | Risk aversion: high | If both players are men | If both players are women |
|------------------------------------------------------|------------------------------|-----------------------------|---------------------------------|--------------------------------------|------------------------------------------------|---------------------------------------------|------------------------------------------------|------------------|------------------|--------------------|------------------------------|----------------------------|------------------------------------------------------|-----------------------|---------------------|-------------------------|---------------------------|
| Receives any social program                          | -0.0640<br>0.003             |                             |                                 |                                      |                                                |                                             |                                                |                  |                  |                    |                              |                            |                                                      |                       |                     |                         |                           |
| Percentage of programs received                      | -0.0455<br>0.038             | 0.7336<br>0.000             |                                 |                                      |                                                |                                             |                                                |                  |                  |                    |                              |                            |                                                      |                       |                     |                         |                           |
| Reception of social programs (index)                 | -0.0802<br>0.000             | 0.8829<br>0.000             | 0.9063<br>0.000                 |                                      |                                                |                                             |                                                |                  |                  |                    |                              |                            |                                                      |                       |                     |                         |                           |
| Receives an education or child care social program   | -0.1171<br>0.000             | 0.6822<br>0.000             | 0.5572<br>0.000                 | 0.7019<br>0.000                      |                                                |                                             |                                                |                  |                  |                    |                              |                            |                                                      |                       |                     |                         |                           |
| Receives a health social program                     | -0.0296<br>0.175             | 0.6993<br>0.000             | 0.6818<br>0.000                 | 0.7440<br>0.000                      | 0.2318<br>0.000                                |                                             |                                                |                  |                  |                    |                              |                            |                                                      |                       |                     |                         |                           |
| Receives a nutrition social program                  | -0.0036<br>0.871             | 0.4814<br>0.000             | 0.6887<br>0.000                 | 0.6711<br>0.000                      | 0.2114<br>0.000                                | 0.3558<br>0.000                             |                                                |                  |                  |                    |                              |                            |                                                      |                       |                     |                         |                           |
| Gender: Female                                       | -0.0304<br>0.164             | 0.0349<br>0.108             | 0.0258<br>0.236                 | 0.0266<br>0.222                      | 0.0082<br>0.705                                | 0.0293<br>0.177                             | 0.0265<br>0.222                                |                  |                  |                    |                              |                            |                                                      |                       |                     |                         |                           |
| Age                                                  | 0.0224<br>0.307              | -0.1036<br>0.000            | -0.0730<br>0.001                | -0.0842<br>0.000                     | -0.0656<br>0.003                               | -0.0686<br>0.002                            | -0.0385<br>0.077                               | 0.1528<br>0.000  |                  |                    |                              |                            |                                                      |                       |                     |                         |                           |
| Years of education                                   | 0.0814<br>0.000              | -0.1769<br>0.000            | -0.1586<br>0.000                | -0.1880<br>0.000                     | -0.1748<br>0.000                               | -0.0718<br>0.001                            | -0.1367<br>0.004                               | -0.0624<br>0.000 | -0.1945<br>0.000 |                    |                              |                            |                                                      |                       |                     |                         |                           |
| Socio-economic level: medium                         | 0.0415<br>0.058              | -0.0440<br>0.043            | -0.1042<br>0.000                | -0.0813<br>0.000                     | -0.0150<br>0.489                               | -0.0529<br>0.015                            | -0.1223<br>0.000                               | 0.0073<br>0.737  | 0.0133<br>0.541  | 0.0969<br>0.000    |                              |                            |                                                      |                       |                     |                         |                           |
| Socio-economic level: high                           | 0.0450<br>0.040              | -0.2060<br>0.000            | -0.1673<br>0.000                | -0.2055<br>0.000                     | -0.1784<br>0.000                               | -0.1258<br>0.000                            | -0.1300<br>0.000                               | -0.0338<br>0.120 | -0.0109<br>0.618 | 0.3389<br>0.000    | -0.4269<br>0.000             |                            |                                                      |                       |                     |                         |                           |
| Percentage expected to be returned by matched player | 0.2273<br>0.000              | 0.0616<br>0.005             | 0.0786<br>0.000                 | 0.0722<br>0.001                      | -0.0128<br>0.563                               | 0.0926<br>0.000                             | 0.0977<br>0.000                                | -0.0139<br>0.529 | 0.0349<br>0.114  | 0.0409<br>0.064    | 0.0457<br>0.039              | 0.0285<br>0.198            |                                                      |                       |                     |                         |                           |
| Risk aversion: medium                                | 0.0578<br>0.008              | 0.0344<br>0.114             | 0.0298<br>0.171                 | 0.0341<br>0.118                      | 0.0119<br>0.585                                | 0.0316<br>0.145                             | 0.0081<br>0.708                                | 0.0149<br>0.493  | 0.0445<br>0.041  | -0.0273<br>0.209   | -0.0662<br>0.002             | -0.0258<br>0.235           | 0.0042<br>0.850                                      |                       |                     |                         |                           |
| Risk aversion: high                                  | -0.0573<br>0.009             | -0.0249<br>0.253            | -0.0242<br>0.266                | -0.0269<br>0.216                     | 0.0005<br>0.981                                | -0.0342<br>0.116                            | -0.0112<br>0.607                               | 0.0098<br>0.652  | -0.1095<br>0.000 | 0.0609<br>0.005    | 0.0374<br>0.086              | 0.0035<br>0.871            | -0.0158<br>0.474                                     | -0.7067<br>0.000      |                     |                         |                           |
| If both players are men                              | 0.0461<br>0.036              | -0.0133<br>0.543            | -0.0272<br>0.216                | -0.0165<br>0.451                     | -0.0038<br>0.863                               | -0.0236<br>0.282                            | -0.0279<br>0.202                               | -0.5479<br>0.000 | -0.0799<br>0.000 | 0.0752<br>0.001    | -0.0372<br>0.090             | 0.0594<br>0.007            | 0.0571<br>0.010                                      | -0.0255<br>0.245      | 0.0121<br>0.581     |                         |                           |
| If both players are women                            | -0.0302<br>0.170             | 0.0327<br>0.136             | 0.0350<br>0.111                 | 0.0406<br>0.064                      | 0.0521<br>0.017                                | 0.0016<br>0.941                             | 0.0333<br>0.128                                | 0.5990<br>0.000  | 0.0877<br>0.000  | -0.0516<br>0.018   | 0.0218<br>0.320              | -0.0266<br>0.225           | 0.0181<br>0.416                                      | -0.0143<br>0.513      | 0.0261<br>0.234     | -0.3282<br>0.000        |                           |
| If participant is a woman an the matched is a man    | -0.0025<br>0.910             | 0.0045<br>0.839             | -0.0090<br>0.681                | -0.0141<br>0.521                     | -0.0459<br>0.036                               | 0.0298<br>0.173                             | -0.0056<br>0.800                               | 0.5015<br>0.000  | 0.0780<br>0.000  | -0.0214<br>0.329   | -0.0116<br>0.596             | -0.0102<br>0.643           | -0.0342<br>0.123                                     | 0.0294<br>0.180       | -0.0118<br>0.589    | -0.2747<br>0.000        | -0.3924<br>0.000          |
| Age difference                                       | -0.0006<br>0.978             | -0.0419<br>0.057            | -0.0336<br>0.126                | -0.0365<br>0.097                     | -0.0479<br>0.029                               | 0.0018<br>0.935                             | -0.0302<br>0.169                               | 0.1211<br>0.000  | 0.6541<br>0.000  | -0.1067<br>0.000   | -0.0048<br>0.826             | -0.0170<br>0.438           | -0.0021<br>0.926                                     | 0.0583<br>0.008       | -0.0773<br>0.000    | 0.0040<br>0.856         | 0.0020<br>0.928           |
| Schooling difference                                 | 0.0019<br>0.931              | -0.0931<br>0.000            | -0.0793<br>0.000                | -0.0930<br>0.000                     | -0.0585<br>0.008                               | -0.0687<br>0.002                            | -0.0582<br>0.008                               | -0.0209<br>0.340 | -0.1223<br>0.000 | 0.5779<br>0.000    | 0.0574<br>0.009              | 0.1247<br>0.000            | 0.0015<br>0.947                                      | -0.0161<br>0.462      | 0.0464<br>0.034     | 0.0010<br>0.962         | 0.0037<br>0.868           |
| If participant is at a lower socio-economic level    | -0.0044<br>0.843             | 0.0566<br>0.010             | 0.0674<br>0.002                 | 0.0621<br>0.005                      | 0.0112<br>0.611                                | 0.0666<br>0.002                             | 0.0617<br>0.005                                | 0.0230<br>0.294  | 0.0083<br>0.706  | -0.0885<br>0.000   | -0.0661<br>0.003             | -0.2954<br>0.000           | -0.0067<br>0.765                                     | 0.0133<br>0.545       | -0.0366<br>0.095    | 0.0063<br>0.774         | 0.0241<br>0.273           |
| If participant is at a higher socio-economic level   | 0.0004<br>0.986              | -0.0446<br>0.043            | -0.0678<br>0.002                | -0.0741<br>0.001                     | -0.0482<br>0.028                               | -0.0376<br>0.087                            | -0.0832<br>0.000                               | -0.0101<br>0.645 | -0.0324<br>0.141 | 0.2032<br>0.000    | 0.1442<br>0.000              | 0.3205<br>0.000            | -0.0061<br>0.784                                     | -0.0207<br>0.346      | -0.0281<br>0.201    | 0.0093<br>0.671         | 0.0140<br>0.524           |

P-values are reported below the correlation coefficients. Variables are defined in Table 1.

**Table 4. Welfare Social Programs and Interpersonal Trust**

|                                                                       | Dependent variable:<br>First player's initial offer |                         |                         |
|-----------------------------------------------------------------------|-----------------------------------------------------|-------------------------|-------------------------|
|                                                                       | (1)                                                 | (2)                     | (3)                     |
| <i>Individuals' socio-demographic characteristics</i>                 |                                                     |                         |                         |
| Age                                                                   | 0.1798<br>(0.1394)                                  | 0.1578<br>(0.1359)      | 0.1621<br>(0.1349)      |
| Years of education                                                    | 0.5733<br>(0.6273)                                  | 0.6594<br>(0.6093)      | 0.5517<br>(0.6147)      |
| Socio-economic level: medium                                          | 1.7400<br>(5.6355)                                  | 0.3702<br>(5.0197)      | -0.7160<br>(5.2521)     |
| Socio-economic level: high                                            | -1.2662<br>(6.8544)                                 | -0.6327<br>(6.5415)     | -2.8072<br>(6.6726)     |
| <i>Matched players' characteristics(related to individuals)</i>       |                                                     |                         |                         |
| If both players are men                                               | -1.4480<br>(3.5234)                                 | -2.6078<br>(3.5142)     | -2.2387<br>(3.4969)     |
| If both players are women                                             | -3.2930<br>(3.4154)                                 | -3.2103<br>(3.3413)     | -2.9215<br>(3.2716)     |
| If participant is a woman an her match is a man                       | -7.7660**<br>(3.5680)                               | -7.8846**<br>(3.5202)   | -8.1188**<br>(3.5109)   |
| Age difference (Individual - Match)                                   | -0.0632<br>(0.0882)                                 | -0.0425<br>(0.0874)     | -0.0551<br>(0.0867)     |
| Schooling difference (Individual - Match)                             | 0.1406<br>(0.4225)                                  | 0.1083<br>(0.4170)      | 0.1379<br>(0.4161)      |
| If participant is at a lower socio-economic level than his/her match  | 5.0622<br>(4.3146)                                  | 4.9092<br>(4.2486)      | 4.1750<br>(4.2871)      |
| If participant is at a higher socio-economic level than his/her match | 8.1739**<br>(3.8558)                                | 7.7101**<br>(3.8939)    | 7.7364**<br>(3.8373)    |
| <i>Experimental variables</i>                                         |                                                     |                         |                         |
| Percentage expected to be returned by matched player                  | 0.1338**<br>(0.0619)                                | 0.1292**<br>(0.0613)    | 0.1299**<br>(0.0610)    |
| Risk aversion: medium                                                 | 7.6280**<br>(3.8655)                                | 7.1610*<br>(3.8710)     | 7.2463*<br>(3.8081)     |
| Risk aversion: high                                                   | -0.1738<br>(3.5872)                                 | 0.1175<br>(3.5906)      | 0.1029<br>(3.5306)      |
| <i>Participation in social programs</i>                               |                                                     |                         |                         |
| Receives any social program                                           | -9.0675**<br>(3.7186)                               |                         |                         |
| Receives any social program * SEL: medium                             | -6.0726<br>(5.7150)                                 |                         |                         |
| Receives any social program * SEL: high                               | 2.3897<br>(7.0714)                                  |                         |                         |
| Percentage of programs received                                       |                                                     | -0.6482***<br>(0.2088)  |                         |
| Percentage of programs received * SEL: medium                         |                                                     | -0.3906<br>(0.3397)     |                         |
| Percentage of programs received * SEL: high                           |                                                     | 0.2433<br>(0.5193)      |                         |
| Reception of social programs (index)                                  |                                                     |                         | -7.1294***<br>(1.6355)  |
| Reception of social programs (index) * SEL: medium                    |                                                     |                         | -2.0481<br>(2.7990)     |
| Reception of social programs (index) * SEL: high                      |                                                     |                         | 1.8208<br>(5.4054)      |
| Constant                                                              | 45.3116***<br>(13.3905)                             | 47.1029***<br>(12.9890) | 48.9104***<br>(13.1465) |
| Observations                                                          | 997                                                 | 997                     | 997                     |
| R-squared                                                             | 0.32                                                | 0.33                    | 0.34                    |
| F                                                                     | 3.724                                               | 3.649                   | 3.891                   |

Robust standard errors in parentheses. All regressions are run using ordinary least squares and include dummies per session in each city. \* Significant at ten percent; \*\* significant at five percent; \*\*\* significant at one percent.

**Table 5. Welfare Social Programs and Interpersonal Trust, Instrumental Variables**

|                                                                       | Dependent variable:<br>First player's initial offer |                         |                         |
|-----------------------------------------------------------------------|-----------------------------------------------------|-------------------------|-------------------------|
|                                                                       | (1)                                                 | (2)                     | (3)                     |
| <i>Individuals' socio-demographic characteristics</i>                 |                                                     |                         |                         |
| Age                                                                   | 0.2044<br>(0.1420)                                  | 0.1420<br>(0.1398)      | 0.1764<br>(0.1386)      |
| Years of education                                                    | 0.3777<br>(0.6509)                                  | 0.6400<br>(0.6286)      | 0.4492<br>(0.6428)      |
| Socio-economic level: medium                                          | -8.3131<br>(7.7914)                                 | -4.7819<br>(6.6290)     | -9.3830<br>(7.0422)     |
| Socio-economic level: high                                            | -13.0830<br>(9.9013)                                | -8.8794<br>(8.5564)     | -12.2753<br>(8.8932)    |
| <i>Matched players' characteristics(related to individuals)</i>       |                                                     |                         |                         |
| If both players are men                                               | -1.6919<br>(3.5041)                                 | -4.1104<br>(3.6776)     | -2.7839<br>(3.5211)     |
| If both players are women                                             | -1.0989<br>(3.8415)                                 | -0.7176<br>(3.9183)     | -1.8076<br>(3.6911)     |
| If participant is a woman an her match is a man                       | -6.4945*<br>(3.7399)                                | -6.7077*<br>(3.7017)    | -8.0183**<br>(3.6052)   |
| Age difference (Individual - Match)                                   | -0.1150<br>(0.1003)                                 | -0.0466<br>(0.0914)     | -0.0746<br>(0.0931)     |
| Schooling difference (Individual - Match)                             | 0.1977<br>(0.4281)                                  | 0.0653<br>(0.4311)      | 0.1649<br>(0.4278)      |
| If participant is at a lower socio-economic level than his/her match  | 4.6722<br>(4.3961)                                  | 4.6352<br>(4.3867)      | 3.1773<br>(4.5024)      |
| If participant is at a higher socio-economic level than his/her match | 9.5838**<br>(4.2324)                                | 8.4765**<br>(4.0535)    | 7.6782*<br>(4.0454)     |
| <i>Experimental variables</i>                                         |                                                     |                         |                         |
| Percentage expected to be returned by matched player                  | 0.1573**<br>(0.0654)                                | 0.1385**<br>(0.0636)    | 0.1355**<br>(0.0627)    |
| Risk aversion: medium                                                 | 7.1760*<br>(4.0389)                                 | 5.9388<br>(4.1091)      | 6.6153<br>(4.0336)      |
| Risk aversion: high                                                   | 0.0194<br>(3.8263)                                  | 1.0656<br>(3.9561)      | 0.3619<br>(3.8481)      |
| <i>Participation in social programs</i>                               |                                                     |                         |                         |
| Receives any social program                                           | -36.0374**<br>(16.2319)                             |                         |                         |
| Receives any social program * SEL: medium                             | 11.0212<br>(13.1795)                                |                         |                         |
| Receives any social program * SEL: high                               | 10.8147<br>(16.1358)                                |                         |                         |
| Percentage of programs received                                       |                                                     | -2.1279**<br>(1.0258)   |                         |
| Percentage of programs received * SEL: medium                         |                                                     | 0.0525<br>(0.7773)      |                         |
| Percentage of programs received * SEL: high                           |                                                     | 0.8528<br>(0.8963)      |                         |
| Reception of social programs (index)                                  |                                                     |                         | -18.0172**<br>(7.3297)  |
| Reception of social programs (index) * SEL: medium                    |                                                     |                         | 7.4110<br>(6.4707)      |
| Reception of social programs (index) * SEL: high                      |                                                     |                         | 10.8312<br>(8.3145)     |
| Constant                                                              | 53.7936***<br>(13.1576)                             | 51.1440***<br>(12.7517) | 57.0808***<br>(13.1758) |
| Observations                                                          | 996                                                 | 996                     | 996                     |
| R-squared                                                             | 0.31                                                | 0.31                    | 0.31                    |
| F                                                                     | 3.077                                               | 3.032                   | 3.090                   |

Robust standard errors in parentheses. For (1) we use a linear probability model in the first stage; and for (2) and (3), an OLS. The predictions of these first regressions are used to calculate new interactions of the variables of interest with each socio-economic level. All second-stage regressions are run using OLS and include dummies per session in each city. The instrument used is the percentage of household members that receive income. \* Significant at 10 percent; \*\* significant at five percent; \*\*\* significant at one percent.

**Table 6. Type of Social Programs and Interpersonal Trust**

|                                                                       | Dependent variable:<br>First player's initial offer |                         |                         |
|-----------------------------------------------------------------------|-----------------------------------------------------|-------------------------|-------------------------|
|                                                                       | (1)                                                 | (2)                     | (3)                     |
| <i>Individuals' socio-demographic characteristics</i>                 |                                                     |                         |                         |
| Age                                                                   | 0.2079<br>(0.1342)                                  | 0.1555<br>(0.1385)      | 0.1808<br>(0.1422)      |
| Years of education                                                    | 0.3823<br>(0.6228)                                  | 0.8015<br>(0.6181)      | 0.7065<br>(0.6253)      |
| Socio-economic level: medium                                          | -2.0205<br>(5.1664)                                 | 0.3473<br>(4.9342)      | -0.8319<br>(4.7974)     |
| Socio-economic level: high                                            | -3.3290<br>(6.5402)                                 | -0.6704<br>(6.6410)     | 2.6800<br>(6.7191)      |
| <i>Matched players' characteristics(related to individuals)</i>       |                                                     |                         |                         |
| If both players are men                                               | -1.2914<br>(3.4713)                                 | -2.2874<br>(3.5722)     | -2.0600<br>(3.5935)     |
| If both players are women                                             | -3.0302<br>(3.3228)                                 | -3.8928<br>(3.3190)     | -4.1437<br>(3.3510)     |
| If participant is a woman an her match is a man                       | -9.0125***<br>(3.4725)                              | -7.7926**<br>(3.5541)   | -8.5433**<br>(3.5252)   |
| Age difference (Individual - Match)                                   | -0.0734<br>(0.0858)                                 | -0.0250<br>(0.0884)     | -0.0444<br>(0.0917)     |
| Schooling difference (Individual - Match)                             | 0.1924<br>(0.4149)                                  | 0.1256<br>(0.4252)      | 0.1471<br>(0.4280)      |
| If participant is at a lower socio-economic level than his/her match  | 3.3445<br>(4.3103)                                  | 4.6775<br>(4.2542)      | 4.9754<br>(4.4743)      |
| If participant is at a higher socio-economic level than his/her match | 7.5707**<br>(3.7947)                                | 7.1108*<br>(3.9632)     | 7.1219*<br>(4.0820)     |
| <i>Experimental variables</i>                                         |                                                     |                         |                         |
| Percentage expected to be returned by matched player                  | 0.1198*<br>(0.0616)                                 | 0.1234**<br>(0.0629)    | 0.1237*<br>(0.0642)     |
| Risk aversion: medium                                                 | 8.0012**<br>(3.8569)                                | 6.6083*<br>(3.9210)     | 7.6871*<br>(4.0490)     |
| Risk aversion: high                                                   | 0.2411<br>(3.5811)                                  | -0.8368<br>(3.6331)     | -0.0825<br>(3.7448)     |
| <i>Participation in social programs</i>                               |                                                     |                         |                         |
| Receives an education social program                                  | -18.3105***<br>(3.6164)                             |                         |                         |
| Receives an education social program * SEL: medium                    | 2.9967<br>(5.8512)                                  |                         |                         |
| Receives an education social program * SEL: high                      | 10.4907<br>(18.5734)                                |                         |                         |
| Receives a health social program                                      |                                                     | -8.8676**<br>(3.8502)   |                         |
| Receives a health social program * SEL: medium                        |                                                     | -7.0831<br>(5.8458)     |                         |
| Receives a health social program * SEL: high                          |                                                     | 4.5354<br>(7.1088)      |                         |
| Receives a nutrition social program                                   |                                                     |                         | -5.8907<br>(4.6632)     |
| Receives a nutrition social program * SEL: medium                     |                                                     |                         | 3.3702<br>(7.3507)      |
| Receives a nutrition social program * SEL: high                       |                                                     |                         | -11.6221<br>(12.8263)   |
| Constant                                                              | 49.9609***<br>(12.9853)                             | 45.3708***<br>(16.8059) | 47.6632***<br>(12.7602) |
| Observations                                                          | 997                                                 | 997                     | 997                     |
| R-squared                                                             | 0.35                                                | 0.32                    | 0.30                    |
| F                                                                     | 3.896                                               | 3.398                   | 3.163                   |

Robust standard errors in parentheses. All regressions are run using OLS and include dummies per session in each city. \* Significant at 10 percent; \*\* significant at five percent; \*\*\* significant at one percent.

**Table 7. Type of Social Programs and Interpersonal Trust, Instrumental Variables**

|                                                                       | Dependent variable:<br>First player's initial offer |                         |                         |
|-----------------------------------------------------------------------|-----------------------------------------------------|-------------------------|-------------------------|
|                                                                       | (1)                                                 | (2)                     | (3)                     |
| <i>Individuals' socio-demographic characteristics</i>                 |                                                     |                         |                         |
| Age                                                                   | 0.2529*<br>(0.1428)                                 | 0.0230<br>(0.1523)      | 0.1871<br>(0.1395)      |
| Years of education                                                    | 0.2709<br>(0.6737)                                  | 1.0033<br>(0.6406)      | 0.5858<br>(0.6323)      |
| Socio-economic level: medium                                          | -7.7444<br>(6.2608)                                 | -12.3334<br>(8.3597)    | -8.9700<br>(6.6873)     |
| Socio-economic level: high                                            | -10.1033<br>(7.8299)                                | -17.7236<br>(13.0554)   | -6.2472<br>(7.8832)     |
| <i>Matched players' characteristics(related to individuals)</i>       |                                                     |                         |                         |
| If both players are men                                               | -0.8680<br>(3.4831)                                 | -7.2317*<br>(4.2731)    | -5.8349<br>(3.9626)     |
| If both players are women                                             | -2.4242<br>(3.5672)                                 | -0.7956<br>(3.9477)     | 1.3304<br>(4.4977)      |
| If participant is a woman an her match is a man                       | -9.4601***<br>(3.5917)                              | -3.0283<br>(4.4639)     | -6.4344*<br>(3.7552)    |
| Age difference (Individual - Match)                                   | -0.0986<br>(0.0956)                                 | 0.0473<br>(0.0962)      | -0.1488<br>(0.1078)     |
| Schooling difference (Individual - Match)                             | 0.2204<br>(0.4284)                                  | 0.2659<br>(0.4281)      | 0.0280<br>(0.4360)      |
| If participant is at a lower socio-economic level than his/her match  | 2.1617<br>(4.5439)                                  | 3.2347<br>(4.4856)      | 3.0676<br>(4.5138)      |
| If participant is at a higher socio-economic level than his/her match | 6.9640*<br>(4.0644)                                 | 8.8318**<br>(4.0587)    | 5.7446<br>(4.1174)      |
| <i>Experimental variables</i>                                         |                                                     |                         |                         |
| Percentage expected to be returned by matched player                  | 0.1122*<br>(0.0622)                                 | 0.1591**<br>(0.0665)    | 0.1940***<br>(0.0727)   |
| Risk aversion: medium                                                 | 8.3751**<br>(4.0435)                                | 0.8612<br>(4.9799)      | 6.5675<br>(4.0776)      |
| Risk aversion: high                                                   | 0.5820<br>(3.8158)                                  | -2.8423<br>(3.7763)     | 5.1706<br>(4.9292)      |
| <i>Participation in social programs</i>                               |                                                     |                         |                         |
| Receives an education social program                                  | -38.9696***<br>(13.3983)                            |                         |                         |
| Receives an education social program * SEL: medium                    | 20.3701<br>(13.6222)                                |                         |                         |
| Receives an education social program * SEL: high                      | 38.6228**<br>(18.4110)                              |                         |                         |
| Receives a health social program                                      |                                                     | -74.4065**<br>(36.5764) |                         |
| Receives a health social program * SEL: medium                        |                                                     | 7.2548<br>(16.4305)     |                         |
| Receives a health social program * SEL: high                          |                                                     | -11.5453<br>(20.5782)   |                         |
| Receives a nutrition social program                                   |                                                     |                         | -80.2860**<br>(36.6388) |
| Receives a nutrition social program * SEL: medium                     |                                                     |                         | 9.0661<br>(17.7580)     |
| Receives a nutrition social program * SEL: high                       |                                                     |                         | 15.7159<br>(22.4047)    |
| Constant                                                              | 54.5261***<br>(12.4381)                             | 62.6261***<br>(14.5310) | 50.0334***<br>(12.4257) |
| Observations                                                          | 996                                                 | 996                     | 996                     |
| R-squared                                                             | 0.31                                                | 0.31                    | 0.31                    |
| F                                                                     | 3.179                                               | 3.112                   | 3.043                   |

Robust standard errors in parentheses. For (1) we use a linear probability model in the first stage; and for (2) and (3), an OLS. The predictions of these first regressions are used to calculate new interactions of the variables of interest with each socio-economic level. All second-stage regressions are run using OLS and include dummies per session in each city. The instrument used is the percentage of household members that receive income. \* Significant at 10 percent; \*\* significant at five percent; \*\*\* significant at one percent.



**Appendix 1. Individuals who Participate in Social Programs by Country**  
(percentage of all first players)

| Variable                                    | Bogota | Lima | Montevideo | San Jose | Buenos Aires | Caracas |
|---------------------------------------------|--------|------|------------|----------|--------------|---------|
| Receives any social program (%)             | 43.7   | 54.1 | 18.4       | 16.4     | 5.5          | 10.2    |
| Receives an education social program (%)    | 34.3   | 18.7 | 15.2       | 9.5      | 0.7          | 9.5     |
| Receives a child care social program (%)    | 4.1    | 0.3  | 2.4        | 0.4      | 4.5          | 0.0     |
| Receives a health social program (%)        | 22.2   | 46.4 | 5.0        | 9.7      | 0.3          | 4.0     |
| Receives a nutrition social program (%)     | 8.0    | 28.1 | 3.6        | 1.4      | 0.0          | 3.7     |
| Social expenditure (% of GDP) <sup>1/</sup> | 6.4    | 4.4  | 5.3        | 11.9     | 11.3         | 9.0     |

1/ The data are for 2006, excepting Uruguay, for which only 2005 was available. It includes expenditure in education, health and housing. *Source:* CEPAL (Web).

## Appendix 2. Social Programs and Interpersonal Trust by Country

|                                                                       | Dependent variable:<br>First player's initial offer |                        |                         |                        |
|-----------------------------------------------------------------------|-----------------------------------------------------|------------------------|-------------------------|------------------------|
|                                                                       | (1)                                                 | (2)                    | (3)                     | (4)                    |
|                                                                       | Bogota                                              | Lima                   | Montevideo              | San Jose               |
| <i>Socio-demographic characteristics</i>                              |                                                     |                        |                         |                        |
| Age                                                                   | 0.0792<br>(0.2080)                                  | 0.1088<br>(0.2368)     | 0.0126<br>(0.1600)      | 0.2953*<br>(0.1558)    |
| Years of education                                                    | 0.7907<br>(0.8590)                                  | 0.1224<br>(1.1669)     | 0.5511<br>(0.8625)      | 0.3894<br>(0.6563)     |
| Socio-economic level: medium                                          | -9.7903<br>(6.3085)                                 | 3.5422<br>(7.1855)     | 4.6196<br>(5.1398)      | 4.3920<br>(6.0698)     |
| Socio-economic level: high                                            | -11.7773<br>(9.2658)                                | 7.2318<br>(10.9382)    | 0.3218<br>(7.0627)      | 21.4352**<br>(8.3360)  |
| <i>Related to matched players' characteristics</i>                    |                                                     |                        |                         |                        |
| If both players are men                                               | -4.2145<br>(5.4469)                                 | -0.4171<br>(5.3477)    | -5.8181<br>(5.0874)     | -4.9054<br>(6.5893)    |
| If both players are women                                             | 4.9027<br>(5.0715)                                  | -13.1266**<br>(5.0778) | -4.3093<br>(4.8112)     | -6.6626<br>(5.1701)    |
| If participant is a woman and her match is a man                      | -1.9192<br>(5.4228)                                 | -13.9152**<br>(5.7422) | -5.0229<br>(4.5553)     | -9.7149*<br>(5.2277)   |
| Age difference (Individual - Match)                                   | 0.0442<br>(0.1362)                                  | -0.1092<br>(0.1427)    | 0.0154<br>(0.1163)      | 0.1949*<br>(0.1118)    |
| Schooling difference (Individual - Match)                             | 0.7403<br>(0.5884)                                  | -0.6441<br>(0.7410)    | 0.0500<br>(0.5312)      | 0.1620<br>(0.5448)     |
| If participant is at a lower socio-economic level than his/her match  | -0.2333<br>(5.7637)                                 | 9.0179<br>(7.9740)     | -1.6137<br>(4.4210)     | -2.2521<br>(5.0126)    |
| If participant is at a higher socio-economic level than his/her match | 13.4253**<br>(5.7620)                               | 7.0605<br>(6.3250)     | -2.8816<br>(4.8395)     | -9.0006<br>(6.6964)    |
| <i>Experimental variables</i>                                         |                                                     |                        |                         |                        |
| Percentage expected to be returned by matched player                  | 0.1292<br>(0.0868)                                  | 0.0701<br>(0.0884)     | 0.4236***<br>(0.0964)   | 0.1634<br>(0.1353)     |
| Risk aversion: medium                                                 | 9.9276*<br>(5.4771)                                 | 6.3496<br>(6.2371)     | 2.3675<br>(5.3201)      | 1.2532<br>(6.4005)     |
| Risk aversion: high                                                   | 0.7858<br>(5.0001)                                  | -1.0511<br>(5.8478)    | -6.3913<br>(4.7667)     | 6.8272<br>(6.1774)     |
| <i>Participation in social programs</i>                               |                                                     |                        |                         |                        |
| Reception of social programs (index)                                  | -11.5174***<br>(2.0295)                             | -3.2427*<br>(1.8347)   | -1.8052<br>(2.6257)     | -9.5343***<br>(3.1057) |
| Constant                                                              | 48.6228***<br>(17.8847)                             | 37.4785**<br>(18.2597) | 40.6278***<br>(14.4961) | 21.7555<br>(14.8606)   |
| Observations                                                          | 270                                                 | 262                    | 280                     | 185                    |
| R-squared                                                             | 0.38                                                | 0.32                   | 0.28                    | 0.31                   |
| F-Test                                                                | 5.438                                               | 2.664                  | 2.241                   | 3.026                  |

Robust standard errors in parentheses. All regressions are run using OLS and include dummies per session in each city. \* Significant at 10 percent; \*\* significant at five percent; \*\*\* significant at one percent.

**Appendix 3a. Instrumental Variables First Stage, Table 5**

|                                                                       | Dependent variables:        |                                 |                                      |
|-----------------------------------------------------------------------|-----------------------------|---------------------------------|--------------------------------------|
|                                                                       | (1)                         | (2)                             | (3)                                  |
|                                                                       | Receives any social program | Percentage of programs received | Reception of social programs (index) |
| <i>Socio-demographic characteristics</i>                              |                             |                                 |                                      |
| Age                                                                   | 0.0007<br>(0.0025)          | -0.0160<br>(0.0410)             | -0.0007<br>(0.0048)                  |
| Years of education                                                    | -0.0111<br>(0.0112)         | -0.0409<br>(0.1801)             | -0.0199<br>(0.0204)                  |
| Socio-economic level: medium                                          | -0.1285*<br>(0.0698)        | -2.4655**<br>(1.1314)           | -0.3154**<br>(0.1238)                |
| Socio-economic level: high                                            | -0.3990***<br>(0.1015)      | -4.7640***<br>(1.6121)          | -0.7111***<br>(0.1846)               |
| <i>Related to matched players' characteristics</i>                    |                             |                                 |                                      |
| If both players are men                                               | -0.0377<br>(0.0698)         | -1.8641*<br>(1.0431)            | -0.1597<br>(0.1225)                  |
| If both players are women                                             | 0.0900<br>(0.0594)          | 1.5628<br>(1.1685)              | 0.1484<br>(0.1217)                   |
| If participant is a woman an her match is a man                       | 0.0330<br>(0.0649)          | 0.3884<br>(1.0706)              | -0.0289<br>(0.1168)                  |
| Age difference (Individual - Match)                                   | -0.0023<br>(0.0018)         | -0.0038<br>(0.0310)             | -0.0021<br>(0.0034)                  |
| Schooling difference (Individual - Match)                             | 0.0023<br>(0.0071)          | -0.0213<br>(0.1212)             | 0.0036<br>(0.0137)                   |
| If participant is at a lower socio-economic level than his/her match  | -0.0188<br>(0.0757)         | -0.4153<br>(1.1299)             | -0.1272<br>(0.1425)                  |
| If participant is at a higher socio-economic level than his/her match | 0.1117*<br>(0.0676)         | 1.0295<br>(1.0095)              | 0.1190<br>(0.1227)                   |
| <i>Experimental variables</i>                                         |                             |                                 |                                      |
| Percentage expected to be returned by matched player                  | 0.0009<br>(0.0010)          | 0.0056<br>(0.0185)              | 0.0000<br>(0.0020)                   |
| Risk aversion: medium                                                 | -0.0152<br>(0.0697)         | -0.9911<br>(1.1049)             | -0.0736<br>(0.1284)                  |
| Risk aversion: high                                                   | 0.0300<br>(0.0670)          | 0.8856<br>(1.1242)              | 0.0834<br>(0.1286)                   |
| <i>Instrument</i>                                                     |                             |                                 |                                      |
| Percentage of household members that receive income                   | -0.3904***<br>(0.0955)      | -6.0392***<br>(1.4719)          | -0.8786***<br>(0.1785)               |
| Constant                                                              | 0.3088<br>(0.2100)          | 5.5070<br>(3.3655)              | 0.9067**<br>(0.4147)                 |
| Observations                                                          | 996                         | 996                             | 996                                  |
| R-squared                                                             | 0.28                        | 0.29                            | 0.32                                 |
| F-Test                                                                | 8.825                       | 2.734                           | 3.791                                |
| Prob > F                                                              | 0.0000                      | 0.0000                          | 0.0000                               |

Robust standard errors in parentheses. For (1) we use a linear probability model in the first stage; and for (2) and (3), an OLS, and include dummies per session in each city. \* Significant at 10 percent; \*\* significant at five percent; \*\*\* significant at one percent.

**Appendix 3b. Instrumental Variables First Stage, Table 7**

|                                                                       | Dependent variables:                       |                                     |                                           |
|-----------------------------------------------------------------------|--------------------------------------------|-------------------------------------|-------------------------------------------|
|                                                                       | (1)                                        | (2)                                 | (3)                                       |
|                                                                       | Receives an<br>education social<br>program | Receives a health<br>social program | Receives a<br>nutrition social<br>program |
| <i>Socio-demographic characteristics</i>                              |                                            |                                     |                                           |
| Age                                                                   | 0.0023<br>(0.0022)                         | -0.0020<br>(0.0025)                 | 0.0001<br>(0.0019)                        |
| Years of education                                                    | -0.0194*<br>(0.0100)                       | 0.0041<br>(0.0105)                  | -0.0018<br>(0.0073)                       |
| Socio-economic level: medium                                          | -0.0728<br>(0.0690)                        | -0.1540**<br>(0.0629)               | -0.1096**<br>(0.0478)                     |
| Socio-economic level: high                                            | -0.2938***<br>(0.0971)                     | -0.2987***<br>(0.0959)              | -0.0970<br>(0.0682)                       |
| <i>Related to matched players' characteristics</i>                    |                                            |                                     |                                           |
| If both players are men                                               | -0.0096<br>(0.0556)                        | -0.0882<br>(0.0639)                 | -0.0703<br>(0.0450)                       |
| If both players are women                                             | 0.0522<br>(0.0557)                         | 0.0428<br>(0.0584)                  | 0.0693<br>(0.0487)                        |
| If participant is a woman an her match is a man                       | -0.0690<br>(0.0543)                        | 0.0581<br>(0.0600)                  | 0.0147<br>(0.0473)                        |
| Age difference (Individual - Match)                                   | -0.0019<br>(0.0016)                        | 0.0012<br>(0.0018)                  | -0.0014<br>(0.0014)                       |
| Schooling difference (Individual - Match)                             | 0.0047<br>(0.0067)                         | 0.0017<br>(0.0066)                  | -0.0012<br>(0.0050)                       |
| If participant is at a lower socio-economic level than his/her match  | -0.0800<br>(0.0705)                        | -0.0302<br>(0.0723)                 | -0.0299<br>(0.0550)                       |
| If participant is at a higher socio-economic level than his/her match | 0.0641<br>(0.0633)                         | 0.0287<br>(0.0569)                  | -0.0117<br>(0.0361)                       |
| <i>Experimental variables</i>                                         |                                            |                                     |                                           |
| Percentage expected to be returned by matched player                  | -0.0007<br>(0.0009)                        | 0.0004<br>(0.0010)                  | 0.0008<br>(0.0007)                        |
| Risk aversion: medium                                                 | 0.0124<br>(0.0605)                         | -0.0941<br>(0.0680)                 | -0.0150<br>(0.0456)                       |
| Risk aversion: high                                                   | 0.0361<br>(0.0584)                         | -0.0281<br>(0.0668)                 | 0.0804*<br>(0.0467)                       |
| <i>Instrument</i>                                                     |                                            |                                     |                                           |
| Percentage of household members that receive income                   | -0.4886***<br>(0.0767)                     | -0.1586*<br>(0.0889)                | -0.1590**<br>(0.0698)                     |
| Constant                                                              | 0.3867*<br>(0.2010)                        | 0.2793<br>(0.1909)                  | 0.1203<br>(0.1440)                        |
| Observations                                                          | 996                                        | 996                                 | 996                                       |
| R-squared                                                             | 0.29                                       | 0.24                                | 0.34                                      |
| F-Test                                                                | 2.614                                      | 2.763                               | 4.135                                     |
| Prob > F                                                              | 0.0000                                     | 0.0000                              | 0.0000                                    |

Robust standard errors in parentheses. For the three regressions, we use a linear probability model in the first stage, and include dummies per session in each city. \* Significant at 10 percent; \*\* significant at five percent; \*\*\* significant at one percent.

## Appendix 4. The Case for Reciprocity

|                                                                       | Dependent variable:<br>Second player's return offer |                       |                       |
|-----------------------------------------------------------------------|-----------------------------------------------------|-----------------------|-----------------------|
|                                                                       | (1)                                                 | (2)                   | (3)                   |
| <i>Individuals' socio-demographic characteristics</i>                 |                                                     |                       |                       |
| Age                                                                   | -0.0300<br>(0.0993)                                 | -0.0282<br>(0.0992)   | -0.0285<br>(0.0994)   |
| Years of education                                                    | -0.0471<br>(0.4350)                                 | -0.0173<br>(0.4293)   | -0.0263<br>(0.4317)   |
| Socio-economic level: medium                                          | -1.8758<br>(2.6197)                                 | -1.6869<br>(2.6554)   | -1.7396<br>(2.6468)   |
| Socio-economic level: high                                            | -5.2557<br>(4.1169)                                 | -4.7537<br>(4.1052)   | -4.8491<br>(4.1294)   |
| <i>Matched players' characteristics(related to individuals)</i>       |                                                     |                       |                       |
| If both players are men                                               | -1.4128<br>(2.5960)                                 | -1.3574<br>(2.6114)   | -1.3995<br>(2.5975)   |
| If both players are women                                             | -4.5956**<br>(2.2276)                               | -4.6063**<br>(2.2292) | -4.6062**<br>(2.2291) |
| If participant is a woman an her match is a man                       | -4.0768<br>(2.5359)                                 | -4.0501<br>(2.5452)   | -4.0688<br>(2.5420)   |
| Age difference (Individual - Match)                                   | 0.0152<br>(0.0721)                                  | 0.0187<br>(0.0726)    | 0.0177<br>(0.0726)    |
| Schooling difference (Individual - Match)                             | -0.2539<br>(0.3081)                                 | -0.2474<br>(0.3074)   | -0.2456<br>(0.3081)   |
| If participant is at a lower socio-economic level than his/her match  | -2.3670<br>(2.5287)                                 | -2.3830<br>(2.5255)   | -2.3676<br>(2.5280)   |
| If participant is at a higher socio-economic level than his/her match | 4.0033<br>(2.8608)                                  | 3.9810<br>(2.8559)    | 3.9808<br>(2.8549)    |
| <i>Experimental variables</i>                                         |                                                     |                       |                       |
| Percentage expected to be returned by matched player                  | 0.2629***<br>(0.0352)                               | 0.2657***<br>(0.0353) | 0.2653***<br>(0.0352) |
| <i>Participation in social programs</i>                               |                                                     |                       |                       |
| Receives any social program                                           | -1.1034<br>(1.8814)                                 |                       |                       |
| Percentage of programs received                                       |                                                     | 0.0248<br>(0.1288)    |                       |
| Reception of social programs (index)                                  |                                                     |                       | -0.0099<br>(1.0934)   |
| Constant                                                              | 10.3167<br>(7.9178)                                 | 9.6147<br>(7.8114)    | 9.8033<br>(7.8226)    |
| Observations                                                          | 1035                                                | 1035                  | 1035                  |
| R-squared                                                             | 0.37                                                | 0.37                  | 0.37                  |
| F-Test                                                                | 5.161                                               | 5.141                 | 5.144                 |

Robust standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Appendix 5. Protocols

The following appendix describes in further detail the protocols followed for the sampling design, recruitment, and experimental sessions. This was the result of an original experimental design initially proposed by the core team and then adjusted during a workshop held in Bogota in January of 2007 with the six local teams that were selected to conduct the experiments in each of the cities. The workshop allowed the team to adjust the language, payoffs and details to a common protocol that was agreed to convey the same framing, incentives and interpretations of language in each of the six cities.<sup>13</sup>

### Sampling

In each of the cities we aimed at a representative sample of 500 participants, for a total of 3,000 people in the six cities. In total we were able to recruit more than 3,100 people all together. The samples were selected in the cities based on a stratified random sampling approach. The strata were chosen on the basis of age, gender, education, and socio-economic status of the neighborhood of residence. After the fieldwork we computed expansion factors (weights) for all the observations to alleviate minor sampling problems.

With respect to age we sampled for the following age groups: 17-27, 28-38, 39-59 and 60-72 years old. The sample should cover roughly half males and half females. Three levels of education were used (incomplete secondary or less, complete secondary and incomplete superior (college/technical) or more). With respect to socio-economic level (sel) each of the cities used the stratification used locally that seemed to be relevant and familiar to the citizens of each city. Some cities had three categories (e.g. Buenos Aires), some others had up to six (Bogotá). To estimate the quotas to be filled in each case, each team identified a reliable demographic census or survey, as follows.

In Bogota the team used the Encuesta de Calidad de Vida 2003 from the Departamento Administrativo Nacional de Estadística (DANE, 2003). The stratification (estrato) was used for the socio-economic level of the neighborhood, aiming at covering representative samples of the categories stratum 1-2 for low level, 3 for low-medium, 4 for medium-high and 5-6 for high. In Buenos Aires the team used the Census of 2001 by the Instituto Nacional de Estadística y Censos (INDEC, 2001). To identify a socio-economic status, the team used data on educational level, medical coverage, qualification if employed and economic activity, creating a classification of three levels low, medium and high. In Caracas the team used data from the Census of 2001 from the Instituto Nacional de Estadística (INE, 2001). The team also used a socio-economic level stratification used by marketing studies in Venezuela based on five groups, and grouping the two highest groups given their low share in the total population, yielding four categories (low, medium-low, medium-high and high). In the case of Lima the team used a sampling design from the firm Apoyo Opinión y Mercado (AOM) which has a mapping of the metropolitan area of the city and based on the five socio-economic levels for the city used in marketing studies. They identified blocks within each category and visited households surrounding the crossing of those blocks. In Montevideo the team used the classification used by the Instituto Nacional

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<sup>13</sup> They were the result of inputs from Jeff Carpenter, María Claudia López, Abigail Barr, Sandra Polanía, Natalia Candelo, and Juan Camilo Cárdenas. The game designs were based on various sources, cited in the references.

de Estadísticas (INE) for four categories of socio-economic level (low, medium-low, medium-high and high) and based on per capita income and unemployment data. Each neighborhood was assigned a classification level based on the INE classification assigned to the households. Finally, San Jose used census data from 2000 from the Instituto Nacional de Estadística y Censos (INEC, 2000), and based on the socio-economic classification used in the census.

### Recruitment and Compositions of Sessions

In each of the cities the recruitment was conducted with the goal of holding a session with an estimate of 20 participants in the same room and time. Depending on the availability of space, assistants and the schedules available, a team would hold one or more sessions in a day, but always one session at a time.

Each team had to recruit subjects so that they could have at least 4 homogenous sessions (in terms of socio-economic level) and 21 sessions of mixed composition with respect to income or socio-economic levels. Each team had a group of recruiters who used a letter of invitation which had the same content and message, namely, to invite voluntarily people to assist to a study on economic decision making which would last between 2 and 3 hours, and to be held at a specific time and day at the same location being in each case a university campus of recognized prestige. Each of the recruited persons received a cash advance to cover the public transportation to the campus on the day of the experiment, to signal reliability and commitment of the study and its team. The teams had a goal or quotas to fill for each session and proceeded to recruit subjects according to the planned sessions in the coming days. Each team used different strategies to recruit subjects. The following table summarizes the strategies used in each city, with phone and door-to-door as the main mechanisms.

| City         | Phone       | Door-to-Door | Other*     |
|--------------|-------------|--------------|------------|
| Bogota       | 15.9        | 78.2         | 5.9        |
| Buenos Aires | 76.7        | 13.5         | 9.9        |
| Caracas      | 84.9        | 13.4         | 1.6        |
| Lima         | 0.0         | 100.0        | 0.0        |
| Montevideo   | 69.3        | 30.3         | 0.3        |
| San Jose     | 0.0         | 100.0        | 0.0        |
| <b>Total</b> | <b>41.5</b> | <b>55.5</b>  | <b>3.0</b> |

\* Workplace, shopping mall, streets, recreational areas, e-mail.

Each recruited person received a unique general number that would be used from then on to identify such participant and follow-up his assistance. At the moment of the recruitment they were asked a first set of basic questions about their home location, education, gender and age. The rest of the data was collected later on after the end of the experimental session. Based on previous experience by the local teams in conducting household surveys, we were aware of the potential problems of recruited subjects not showing up. Therefore, in each case we aimed at recruiting more people (30 to 40) in most cases, to aim at 20 actual participants. This did not impede our study to be able to achieve a

sufficiently wide variation in terms of the demographic characteristics of our sample as it can be seen in the final sample used. There could be concerns, though, about the non-random selection of more pro-social individuals into the sessions. The previous experience of local teams suggest that there are no strong reasons to believe that this non-random selection is any different than the selection that occurs at regular opinion surveys (which traditionally have non-response rates at around 50%).

### **On the Day of the Experimental Session**

At the start of the actual session a group of assistants was available to greet the recruited participants, verify their unique general number and make sure they were the same people being recruited. Once the group was gathered, they were invited to the experimental room, usually a classroom, where they were read the main instructions about the experimental session. During the introduction the subjects were informed of the usual conditions of privacy and confidentiality of their decisions and outcomes, and the use of the data collected for academic purposes only. Once the activities were explained, an oral consent form was read by the experimenter to the group and approved by all participants before continuing. Each participant received the forms they would use throughout the session for answering the questions and decisions during each of the activities. It was made clear during this general explanation that only one of the four activities would be chosen and be paid for all participants in that session. The purpose of this design is to make each activity sufficiently important and more independent of a possible portfolio decision-making if all activities were to be paid. If only one activity was to be paid, we expect each of the tasks to be considered with sufficient care given the significance of the stakes. On average each participant was paid the equivalent to 1.5-2 days of work at the minimum wage in the city.

In the experiment room they were assigned randomly a player 1 or player 2 positions for the first activity (trust game). Once they received the first set of instructions (see details below) they proceeded to be divided in two groups of players 1 and 2, with players 1 being moved to another separate room for the first activity. Once that activity was completed the whole group was reconvened to the original room for the rest of the remaining activities.

### **Summary of Experimental Activities**

**Activity 1 (TRUST GAME):** all participants are randomly assigned in pairs to play a one-shot Trust Game, with one being chosen randomly as player 1 and the other as player 2. Players 1 were brought to a contiguous room and players 2 remained in the initial room. They were not told the player they were matched with, they only knew that they would play with one person in the other room. To start the game each player receives an equal endowment of the equivalent of approximately US\$5.00. The player assigned to the player 1 role must decide between sending 0, 25%, 50%, 75% or 100% of her initial endowment. The amount sent to player 2 is tripled by the experimenter and given to player 2. Any amount kept by player 1 goes to her own final earnings. Player 2 then must decide how much from her initial endowment and the received tripled amount to return back to player 1. Such amount returned is not tripled on its way back, just transferred. This information given is common knowledge to the players. The initial endowments in each city were calibrated to reflect the same purchasing power and rounded to simplify the mathematical operations of



the players. However in all cases we calculated the percentages in the local currency amounts to facilitate the valuation of the different options.

Players 1 are located in one room and players 2 in another. Identities are never revealed, but each player observes the demographic characteristics of the other (age, gender, education and socio-economic level) before making their decisions. The game is played using the strategy method where player 2 must decide the amounts to be returned to player 1 for each possible offer from player 1. The results of the game are not revealed to the participants at this point but at the end of the game and therefore we do not expect to see major learning or reciprocity effects carrying on from this game to the next activities. All players in both rooms listen from the monitor a series of examples of different possibilities from the game depending on offers sent by player 1 and returned amounts from player 2. To make their decision each player checks one of the possible options (0, 25, 50, 75 or 100% of the initial endowment) and the decision is then recorder in the booklet that they will carry with all their decisions throughout the session. For each of the possible decisions, the instructions read (this is an example based on an initial endowment of Col\$12,000, and for the case of sending 50% of the endowment):

O 3. You decide to send **\$6,000** to player 2.

You then keep \$6,000 and player 2 receives.

Player 2 will decide how much of the \$18,000 plus \$12,000 wants to return back to you.

*Please check only one of the options with an X on the circle to the left of the possible choices below.*

Aside from the actual decision, players 1 are also asked to predict how much they think they will get back from player 2:

L6. ¿How much do you think Player 2 will send back to you?

*Check with an X on the circle to the left of the possible choices below.*

In the case of players 2, each of the possible decisions reads as follows (the example here is for the possibility that player 1 sends \$3000, i.e. 25% of the initial endowment):

L17. If player 1 decided to send you **\$3,000**, then player 1 kept \$9,000 and you received \$9,000. If this was the decision of player 1, how much would you like to return back to player 1 from the \$21,000 (initial \$9,000 plus \$12,000 from your initial endowment)?

O 1. **\$0**

O 2. **\$3,000**

O 3. **\$6,000**

O 4. **\$9,000**

O 5. **\$12,000**

O 6. **\$15,000**

O 7. **\$18,000**

O 8. **\$21,000**

Players 2 were also asked to state their expectations:

L21. Now, how much do you think player 1 sent you from her \$12,000?

- O 1. \$0
- O 2. \$3000
- O 3. \$6000
- O 4. \$9000
- O 5. \$12000

**Activity 2 (PUBLIC GOODS GAME - VCM):** In this next activity all participants are now gathered back in one single room and now play a one-shot Voluntary Contributions Mechanism or Public Goods game as follows. The monitor announces that this is a new activity, not related to the previous one, and that this one can also be selected for the final payment. Once again they are reminded that the decisions are kept confidential and private during and after the experiment. They are also asked not to communicate with any other participant in the session. The monitor then explains the incentive structure and rules of the game. In this game each participant has one token to be invested in two possible alternatives P (private account) or G (group account). Depending on the investment decision the earnings will be determined in the following manner:

- If a player invests the token in the private account (P) her earnings are based on two amounts of money:
  - First, the player earns \$20,000 (we continue using the Colombian case in our examples) from his investment in the private account.
  - Second, the player also earns \$2,000 for every token that the rest of participants invest in the group account.
- If the player invests in the group account (G) the player earns \$2,000 for every token invested in the group account by that player and everyone else.

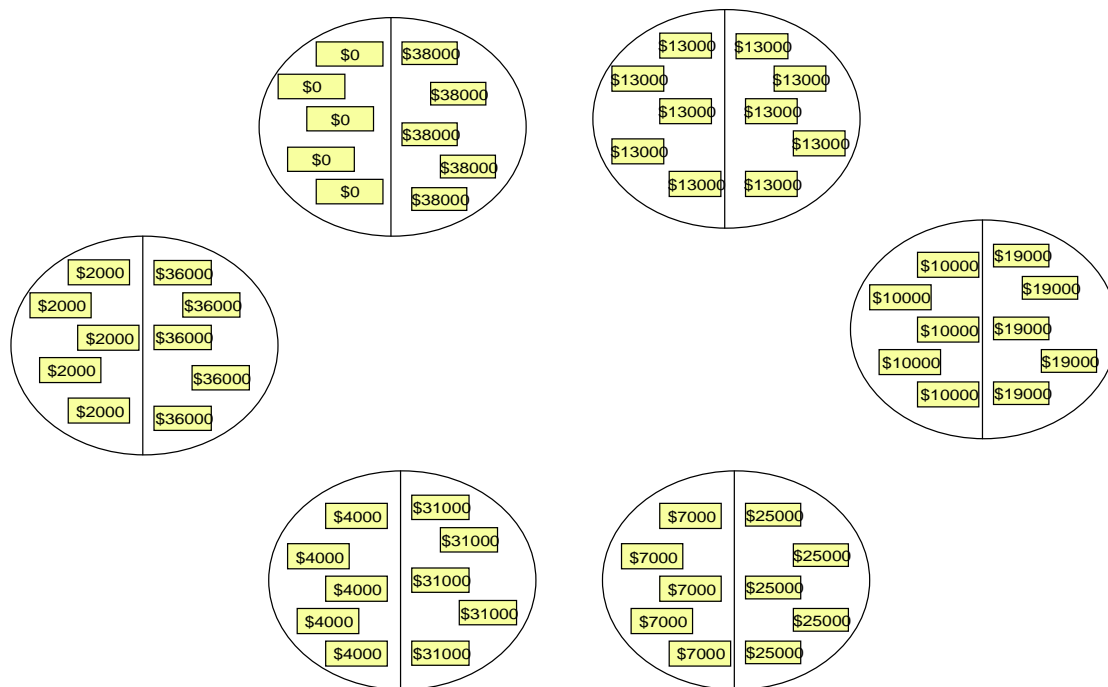
The decision to invest in either account is then written in a slip of paper as the one shown below where the player must mark the account she wants her token invested in. The monitor also asks the participants to predict the number of people they believe will invest in the group account out of the number of players in the session.

| Activity 2 |                                            |                                                                           |
|------------|--------------------------------------------|---------------------------------------------------------------------------|
| L1         | L9                                         | L10                                                                       |
| No. Player | My decision<br>Private or Group<br>Account | How many people<br>do you predict will<br>invest in the group<br>Account? |
|            | P      G                                   |                                                                           |

During the activity, and before they make their decisions the monitor explains the incentives and possible actions and results with four examples that explain clearly what happens if you decide to contribute in P or in G for both cases of a majority investing in P and a majority investing in G. Also before the decision is made, the monitor shows in the

board of the room the basic demographic composition of the session in terms of the fraction of players in each gender, educational level and the socio-economic status, based on the neighborhoods they come from. Once players make their private decisions the slips of paper are collected by the monitors and put in an envelope for the session. Once again, the participants are not told of the results from their decisions until the end of all activities.

**Activity 3 (THREE RISK GAMES):** In this activity there is no interdependence of actions and payoffs across participants. The activity includes three decisions or steps, namely aversion to risk, ambiguity and losses.<sup>14</sup> All games are based on six 50/50 lotteries that increase both in expected value and variance. The participants are shown six circles, each representing a bag with ten tokens inside. Each token represents the amount of money the player would receive, depending on the bag chosen. The decision is to choose a bag out of the six and, once chosen, randomly pick one of the ten tokens inside to know how much money was earned. Only in one of the bags each of the ten tokens represents the exact same amount of money (the risk-free one). The remaining five bags have five tokens with a low amount and five with a high amount. The lower and higher values change over the other five bags. The first risk game involves the following 6 circles or bags, again, using the Colombian pesos example: The first bag starting in the upper right side represents the sure bet of \$13,000. Moving clockwise one can observe that the values now move to a 50/50 lottery of \$10,000 or \$1,9000, and so on, increasing in the variance and expected value all the way to \$0 or \$38,000 (the last two lotteries do have the same expected value of \$17,000). The monitor explains with a series of examples how the game works and then proceeds to ask each of the players to mark with an X the lottery they would like to pick.



<sup>14</sup> Obviously they are not labeled as such to the participants, just named decisions 1, 2, and 3.

Once the participants have made their decisions in their booklets the monitor asks them to make the same kind of choice in the next decision, but showing that now the bags have 3 high payoff tokens and 3 low payoff tokens. The remaining 4 tokens are of either high or low value but the participants will not know how many of each. For the third decision in this activity, the participants are asked to again decide over six bags but in this case they are endowed initially with a fixed amount of money and then must decide over which bags to choose, which include in some cases losses instead of gains. Using our Colombian pesos example, each player receives in this decision \$20,000 to start the game and then must decide over the sure loss of -\$7,000, or lotteries with ranges of -\$1,000/- \$1,000, -\$13,000/+\$5,000 and so on, all the way to the last lottery of -\$20,000/+\$18,000. As it can be seen, the values are the exact same if adding the initial \$20,000 endowment.

**Activity 4 (RISK POOLING):** In this last activity the participants repeat the first decision of activity 3 with one variation. In this case each player chooses whether to form a group to share equally the gains from playing again the risk game, or to play the new risk game again individually. Once they decide to form the group or not, the total number of people forming the group is announced and then they decide over the risk choice among the six possible lotteries. In either case each player needs to pick one of the six lotteries, but the earnings are received individually or shared depending on the case. To make their decisions the players must fill a slip of paper like this one:

|                                                                                                   |
|---------------------------------------------------------------------------------------------------|
| <b>Activity 4</b>                                                                                 |
| L14. Decision to join a group                                                                     |
| No. Player_____                                                                                   |
| Do you wish to join a Group in which<br>Earnings of the Group will be divided<br>in equal shares? |
| <input type="checkbox"/> YES <input type="checkbox"/> NO                                          |

Once everyone has filled the slip, and before they decide over which lottery to choose, the monitor collects the slips and announces the number of people who have decided to join the group. Now every player should know if the earnings in this game will come from an individually played lottery or from the risk-pooling group. Then they are asked to mark the lottery or bag they would like to play.

**Ending of an Experimental Session**

Once all participants had completed the four activities, the random selection of the activity to be paid out of the four was made, in front of all assistants. If activity 3 was picked (risk games) then another random selection was made on which of the 3 lottery games was to be paid and then the random selection of whether the high payoff or the low payoff was to be paid in the 50/50 lottery. If the activity 4 was picked, then each of the participants picked their random outcome of high or low payoff before the polling of earnings was made.

At the exit of the experimental room all participants received a snack while waiting to be called to receive their payments and to answer the post-game survey. This last stage was made in parallel by all available monitors; each of which took one player's booklet and survey, called the participant to fill the survey and to proceed with payments. Once this task was completed the participant could leave the premises.

## Payments

The payments made to the participants are explained in detail in the following tables, along with the exchange rates for comparisons across cities.

|                                       |        | Bogota     | Buenos Aires | Caracas   | Lima   | Montevideo | San Jose |
|---------------------------------------|--------|------------|--------------|-----------|--------|------------|----------|
| Currency                              | Dollar | Peso       | Peso         | Bolivar   | Sol    | Peso       | Colon    |
| Exchange rate 1 US\$ (Jan.25.2007)    | 1      | 2296.81    | 3.1007       | 2149.23   | 3.2484 | 25.471     | 537.37   |
| Minimum denomination used for payment |        | 1000 pesos | 25 cents     | 1000 blvs | 1 sol  | 5 pesos    | 100 cols |
|                                       | 0.25   | 1000       | 0.25         | 1000      | 1      | 5          | 100      |
| Fraction of a 1\$US                   | 25%    | 44%        | 8%           | 47%       | 31%    | 20%        | 19%      |

Payments made for each game in local currencies (based on average behavior observed in each sample):

|                                  |          | Bogota    | Buenos Aires | Caracas   | Lima    | Montevideo | San Jose  |
|----------------------------------|----------|-----------|--------------|-----------|---------|------------|-----------|
| Currency                         | Dollar   | Peso      | Peso         | Bolivar   | Sol     | Peso       | Colon     |
| <b>TRUST GAME</b>                |          |           |              |           |         |            |           |
| Min. payment possible Trust Game | \$0      | \$0       | \$0          | \$0       | \$0     | \$0        | \$0       |
| Max. payment possible Trust Game | \$ 20.00 | \$ 48,000 | \$ 120       | \$ 48,000 | \$ 72   | \$ 560     | \$ 12,000 |
| Avg offer Player 1 (%)           | 0.446    | 0.368     | 0.486        | 0.431     | 0.496   | 0.449      | 0.454     |
| Avg return player 2 (%)          | 0.274    | 0.187     | 0.264        | 0.339     | 0.302   | 0.284      | 0.279     |
| Average earnings                 |          |           |              |           |         |            |           |
| Avg.payoff Player 1              | \$ 5.97  | \$ 12,306 | \$ 34.86     | \$ 16,153 | \$ 23   | \$ 171     | \$ 3,612  |
| Avg.payoff Player 2              | \$ 8.49  | \$ 20,528 | \$ 54.32     | \$ 18,190 | \$ 31   | \$ 235     | \$ 5,113  |
| Avg.Ply1/2                       | \$ 7.23  | \$ 16,417 | \$ 44.59     | \$ 17,172 | \$ 27   | \$ 203     | \$ 4,362  |
| <b>PUBLIC GOODS GAME</b>         |          |           |              |           |         |            |           |
| Min. payment Public Goods game   | \$0.80   | \$ 2,000  | \$ 5.0       | \$ 2,000  | \$ 3.0  | \$ 25.0    | \$ 500    |
| Max. payment Public Goods game   | \$23.20  | \$ 58,000 | \$ 145.0     | \$ 58,000 | \$ 87.0 | \$ 725.0   | \$ 14,500 |
| Avg payment received             | \$ 9.9   | \$ 22,504 | \$ 61.2      | \$ 28,206 | \$ 36.3 | \$ 313.4   | \$ 6,233  |