

Prosociality across Socio-Economic Disparities: Trust, Cooperation and Generosity in Argentina

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Abstract

This document describes the pre-analysis plan for the paper with the working title “Prosociality across Socio-Economic Disparities: Trust, Cooperation and Generosity in the Context of the Argentine Society”.

1 Introduction

The plan is outlined as follows: Section 1 presents the motivation, literature review, sample selection and experimental design, Section 2 describes the data collected, and Section 3 introduces the process of analysis through the hypotheses to be tested and the specifications to be used.

1.1 Motivation

How prosocially different social groups behave has been a recurrent topic of discussion in the context of a society’s development. We define prosociality as the behavior that is intended to benefit others. It is believed that with the lack of prosociality we would frustrate the operation of institutions and economic development. At the same time, considering the wealthier minority’s influence on the power dynamics and the provision of goods and services, understanding how a wealthier minority behaves prosocially becomes a very important topic.

In Argentina, there has been a constant discussion about the reasons behind the failure of the country to leave a history of downturn aside. Traditional explanations have focused on structural problems, inefficient institutions, among other reasons. By contrast, other approaches have emphasized the micro-level behavior of Argentines. The perception that the wealthier minority is more selfish compared to the rest of the socio-economic groups is one of the components of the debate, which together with the deterioration of trust and generosity portray the importance of behaving prosocially.

When it comes to the literature in the matter of prosociality, this topic is motivating due to the fact that previous studies have found conflicting results. We are unable right now to determine whether there is a common trend worldwide. There are significant differences in the extent of the prosocial behavior varying for social classes. In some studies, lower classes portray higher willingness to behave prosocially, while in others there is the opposite effect. This shows that there is something deeper to dig to, there is still a puzzle to solve.

In this research project I will be investigating the salience of socio-economic status in the prosocial behavior of individuals. The particular question I will be asking is whether the individual’s perception of their socio-economic status affects their trusting, cooperative and generous behavior, as measurement of prosocial behavior, in the context of the Argentine society. I hope this study sheds light on determining a common behavior and, eventually, try to give new perspectives into the matter

1.2 Literature Review

Banfield and Fasano (1958) opened the literature on the matter. They indicated through cooperation studies in Italy that lower income individuals are less prone to cooperation as they are more concerned with their personal welfare and that of their immediate families. Closer to the present Putnam (1993) stated that the level of prosociality varies across the level of social capital of individuals, referring to the network of relationships rather than purely through the perception of the social class you are part of.

One of the most influential papers on the matter of prosociality, by Fehr and Schmidt (1999), states that individuals tend to behave in a selfish manner, even though their intentions may be those of fairness and equality, when a minority of the participants behave unfairly. This paper tested this through a set of ultimatum and public good games. This would lead us to think that we should expect a homogeneous behavior across different social groups, yet when it comes to socio-economic disparities, the current literature portrays contradicting results on the prosocial behavior. In theory, lower-income individuals are endowed with fewer resources, then prosocial acts that require resources may represent a higher personal cost. Hence, it would theoretically be expected that lower-income individuals would engage in less prosocial acts. However, literature often shows the opposite behavior.

However, in current studies, Piff et al. (2010) indicated through a study in which participants had to share 10 tokens with a stranger remotely or face-to-face that lower classes are more likely to engage in prosocial activity when compared to higher-income individuals. However, other studies have results that contradict what was found in previous papers. For instance, Andreoni et al. (2018) “mis-delivered” envelopes with cash and bank transfer cards of the same denomination to households in higher and lower class neighborhoods in the Netherlands and found that higher income households behave more prosocially at the moment of returning the envelope to the right address.

1.3 Sample Selection

This project is situated in Argentine schools, with Argentine students as the main sample. We captured schools in the private and public sector in a variety of districts to ensure variation in socio-economic status of individuals. In total, 4 schools were open to collaborating with the study. One of the schools had a demographic with a notably high socio-economic status, another one with a significantly low socio-economic class and the other two schools portrayed a more varied socio-economic background within their students, ranging from upper-middle to middle-low social class. We run an in-class experiment in these four schools, capturing a sample size of 513 students, 244 men, and 269 women. The students interviewed are between 15 to 21 years old, coming from the last 3 years of secondary school. In total, 24 classrooms were surveyed.

1.4 Experimental Design and Randomization

The study is designed to take place in a classroom, with students seating in numbered positions. The study is divided in three main parts. First, a baseline and network survey. Second, a series of behavioral games. And third, a behavioral survey asking participants about their thought process when making decisions during the games. This was designed to last between 40 to 60 minutes per classroom, an average of 2 days was dedicated to each school to

be able to cover all classrooms. Figure 1 is a graph of the research design attached for greater clarity and details on the data collected in each section can be found in Section 2 of this pre-analysis plan.

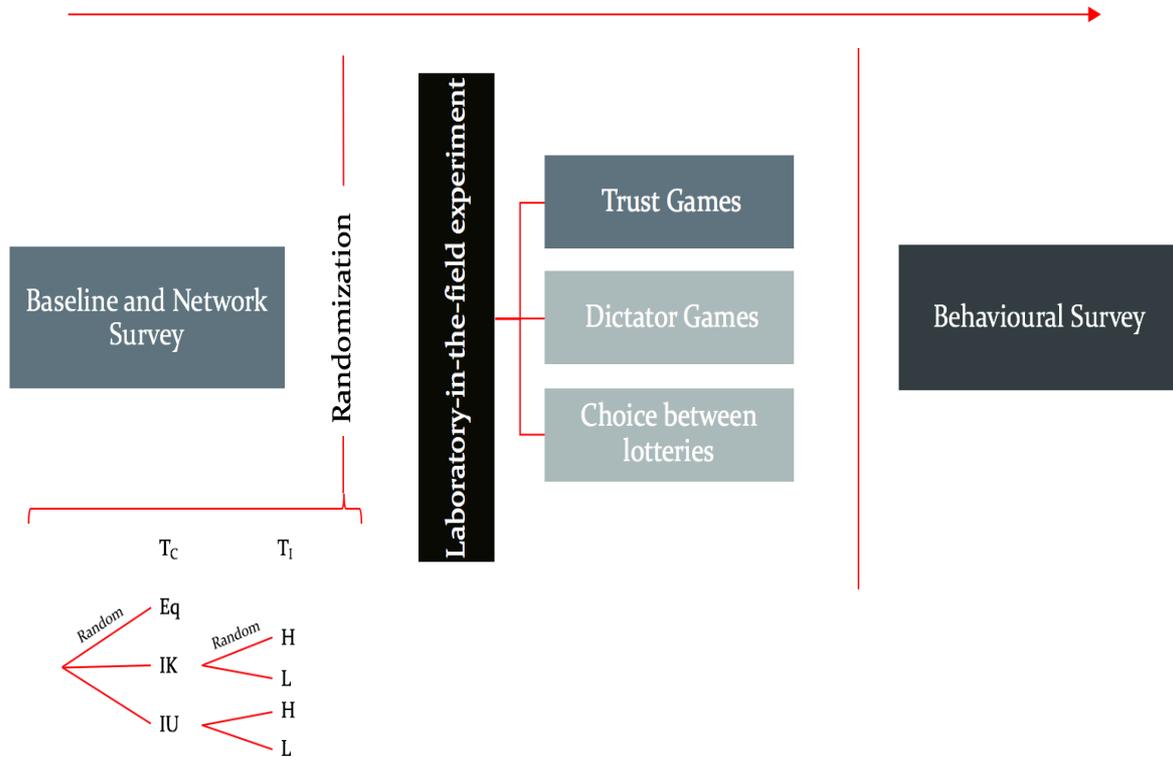


Figure 1: Research Design Diagram

One of the purposes of this study is to investigate the change of behavior in the context of inequality. In this experiment, we randomly varied the participation fee received by the students. In that way there were two main situations, one in which all students in the classroom received the same participation fee and the second in which they received an unequal payment. Students in a situation of equality would receive 50ARS (1.21USD at the moment of the experiment) and those in a situation of inequality would receive a randomly assigned payment of 25ARS (0.61 USD) or 75ARS (1.86USD).

Students would be informed of the treatment they would receive after the baseline and networks data and before playing the games. In the case of equality, students would be informed that everyone would be given the same amount. However, in the inequality situation, in some classrooms students would be informed of the payment they receive and the fact that some other students in that classroom, while other classrooms students were only informed of their individual payment. Whether the students of a classroom knew about the unequal payments or not was randomly assigned at the classroom level. In this way we would have a total of three different situations: First, a situation of equality, second, a situation of known inequality, and third a situation of unknown inequality. As seen under the bracket under “Randomization”, the randomization of the treatment was at the classroom level (T_c) for the situations of Equality (Eq), Known Inequality (I.K.) and Unknown Inequality (I.U.). The randomization of high (H) or low (L) payments received in both contexts of inequality was done at the individual level (T_1).

Payments for each student at the end of the study would be the sum of their participation fee and their payoff at one of the games. Before starting the study, students would be informed that at the end of the experiment one game would be randomly picked to be the payed one.

2 Data

2.1 Baseline Survey

The baseline survey is intended to capture basic information of the participant that can help us determine the social class he/she belongs to. We capture social class proxy information, for instance, the level of education of the parents/tutors, the grant of government subsidies and household assets (for instance, living space and vehicle ownership). At the same time, we capture basic information of the participant such as age and gender.

2.2 Networks Survey

The purpose of this survey is to capture their perceptions on the rest of their classmates. Each student is asked about each other of his/her classmates regarding their level of friendship, the level of trust they feel towards the other participant, their level of socio-economic privilege compared to that of the respective classmate and the level of altruism they perceived in the other person. The way in which we measure the level of friendship is by giving them multiple options to respond to the question “How would you describe your relationship with him/her?”. The options were, “Very Friendly”, “Friendly”, “Acquaintance” and “Unfriendly”. As for trust, they would state how much they would agree with the statement “I trust him/her in personal matters” with the options “Strongly Agree”, “Agree”, “Neutral”, “Disagree” and “Strongly Disagree”. This same procedure would be followed for altruism with the statement “I believe he/she worries first about their own good before the collective good”. As for relative privilege, they would complete the sentence “I consider him/her to be [blank] socio-economically privileged than me” with the options “A Lot More”, “More”, “Equally”, “Less”, “A Lot Less”.

2.3 Behavioral Games

The purpose of the games is to capture the direct prosocial behavior of the students in relation to the sharing of monetary amounts. The participants were informed of the payment they received before playing. Three games were played in total: A Choice of Lotteries, a Trust Game and a Dictator Game. It is important to note that in order to be able to rule out time or learning effects, the order of the Trust Game and the Dictators’ Game was randomly assigned, always after the Choice between Lotteries.¹

The first game they would play would be the choice between lotteries. In the literature, this exercise is usually used to measure the risk behavior of participants. Individuals would be given different lottery options with different levels of risk in the outcome, based on their preference we can measure their risk behavior. In our experiment, participants were given a six 50% chance lotteries with different outcomes each. For instance, accounting for a complete risk aversion situation, the first lottery option consisted of certainty of earning 24ARS (0.58USD). While the last option, accounting for a risk loving behavior, consisted of 50%

¹ The choice of lotteries was selected to always be the first game for logistical reasons, because this would minimize the number of versions of the surveys we would randomly assign to different classes.

chances of earning 64ARS (1.56USD) and 50% chances of earning 0ARS. The other lotteries would lie between this two options.

Following this exercise, they would play a Trust Game. This game, as the name implies, is often used in the literature as a measure for trust among individuals playing together. This is due to the fact that sharing decisions depend on how much they trust that the other participant is going to share back with them. This game is played between two participants. The first participant is given an initial endowment of 20ARS (0.48USD), while the second participant receives 0ARS. The first participant is asked to share any amount from 0ARS to 20ARS with the other participant, knowing that the amount he/she shares will be multiplied by 3 before arriving to the second participant. Hence, if the first participant shares 10ARS, the second participant would receive 30ARS. Once this transaction takes place, the second participant is asked to share any amount from 0ARS to the total amount received with the first participant. The second transaction is not multiplied by 3. After this decision is made the game is over. This game is played between two participants, yet for the purpose of this study, students would be directly interacting with another participant. Each student would have to fill out what their decision would have been in the position of both participants. They would know who they are participating with, as they would later be paired² with another student of the same class to establish the final payment for the game. At the moment of the pairing, students would be randomly assigned the role of first or second participant.

As for the last exercise, participants would play a Dictators' Game. In the literature, this game is very commonly used as a measure of generosity and preferences towards equality. In certain ways similar to the Trust Game, this game also consists of two individuals. One with an endowment of 20ARS and the other with 0ARS. This time, the first participant cannot know who the second participant is nor any other information regarding him/her, apart from the fact that he is a human. There are no second movers in this game, the only task consists of asking the first participant to share any amount from 0ARS to 20ARS with the other participant. Different to the Trust Game, the second participant would not receive the shared amount multiplied by 3. After this transaction is done, the game is over.

It is important to note that in order to be able to rule out time or learning effects, the order of the Trust Game and the Dictators' Game was randomly assigned, always after the Choice between Lotteries.

2.4 Behavioral Survey

After finishing the games, participants completed a survey asking about their thoughts during the games. These questions had the purpose of rationalizing their expectations during the games. The first question we ask about each game has the purpose of finding out about how each participant compares his level of generosity with that of their class. Participants would answer whether the amount they shared was "A Lot More", "More", "Approximately the same", "Less" or "A Lot Less" compared to what the rest of their class gave.

² For pairing, students would randomly be assigned being the first or second player. After doing so, they would be randomly paired with a student assigned the opposite player position. The first player would be paid his initial endowment minus what he/she gave to the other player plus what he receives from the second player based on the second player's decision for the amount received. The second player would receive the amount given by the first player he is assigned to multiplied by three minus what he gives to the first player for that amount

Later, questions would be targeted to a specific game. As for the Trust Game, participants were asked about the level of expected generosity from their classmates. Participants had to answer whether they expected the amount to receive from the first player, when playing as second player, and from the second player, when playing as first player, was a “Good Amount”, a “Fair Amount”, a “Little Amount” or “Nothing”. Later, participants were asked about whether they took revenge with the amount they shared as second player when receiving unequal shares of money. They would respond to this statement with the options “Strongly Agree”, “Agree”, “Neutral”, “Disagree” and “Strongly Disagree”.

As for the Dictators’ Game, participants had to respond to the statement of whether the fact that they did not know the other person they were playing with was important in their decision-making process in a Likert Scale.

After responding to these questions, participants would be asked about their level of happiness, trust for others in their community, generosity within their community and care within their community. Participants would measure ideas on a scale of 1 to 10, 1 being the lowest and 10 the highest.

3 Analysis: Hypotheses & Specifications

3.1 Main Effects

As mentioned previously, there were two kinds of randomizations taking place during the study: at the classroom level and at the individual level. For the purpose of clarity, below we can find a graph explaining the different treatments of interest based on the treatments received. Eq stands for the situation of payment equality, I for inequality, K stands for known inequality and U for unknown inequality. Within inequalities, H for those receiving a higher endowment and L for the ones receiving a lower one. The equality, the known inequality treatment and the unknown inequality treatment occurred at the classroom level. However, the high or low endowment treatment occurred at the individual level.

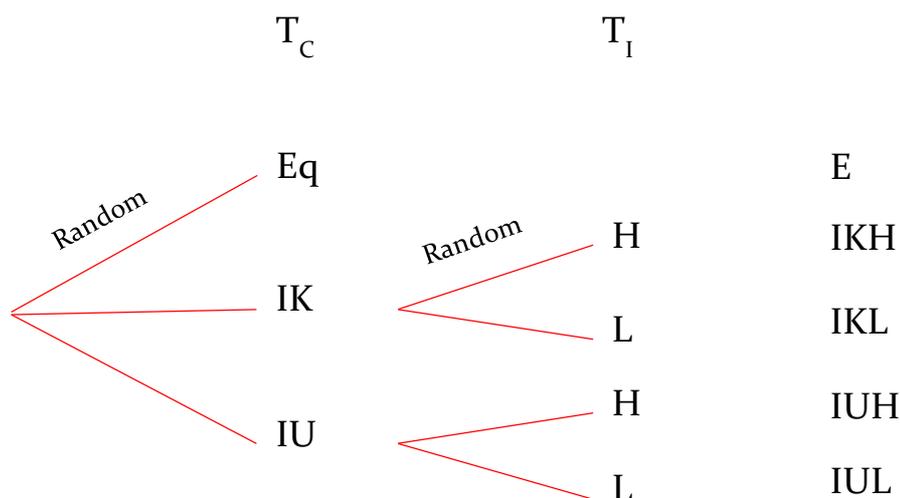


Figure 2: Treatment Categories

H1: Whether participants are in unequal classes will vary their prosocial behavior compared to equality.

Due to the fact that the randomization of the inequality in payments treatment was done at the classroom level, we will analyze the effects of the inequality treatment at the classroom level. This hypothesis will encompass the full sample of the study. We anticipate that our main specification will be as follows:

$$Y_i = \alpha + \beta_I I_c + \varepsilon_c$$

where I_c stands for whether we are in a situation of inequality and Y_i stands for the outcomes of the games, the Dictators' Game and the Trust Game.

H2: Whether participants know or do not know that they are in unequal classes will vary their prosocial behavior compared to equality.

As a continuation of the previous hypothesis, we will analyze the effects of the known and unknown unequal treatment at the classroom level, encompassing the full sample of the study. We will test this through the following specification;

$$Y_i = \alpha + \beta_I I_c + \beta_{IK} I_c K_c + \varepsilon_c$$

where K_c stands for whether the participants know that they are in an unequal classroom.

H3: In the context of inequality, whether participants receive a higher or a lower endowment will vary their prosocial behavior.

For this hypothesis, our outcomes of interest are at the individual level, due to the fact that the randomization of the high and low payments in the context of inequality was done at this level. We expect that within the classes receiving unequal payments there will be differences in the prosocial behavior between those receiving a higher endowment and participants receiving a lower endowment. We will test this through the following specification:

$$Y_i = \alpha + \beta_H H_i + \varepsilon_i$$

where H_i stands for the whether the participants received a high endowment.

H3: In the context of inequality, the effect of receiving a high or a low payment on behavior will vary whether the inequality is known or unknown.

Knowledge of inequality was randomized at the classroom level. We expect that in the context of unequal payments, knowing that you are receiving an unequal payment with respect to your class will lead a difference in the prosocial behavior of students compared to those classrooms in which students do not know of the inequality. We anticipate that our specification for this outcome of interest will be as follows:

$$Y_i = \alpha + \beta_H H_i + \beta_{HK} H_i K_c + \varepsilon_i$$

where $H_i K_c$ is whether they are receiving a higher endowment in the case of inequality and know about it.

3.2 Heterogeneity

We anticipate that our heterogeneity analysis will be divided into three different sets of hypotheses: concrete social context, social perceptions, and social capital and trust. Under each hypothesis you will find what are the heterogeneity dimensions of interest. It is important to note that the heterogeneity analysis will be done entirely at the individual level. However, as a general specification for these section of hypothesis, we anticipate that this will have the following model:

$$Y_i = \alpha + \beta_1 T_{c,i} + \beta_2 T_{c,i} H_i + \beta_3 H_i + \varepsilon_i$$

where $T_{c,i}$ stands for the treatments in place, H_i is the heterogeneity dimension of interest and Y_i is the individual level outcome at the games.

H1: The prosocial behavior of participants will vary according to their position in relation to concrete measures of the socio-economic group they belong to.

When talking about concrete measures of the socio-economic group participants belong to we refer to the information collected in the baseline survey at the beginning of the study. The heterogeneity dimensions of interest for this hypothesis would be:

- Education level of the household head: each student had six options between Primary School to PhD to answer. We know from several studies in the past that the level of education is very closely correlated with the socio-economic status of an individual. A median split will be done in order to do the analysis.
- Government subsidy: this is a dummy variable for whether they receive financial assistance from the national or provincial government. Naturally, wealthier families do not have access to this assistance.
- People living and working in the household: We know how many people live in the household and how many have an income from their work. Here a median split will also be done.
- Assets: we collected data related to whether they own the house where they live in, a vehicle and they travel during their holidays. An assets index encompassing all the assets measured will be developed for the purpose of the analysis.

An overall “material socio-economic status” index will be developed with all the information above mentioned for the purpose of further analysis.

H2: The prosocial behavior of participants will vary depending on social capital measures and the socio-economic perceptions of their social group

Compared to the previous hypothesis, dealing with more objective and concrete measures, for this hypothesis we will focus on other aspects of socio-economic classes. In order to do so we will use the data collected in the network and behavioral survey. The heterogeneity dimensions of interest for this hypothesis, understood as socio-economic perceptions, would be:

- Socio-economic privilege perception:
 - *Within-class comparison*: We can determine how he feels in average to the rest of his class in terms of privilege and how the rest of the class feels about his privilege level. We used socio-economic privilege as a measure for socio-economic class.
 - *National comparison*: in the baseline survey we asked the participants what social class they felt they belonged to in relation to entire national population.
- Altruism: we collected network data related to how altruistic they thought their classmates were, hence, we will construct an index of altruism based on their answers.
- Generosity:
 - *Within-class comparison*: in the behavioral survey students were asked to compare their perceived level of generosity compared to that of their classmates.
 - *National comparison*: in the behavioral survey we also asked students on a scale of 1 to 10 how generous they thought their communities are.

An overall index portraying perceptions among participants will be developed for a more holistic analysis of this hypothesis.

H3: The prosocial behavior of participants will vary depending on social capital and trust measures.

As for this last hypothesis, measures taken from the network and the behavioral survey are used to study whether the social capital and the level of trust of the students has a relation to their prosocial behavior. The heterogeneity dimensions of interest are:

- Social Capital: we will construct a social capital measure based on the number of friends, acquaintances and non-friends they report.
- Trust:
 - *Within-class comparison*: we will construct a trust index based on their responses to how much they trust each of their classmates.
 - *National comparison*: in the behavioral survey students were asked how much they trusted the people in their country in a scale of 1 to 10.

As done for the previous hypotheses, an overarching index will also be developed for a more general study of this hypothesis.

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