

# Pre-analysis Plan: An Experiment on Institutions and Theories of Property

Giuseppe Dari-Mattiacci\*, Marco Fabbri<sup>†</sup>, Matteo Rizzolli<sup>‡</sup>

January 18, 2020

## 1 Introduction

Respecting others' property rights in situations where state enforcement or decentralized enforcing institutions are absent is an important component of social preferences. A burgeoning experimental literature has identified this unenforced respect for property rights and labelled it “taking aversion” or “first party enforcement” (Faillo et al., 2019). In this project, we investigate the effects that property rights have on taking aversion. More specifically, we study whether the source that originated the property rights (merit or luck) is an important determinant of taking aversion and how the origin of property interacts with property rights institutions.

To do so, in a lab-in-the-field experiment we conduct a modified dictator game with taking in which the passive player had either received windfall money or earned the endowment through an effort task (Jakiela, 2011). To achieve identification, we combine the lab-in-the-field game with the setting of property rights reform implemented following a unique strategy in a West African country.

This pre-analysis presents the data sources, the structure of the experiment, and the empirical strategy.

## 2 Research Strategy

This project investigates whether the establishment of formalized ownership affects individuals' willingness to respect others' property rights and whether the origin of these property

---

\*Columbia University

<sup>†</sup> *Corresponding author.* University Pompeu Fabra & Barcelona GSE. E-mail address: [marco.fabbri@upf.edu](mailto:marco.fabbri@upf.edu).

<sup>‡</sup>LUMSA University

rights determines the result. We study a land rights reform that was implemented in Benin, West Africa, between 2010 and 2011. The reform was implemented as a randomized control-trial in half of over 600 rural villages that were included in the randomization pool. We make use of the RCT design to compare the results of a variant of the dictator game where takings are allowed and we vary the source of the passive player’s endowment both in villages that had the reform implemented (treated) and in other selected villages included in the RCT pool (control). Since being selected as participants to the land reform in the RCT is orthogonal to participants’ preferences, a comparison between treated and control allows to isolate the impact of the institutional change on subjects’ social preferences for respecting others’ property rights.

The beginning of the data collection for the research project is scheduled for the end of January 2020. The pre-analysis plan was submitted before the data collection started. The participants will be recruited during fieldwork sessions in Beninese rural villages. A team of research assistants will visit 32 villages and request voluntary participation in the research study to the local population. We plan to recruit 18 participants (9 males and 9 females) for each village, for a total of 576 participants.

## 3 Design

### 3.1 Dictators’ choices

The experiment is based on a modified Dictator game in which the dictator has the possibility to take part or all of the resources belonging to a passive player. Our treatment variation consists in varying the source of the passive players’ endowment. In the *Luck* treatment, the passive player receives the initial endowment from the experimenter as windfall money.

In the *Merit* treatment, the passive player has to complete an effort task within a pre-specified time limit in order to receive the initial endowment. More specifically, participants will receive a plastic box and 200 toothpicks. The plastic box has a little hole on top. Participants have ten minutes to place all the 200 toothpicks inside the box from the top hole. If a participant manages to complete the work assignment within the ten minutes, he/she receives an initial endowment. Otherwise, he/she will not receive any token.

All participants (those who successfully complete the effort task in the *Merit* treatment, and all those participating in the *Luck* treatment) receive 10 tokens worth XOF 50 each (in total approximately \$ 0,85). The dictator has the possibility to take part or all of these tokens. The final earnings for each subject are equivalent to the amount of tokens she possess.

We will ask to each participant in the experiment to state her taking decision in the role of dictator.

Each participant will take one decision only. Participants are informed that, at the end of the experiment, they will be randomly paired with another participant and assigned either the role of dictator or that of passive player. Within each couple only the decision of the subject

whose assigned role is the dictator one will determine the payoffs for both participants. The other decisions will not affect the calculation of final earnings.

## **3.2 Instructions**

### **General instructions**

Thank you for coming to today's meeting. Please note that, if you do not feel comfortable, you are free to leave this meeting at any point of time. Today's meeting starts with some activities in which you have to make choices. During the activities, you will have the chance to earn a substantial amount of money. The money you earn, together with the 500 XOF for showing up today, will be paid out in cash at the end of the meeting.

The meeting will last for some hours, and to receive the payment it is necessary that you attend the meeting until the end. All the choices you will make will remain strictly anonymous. No one other than me will know what you earn today. The payment will be private. You should know that the money comes from research funds and not from our own pockets or from the pocket of politicians. Please note that there is no right or wrong in making the decisions, this is not a test. During today's session you will receive a code. This ensures that everything you do (your decisions and your answers in questionnaires) will remain anonymous.

During the activities, we will speak of tokens. 1 token is worth 50 XOF.

### **Merit treatment**

In this activity there are two types of participants: Participant A and Participant B. Participant A has the possibility to work in order to earn 10 tokens. To earn the 10 tokens, Participant A will need to successfully complete a work assignment.

Specifically, Participant A will receive a plastic box and 200 toothpicks. The plastic box has a little hole on top. Participant A has ten minutes to place all the 200 toothpicks inside the box from the top hole. If Participant A manages to complete the work assignment within the ten minutes, he/she receives the ten tokens. Otherwise, he/she will not receive any token for this part of the study.

Participant B initially has zero tokens. If Participant A earned the 10 tokens, Participant B can take 0, 1, 2, etc. up to 10 tokens from Participant A.

The final outcome of this activity is: for Participant A, the tokens left by Participant B. For Participant B, the tokens taken from Participant A. If Participant A did not manage to complete the work assignment within the ten minutes, both Participants get zero.

### **Luck treatment**

In this activity there are two types of participants: Participant A and Participant B. Participant A receives 10 tokens from the experimenter for free. Participant B initially has zero

tokens. Participant B can take 0, 1, 2, etc., up to 10 coins from Participant A.

The final earnings of this activity are: for Participant A, the tokens left by Participant B. For Participant B, the tokens taken from Participant A.

*Which is your role?*

We do not know yet whether you will be the Participant A or B. We ask you to work and complete the work assignment as if you are the Participant A, and we also ask you to choose how many tokens you want to take from your partner as if you were the Participant B. At the end of the assignment, we will randomly assign you either the role of Participant A or the role of Participant B.

*Who is your partner in this activity?*

In this project you are going to be asked to make decisions with people from this village participating to the research project today. At the end of the activity, we will randomly match you with another participant in this village who has been assigned the other role.

*How are your earnings in this activity calculated?*

Yours and your partner's earnings will be determined by the actions you made in the assigned role; actions made in the other role will not affect final earnings and will be discarded. Your earnings in this activity will be paid cash at the end of today's study.

### **3.3 Survey questions**

In addition to the dictator game choices, participants will answer a set of non-incentivized survey questions regarding: age, gender, religion, marital status, number of family members, participation to household finance management, education, literacy, village of birth, years of residence in the village, income.

## **4 Empirical Strategy**

The project is designed to study how the source that originated the property rights that an individual holds over a resources (either merit or luck) interacts with the experience of the institution of private property in determining unenforced respect of others' property rights. Since theoretical reasoning provide no reasons to believe that different sources of property right acquisition in connection with the experience of ownership could cause a modification of respect for others' property rights, we will apply two-sided tests of significance.

## 4.1 Hypothesis

### 4.1.1 Treated vs. Control

We start by comparing the taking rate of dictators who experienced a reform of land rights establishing private ownership with a set of villages forming the control group where access to land is governed by collective and informal land rights. We compare whether experiencing private property affects the propensity to respect others' property *both* when property originated by merit or by luck.

**Hypothesis 1** *The respect for others' property rights is the same in treated and control villages.*

### 4.1.2 Main Hypothesis: Merit vs. Luck

Second, we will test whether there are systematic difference in the levels of respect for others' property rights between treated and control villages. We define a difference in respect for others' property as systematic if the level of taking in the dictator game is higher or lower for both participants in Merit and in Luck treatments for participants in treated than in control villages.

Moreover, we will test whether property rights that originated from an individual effort work differently in treated and control villages in determining respect for others' property.

**Hypothesis 2** *There is no systematic difference in respect for others' property rights between treated and control villages*

**Hypothesis 3** *The respect for others' property when property rights are generated via individual effort is not different in treated and control villages.*

### 4.1.3 Heterogeneity

We will study heterogeneity in respecting others' property rights in the treated and control villages for subject in Merit and Luck treatments by using data on the level of market integration. As a proxy for market integration, we will use a village distance from the closest paved road (below and above the median in the sample).

We will additionally test whether background data collected in the survey – gender and income – generate differences.

## 4.2 Specification and analysis

Hypothesis 1-3 will be tested by estimating the following regression equation:

$$t_i = \alpha + \alpha_M M_i + \delta_T T_i + \delta_M M_i T_i + \mathbf{x}_i + \epsilon_i \quad (1)$$

where  $t_i$  is the taking decision made by the dictator,  $M_i$  is a dummy equal to one when the subject takes decisions in the *Merit* treatment,  $T_i$  is a dummy equal to 1 for subjects in treated villages, and  $\mathbf{x}_i$  is a vector of the individual characteristics specified in the post-experimental survey.

The heterogeneity analysis will additionally add to specification (1) interaction terms with the following variables:

- a dummy variable equal to 1 when the distance of the village from the closest paved road is above the median in the sample of villages
- a dummy equal to one for male subjects
- a dummy equal to one for subjects whose income is above the median in the sample

## References

- Faillo, M., Rizzolli, M., and Tontrup, S. (2019). Thou shalt not steal: Taking aversion with legal property claims. *Journal of Economic Psychology*, 71:88–101.
- Jakiela, P. (2011). Social preferences and fairness norms as informal institutions: Experimental evidence. *American Economic Review*, 101(3):509–13.