H i C N   Households in Conflict Network

Trust and trustworthiness after a land restitution program: Lab-in-the-field evidence from Colombia

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HiCN Working Paper 291

January 2019

Abstract: We assess the impact of a governmental program to compensate victims of forced displacement on pro-social behavior. All our subjects were eligible to apply for restitution of their land in accordance with the "Bill of Victims" (Ley de Víctimas, Bill 1448/2011). The key independent variable of our analysis is whether a subject had obtained land within this or similar programs. Our dependent variables are a subject's trust and trustworthiness to unknown others, as measured by a modified version of a Trust Game. We focus on interpersonal trust and trustworthiness because of their well-documented positive effect on economic development. Our design also included a treatment in which subjects voted on their most preferred outcomes in the Trust Game, because we wanted to understand whether forms of consultative democracy could engender higher mutual trust. We find that land restitution significantly increases trustworthiness, while there is no effect on trust. This is consistent with findings that trust and trustworthiness tap into different aspects of pro-sociality. Voting does not improve either trust or trustworthiness, but there is a positive effect once interacted with restitution.

Keywords: trust; trustworthiness; internally displaced population; reparations

JEL Codes: C93, I38, Q15

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1. Introduction

In 2011, the Colombian government approved the Bill of Victims (*Ley de Víctimas*, Bill N. 1448/2011). This legislation served to formally recognize the country's internal conflict and lay the foundation for a long-term commitment to compensating victims, including land restitution for those whose land was dispossessed or who had to unwillingly abandon their property. Given the size of the population affected by the civil conflict (around 15% of the total population), a plan of this scale is unprecedented (Sikkink et al. 2014), with the possible exception of the South African case. The amount of land dispossessed during the conflict was around 5.5 million hectares. However, the Bill only granted restitution to victims whose land was stripped after 1991.[2]

From an economic perspective, access to property rights favors investment. Since the owner becomes the residual claimant over the surplus generated by investment, property rights incentivize investment. Moreover, it has been argued that land (or dwellings) can be collateralized, thereby promoting access to credit (De Soto, 2000).

Although from the incentive point of view the two are comparable, land restitution is not land titling. Land restitution is a method of restoring the rights of the victims of violence, whereas restoration accelerates the healing of the trauma and the forgiveness of perpetrators. Healing and forgiveness may induce pro-social behavior.

Moreover, if other people's welfare is a normal good, in the framework of other regarding preferences, land restitution is a positive asset shock, which will *ceteris paribus* increase pro-sociality.

Finally, to the extent that reparation overcomes grievance, affected communities may be more willing to engage in bottom-up institution building and be more sensitive to procedural fairness. Although rational choice postulates that outcomes represent the ultimate drivers behind actions, political scientists claim that procedures are also important in determining the legitimacy of decisions and of organizations (Lind and Tayler, 1988; Olken, 2010). In the context of rural development, assessment of the sensitivity to fair procedures is important to promote participation and community empowerment on the condition that democratic procedures are in place.

To test these hypotheses, we collect data from a lab-in-the-field experiment in rural Colombia. We engaged different communities with members who were either claiming their land or were already recipients of land restitution through the program. We measured trust and trustworthiness through a standard trust/investment game (Berg et al. 1995). Our design included a consultative vote on the most desirable course of action, as in Bogliacino et al. (2018). Non-binding consultation with simple majority is *cheap talk*, and it does not change the prediction of the Subgame Perfect Nash Equilibrium; however, it is a fair procedure and mimics the way in which rural

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[2] A couple of clarifications are in order. First, since 2011, a new Register has been created (Unique Register of Victims; RUV per the acronym in Spanish); according to the most recent available data, more than eight million victims have been officially recognized as affected by the internal conflict. Second, the amount of dispossessed land is unclear, essentially because the legal status of most rural properties is not formalized. Ibáñez et al. (2006), in an initial estimate, placed this number at 1.2 million hectares, but there are estimates as high as 10 million (Sánchez León, 2017). The 5.5 million estimate is validated by the largest survey of victims (Contraloría, 2014), and it is the figure on which the legislative agenda has been based.

communities are consulted for relevant projects that may affect their daily life (e.g., infrastructure projects).

Our main variable is a dummy for land restitution. This variable is self-reported and is not exogenously assigned. Our identification strategy relies on the selection on observables as well as a control for omitted variable bias, as in Oster (2017). When we try to assess the sensitivity to the voting treatment, we use a model with an interaction term, such as a difference-in-difference model (Card and Krueger, 1994).

This paper proceeds as follows: Section 2 discusses the relevant literature background; Section 3 provides the ethnographic and institutional context; Section 3 presents the design and the econometric strategy; Section 4 discusses the main results; and Section 5 presents conclusions. An English version of the full protocol is included in the Supplementary Online Materials (SOM).

2. Land Restitution, Violence, Trust and Procedural Fairness

2.1. Trust and trustworthiness

Trust can be defined as the propensity to rely on other agents by willing to put material resources at their disposal without a legal or binding constraint. Although beliefs are a constituent part of this definition, trust is a behavioral concept (Coleman, 1988); i.e., for trust to be in place, there must be a transfer of resources. Generalized trust is a peculiar form of trust when the counterpart in the interaction is a stranger. In social capital theory, generalized trust is a form of *bridging*, i.e., it strengthens bonds with people belonging to other groups.

In social surveys, trust is measured through questions. Examples include asking people whether they would give a copy of the keys to their apartment to a neighbor. In the World Values Survey, trust is approached through the following question: "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?", which is a behavior-related question (Fehr, 2009).

Trust is valuable because it generates social surplus. In a trusting environment, people can save on insurance and on transaction costs to write contracts, and organizations can save the costs necessary to build up enforcing mechanisms. Trust is widespread, but from an efficiency point of view, it is undersupplied: By trusting, an agent exposes himself to the free-riding behavior of the counterpart. As a result, trust relies on the trustworthiness of the others. By trustworthiness, we mean the propensity to return the benefits of trust.

In economics, trust and trustworthiness are measured through the investment game developed by Berg et al. (1995). In this game, a trustor and a trustee interact, taking a decision in sequence, under perfect information. The trustor moves first, deciding how much she wants to transfer to the trustee. The amount sent is multiplied by the experimenter, usually by a factor of three. The trustee can decide how much to share with the trustor. This second move is purely distributive. This is a sequential game with perfect information: rational, self-interested agents will anticipate that the only equilibrium strategy by the trustee is to free ride, thus transferring zero and generating the lowest possible social surplus. Since this is rarely observed in experiments, significant effort has been devoted to studying the possibility that agents follow *rational*

decision-making but with direct concern for the welfare of other participants. Within a wide array of models, we can distinguish between the class of preference-representation with disinterested concern for others (such as inequality aversion models, e.g., Fehr and Schmidt, 1999 and Bolton and Ockenfels, 2000) and models of reciprocity, wherein individuals react positively to counterpart behavior that follows norms of fairness (Rabin, 1993; Dufwenberg and Kirchsteiger, 2004).

Experiments with the trust/investment game have been conducted in many labs and field environments. In fact, the importance of trust as a lubricant of economic transactions (Arrow, 1974) and as a predictor of economic performance (La Porta et al., 1999; Zak and Knack, 2001) poses a policy challenge regarding which institutions most effectively promote trust. For detailed results of differing views on trust and rationality, see Cardenas and Carpenter (2008) or Johnson and Mislin (2011). There are both individual level determinants of trust, e.g., age (Belli et al. 2012) and risk attitudes (Karlan, 2005), and institutional settings that promote trust. As discussed by Bogliacino, Jiménez and Grimalda (2018), sanctions, voice, communication, promises and reputation can, to varying degrees, shape the level of trust in the interaction between two anonymous parties.

2.2 Land restitution and trust: some hypotheses

According to the Bill 1448/2011, victims of land dispossession and unwilling abandonment after 1991 are entitled to have their property rights restored. As stated in the introduction, standard incentive theory postulates that property rights allow the owner to reap the benefits of an investment (Demsetz, 1967). To the extent that more worthwhile investments would follow, this institution is efficiency enhancing. There is considerable historical evidence regarding the role of land titling in development (Davis and North, 1971; Di Tella, Galiani, and Schargrodsky 2007; Deininger and Feder, 2009; Galiani and Schargrodsky 2010).[3]

Considering land restitution as a peculiar form of land titling would lead to the following predictions, depending on how we interpret trust. Notice that this analogy is well grounded for the Colombian case: Restitution is part of a massive strategy to promote change in rural areas, where unequal access to land was a root cause of the conflict, and restitution is coupled with a strategy of formalization. In fact, the law claims that the substantive concept of property--and not the formal one--should be privileged; in cases where violence interrupts a material and productive relationship of

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[3] Private titling is not the only arrangement associated with more efficient decisions. Recently, Peña et al. (2017)'s assessment of collective titling in the Pacific region of Colombia shows that communities under collective titling have more education and investment than their counterfactual neighbors. Mixed results on individual titling versus collective titling comes from the experience of Papua New Guinea (Curtin and Lea, 2006). De Soto (2000) argues for an alternative channel in claiming that a title is a tool to provide collateral to the poor, favoring access to credit and the development of financial markets. Although intuitive, the result is not general, market imperfections may significantly affect the predictions and the De Soto effect ultimately depends on the extent of competition among lenders (Besley et al., 1992). In the specific case of land, unequal distribution of power in access to the registration system, relative abundance of land and low efficiency of land administration systems may weaken the functioning of the De Soto effect, whose empirical evidence is scant (Deininger and Feder, 2009).

a person and a certain land asset, in absence of a formal title, the sentence of land restitution should be complemented by formalization and not be merely limited to the restoration of the previous state of affairs (Sánchez León, 2017).[4]

Trust is equivalent to an investment in the counterpart's trustworthiness, as suggested by the "investment game" label originally used by Berg et al. (1995). Empirical evidence from laboratory experiments shows that many different motives lead to higher trust, from reciprocity to altruism, from efficiency to self-interest (Cox, 2004). If we assume that the owner of a land title in a certain community is willing to protect his assets in a domain of weak institutional efficiency, we can reasonably infer that he will be eager to show trustworthiness in repeated or even face-to-face interactions, in order to avoid retaliation, but it is unclear what would happen in anonymous interactions, such as those identified in a controlled lab-in-the-field environment.

A second consequence can be derived from the fact that the trust game is a typical task used to infer social preferences, an umbrella concept capturing other regarding concerns in behavior, e.g., cooperation, reciprocity, altruism and inequity aversion (Bowles and Polanía-Reyes, 2012). What happens to social preferences under land restitution? If other people's welfare is a normal good, given that land restitution is a positive wealth shock, we should expect more pro-sociality (Eckel and Gintis, 2010).

But there are other three reasons that support a positive impact of land restitution on social preferences. The first is predicated on the endogeneity of preferences. Trust may be part of the behavioral repertoire of an individual, which certain situations or institutions may induce or activate (Bowles, 1998). As Arrow (1971) claims, rules of conducts and behavioral norms such as trust may be conceived as societal solutions to market failures that society itself may internalize toward "the achievement of the desired agreement on an unconscious level" (Arrow, 1971: 20).

Restoring victims' rights will help heal wounds and traumas and favor forgiveness. This can activate certain socially beneficial behavioral traits, such as trust and trustworthiness.

The second reason suggests that asset-based restoration and political agency are linked, and trust/trustworthiness may be a mediating variable. In the academic discussion on transitional justice, reparation and restitution, Atuahene (2010) introduces the concept of property-induced invisibility:

> "Property-induced invisibility is the confiscation or destruction of real property with no payment of just compensation, executed such that dehumanization occurs. The act is perpetrated by the state or other prevailing power structure(s) and adversely affects powerless people or people made powerless by the act, such that they are effectively left economically

vulnerable and dependent on the state to satisfy their basic needs." (Atuahene, 2007: 1431)

When property-induced invisibility occurs, it is argued that the victim is essentially excluded from the social contract. Being excluded from social contract means lacking the obligation to comply with social norms and adhere to institutional rules, which, in turn, means higher vulnerability. In contrast, restoring property rights renews political agency by rebuilding a relationship with society. Moreover, asset-based restoration represents a means to guarantee inclusion and soften dependence on the State, thus lowering the opportunity cost of political participation and community involvement (Atuahene, 2007).

A similar point has been made by Lid (2010), who directly correlates collective action and restitution:

> "By restoring the victims to their former conditions in their place of origin one can restore their collective power to decide the future for their communities, regulate the activities which have been introduced in their absence, and on an individual level one will return the people to conditions that they are familiar with and have a realistic prospects of mastering and improving." (Lid, 2010: 184).

Another research hypothesis is that by favoring entitlement and community healing, land restitution may increase institutional efficiency. De Greiff claims that one aim of any form of transitional justice should be to increase trust, both between people and towards institutions (ONU, 2015). The very functioning of the rule of law is grounded in this trust (De Greiff, 2006a). Restoring property rights to the dispossessed makes the current system of property rights more legitimate, increasing political stability and procedural legitimacy, and indirectly injecting trust and trustworthiness in the community. This is achieved by stabilizing citizens' expectations, using material reparations as a means of restoring belief in the trustworthiness of the institutions; in turn, through these channels, trusting behavior is occasioned: "Former victims of abuse are given a material manifestation of the fact that they are now living among a group of fellow citizens and under institutions that aspire to be trustworthy" (De Greiff, 2006a: 464). Bogliacino, Jiménez and Grimalda (2018) identify a significant effect of consultative voting on both trust and trustworthiness. As non-binding, the vote is cheap talk (Crawford and Sobel, 1982) and does not affect the theoretical prediction of the Subgame Perfect Nash Equilibrium, but it may induce a commitment effect (similar to the case of promises; Vanberg, 2008), spur the formation of normative expectations (Duffy et al., 2013) or transmit signals on empirical expectations (Bicchieri and Xiao, 2013). In these rural environments, consultative democracy is the most widely used institutional mechanism for community deliberation and empowerment. It is reasonable to expect that as soon as victims receive reparations, become more prone to engage in community-focused activities and reach a more advanced stage of healing, they should be more sensitive to communitarian institutions, showing more trust and trustworthiness when this outcome is voted on.

Do we have robust evidence consistent with our hypotheses? Land restitution is the norm in postconflict transitional justice, as established by the UN's Pinheiro Principle

(Sánchez León, 2017). In South Africa, land restitution was the cornerstone of the policy of reparations, as in Colombia, despite the design being different. Nevertheless, we do not have counterfactual impact evaluations of the international or the South African case. In particular, we do not have compelling evidence on behavioral change. For the South African case, we know that land restitution alone was insufficient in terms of improving living conditions (Hall, 2010): This is what government agencies claimed, based on the lack of production on most parcels, probably because improved access to land was not coupled with improved access to technology and capital. De Greiff (2006b) includes a substantial collection of case studies in transitional justice, though this evaluation is mainly legal, based on the extent of coverage and the efficiency of the process. We have some studies on resettlement, which is clearly not equivalent with a return with restitution as enforced by the Colombian legislation. Barr (1999; 2003) finds that trust is lower in resettled villages in Zimbabwe than in traditional villages. Barreto et al. (2016) encounter no significant difference in trust and other pro-social behavior in internally displaced households when comparing those that decided to return home in a government-sponsored program to those that did not. The effectiveness of governmental support programs for displaced populations is essentially mixed (Ibáñez and Moya, 2010), although this evidence is limited to change in consumption per capita, and an extension to social capital may be unwarranted.

3. Institutional and ethnographic background
3.1 The role of land in the Colombian internal conflict
The Colombian internal conflict is defined as the fight between government and left-wing guerrilla groups. It started in the first half of the 1960s, when the two major organizations (the Marxist-Leninist FARC and the Guevarist-nationalist ELN) were created. The creation of these organizations was the response to the violent repression of the Government to farmers' organizations, a violent repression inspired by the US regional doctrine (Latin American Security Operation, or LASO Plan) that was essentially oriented to eliminate seeds of left-wing organizations (especially after the Cuban revolution).

Over the decades, the conflict has changed in nature and participants, with different strategies from the Government and new actors involved, from other guerrilla organizations to paramilitary groups.

An official narrative of the conflict has been provided in GMH (2013), a work carried out in the mark of the National Center for Historical Memory (*Centro Nacional de Memoría Histórica*), which is one of the institutions established by the *Ley de Víctimas*. The report highlights two main drivers: the unequal access to land (with Gini of property well above 80%) and the ostracism against left wing parties. As part of the negotiation between the FARC and the Government, a Committee was established, where a number of experts provide their own reading of the enduring conflict. Recently, a Truth Committee similar to the South African one has been established, but this work is still ongoing. There are three reasons to highlight the role of land in the conflict.

First of all, Colombia has been characterized by the existence of an internal frontier. Many areas, such as the Amazon, do not have property rights and are open to

colonization (LeGrand, 1988). The groups that gave rise to the FARC were actually settlers' organizations. Areas colonized tend to show poor or completely absent State control and are prone to the penetration of illegal groups that tend to enforce rules and codes of conducts (Aguilera, 2014). In many cases, Internally Displaced Persons (IDP) are forced to colonize new territories to have access to land, and given that coca leaves end up being the only profitable crop, this will attract and strengthen the presence of illegal groups, further exposing victims to new risks of displacement (because of disputes among illegals groups or army intervention) in a sort of vicious cycle (Reyes Posada, 2009).

Secondly, in most rural areas, the most profitable activities are land intensive, from narco-trafficking to illegal mining and agroindustrial production (oil palm, sugar cane etc.). In presence of poorly enforced property rights and contended monopoly of the violence (Robinson, 2013; Berry, 2002), displacement has traditionally been an instrument of accumulation by dispossession (Fajardo, 2015).

Finally, land control is the main asset behind the center-periphery political equilibrium, where collusive control of the central power by oligarchic groups is matched by *divide-and-rule* policies in the peripheries, where local bosses control votes and institutions but may be subject to turnover (Robinson, 2013).

3.2 Legal context

The *Bill of Victims* (Bill 1448/2011) was passed on the 10th of June, 2011. It is considered the most ambitious plan in the country's history to repair the multiple victims of internal conflict (Summers, 2012).

It is not the first attempt to do so, however:[5] recently, in the process of negotiation with paramilitary groups, former president Uribe approved many legislative acts to implement a system of transitional justice deemed to restore victims' rights (975/2005, 1421/2010, and 1424/2010), the most important of which was known as the *Justice and Peace Law* (975/2005).

The Bill officially recognized internal conflict, taking a different stance with respect to the predominant governmental position in the Uribe era, which defined and fought illegal groups as terrorists under the influence of the prevailing US orientation (Robinson, 2013; Rojas, 2015).

The law is oriented towards all victims, considering January 1, 1985 as the starting date. The status of victim is acquired independently of the individualization, apprehension, prosecution or condemnation of the responsible.

Advocacy groups, NGOs and other humanitarian activists have praised the incorporation of a number of strategic issues (Barreto et al. 2016), such as the gender approach and the right to memory (with the creation of the institutions such as the National Center for Historical Memory). A discussion of the institutions and the related decrees can be found in Barreto et al. (2016) and Summers (2012).

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[5] Technically, the first attempt to restitute land to the displaced goes back to the First National Front government 1958-1962 (Karl, 2017).

The Law establishes that dispossessed have the right to the restitution (if they have been disposed after 1991), which consists of two phases: an administrative one, managed by the *Unidad de Victimas* (the main agency for the protection of the rights of victims) and a judicial one, where there is the presumption of good faith by the victim and the charge of proof is assigned to the actual owner.

If restitution is not possible, an alternative property should be transferred; in cases where neither of the two is available, a compensation will be paid. Ethnic minorities have specific processes, regulated by additional decrees. Additionally, the Law establishes nullity of any administrative act involving legalization of the property without acknowledging the right of the victim, and of course inexistence of contracts celebrated on the property without good faith.

Article 66 of the Law establishes the general rules of the return of the victims, or relocation in case there are not proper conditions for return. The main principles to be respected are: willingness, dignity and safety.

It is important to stress that a specific law that put the State in charge of the attention to displaced and dispossessed exists only beginning in 1997 (Law 387), although no specific requirements were imposed (Summers, 2012). The Justice and Peace Law was more stringent, but victims should report the crime and the perpetuator in order to ask for damages and restitution, which prevent effective implementation due to fear and lack of safety for the victims.

3.3 Ethnographic account

The region in which we conducted the experiments is named *Montes de María*. It is found in Northern Colombia, in the Bolívar Department. It has been a very rich agricultural region due to its climatic and soil features, although the nature of agriculture production has shifted dramatically over the years from diversified production to strong specialization in oil palm, extensive livestock and wood industry (Aguilera, 2013). It is a strategic corridor on account of its proximity to the sea, to one of the main rivers (Río Magdalena) and to the harbors of Cartagena and Barranquilla.

Tension in the area has been traditionally high, with organizations of small farmers and colonizers asking for land titling since the 1960s. Penetration of left wing guerrillas was on the rise from the 1990s on, which has been followed by a strong and violent response of paramilitary groups; this led to 42 different massacres and massive displacement (GMH, 2013; 2009).

We involved different communities through Community leaders, but this is still a convenience sample. Among the reported communities we have:[6] Palo Altico, Carmen de Bolívar, Cartagena, Cucal, Bellavista, Mampuján, Ovejas, Palma de Vino, Palmito, Paraiso, San Cristobal, Santafe de Icoté.

Among the reasons for displacement (question 6 in the questionnaire in the SOM), the main reported cause is threats (47.17%) followed by direct violence (16.85%).

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[6] We report only those communities with more than one participant. Data refer to question 8 in the post-experimental questionnaire (SOM).

Twelve persons reported not having abandoned their land, which means that they belong to the second or third generation of displaced, which are recorded as such according to the law.[7]

Among the respondents, 74.04% reported being officially registered as victims, while 20.19% do not know, 5.77% state not to be officially registered (question 9 in the SOM).

4. Experimental procedures

4.1 Design

Our lab-in-the-field was conducted in Pava, in the Bolívar region, in Colombia (Figure 2). The recruitment of participants was obtained through different community leaders. The lead experimenter had different meetings with them prior to the study and provided a generic description of the aim of the research. No mention was made of the task or the main hypotheses. We ensured that people from different communities took part in the same session to limit interaction among acquaintances.

Our version of the Trust Game (TG) is similar to Charness et al. (2011) and Ermisch et al. (2009). A close version of this protocol is implemented in Bogliacino, Jiménez and Grimalda (2018) in Cundinamarca (rural Colombia).

The sender and the receiver were given two Experimental Currency Units (ECUs) at the beginning of the interaction; the sender then decided how much she would like to transfer to the receiver. Possible choices were 0, 1, and 2. As customary, the amount transferred was tripled by the researcher. The receiver then decided whether to keep all the tokens in her possession, or to share them equally with the sender. We record receiver's decisions through the strategy method. The keep or share-equally is found to be very easy to understand for a population with very low educational level (Table 1 below).

The extended form of the game is illustrated in Figure 1, with payoffs given in ECUs. Each token was worth 4000 Colombian Pesos (COP). The experiments were performed in July 2014: at that moment, the exchange rate was 1866 USD/COP. The hourly minimum wage was slightly above 2000 COP, and considering that poverty status is overwhelmingly diffused among the displaced (83.9% of monetary poverty according to Contraloría, 2014), stakes were largely above opportunity cost for participants.

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[7] See question 5 in the post-experimental questionnaire in the SOM. We confirmed with the community leaders to ensure all the participants were displaced.

Figure 1 The trust game in extended form.
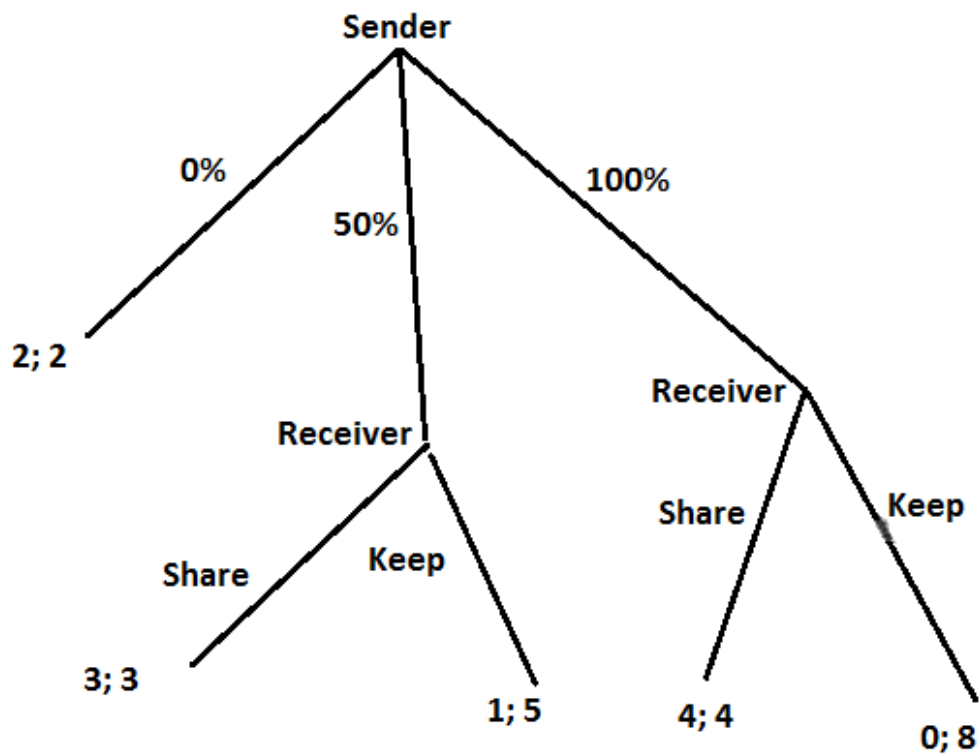
Participants received a randomly assigned ID number at the beginning of the session. Half of participants received an odd number and half an even number. Once seated, the lead experimenter (supervising all experimental sections) informed the subjects that they would take a series of decisions, and that one of the decisions would be paid, randomly decided at the end of the session. The lead experimenter then illustrated the rules of the interaction relevant for the first decision on a blackboard. Visual representations of the interactions were also handed out (an example is in Figure A1 in the SOM).

Comprehension was checked through two sets of questions. We could not ask subjects to provide written answers since there was a large set of illiterate participants. As a result, we encouraged oral answers and after that we corrected the mistaken responses, illustrating the correct answer on the board.

At the end of the comprehension check, the treatments were administered. We had three conditions: control, vote and message. The control condition is the baseline: under this treatment, subjects just moved to the decision tasks.

In the voting condition, the set of decisions was preceded by a vote. Each subject was asked to indicate on a sheet which actions she considered the most appropriate for

participants to perform.[8] Subjects were asked to vote for all the three decisions that subjects would make – namely, the sender's transferred amount and the receiver's return, conditional on the sender transferring respectively one and two ECUs. The actions that received most votes were then publicly announced. It was explained that the consultation was not binding.

In the signal condition, we read the majority voting of the trust game performed by Bogliacino, Jiménez and Grimalda (2018).[9] The message was announced to everybody, emphasizing that it was not binding.

Of the nine sessions performed, three sessions were assigned randomly to each condition. In the end, we have 24.32% of the sample under the control condition, 34.23% in the signal treatment, and the remaining 41.44% in the vote treatment.

After the treatment, the roles of sender and receiver were assigned. A random draw was carried out, assigning either people holding an odd ID number or an even ID number the sender role. The other group was assigned the receiver role. Both senders and receivers were asked to submit their decision on a decision sheet. We remind readers that receivers made their decision through the strategy method, i.e. either keep or share equally, conditionally on the sender transferring 1 or 2 ECUs. Assistants helped participants provide a decision when prompted.

Once everyone had made their choices, the decision sheets were collected. Subjects were told that the second decision consisted of another TG, where roles would be swapped. Those who acted as receivers (senders) in the first decision, acted as senders (receivers) in the second decision. New pairs were formed. Our matching algorithm ensured that everyone was paired with a different player from the first decision. This was publicly announced. The lack of repeated interaction is necessary to avoid reputation building or any form of form of strategic reciprocity.

The overall experiment lasted up to two hours, with minimal variation. Average payment was 13297 COP with standard deviation 7516 COP. Participants received the reimbursement of their travel expenses to reach the experimental site.

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[8] The text of the relative instructions was as follows: "Please, indicate how many tokens you would consider convenient for the sender to send to the receiver" "For each scenario, please indicate if you consider convenient that the receiver send some tokens." See the SOM for the full version of the instructions.

[9] The text of the relative instructions was as follows: "According to the sessions previously performed in some Colombian villages, the majority of the participants consider convenient that for the sender to send two tokens to the receiver. According to the same sessions, the majority consider convenient for the receiver to transfer when the sender sent one token. According to the same sessions, the majority consider convenient for the receiver to transfer when the sender sent two tokens." See the SOM for the full version of the instructions.

Figure 2. A picture of the experimental sessions.

3.2 Econometric strategy

We compute the trust variable as the share of ECUs sent to the receiver; the trustworthiness is defined as the share of ECUs given back to the sender. The exact formula for the latter variable is:

$$TW = I(1ECU) \cdot \frac{2}{6} + I(2ECU) \cdot \frac{4}{6} \qquad (1)$$

where TW is the trustworthiness, I() is the indicator function, I(s|1ECU) is equal to one if the receiver decides to share when one ECU is transferred, I(s|2ECU) is equal to one if the receiver decides to share when two ECUs are transferred. Since in the first case two ECUs are shared and in the second case 4 ECUs, we properly weight the two cases. We label "Land" the dummy equal to one if the respondent self-reports having benefited from a land restitution process.[10]

We first assess if there is a significant increase of trust and trustworthiness in the displaced population whose land rights have been restored.

To conduct this analysis, we run Ordinary Least Squares regressions using the Land dummy as treatment variable. We use a selection on observables strategy. Since we could not collect a baseline ex ante, to avoid bad control (Angrist and Pischke, 2008) we use only socio-demographic controls.

To assess robustness, we provide a sensitivity analysis of the effect size of land on outcome variables, inferring the potential impact of omitted variable bias from the stability of the coefficients of interests when further controls are added (Oster, 2017). Based on the key (unverifiable) assumption that the selection on observables is the same as the selection on unobservables, after adjusting for differences in the variance of these distributions, we can calculate the bias and estimate the value of the coefficient after correcting for it. The formula (based on OLS regressions) for this coefficient is:

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[10] Technically, it is equal to one when the respondent answers affirmatively to one of the following three items: "I have been benefited by the restitution under the Ley de Víctimas", "I have been benefited by other process of land titles formalizations", "I have been benefited by a collective process of land titling." See question 4 in the post-experimental questionnaire in the SOM. Since we are interested in restitution and not in the policy evaluation of the Law *per se*, we think it is important to include other processes as well.

$$\bar{\bar{\alpha}} = \hat{\alpha}^* - \left(\widehat{\alpha^0} - \hat{\alpha}^*\right) * \frac{R_{max} - R^*}{R^* - R^o} \tag{2}$$

where $\hat{\alpha}^*$ and R^* are the coefficient estimate and R squared from the regression using observable covariates, respectively, and α^0 and R^o are the coefficient and R squared from the uncontrolled regression, respectively. The key to understanding this procedure is R_{max}: this is the R-squared when y is regressed against both observable and unobservable controls, which is clearly unknowable and represents a degree of freedom. In our investigation, we followed a procedure similar to that of Gonzales and Miguel (2015), calculating four different scenarios: (1) a conservative scenario wherein $R_{max} = 1$, which would be the case given zero measurement error; (2) a scenario wherein $R_{max} = 2R^* - R^o$, which corresponds to the assumption that the relationship between the treatment and the observables is the same as the relationship between the treatment and the unobservables (Bellows and Miguel, 2009); (3) Oster's (2017) proposal of $R_{max} = Min\{2.2R^*, 1\}$; and, finally, (4) a rule of thumb $R_{max} = .5$, which corresponds to a measurement error of 50%.

In the second part of the analysis, we first assess to what extent the results of the rural sample of Bogliacino, Jiménez and Grimalda (2018) apply to a violent environment. In the former environment, it is found that a consultative voting treatment was able to improve trust and trustworthiness working as a coordination mechanism. Since we have random assignment of treatments to session, we look at the difference in trust and trustworthiness across experimental conditions. Then we split the participants in four groups according to two dimensions: whether they were displaced or restituted, and whether they were in the control condition or in a treatment (signal or vote) condition, and we look at the differences across the four groups.

As a final analysis, we also compare the results of trust and trustworthiness with the result of the same trust game implemented in rural Colombia (Bogliacino, Jiménez and Grimalda 2018) and in Bogotá (Bogliacino, Gómez and Grimalda, 2018.

5. Results
5.1 The effect of land restitution
111 observations were collected in the TG, but the regression analysis includes fewer observations due to missing values in the post-experimental questionnaire.

Some descriptive statistics are reported in the Table below. Two thirds of participants were males, 58% were older than 40 years and two-thirds of the sample had at most primary education.

Table 1: **Descriptive statistics**

Variable	Distribution
Observations	111
Gender	M: 67%
Age	18-24 (10.20%)
	25-30 (12.25%)
	31-40 (19.03%)
	41-55 (27.55%)
	56-83 (30.61%)
SES	1 or absent: 90.42%
	2 or 3: 5.31%
Education	No education: 32.38%
	Primary: 37.14%
	Secondary or more: 30.48%
Land	20.72%
Occupation	Farmer: 74%
	Retired/unemployed: 12%

Note: Land is equal to one when the respondent answers affirmatively to one of the following three items: "I have been benefited by the restitution under the Ley de Víctimas", "I have been benefited by other process of land titles formalizations", "I have been benefited by a collective process of land titling". SES measures the quality of the dwelling, increasing from one to six.

Among participants, those that had received land represented around 20% of the sample, while 52.58% declared not to have received any measure of compensation of any kind (see SOM: Section S2, Question 10). Of course, we cannot double check these response because we don't have access to administrative data.

Table 2 Sample comparison

	By Condition	By Land Status
Gender	$\chi^2=.01$	$\chi^2=.10$
Marital Status	$\chi^2=1.22$	$\chi^2=.53$
Age	$\chi^2=118.65$	$\chi^2=52.35$
HH size	$\chi^2=4.56$	$\chi^2=.00$
SES	$\chi^2=10.21$	$\chi^2=11.98*$
Time of displacement	$\chi^2=57.19$	$\chi^2=32.38$

Randomization of the three conditions ensures exogeneity of the treatments. In fact, no socio-demographic characteristics is statistically different across conditions as shown

by the Pearson's χ^2 test reported in Table 2 above.. We measure Socio-Economic Status (SES) (through the government assessment of the quality of one's dwelling (so-called *estrato* in Spanish). The government performs such an assessment over the whole country, thus making comparisons across different localities possible. The assessment assigns a tier ranging from 1 to 6 to each dwelling, increasing in quality. The tier is highly correlated with income.[11] People are normally aware of their dwellings' tier because the payment of utility bills is based on it. There is no social stigma associated with the tier level, thus ensuring truthful self-reporting.

Regarding the *Land* variable, socio-demographic characteristics are balanced across conditions, as shown in Table 2 above.[12] The SES is different χ^2=11.98 (p=.04), but it is not robust to multiple hypothesis testing.

In SOM, Section 3, Figure 1, we plot the choices of participants. The distribution of the outcome variable is the following: 11.71% sent zero ECUs, 45.05% sent one ECU and 43.24% sent two; 63.06% decided to share conditionally on the trustor sending one ECU and 63.96% decided to share conditionally on the trustor sending two tokens. Moreover, 47.74% have a 100% trustworthiness.

The order of decision did not affect choices significantly. The null hypothesis that the order of choice and the outcome variables are independent is not rejected either when one token was transferred (trust, χ^2=1.00, p=.60; share when one ECU is transferred, χ^2=.01, p=.90; share when two ECUs are transferred, χ^2=.21, p=.64). We also check if the payment of only one decision affects behavior: the null hypothesis that the drawn decision (either first or second) and the outcome variables are independent is never rejected (trust, χ^2=2.25, p=.32; share when one ECU is transferred, χ^2=.42, p=.51; share when two ECUs are transferred, χ^2=1.22, p=.26).

Figure 3reports the level of trust according to the Land variable. No significant difference emerges, which is confirmed by a Mann Whitney Wilcoxon rank sum test (MWW, z=-.47, p=.63).

Figure 4reports the average trustworthiness, computed as in Equation (1), distinguishing by access to land restitution. A significant difference emerges, with land restitution recipients showing higher trustworthiness. The result is robust to a non-parametric test (MWW, z=-2.10, p=.03).

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[11] See the discussion in Bogliacino, Jiménez and Reyes (2018).

[12] Pearson chi-squared test is not affected by the fact that samples are unpaired. In any case, t-test with control for unequal variance return the same results: sex (p=.75); marriage status (p=.45); age (p=.18); household size greater than four (p=.98); time of displacement (p=.46).

Figure 3 Trust in displaced and restored population
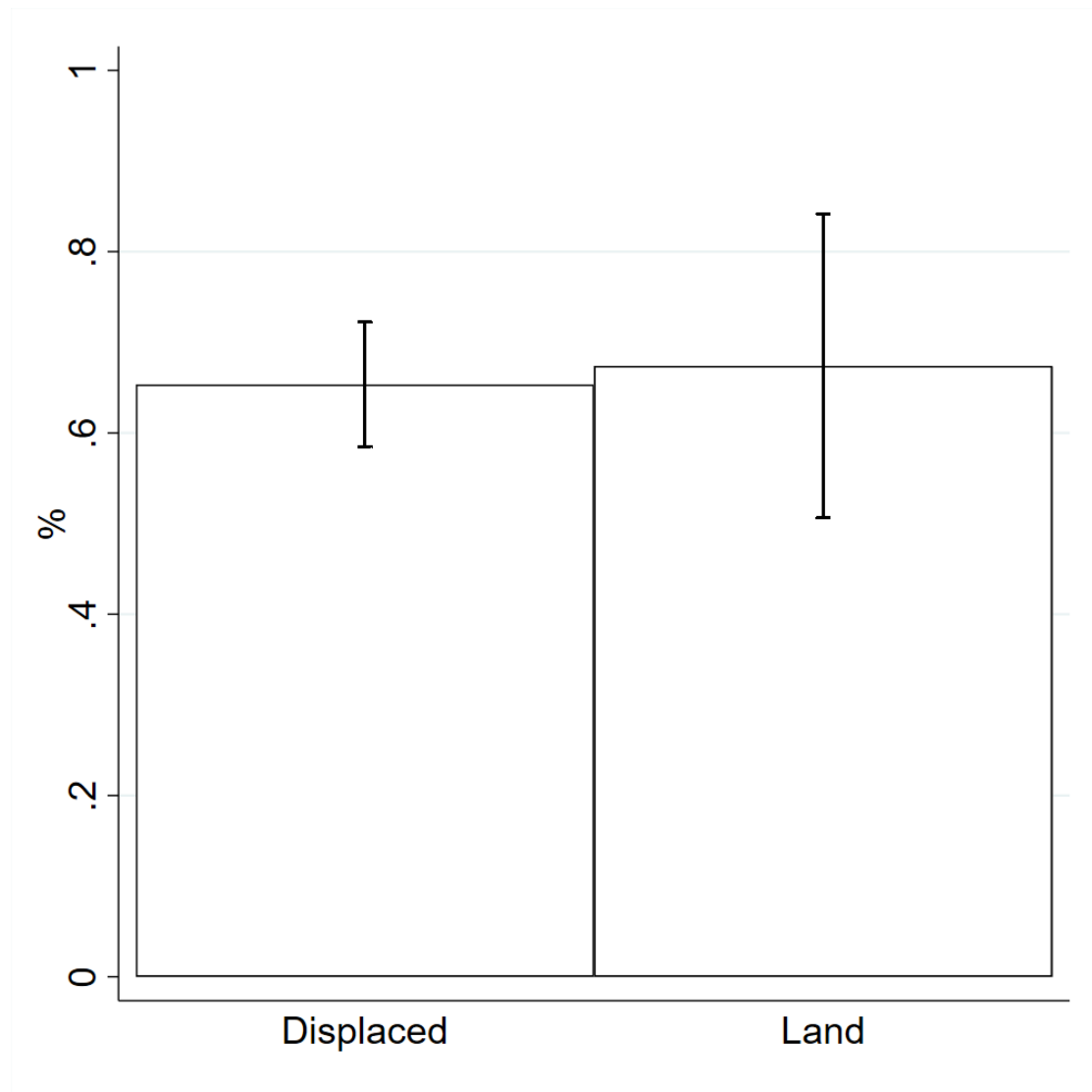
Note: Land is a dummy equal to one when the respondent answers affirmatively to one of the following three items: "I have been benefited by the restitution under the Ley de Víctimas," "I have been benefited by other process of land titles formalizations," "I have been benefited by a collective process of land titling." *Displaced* corresponds to the observations for which *Land* is equal to zero.

Figure 4 Trustworthiness in displaced and restored population.

Note: Land is a dummy equal to one when the respondent answers affirmatively to one of the following three items: "I have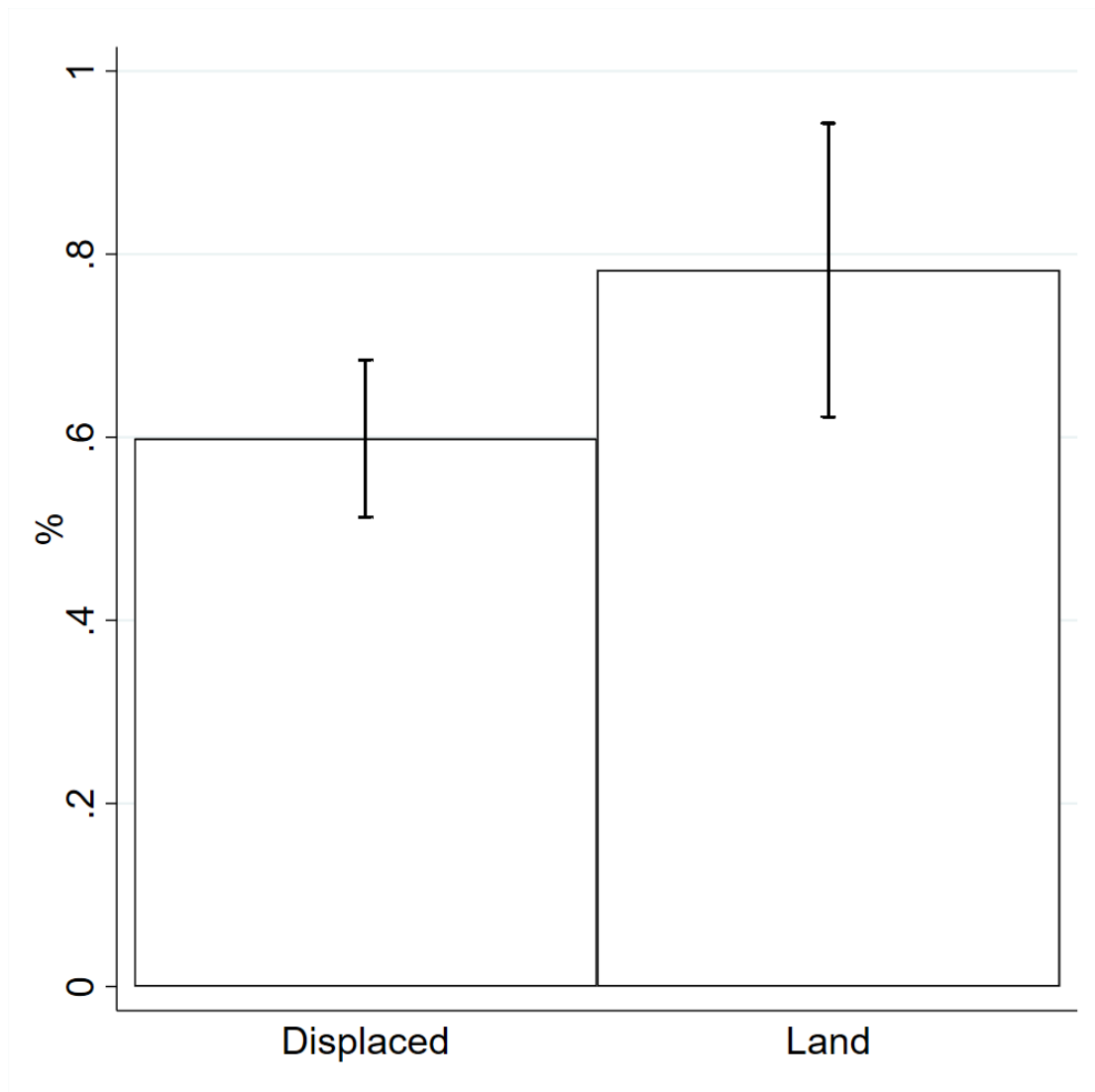 been benefited by the restitution under the Ley de Víctimas," "I have been benefited by other process of land titles formalizations," "I have been benefited by a collective process of land titling." *Displaced* corresponds to the observations for which *Land* is equal to zero.

In Table 2 below, we report econometric analysis, using Ordered Logit regressions for both trust and trustworthiness. We control for socio-demographic characteristics in all cases. No significant impact of land restitution on trust is displayed, but there is an effect on trustworthiness. Moreover, this effect is robust when we control for SES and for occupation (with two dummies for farmers and retired). Even controlling for the number of the session does not change the results.

We provide further robustness checks: in Table 3, we first use as the key independent variable the receipt of some form of reparations, and the trustworthiness effect disappears, showing that land is the key variable. In Columns (2) and (5), we exclude those that declared not to have abandoned their land (Section 2.3 above), yet the Land effect is still robust. Finally, in Columns (3) and (6), we control for the time spent in

the current residence (question 7 in the SOM). Again, the result with regard to trustworthiness is very robust.

Finally, in Table 4 we report separate Logit regressions for the two dummies for trustworthiness: sharing conditioned on 1 ECU transfer, and sharing conditioned on 2 ECU transfer. As Table 4 shows, the results do not change, although the effect seems to be stronger with regard to the sharing of the maximum surplus.

The results are robust to the correction of omitted variable bias. The reason is the following: when we move from uncontrolled OLS regression to controlled OLS regression, the magnitude of the coefficient actually increases (there is no attenuation bias in our sample). This occurs for the three variables: trustworthiness, I(s|1 ECU), I(s|2 ECU). Since by (2), the correction for omitted variable bias has the same sign as the difference between the uncontrolled coefficient and the controlled coefficient, in this case we actually infer a large impact of the land restitution. Results are reported in SOM, Section 2, Table 10.

Table 2 Trust and trustworthiness in displaced and restored population

	(1) Trust	(2) Trust	(3) Trust	(4) Trust	(5) T/worthiness	(6) T/worthiness	(7) T/worthiness	(8) T/worthiness
Land	0.0236 (0.0871)	0.0402 (0.0947)	0.0540 (0.103)	0.0694 (0.116)	0.176** (0.0886)	0.233** (0.0993)	0.253** (0.112)	0.236* (0.123)
Treatments	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographics		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Socio economic				Yes				Yes
Session FE			Yes	Yes			Yes	Yes
Constant	0.682*** (0.0619)	0.645*** (0.121)	0.717*** (0.173)	0.552*** (0.201)	0.554*** (0.0691)	0.750*** (0.120)	0.834*** (0.184)	0.688*** (0.250)
Observations	111	98	98	82	111	98	98	82
R-squared	0.003	0.027	0.068	0.127	0.047	0.081	0.110	0.164

Note: OLS Regression with robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Land is a dummy is equal to one when the respondent answers affirmatively to one of the following three items: "I have been benefited by the restitution under the Ley de Victimas," "I have been benefited by a collective process of land titling." Treatments are the dummies for the Signal and the Vote conditions. Demographics include age and gender (F). Socio economic include Education, SES (measuring the quality of the dwelling, increasing from one to six), a dummy for unemployed, and a dummy for farmers. The full estimation is in the SOM, Section 2.

Table 3 Trust and trustworthiness in displaced and restored population. Robustness checks.

	(1) Trust	(2) Trust	(3) Trust	(4) Trust	(5) T/worthiness	(6) T/worthiness	(7) T/worthiness	(8) T/worthiness
Land			0.0743 (0.137)	0.0555 (0.122)			0.255* (0.147)	0.298** (0.112)
Any reparation	-0.0133 (0.0677)	-0.0559 (0.0961)			-0.0662 (0.0779)	-0.0953 (0.116)		
Treatments	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographics		Yes	Yes	Yes		Yes	Yes	Yes
Socio economic		Yes	Yes	Yes		Yes	Yes	Yes
Session FE		Yes	Yes	Yes		Yes	Yes	Yes
Time			Yes	Yes			Yes	Yes
Excluding Unregistered				Yes				Yes
Constant	0.691*** (0.0648)	0.563*** (0.207)	0.453 (0.293)	0.582** (0.220)	0.607*** (0.0733)	0.707*** (0.245)	0.929*** (0.318)	0.705** (0.266)
Observations	111	82	58	78	111	82	58	78
R-squared	0.003	0.125	0.116	0.120	0.022	0.122	0.129	0.216

Note: OLS Regression with robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Land is a dummy is equal to one when the respondent answers affirmatively to one of the following three items: "I have been benefited by the restitution under the Ley de Víctimas," "I have been benefited by other process of land titles formalizations," "I have been benefited by a collective process of land titling." Treatments are the dummies for the Signal and the Vote conditions. Demographics include age and gender (F). Socio economic include Education, SES (measuring the quality of the dwelling, increasing from one to six), a dummy for unemployed, and a dummy for farmers. Time refers to the time (in years) living in the current house (question 7 in the SOM). Unregistered means that the respondent is not included in the Victim Registry (RUV) or doesn't know (question 9 in the SOM). The full estimation is in the SOM, Section 2.

Table 4 Trustworthiness in displaced and restored population: Analysis of the strategy method

	(1) I(s|1 ECU)	(2) I(s|2 ECU)	(3) I(s|1 ECU)	(4) I(s|2 ECU)	(5) I(s|1 ECU)	(6) I(s|2 ECU)	(7) I(s|1 ECU)	(8) I(s|2 ECU)	(9) I(s|1 ECU)	(10) I(s|2 ECU)	(11) I(s|1 ECU)	(12) I(s|2 ECU)
Land	0.202** (0.100)	0.163 (0.100)	0.208* (0.109)	0.245** (0.105)	0.204* (0.111)	0.277** (0.123)	0.192 (0.120)	0.258* (0.139)	0.254** (0.108)	0.320** (0.128)	0.272* (0.142)	0.386** (0.163)
Treatments	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographics			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Socio economic							Yes	Yes	Yes	Yes	Yes	Yes
Session FE					Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time									Yes	Yes	Yes	Yes
Excluding unregistered											Yes	Yes
Constant	0.674*** (0.090)	0.494*** (0.099)	0.830*** (0.183)	0.710*** (0.161)	1.181*** (0.215)	0.661*** (0.211)	1.088*** (0.267)	0.488 (0.304)	0.965*** (0.291)	0.575* (0.308)	1.153*** (0.330)	0.941** (0.385)
Observations	111	111	98	98	98	98	82	82	78	78	54	54
R-squared	0.036	0.054	0.050	0.072	0.179	0.117	0.304	0.170	0.343	0.220	0.390	0.204

Note: OLS Regression with robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. I(s|1ECU) is equal to one if the receiver decides to share when one ECU is transferred, I(s|2ECU) is equal to one if the receiver decides to share when two ECUs are transferred. Land is a dummy is equal to one when the respondent answers affirmatively to one of the following three items: "I have been benefited by the restitution under the Ley de Víctimas," "I have been benefited by other process of land titles formalizations", "I have been benefited by a collective process of land titling." Treatments are the dummies for the Signal and the Vote conditions. Demographics include age and gender (F). Socio economic include Education, SES (measuring the quality of the dwelling, increasing from one to six), a dummy for unemployed, and a dummy for farmers. Time refers to the time (in years) living in the current house (question 7 in the SOM). Unregistered means that the respondent is not included in the Victim Registry (RUV) or doesn't know (question 9 in the SOM). The full estimation is in the SOM, Section 2.

5.2 The effect of the voting mechanism

In Figures 5 and 6 below we report the results of the two treatments (Vote and Signal) respectively on trust and trustworthiness. We report the average trust and trustworthiness, together with the confidence interval at 95%.

As can be seen, the two treatments do not have significant impact on behavior. The dummies for Voting and Signal are never significant in the regressions in Table 2-4, which implies that consultative voting does not work in violence exposed population in the same way it did in rural population (Bogliacino, Jiménez and Grimalda 2018).

52.63% voted to send two ECUs, and 63.16% and 65.79% voted to share in the case of one and two ECUs, respectively, which means that consultations do provide coordination on efficient behavior, without affecting decisions in this context.

The null hypothesis of independence of the distribution of voting and trust is rejected, $\chi^2=14.95$ (p=.00), but it is not rejected for sharing contingent upon the transfer of one ECU, $\chi^2=2.89$ (p=.08) or sharing contingent upon the transfer of two ECUs being transferred, $\chi^2=.36$ (p=.54).

In Table 6 we report the results on heterogeneous effect between displaced and restored. We do not have enough information to assess the interaction effects for both treatment, thus we put together Vote and Signal. After splitting the participants in four groups according to two dimensions: whether they were displaced or restituted, and whether they were in the control condition or in a treatment (signal or vote) condition, we see that restituted with voting have a higher trustworthiness than displaced in control condition, while displaced in voting condition do not. This is in line with the idea that political agency is rebuilt through asset restoration and this increases trustworthiness.
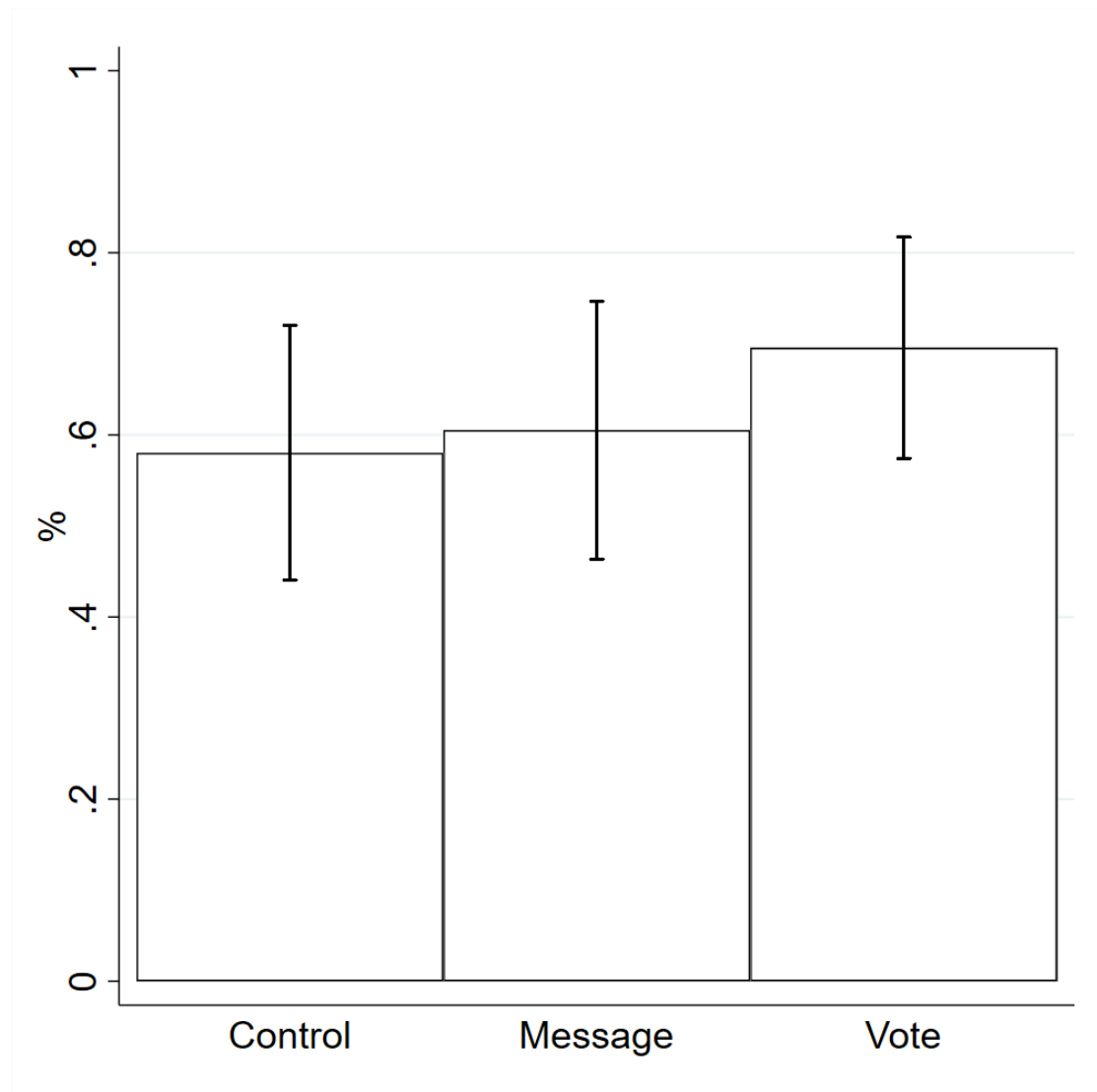
Figure 5 Trust per experimental condition
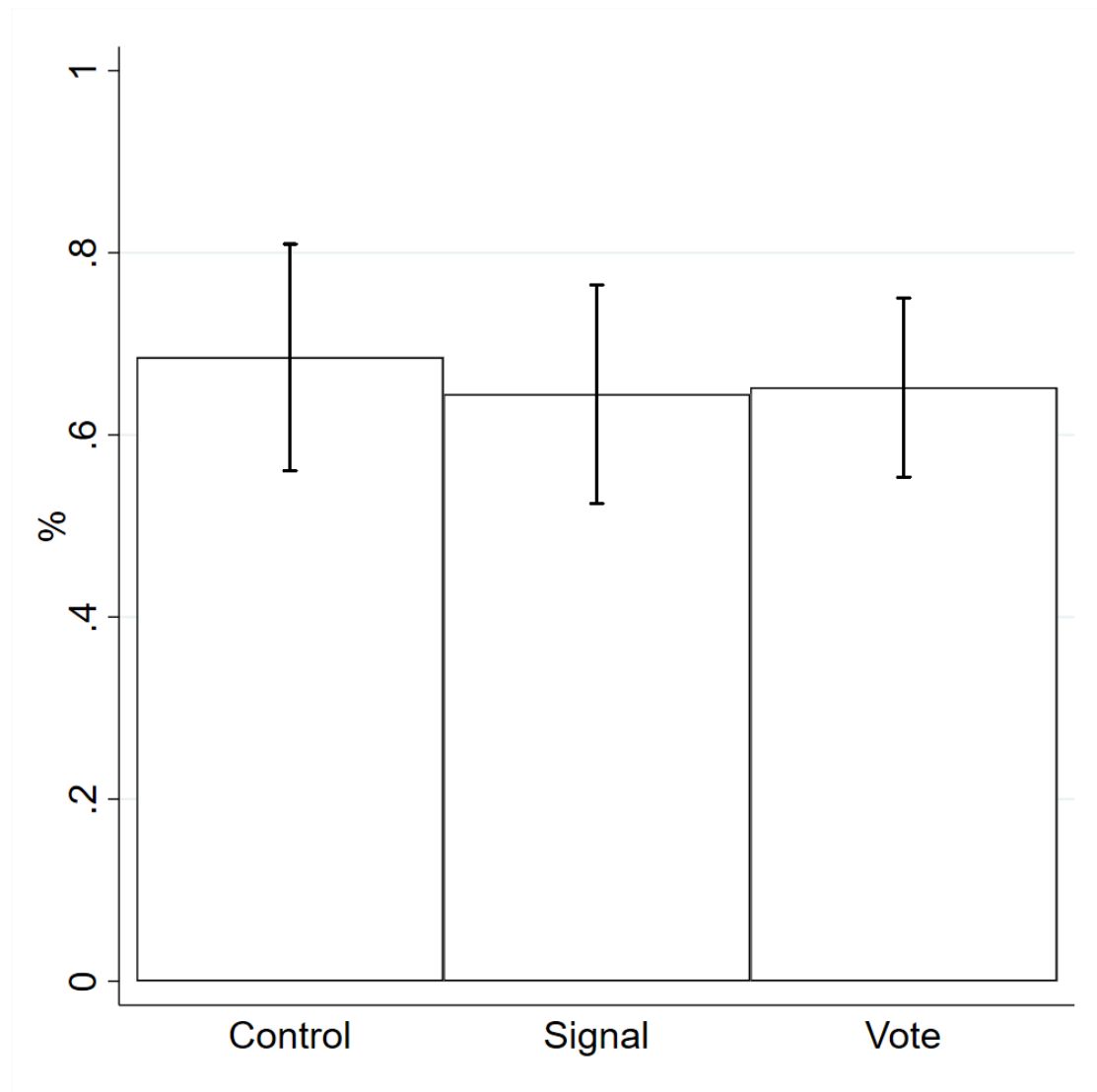
Note: Vote is the subsample under the vote treatment; Signal is the subsample under the signal treatment.

Figure 6 Trustworthiness per experimental condition.

Note: Vote is the subsample under the vote treatment; Signal is the subsample under the signal treatment.

Table 6 Heterogeneous effect of the voting mechanism on the restored population

VARIABLES	(1) Trust	(2) Trust	(3) Trust	(4) Trust	(5) Trust	(6) T/worthiness	(7) T/worthiness	(8) T/worthiness	(9) T/worthiness	(10) T/worthiness
Control-Restituted	0.223*	0.0380	0.0631	-0.0329	-0.0445	0.101	0.556***	0.548***	0.517***	0.505***
	(0.128)	(0.192)	(0.198)	(0.203)	(0.203)	(0.185)	(0.119)	(0.138)	(0.161)	(0.175)
Vote/Signal-Displaced	0.00167	-0.0344	-0.0352	-0.118	-0.131	0.0450	0.142	0.137	0.151	0.119
	(0.0778)	(0.0856)	(0.0866)	(0.0818)	(0.0856)	(0.0907)	(0.0988)	(0.104)	(0.121)	(0.130)
Vote/Signal-Restituted	-0.0206	0.00548	0.00221	-0.0488	-0.0708	0.242**	0.326**	0.346***	0.326**	0.362**
	(0.113)	(0.119)	(0.120)	(0.121)	(0.126)	(0.112)	(0.129)	(0.126)	(0.144)	(0.146)
Demographics		Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Socio-economic			Yes	Yes	Yes			Yes	Yes	Yes
Session number				Yes	Yes				Yes	Yes
Time					Yes					Yes
Constant	0.652***	0.642***	0.587***	0.511***	0.585***	0.565***	0.705***	0.536**	0.533**	0.561*
	(0.0659)	(0.114)	(0.159)	(0.191)	(0.214)	(0.0736)	(0.119)	(0.219)	(0.266)	(0.301)
Observations	111	98	98	82	78	111	98	95	82	78
R-squared	0.016	0.027	0.030	0.114	0.107	0.040	0.087	0.123	0.109	0.127

Note: Ordered Logit Regression with robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Land is a dummy is equal to one when the respondent answers affirmatively to one of the following three items: "I have been benefited by the restitution under the Ley de Víctimas," "I have been benefited by other process of land titles formalizations," "I have been benefited by a collective process of land titling." Demographics include age and gender (F). Socio economic include Education, SES (measuring the quality of the dwelling, increasing from one to six), a dummy for unemployed, and a dummy for farmers. Time refers to the time (in years) living in the current house (question 7 in the SOM). Vote/Signal is the dummy for the vote or signal treatment.

5.3 Comparative evidence

In order to have some comparative evidence, we use data from two different samples. The first is the sample of 91 observations from Bogliacino, Jiménez and Grimalda (2018). In that study, rural farmers (Cundinamarca, Colombia) took part in a trust game with a voting condition. The structure of the interaction is the same; however, in the 2015 research, two double rounds were played, separated by treatment. For that reason, we rely on the second round data for the purposes of the present study.

The second sample is from Bogotá (224 observations) related to a trust game with a third party punishment treatment (Bogliacino, Gómez, and Grimalda, 2018).

We report the level of trust and trustworthiness (calculated using Equation 1) in Figures 7 and 8, respectively. In both cases, we report the average level of the variable with the confidence interval at 95%. The first two bars (*Displaced* and *Land*) show the average level of the variable in Montes de María for the displaced population and the one receiving restitution. The third bar shows the level for rural (not exposed to violence) participants. The fourth bar shows the urban level for Colombia's capital (Bogota).

A one-way analysis of variance rejects the null hypothesis of absence of difference in trust between groups (F=10.11, p=.00). Pairwise comparisons using Bonferroni corrections show difference between IDPs and rural (p=.10), between IDPs and urban (p=.08) and between urban and rural (p=.00). The low level of trust in the urban environment is in line with comparative evidence and previous studies on Bogotá (Cardenas, Chong and Ñopo, 2013).

In the case of trustworthiness, the null hypothesis of absence of difference between groups is rejected (4.59, p=.00). The level of trustworthiness in IDPs is lower than both rural (p=.00) and urban (p=.04). It is policy relevant here that those receiving restitution reach same levels of trustworthiness as the rural population.

In Table 7, we report the results of OLS regressions on the pooled data from the three samples. The effect of land restitution on trustworthiness appears robust. In SOM, Section 2, Table 9, we report also Ordered Logit Regression and the results are the same.

Figure 7 Trust among displaced and restored participants, compared with rural and urban Colombia
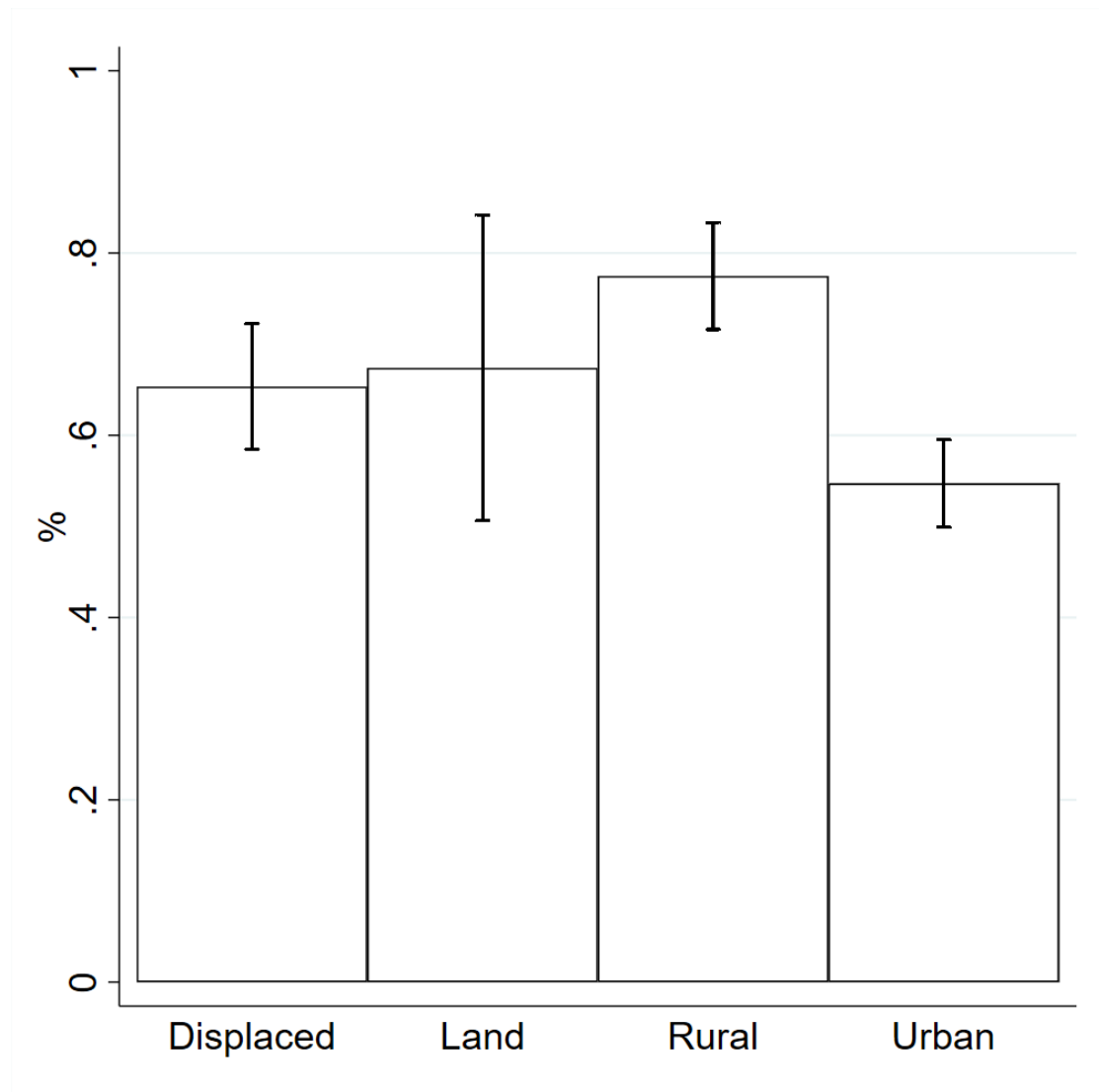
Note: *Displaced* and *Land* refer to the Montes de María sample. Land is a dummy equal to one when the respondent answers affirmatively to one of the following three items: "I have been benefited by the restitution under the Ley de Víctimas," "I have been benefited by other process of land titles formalizations," "I have been benefited by a collective process of land titling." *Displaced* corresponds to the observations for which *Land* is equal to zero. *Rural* is the sample in Bogliacino et al. (2015), while *Urban* is a sample from Bogotá.

Figure 8 Trustworthiness among displaced and restored participants, compared with rural and urban Colombia
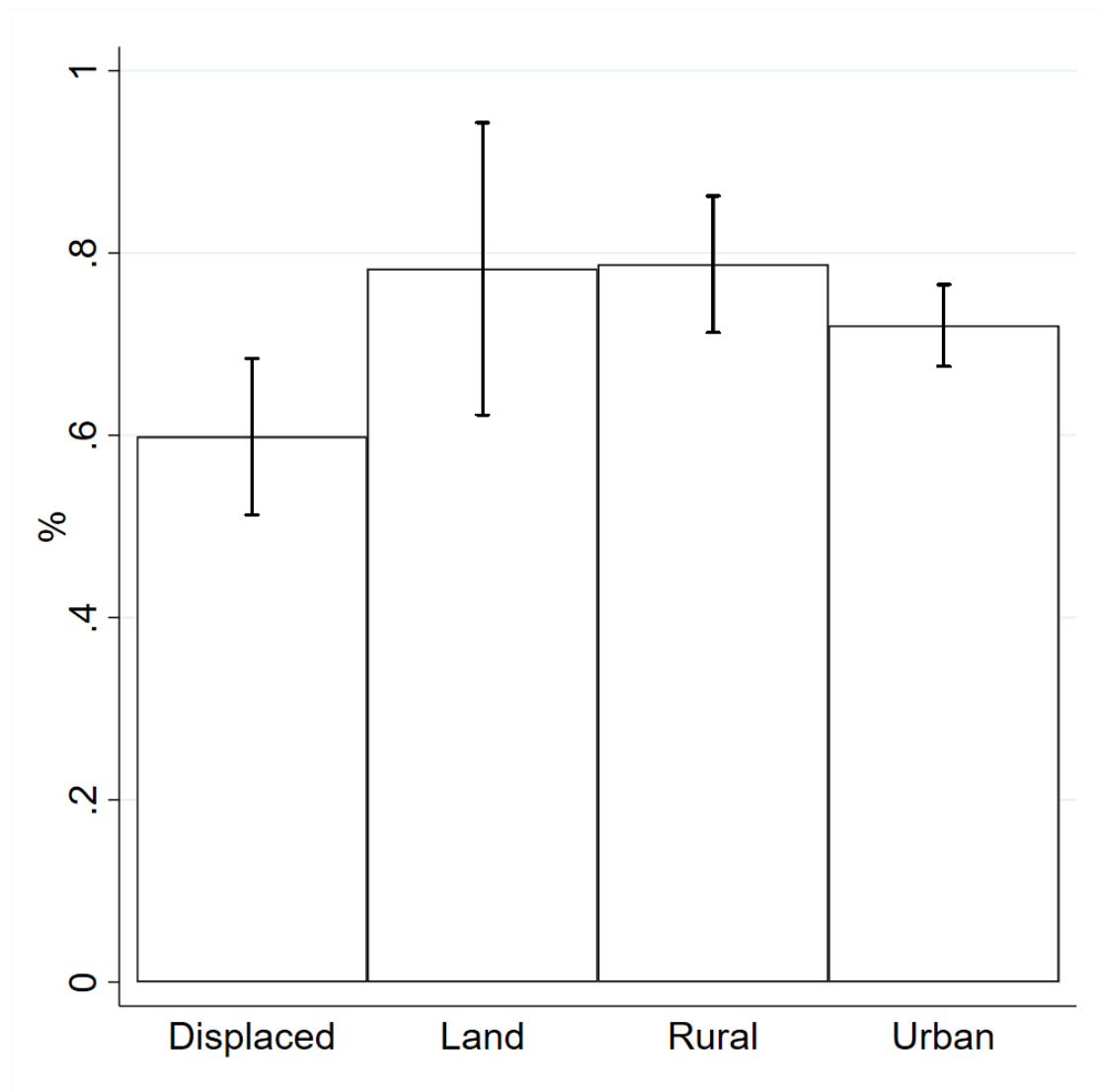
Note: *Displaced* and *Land* refer to the Montes de María sample. Land is a dummy equal to one when the respondent answers affirmatively to one of the following three items: "I have been benefited by the restitution under the Ley de Víctimas," "I have been benefited by other process of land titles formalizations," "I have been benefited by a collective process of land titling." *Displaced* corresponds to the observations for which *Land* is equal to zero. *Rural* is the sample in Bogliacino, Jiménez, Grimalda (2018), while *Urban* is a sample from Bogotá (Bogliacino, Gómez, Grimalda, 2018).

Table 7 Trust and trustworthiness: displaced, restored, rural and urban population

	(1) Trust	(2) Trust	(3) Trust	(4) Trustworthiness	(5) Trustworthiness	(6) Trustworthiness
Land	0.0205	0.0369	0.0225	0.184**	0.236**	0.202**
	(0.0866)	(0.0922)	(0.0975)	(0.0873)	(0.0959)	(0.102)
Rural	0.121***	0.105**	0.0538	0.189***	0.159**	0.108*
	(0.0455)	(0.0509)	(0.0534)	(0.0573)	(0.0619)	(0.0645)
Urban	-0.106**	-0.0960	-0.157***	0.122**	0.0576	0.0114
	(0.0423)	(0.0600)	(0.0607)	(0.0488)	(0.0656)	(0.0691)
Sex (F)		-0.0458	-0.0397		-0.000630	0.00606
		(0.0351)	(0.0355)		(0.0374)	(0.0382)
Age		0.00203	0.00110		-0.00104	-0.000930
		(0.00146)	(0.00146)		(0.00175)	(0.00182)
SES			0.0120			0.0220
			(0.0180)			(0.0189)
Education		0.0266*	0.0220		0.0158	0.0104
		(0.0152)	(0.0155)		(0.0162)	(0.0168)
Constant	0.653***	0.535***	0.597***	0.598***	0.629***	0.629***
	(0.0346)	(0.0822)	(0.0858)	(0.0431)	(0.0927)	(0.104)
Observations	425	399	381	425	399	381
R-squared	0.067	0.076	0.075	0.032	0.036	0.027

Note: Ordered Logit Regression with robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Land is a dummy equal to one when the respondent answers affirmatively to one of the following three items: "I have been benefited by the restitution under the Ley de Víctimas," "I have been benefited by other process of land titles formalizations," "I have been benefited by a collective process of land titling." SES measures the quality of the dwelling, increasing from one to six. *Rural* is equal to one if the observation belongs to the sample of Bogliacino et al. (2015), while *Urban* is equal to one if the observation belong to the Bogotá sample (Bogliacino, Gómez & Grimalda, 2018).

6. Discussions and concluding remarks

In this paper, we assessed the impact of land restitution on trust and trustworthiness. Measures of the latter were collected through a TG in a lab-in-the-field experiment in rural Colombia.

The interest driving this research is to monitor the ongoing process of land restitution to dispossessed in Colombia in compliance with Bill of Victims . Although land titling is expected to affect a large array of behaviors, such as education and investment, this impact is going to take more time, and we focus on trust as a measure of social preferences. There is compelling evidence that trusting communities have better economic and institutional performance.

In our trust game, we implement two different treatments: a non-binding vote, designed as a tool to establish social norms, and a signal, reporting the result of the vote in other communities. The latter was introduced in order to separate the simple coordination effect from the normative expectations related to social norms. Our interest stands in whether restituted persons are more sensible to fair procedures as communitarian voting.

The experiments were conducted in Montes de María, in northern Colombia, with 111 participants recruited by community leaders.

The main results are as follows. Land restitution significantly affects trustworthiness but not trust. The result does not hold when we consider generic compensation from the government, thus land *per se* is very important. The impact of land restitution is robust to a sensitivity analysis for omitted variable bias.

In comparative terms, the use of two samples from rural and urban Colombia demonstrates that land restitution ensures that victims reach the same level of trustworthiness as the inhabitants of rural villages, catching up with participants without exposure to violence.

Nevertheless, there is no significant treatment effect of consultative voting, which differs from evidence in rural areas. Given the relatively easy implementation and popularity of consultations in developing communities, this raises an important policy issue for future research. Once we put together the two treatments and we interact with the dummy for land restitution, we found a positive and significant effect on trustworthiness, which is an important point from a policy perspective, but deserves further investigation.

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