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**Land Arrangements Between Refugees and Host
Communities in Northern Uganda: Do Trust and Social
Preferences Matter?**

by Annet Adong, Oliver Kiptoo Kirui, and
Lukas Kornher

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Land arrangements between refugees and host communities in Northern Uganda: Do trust and social preferences matter?¹

Annet Adong¹, Oliver Kiptoo Kirui², Lukas Kornher³

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Abstract

Amidst the protracted refugee crisis and unpredictable refugee inflows in several developing countries, private land arrangements between refugees and hosts offer alternative ways by which refugees can acquire land and be self-reliant and integrated into the local communities. To a large extent, land access and use are driven by informal land arrangements that may rely on trusts and social preferences of hosts and refugees. Using data collected from behavioral field experiments and a survey, we find that, indeed, high levels of trust and expectations of trustworthiness are significantly associated with the host's previous engagement or future willingness to engage in informal land arrangements with refugees. Results show that the host's trust is associated with a 20 percent higher willingness to engage in land transactions. Other significant factors associated with private land arrangements between refugees and hosts include age, whether the household head is female, level of education, wealth, and the perceived relative economic and social status of refugees to hosts. Policy efforts in managing refugees should support enhancing social interactions for building trust and combating stereotypes that are likely to discourage meaningful land arrangements.

Keywords: Informal land arrangements, trust, reciprocity, altruism, refugees, hosts

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1.0 Introduction

Land is a valuable resource to agrarian households displaced by conflict. It is crucial for boosting consumption and poverty reduction (Keswell & Carter, 2014; Zhu et al., 2016). With the proper support of land, refugees can contribute to their hosts' economic growth and development rather than being a burden (Kreibaum, 2016) by improving their productive capacity (Zhu et al., 2016). Land transfers to poor households boost their consumption by 25 percent (Keswell & Carter, 2014). Zhu et al. (2016) also show that the marginal benefit of providing refugees with land besides development aid significantly increases refugees' impacts on local incomes by a range of \$92 to \$205. Despite the significant effect of land access, a substantial proportion of households emerging from conflict or displaced by conflict lack access and ownership rights to use land (Kreibaum, 2016).

In many parts of the developing world, the structure of land ownership and land use is driven to a larger extent by non-market informal land arrangements such as inheritance, allocation by village chiefs, friendly rental agreement among kin, access rights over a perennial, exchange of labor for land, sharecropping and fixed-wage contracts (Burke & Young, 2009; Deininger & Feder, 2001; Yami & van Asten, 2018). Many households, particularly the land poor, can only access land through informal land transactions, while it is also an income-generating opportunity for landed families (Holden & Otsuka, 2014). Such casual land arrangements are usually in response to market imperfections such as risks and the absence of insurance markets (Binswanger & Rosenzweig, 1981; Eswaran & Kotwal, 1985). The informal land arrangements and partnerships do not depend on documentation or written contracts. Instead, they may rely on personal relations of trust, altruism, and other informal institutions such as existing cooperative norms to settle for the best bargain, monitoring, enforcement, and verification (Holden & Otsuka, 2014; Karlan, 2005; Martiniello, 2010). On the other hand, formal contracts will rely on written rules that reinforce trust, certainty, and predictability (Odera, 2013). For example, parties engaged in sharecropping

may depend on mutual trust that neither party reneges on the contractual arrangement through agency problems like moral hazard and shirking (Ghatak & Karaivanov, 2014).

Similarly, in sharecropping, the landowner might consider an equal share of the pie rather than competitive returns to labor and land or on the bargaining powers of either the agent due to altruistic or equity concerns (Burke & Young, 2009). It is also possible that the tenant/landowner might decide to bear all the costs of the inputs (perhaps due to altruism concerns) or share the expenses in the same proportion (fairness concerns) (Allen & Lueck, 1992). In the context where contracting parties have experiences of violence, empathy-driven altruism born out of previous exposure to violence (Hartman & Morse, 2018) might explain contractual land arrangements like free land giving between hosts and refugees.

This study explores whether refugees' and hosts' social preferences and trust behavior drive the willingness or previous engagement in land arrangements between refugees and hosts. Host communities are the owners of productive inputs such as land that refugees do not have, and informal land transactions offer an opportunity for refugees to acquire excess land from the hosts. Most of the research on social preferences is limited to only understanding individual attitudes and relations (Bauer et al., 2016, 2018), which are usually not the real outcomes but links to overcoming market failures and enforcement of contracts (Bauer et al., 2018; Karlan, 2005). In this study, we explore if social preferences of reciprocity, altruism, and trust predict the willingness or previous engagement in different forms of land arrangements. Examples of existing land arrangements between refugees and hosts include free land arrangements, exchange of labor for land, and land renting arrangements. We hypothesize that more "trusting" hosting communities and more trustworthy refugees have a higher probability and willingness to engage in informal land arrangements. We also hypothesize that altruism and expectations of trustworthiness explain willingness or previous engagement in casual land arrangements.

The contribution of this paper is threefold. First, it is of high policy relevance aimed at addressing refugee integration into hosting communities and their self-reliance. Amid protracted refugee crises and unpredictable refugee inflows, humanitarian efforts are being tailored towards ensuring refugee self-reliance and local integration (Hartman & Morse, 2018). In countries such as Uganda, the government has embarked on free land distribution to refugees to access and use land. Nevertheless, the kind gesture is costly and unsustainable in developing countries faced with challenges of competing priorities and limited budget (United Nations Development Programme, 2018). Therefore, beyond direct Government distribution of free land to refugees, it is crucial to explore other alternative ways by which land can be made accessible to households displaced by armed conflicts. One likely avenue to achieve refugee land access and user rights is through their direct private engagement with local communities that own private or communal land. Refugee access to land through land transactions with hosts can potentially achieve the twin objectives of self-reliance and local integration. If trust and social preferences explain the willingness of hosts and refugees to engage in land transactions, then boosting these behavioral attributes amongst hosts and refugees offers alternative ways for refugees to acquire land. Also, if the community has the willingness to provide land to refugees through informal contractual arrangements, Government land provision may erode this intrinsic motive (Frey & Jegen, 2001). Land transactions between refugees and hosts are likely to lead to increased opportunities for interaction and social networking, which is helpful for the integration of refugees in the local communities.

Second, we use an experimental approach to measure trust, reciprocity, and altruism much more convincingly than other measures used in surveys (Glaeser et al., 2000) to show whether experimental games provide inferences to economic outcomes in institutional economics. Other studies have explored the linkages between behavioral attributes with informal insurance, market integration, and savings but not on land transactions (Fisman et al., 2017; Jakiela, 2011; Karlan,

2005). For instance, Karlan (2005), using a similar empirical strategy, explores whether microfinance institutions' creditworthiness signals trustworthiness.

Lastly, we contribute to the limited quantitative microeconomic literature focusing on refugees and their hosts' behavioral aspects. Most of the available research on forced displacements has been on the effect of refugee influx on the livelihood of hosts (Kreibaum, 2016; Maystadt & Verwimp, 2014; Zhu, Filipski, et al., 2016) with less focus on behavioral attitudes and their socioeconomic implications. Yet understanding attitudes and their implications are crucial to refugee management and local integration.

Our main findings show that high levels of trust and expectations of trustworthiness are significantly associated with the host's future willingness or previous engagement in informal land arrangements. The results remain consistent, albeit of lower magnitude, when we exclude hosts with a prior land engagement with refugees, a potential source of bias. Our experimental measures of trust also corroborate with survey measures of trust. In both trust measures, there is a statistical difference in the proportion of hosts who trust refugees and are willing to engage in land arrangements with them and those who trust refugees but are unwilling to engage in any land arrangements. Results also suggest that altruism by hosts does not signal their willingness to engage in land arrangements with refugees. Due to the possibility of reverse causality² and endogeneity, we do not claim causality but associations. Despite this, our findings are essential in verifying whether experimental games provide inferences to economic outcomes such as informal land transactions. With humanitarian efforts leaning towards sustainable approaches that ensure refugee's self-reliance in their hosting communities, fostering private land arrangements between hosts and refugees may provide an alternative approach to government land provision. Policies

² High prosociality might increase the likelihood of engaging in an informal land arrangement, yet previous land engagements may also lead to high prosociality. We test for the sensitivity of the results, when we exclude hosts that have previously had any land arrangements with refugees.

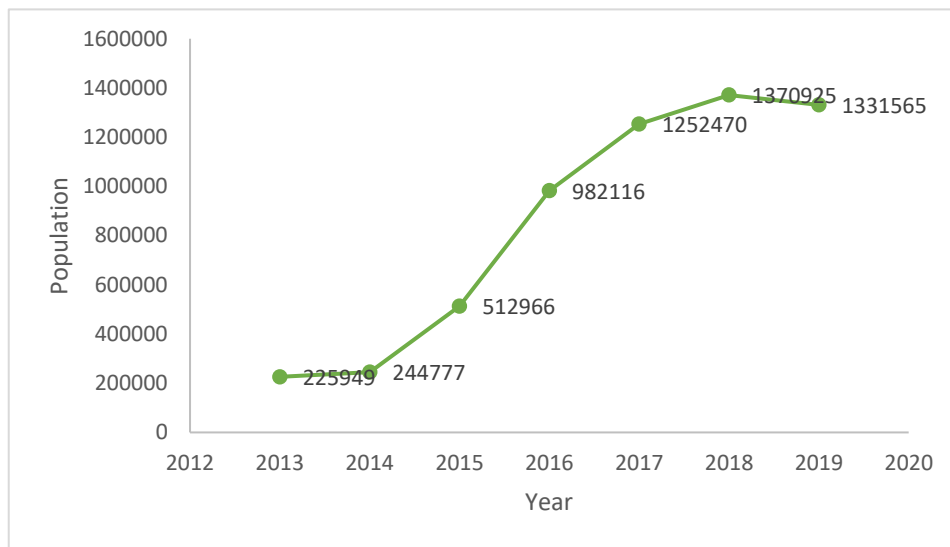
and interventions should be tailored towards building trust and social preferences amongst hosts and refugees. We study a population of Ugandan host communities and refugees from South Sudan who are quite similar in several aspects of their culture and ethnic backgrounds. This is likely to limit our findings in other contexts where the hosts and refugees are quite dissimilar, like in the developed countries. Nevertheless, our findings may still be essential to host communities who have also been refugees in the past and therefore sympathetic towards refugees, a common phenomenon in refugee-hosting contexts in Sub-Saharan Africa.

The rest of the paper is organized as follows. Section 1.1 reviews refugee hosting and land distribution in Uganda, section 1.2 is a brief description of the study area. Section 2 is the review of the literature. In section 3, we discuss the methodological approach, including a description of the experimental design and the empirical strategy. The results are presented and discussed in Sections 4 and 5, respectively. Section 6 concludes the study with policy implications.

1.1 Refugee hosting and Land distribution in Uganda

Uganda is situated in central-eastern Africa with about 40 million people, and approximately 19.7 percent of its population is below the poverty line. Poverty is concentrated in its northern and eastern regions (World Bank, 2016). Its neighbors like the Democratic Republic of Congo, South Sudan, and Rwanda have witnessed several internal and internationalized civil wars, leading to human suffering and displacements. Most of the displaced families have found their way into Uganda. Currently, Uganda hosts about 1.2 million refugees fleeing from South Sudan, the Democratic Republic of Congo, Somalia, Rwanda, Eritrea, Burundi, and the number has skyrocketed over the years (Figure 1). Uganda is currently third to Turkey and Pakistan as a refugee-hosting country (UNDP, 2017).

Figure 1: Number of refugees fleeing into Uganda between 2012 and 2019



Source: (UNHCR, 2019)

As enshrined in the 2006 Refugee Act and 2010 Refugee Regulations, Uganda’s Refugee policy allows refugees free movement, work, and access to services such as health and education as their host communities. The Government of Uganda also gives refugees small plots of land (an average of 30 meters by 30 meters for residence) for residence and cultivation. This policy contrasts the policies of other refugee-hosting countries within the region that are reluctant to this approach of land distribution and instead confine refugees to camps (United Nations Development Programme, 2018). As a result, Uganda’s refugee policy and management have primarily been referred to as overly generous (UNHCR, 2019), unlike other hosting countries in the region.

Presently, between 70 to 90 percent of refugees have officially gazetted land by the government for cultivation (FAO, 2018; Poole, 2019; UNHCR, 2018). Other avenues through which refugees acquire land include agreements with the land user, land purchases, and even incidences of walking in and cultivating without asking for permission (United Nations Development Programme, 2018). Uganda’s generous refugee policy of land distribution nevertheless constraints the Government of Uganda and has proved unsustainable given the protracted nature of refugee settlements and the unpredictable refugee influx. For example, in 2019/2020, 18 percent of the budget allocated to

disaster preparedness and refugee management was used to resettle refugees, including land distribution. For a poor ranking nation on the human development index (e.g., 159th out of 189 countries in 2019), free land distribution reduces government resources, which would otherwise be available for other competitive uses. To support its land distribution program, the Government of Uganda strongly relies on donor funding from humanitarian agencies from the USA, UK, Sweden, Canada, and Germany. External donor funding has nevertheless been very volatile. For example, at the end of 2017, the United Nations High Commission for Refugees (UNHCR) was only able to raise 39 percent of the required funds for the refugee response in Uganda. Also, the 2017 solidarity summit supporting Uganda's contribution to hosting refugees raised USD 350 million out of the targeted USD 2 billion. The shortfall in external funding further constrains Uganda's efforts in supporting refugees using a meager budget.

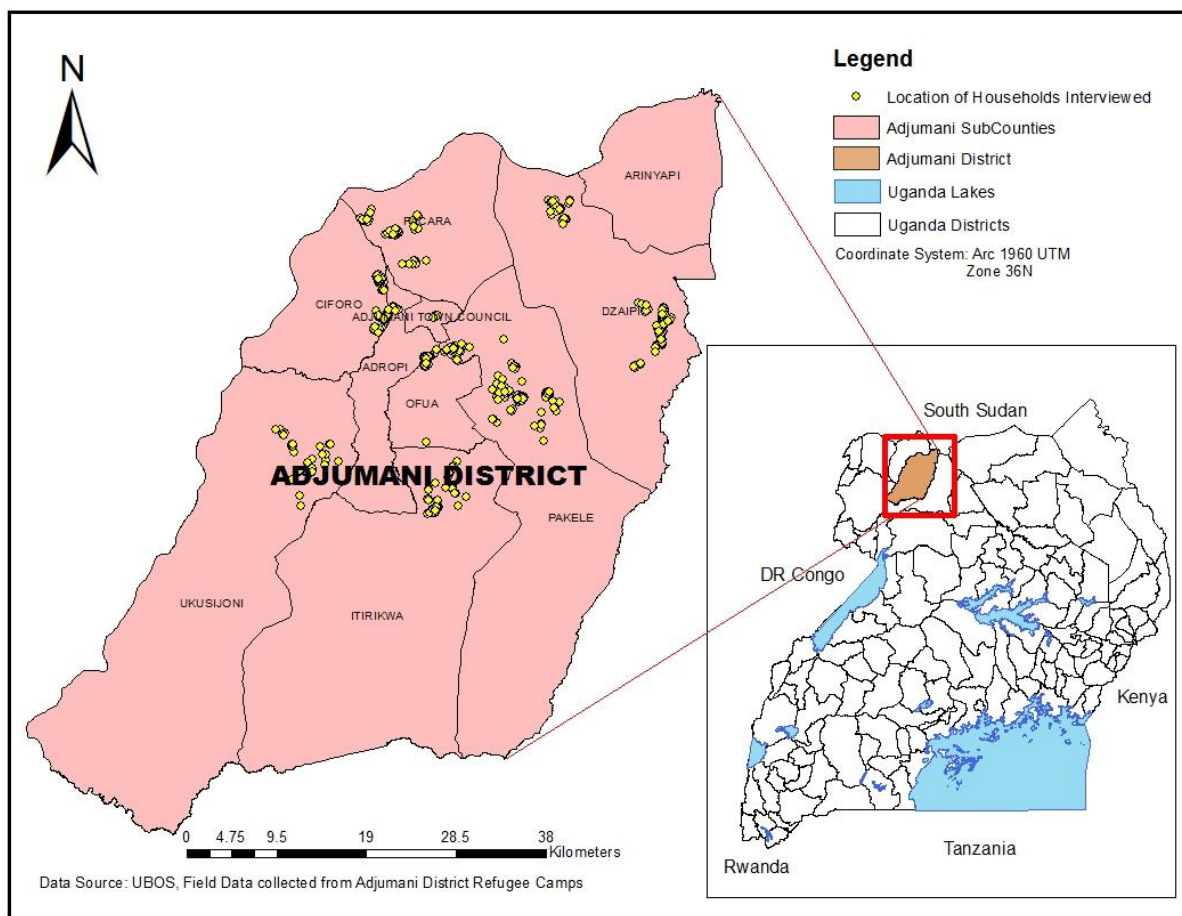
Also, despite the excellent gesture of land distribution to refugees, the allocated plots of land (about 30 meters by 30 meters used for residential plots) are of poor quality and small in size for refugees to be self-reliant through farming (Bohnet & Schmitz, 2019). Refugees cannot engage in production sufficient to meet their food needs, leaving them in dire situations (Coggio, 2019). Before 2016, refugee households received residential plots of agricultural land of about 50 meters by 50 meters in area and a homestead plot of 20 meters by 30 meters in one of the districts (United Nations Development Programme, 2018). In the absence of insufficient land provision by the government, land arrangements based on suitable contractual arrangements between hosts and refugees may offer alternative opportunities for land access.

1.2 Study area

The setting that we study is Adjumani district situated in Northern Uganda (Figure 2). Adjumani has been plagued by civil tensions emanating internally from ethnic conflicts and externally from Southern Sudan. Also, many people residents in the Adjumani district have been displaced due to

internal conflicts. Currently, Adjumani has the highest refugee ratio to the host population (43:57) compared to other refugee-hosting districts in the country with the newest and largest refugee settlements. We conducted our study in 11 refugee settlements and surrounding host communities, namely: Elema, Boroli, Mugula, Olijj, Alere, Agojo, Maji, Merieyi, Ayilo, and Pagirinya settlements in Adjumani district. The distribution of the sampled households in the different refugee settlements is shown in Figure 2.

Figure 2: A map of Adjumani district showing the distribution of sampled households for the study.



Source: (UNHCR, 2019)

2.0 Review of Literature

The level of trust in the society strongly predicts many economic and political outcomes (Bauer et al., 2018; Glaeser et al., 2000; Karlan, 2005). Many social relations hinge on trust, trustworthiness,

and altruism, which is crucial in the presence of market failures when contracts are difficult to enforce (Karlan, 2005). When transactions seem complex, trusts and social preferences will allow for transactions to be completed informally and at lower costs (Bellemare & Kröger, 2007). Trust largely depends on individual attitudes, duration of acquaintanceships, and geographic similarity between groups (Glaeser et al., 2000; Karlan, 2005).

Regarding social preferences, economic experiments show that people do not necessarily choose options that maximize their monetary payoffs when their actions could affect the payoffs of others (Charness & Rabin, 2002). These actions are driven by the desire to reduce differences in payoffs (difference aversion), reciprocity (raise or lower payoffs depending on how others behave) and maximize social welfare (Charness & Rabin, 2002; Fisman et al., 2007; Rabin, 1993). Social preference models that depict prosocial behavior incorporate fairness concerns such as difference aversion and reciprocity when individuals care for their payoffs and payoffs received by others (Fehr & Schmidt, 1999). Behavior such as trust will emanate from expectations of trustworthiness (expectations of returns) from the other party and satisfaction from being kind to others, referred to as unconditional kindness (Ashraf et al., 2006; Rabin, 1993).

Prosocial behavior of individuals has been linked to outcomes such as creditworthiness (Karlan, 2005), political allegiance (Fisman et al., 2007), market integration (Jakiela, 2011), and it is the fundamental driver of consumption savings and investments (Voors et al., 2012). Karlan (2005) uses investment games to explore whether creditworthiness in microfinance institutions signals trustworthiness. They find that trustors give significantly more (and believe they will receive more from) microfinance borrowers. Jakiela (2011) uses dictator games to examine the relationship between market integration and individual choices and find that giving in the dictator game is significantly associated with market integration (proximity to roads). A related paper by Henrich et al. (2010) finds that fairness varies with the extent of market integration (percentage of purchased calories). They also find that religiosity is associated with fairness, although not across

all measures. Prosocial behavior may vary by gender (Bellemare & Kröger, 2007; Chaudhuri et al., 2013), exposure to violence (Bauer et al., 2018; Voors et al., 2012), genetics (Kosfeld et al., 2005), environment (Cesarini et al., 2008), internalized norms and audience effects (Andreoni & Bernheim, 2009; Kimbrough & Vostroknutov, 2016). For example, Haselhuhn et al. (2015) show that women are more likely to trust and regain trust once lost, while those who have had a previous experience of violence may be more altruistic to those fleeing from violence (Voors et al., 2012).

3.0 Methodology

3.1 Conceptual Framework and Hypothesis

Many contractual arrangements in rural areas in developing countries may rely greatly on social relations and behavioral attributes of trust, reciprocity, and altruism. These attributes are crucial in verifying, enforcing, and monitoring undocumented contracts (Binswanger & Rosenzweig, 1981; Ghatak & Karaivanov, 2014; Odera, 2013). For example, landlords in a sharecropping land arrangement are more likely to choose trustworthy tenants to minimize the possibility of underreporting the output and shirking (Holden & Otsuka, 2014). Evidence also shows that past exposure to violence increases prosociality (Hartman & Morse, 2018; Voors et al., 2012). Voors et al. (2012) found that individuals exposed to violence in Burundi displayed more altruistic behavior towards their neighbors. Similarly, Hartman & Morse (2018) find that Liberian host communities exposed to violence are empathetic and generous. Members of the host community exposed to war may be charitable to refugees and likely to influence their willingness to engage in any land arrangements with refugees. In this regard, we hypothesize that higher levels of trust and social preferences (expectations of trustworthiness and altruism) by the hosts are associated with an increased likelihood to engage in informal land arrangements. In other words, trusting and altruistic hosts are more willing to engage or have previously been involved in land arrangements than non-

trusting and selfish hosts. Similarly, refugee's reciprocity and altruism are associated with an increased probability of prior participation in informal land arrangements.

Variables and measurements:

For hosts, the main independent variables are: trust and social preferences (altruism and expectations of trustworthiness), both of which are elicited from the games. Trust is measured by the proportion of the endowment that the trustor (hosts) send to their partners. In contrast, we measure the expectation of trustworthiness by the average amount that the sender anticipates in return from the trust game (solicited using the strategy method). Altruism is the proportion of the endowment that the sender in the dictator game transfers to the receiver with no anticipation of receiving anything back. For refugees, the independent variables of interest are altruism and trustworthiness. Altruism is the proportion of the endowment that refugees send to their partners in the trust game. Trustworthiness is the average amount that refugees send back in the trust game. Following the literature, other independent variables that are likely to affect the willingness or previous engagement of hosts in land arrangements include age, the gender of the household head, the level of education, and the household's wealth (Allen & Lueck, 1992; Ghatak & Karaivanov, 2014; Holden & Otsuka, 2014; Yami & van Asten, 2018).

The dependent variables are: (1) present willingness by hosts to engage in any one of the existing land arrangements in the area (2) whether the hosts have previously engaged in land arrangements or not and (3) whether refugees have previously engaged in any land arrangement or not. The existing land arrangements between hosts and refugees in Adjumani district include sharecropping, land renting for a specified period, land, labor exchange, and giving refugees or hosts free land for a specified period.

3.2 Estimation

To estimate the effect of trust and social preferences on the willingness of host and refugee communities to engage in land arrangements, we estimate the following equation below

$$Y_h = \beta_0 + \beta_1 T_{ih} + \beta_2 R_{ih} + \beta_3 A_{ih} + \beta_4 X_h + \beta_5 D_i + \beta_6 E_h + \epsilon_h \dots\dots\dots(1)$$

Y_h is the willingness of hosts to engage in informal land arrangements with refugees. In another estimation, Y_h is whether the household has previously engaged in any land arrangement or not. T is a measure of trust of individual i from household h . It is a binary variable equal to one if the trustor (hosts) sends positive amounts and equal to zero if the trustor sends nothing to their partner. β_1 is the magnitude of association between trust and willingness or previous engagement in informal land transactions with the refugees. R_{ih} is the measure of host's expected reciprocity. Hosts were asked what they expect their partners to return to them after they made transfers in the trust game. β_2 is the association between expected reciprocity and willingness to engage in informal land transactions with refugees. A_{ih} measures altruism, which is a dummy variable depending on whether a household transferred positive amounts or not in the dictator game, coefficient β_3 is the association between altruism and willingness to engage in informal land transactions with refugees. X_h is a vector of other household characteristics like household size, the land size held by the household, wealth status and educational level of the household head. D_i are characteristics of player (education level and age), E_h measures the perceived ratio of the socioeconomic status of hosts to refugees. Lastly ϵ_h is the error term. We estimate equation (1) using a binary probit model.

Likely, some households who have previously engaged in some land arrangements with either hosts or refugees are presently unwilling to engage. At the same time, some are willing to continue to engage with refugees. To explore the role of trust and social preferences in the dynamism between previous engagement and present willingness to engage in land arrangements, we constructed four choices : (1) hosts who have ever and are presently willing to have a land

arrangement with refugees (2) hosts who have ever engaged but not presently willing to have any land arrangements with refugees, (3) hosts who have never had any land arrangement with refugees but are presently willing to engage, (4) hosts who have never had any land arrangement with refugees and are not presently willing to engage. The four choices are discrete, and we use the multinomial logit model to estimate the likelihood for a household to be associated with one option over the other. The multinomial logit model has the assumption that the error terms should be independently and identically distributed across the four alternatives (Wooldridge, 2010).

Robustness checks

Endogeneity in estimating the association between trusts and social preferences and the willingness to engage in informal land arrangements is likely to be a problem. Hosts who have previously engaged in informal land arrangements with refugees already have prior reasons for trusting or not trusting, introducing bias in estimating the effect of trust and social preferences on their willingness to engage in informal land arrangements. As a sensitivity test, we exclude households that have previously been engaged in any informal land arrangements with a refugee from our analysis and compare the results.

3.3 The Experiment

Trust and dictator games

Berg et al. (1995) proposed the two-player sequential trust game with no contract to enforce agreement (Johnson & Mislin, 2011). The trust game involves two anonymously paired players; a sender and receiver. The sender decides on what proportion of his endowment (as a measure of trust) (s)he should send to the receiver with the anticipation that they will reciprocate the trust or from unconditional kindness. The amount transferred is tripled, and the receiver decides how much to send back to the trustor (as a measure of trustworthiness). The dictator game measures unconditional kindness (altruism) (Ashraf et al., 2006). The dictator and the receiver in the dictator game split a prize normalized to have a unit value. The dictator decides what proportion of his

endowment to give to the receiver with no anticipation to receive anything back. In our study, we used the within-subject design in which each participant played both the trust and dictator games in random order.

Experimental procedures and instructions

We conducted the trust and dictator games following written procedures by Bauer et al. (2018). Bauer et al. (2018) adapted the written protocols by Henrich et al. (2006). Both games were played separately by refugees and host communities. Refugees played as trustees/receivers in the trust game and senders in the dictator game. On the other hand, Hosts played as trustors in the trust game and also played as senders in the dictator game. Trustors were endowed with slips equivalent to Uganda shillings (UGX) 2000 and had the opportunity to send either UGX 0, 1000, or the entire UGX 2000 endowment. The amount transferred by the trustors was tripled and given to the trustees who had the chance of sending back UGX 3000 if the trustor sent UGX 1000 and up to UGX 6000 if the trustor sent them UGX 2000. Hosting communities were also asked to place in the envelopes how much they expected from their partner if they transferred UGX 1000 (tripled amount 3000) and UGX 2000 (tripled amount UGX 6000). Both groups played separately in different demarcated areas. To control for learning effects from playing the game in the same order, we randomly assigned individuals to which game (either trust or dictator game) that they play first.

Before the start of the game, all rules were explained to the group of refugees and host communities, for example: (i) that the game would remain anonymous, (ii) that the cards or slips represent UGX1000 notes which will be replaced with real money after the game (iii) payments will be from one of the randomly chosen two games (iv) expectations shall be paid UGX 500 for every correct prediction, (v) envelopes of different colors will be used for the amount of money

that the players decide to transfer, retain and one for expectations. Instructions for playing the game were provided first at the group level and subsequently at the individual level. We tested the players' comprehension and understanding of the game and dropped and replaced those who did not seem to understand the experiment.

Sampling technique and sample size

We used a multistage sampling technique where in the first stage, we randomly selected refugee settlements based on whether they had been in existence for two years, five years, or more than five years. We also randomly selected two of the five hosting local council areas (lowest administrative units in Uganda) within a vicinity of 15km from refugee settlements. In the second stage, refugee and host households were randomly selected from the settlements and local council areas using probability proportional to size sampling. In total, our study covered 628 refugee and host community households, although the final sample with complete analysis only contained 619 households (288 refugee households and 331 host households). 589 families participated in the field experiments (272 refugees and 317 hosts).

3.4 Survey data and sample characteristics

The information required for the study was also collected from a household survey and focus group discussions in each of the refugee settlements and local council areas of the host communities. The household survey and focus group discussions were conducted between April and May 2018, while the field games were held in June 2018. The focus group discussions solicited information on the available land arrangements in the area, access to infrastructure and refugees, and hosts' perceptions of refugee influx in the area. A survey solicited information on household demographic characteristics, consumption patterns, and welfare. Table 1 provides the summary statistics for the variables used in the study. The average amount transferred by the hosts in the

trust game was UGX 981.1³ (while the average amount transferred in the dictator game by all players (both refugees and hosts) is UGX 787.7. Hosts' expectations of reciprocity were 50.76 percent of the tripled amount that they transfer. This amount is comparatively higher than the actual average reciprocated amount by refugees (37.29 percent). Refugee's expectations of the amount their partners transfer in the trust game as a measure of expected trust was an average of UGX 1092, representing about 54.6 percent of the endowment.

³ 1 USD = UGX 3600; therefore UGX 981.1 is approx. 0.27 USD. For simplicity, we maintain the use of UGX throughout the paper

Table 1: Summary statistics of variables used

Variables	(1) N	(2) Mean	(3) Standard Deviation	(4) Minimum	(5) Maximum
1. The ratio of perceived economic, social status of oneself to a neighboring refugee	619	1.072	0.893	0.100	9
2. The ratio of perceived economic, social status of oneself to a neighboring host community	619	0.925	0.844	0.100	10
3. Household head is female (d, 1= Yes)	589	0.628	0.484	0	1
4. Age of player	624	38.48	14.86	22	90
5. Average amount transferred in trust game by hosts	317	981.1	578.9	0	2,000
6. Amount transferred in dictator game (Refugees and Hosts)	589	787.8	626.1	0	2,000
7. Host's beliefs of the expected average amount to be reciprocated	318	50.76	19.53	0	100
8. Average percentage reciprocated in trust game by refugees	272	37.29	18.45	0	100
9. Refugees expectations of amount to be transferred in trust game	272	1,092	525.0	0	2,000
10. Years of schooling of the household head	585	4.844	4.104	0	17
11. Distance to district headquarters	619	8.572	4.795	1	16
12. Number of shops in the locality	619	6.596	3.412	1	12
13. Logarithm of total productive assets	624	2.967	4.418	0	13.62
14. Ever participated in land arrangement with refugees (d, 1=yes)	628	0.253	0.435	0	1
15. Ever participated in land arrangement with host community (d, 1=yes)	628	0.347	0.476	0	1
16. Willingness to offer refugees land freely (d, 1=yes)	628	0.347	0.476	0	1
17. Willingness to rent land to refugees (d, 1=yes)	628	0.121	0.326	0	1
18. Willingness to engage in land labor arrangements (d, 1=yes)	628	0.0701	0.255	0	1
19. Willingness to engage in other land arrangements (d, 1=yes)	628	0.0303	0.171	0	1
20. Ever engaged in any land arrangement (d, 1=yes)	628	0.473	0.500	0	1
21. Willingness to engage in any non-market land transactions (d, 1=yes)	628	0.433	0.496	0	1

Numbers in parenthesis are standard deviations. N refers to the number of respondents

1

2 **4.0 Results**

3 **4.1 Descriptive statistics**

4 We asked hosts and refugees if they had ever engaged in any land arrangements with refugees,
5 hosts, or both. We also asked if they were presently willing to engage in each of the following land
6 arrangements: (1) free land arrangements (cultivate the land for free for a specified period), (2)
7 offer land in exchange for labor, (3) rent land for a specified period and (4) other unspecified
8 informal land arrangements. Overall, 47.3 percent of both refugees and hosts had ever engaged in
9 any land arrangements, and 43.3 percent were presently willing to engage in any form of land
10 arrangements. Specifically, 34.7 percent of hosts are willing to engage in free land arrangements
11 with refugees. 12.1 percent are ready to rent out their land, 7 percent are willing to engage in land
12 labor arrangements, and 3 percent are willing to engage in other unspecified land arrangements.

13

14 *Previous engagement land arrangements by the Host community*

15 Results in Table 2 show characteristics of hosts based on whether they have ever had any land
16 arrangements with refugees in the past or not. Results show no statistical difference in the amounts
17 transferred in the dictator game by the host's previous engagement in informal land arrangements.
18 There are also no significant differences in trust, expectations of reciprocity, and altruism by
19 previous participation in land arrangements with refugees. Regarding other characteristics, females
20 are significantly less likely to have engaged in any land arrangements with refugees than males. 34.9
21 percent of females had had a land arrangement with refugees than 58.8 percent of male-headed
22 households of hosting communities. There are also significant differences in years of schooling of
23 the household head by engagement in land arrangements with refugees. The relative perceived
24 socioeconomic status of self (host community) to refugees and fellow hosts and the value of
25 productive assets is not statistically different between hosts willing to engage in land arrangements
26 and those unwilling to engage in land arrangements.

27

28 **Table 2: Characteristics of hosts based on whether they have ever had any land**
 29 **arrangements with refugees or not**

	Had any informal land arrangements with refugees (%)			t value
	Yes (46.2 %)	No	All	
Trust: amount transfered in the trust game (UGX)	1037.5 (645.21)	962.02 (554.86)	981.07 (578.86)	-1.01
Expected partner's reciprocity (Average percent)	54.219(20.88)	49.61(18.96)	50.76(19.53)	-1.82
Altruism : amount transfered in the dictator game	739.726(643.85)	788.24(617.19)	765.82 (629.11)	0.68
Household head is female	0.349 (0.49)	0.588 (0.49)	0.477 (0.50)	4.35
Age of the household head	38.06(14.2)	37.33(14.46)	37.67(14.33)	0.45
Years of schooling	6.234 (3.82)	4.953 (3.50)	5.543(3.70)	3.11
Ratio of perceived economic status of one to refugees	1.14(1.10)	1.01(0.79)	1.074 (0.95)	-1.16
Ratio of perceived economic status of one to host community	1.088(0.69)	1.032(0.80)	1.058(0.75)	-0.66
Value of productive assets (UGX)	8294.521(28626.95)	10305.88(43181.2)	20011.36(37129.79)	0.479

30 The numbers in parenthesis are standard deviations

31

32 *Host community willingness to participate in land arrangements*

33 In Table 3, we show the characteristics of the host by their willingness to engage in land
 34 arrangements. 71.5 percent of hosts are willing to engage in land arrangements with refugees.

35 Specifically, 61.4 percent are willing to engage in free land arrangements, 12.3 percent in land labor
 36 exchange, and another 5 percent are willing to engage in other unspecified land arrangements.

37 There are significant differences in trust by hosts willing to engage in informal land arrangements.

38 Hosts willing to engage in land arrangements with refugees transfer UGX 1090 (about 54.5 percent
 39 of their UGX 2000 endowment) to their partner, while their counterparts are unwilling to engage

40 in any land arrangements with refugees transfer a less amount of UGX 913.26. Other behavior

41 measures, such as expectations of trustworthiness and beliefs of expected trust, are not

42 significantly different between hosts willing and unwilling to engage in informal land arrangements.

43 Other variables, such as gender of the household head and the ratio of perceived socioeconomic

44 status compared to refugees, show a significant difference between willingness to engage in
 45 informal land transactions. For example, those willing to engage in informal land transactions
 46 perceive themselves to be of a higher social, economic status relative to their neighbors.

47

48 **Table 3: Characteristics of hosts by their willingness to engage in land arrangements**
 49 **with refugees.**

Willingness to engage in any land arrangement with refugees				t value of the difference
	Yes (N=226)	No =(N=90)	All=(N=316)	
Trust: amount transferred in the trust game (UGX)	1090.9(562.73)	913.26(579.67)	981.07(578.86)	-2.68
Altruism : amount transferred in the dictator game	769.91(632.57)	755.56(623.71)	765.82(629.11)	-0.183
Expected partner's reciprocity (Average percent)	52.92(19.28)	49.45(19.60)	50.76(19.53)	1.53
Beliefs in partner's expectation of trust	1108.33(498.67)	1070.7(498.78)	1084.9(498.28)	0.652
Household head is female	0.39(0.49)	0.68(0.47)	0.47(0.50)	4.625
Age of the household head	36.69(13.69)	40.11(15.63)	37.66(14.33)	1.92
Years of schooling	5.897(3.64)	4.66(3.69)	5.54(3.69)	-2.72
Ratio of perceived socio economic status of oneself to hosts	1.08(1.01)	1.057(0.752)	1.074(0.945)	0.195
Ratio of perceived socio economic status of oneself to refugee	1.12(0.837)	0.893(0.436)	1.05(0.753)	-2.445
Total value of productive assets	10995.58(10995.58)	5311.11 (12255.38)	9376.58(37129.79)	-1.229

50 The numbers in parenthesis are standard deviations

51 *Previous engagement and future willingness to engage in land arrangements*

52

53 Descriptive statistics show that 187 families (29.8 percent) have ever and are presently willing to
54 engage in informal land arrangements. 110 households (17.5 percent) had ever and are not willing to
55 engage, while 85 families (13.5 percent) have never engaged but are willing to engage. Lastly, 246
56 (39.17 percent) families have never participated and not willing to engage in any land arrangements.
57 Refugees dominate the last category because they lack land. For host communities, 162 households
58 (51.3 percent) had ever engaged and were willing to engage in informal land arrangements. 40 families
59 (17.5 percent) had participated in the past and were no longer willing to engage in non-market land
60 transactions. 64 (20.6 percent) families have never engaged but are willing to engage in any land
61 arrangements. Lastly, 50 (15.82 percent) families have never participated and are unwilling to
62 participate in any non-market land transactions.

63 The highest proportion of hosts who sent all their initial endowment of UGX 2000 in the trust game
64 are those who have ever engaged and are willing to engage in the future, suggesting that they trust a
65 lot more (Appendix, Figure A1). Those who have never been involved in any land arrangement and
66 are willing to engage send the highest proportion of a 50/50 split of their endowment (UGX 1000).
67 It's probable to think that these are individuals who care for inequity aversion. Lastly, players who
68 have ever engaged and are unwilling to engage anymore have the highest proportion of players who
69 send nothing from their endowment, suggesting that they trust people less (27.12 percent). Those who
70 have never engaged and are not willing to engage, follow with the highest proportion of players who
71 send zero shilling of their endowment. Overall, those unwilling to engage in any land arrangements
72 with refugees show the highest degree of selfishness (transfer zero in the trust game).

73

74 Hosts who have never participated and are unwilling to engage in any informal land arrangement send
75 the highest proportion of their endowment to their partners, followed by households who have never
76 engaged but are willing to engage (Appendix, Figure A2). The figures seem to illustrate the possibility
77 that host communities who have never engaged with refugees in any land arrangement may be more
78 altruistic than those who have engaged with them in the past, perhaps because they are clueless about
79 the latter's behavior and socioeconomic status. Indeed the median and mean of the perceived ratio of
80 one's socioeconomic status to their neighbors who are refugees are slightly higher for hosts who have
81 never engaged with refugees. For hosts who have previously engaged with refugees, their perceived
82 socioeconomic ratio to refugees is somewhat lower than hosts who have never engaged with refugees.
83 Their expectations of reciprocity are also low. The result seem to show that intrinsic behavior revealed
84 through experiments are somehow linked to some outcomes that people respond to in experiments.

85

86 Reciprocating trust is crucial for informal transactions. To trust substantially, one's expectations of
87 their partner's reciprocation of their trust is an important determinant. Hosts who have previously
88 engaged in informal land transactions with refugees but are unwilling to engage anymore have the
89 highest proportion of players whose beliefs about expected reciprocity or trustworthiness of their
90 partners is zero. In other words, their expectations of reciprocity by refugees are low in the trust game,
91 perhaps given their previous engagement. Hosts who have previously engaged and currently willing
92 to or have never participated but willing to engage with refugees have firmer beliefs in reciprocation
93 of trust by refugees⁴. The survey results on trust also show that 20.5 percent of hosts who have
94 previously been involved with refugees and are unwilling to trust refugees anymore. 12 percent of
95 hosts who have never encountered and are not willing to engage trust refugees. 9.3 percent of hosts

⁴ Our previous treatment in playing the dictator and trust game was the random assignment to information that one plays with a either refugee or member of the host community. We find that it does not predict whether hosts or refugees has ever engaged in any informal land transaction in the past or their willingness to engage and therefore does not affect the analysis

96 who have been involved with refugees and are willing to engage trust refugees. Lastly, 8.3 percent of
97 the hosts have not been involved in the past but are willing to trust refugees.

98

99 **4.2 Econometric estimation**

100 We examine whether trust, trustworthiness, and altruism are associated with the increased likelihood
101 by hosts to engage in land arrangements with refugees. We hypothesize that the more “trusting”
102 hosting communities and more trustworthy refugees are likely and presently willing to engage in any
103 of the land arrangements with refugees.

104

105 Table 4 shows results from the analysis of factors associated with the host’s present willingness to
106 engage in land arrangements with refugees using a full and a reduced sample that excludes families
107 that have engaged in informal land arrangements in the past. Results show that having trust is
108 associated with a 20 percent increased willingness to engage in land transactions compared to less
109 trusting families (make no transfer in the trust game). The results are consistent, albeit of a lower
110 magnitude when families that have previously had land engagements are excluded from the sample.
111 It shows that trust is crucial for the host’s willingness to engage in informal land transactions⁵.

112

113

114

115

116

117

⁵ We are unable to distinguish between whether it is trust towards refugees or trust towards hosts due to the limited sample

118 **Table 4: A probit analysis of factors associated with the present willingness for hosts to**
 119 **engage in informal land arrangements with refugees (margins)**
 120

VARIABLES	Willingness to engage in land arrangements (Full sample)			Willingness to engage in a land arrangement (Sample excludes those who have ever)		
	(1)	(2)	(3)	(4)	(5)	(6)
Transferred in the dictator game (Dummy; 1=Yes)	-0.092*	-0.075	-0.078*	-0.095	-0.084	-0.098
	(0.047)	(0.047)	(0.046)	(0.070)	(0.070)	(0.067)
Transferred a positive amount in the trust game(Dummy; 1=Yes)	0.183**	0.205**	0.201**	0.163**	0.174*	0.132*
	(0.070)	(0.085)	(0.083)	(0.065)	(0.096)	(0.073)
Average expected trustworthiness (percentage)		0.001	0.001		0.002	0.002
		(0.002)	(0.002)		(0.002)	(0.002)
Household size		-0.019**	-0.014		-0.024*	-0.015
		(0.010)	(0.009)		(0.012)	(0.010)
Household head is female (d, 1=Yes)		-0.204***	-0.160**		-0.115	-0.052
		(0.077)	(0.070)		(0.107)	(0.091)
Age of the household head		-0.002	-0.002		-0.003	-0.001
		(0.003)	(0.002)		(0.002)	(0.002)
Years of schooling		0.005	0.001		0.003	0.002
		(0.008)	(0.008)		(0.009)	(0.007)
Log of total assets		0.016***	0.013**		0.009	0.005
		(0.006)	(0.006)		(0.008)	(0.006)
Ratio of socio-economic status of self to hosts			0.183***			0.191***
			(0.024)			(0.033)
The ratio of socio-economic status of self to hosts			-0.114***			-0.087***
			(0.034)			(0.031)
Pseudo R squared	0.017	0.101	0.171	0.018	0.081	0.164
Observations	314	302	302	234	224	224

121 Notes: The numbers in parenthesis are standard errors, and the analysis is clustered at the village level with settlement fixed effects. *** p<0.01,
 122 ** p<0.05, * p<0.1. represent statistical significance at 1%, 5% and 10% respectively
 123

124 The gender of the household head and the total value of the household assets are also associated with
 125 the higher willingness to engage in land transactions with refugees. Females are associated with 16
 126 percent less willingness to engage in land transactions with refugees than their male counterparts. Also,
 127 a 10 percent increase in the value of total assets that the household owns is associated with a 0.01
 128 percent increase in the willingness to engage in land transactions with refugees. The perceived ratio of
 129 socioeconomic status of hosts to refugees is also associated with a higher likelihood to engage in land

130 transactions with refugees. If hosts see that refugees are better off than they are, it is associated with
131 less willingness by hosts to engage in land transactions with refugees.

132

133 *The combined decisions of previous engagement and current willingness to engage in informal land transactions*

134 Table 5 reports the results of the multinomial logit model, comparing factors associated with previous
135 engagement and present willingness to engage in land transactions with refugees. The base outcome
136 is households who have never had and are unwilling to engage in any land transactions with refugees.
137 The results show that people who transfer positive amounts in the dictator game are associated with
138 the option of not having engaged and not presently willing to engage in land arrangements. This is
139 compared to their counterparts who have never engaged but presently willing to engage in land
140 arrangements with refugees. Specifically, there is a 10 percent likely association of transfer of positive
141 amounts in the dictator game (altruism) and the option of never engaging and not presently willing to
142 engage in any informal land transactions with refugees. It suggests that altruistic hosts are not
143 necessarily involved in or willing to engage in land transactions with refugees contradicting our
144 previous assumptions. Results also show that individuals who transfer positive amounts in the trust
145 game are more likely to be associated with never engaged but presently willing to engage in any land
146 transaction with refugees. Specifically, there is a 15 percent more likely association between individuals
147 that transfer positive amounts in the trust game and the willingness to engage in land transactions with
148 refugees when they have not been involved in the past. Although marginally significant, trust is less
149 associated with individuals from households who have ever engaged and are unwilling to engage with
150 refugees suggesting that hosts need to trust refugees before engaging in any informal land
151 arrangements.

152

153

154

155

156 **Table 5: A multinomial logit model comparing factors associated with previous engagement**
 157 **and current willingness for host communities to engage in informal land arrangements with**
 158 **refugees (margins)**
 159
 160

VARIABLES	Ever had a land arrangement and presently willing (N=162)		Ever had a land engagement and not willing to engage with refugees (N=40)		Never had a land engagement and willing to engage with refugees (N=64)	
	(1)	(2)	(3)	(4)	(5)	(6)
Made a transfer in the dictator game (Dummy; 1=Yes)	0.012 (0.041)	0.026 (0.045)	0.036 (0.063)	0.046 (0.058)	-0.093** (0.041)	-0.099** (0.041)
Made a transfer in the trust game (Dummy; 1=Yes)	0.067 (0.066)	0.093 (0.073)	-0.128* (0.075)	-0.136* (0.074)	0.143** (0.065)	0.152** (0.069)
Household head is female	-0.247*** (0.056)	-0.211*** (0.045)	-0.004 (0.063)	0.026 (0.061)	-0.002 (0.062)	0.009 (0.073)
Age of the household head		-0.001 (0.003)		0.002 (0.002)		-0.002 (0.001)
Years of schooling		0.006 (0.009)		0.010* (0.006)		0.002 (0.006)
Log of total assets		0.018*** (0.006)		0.001 (0.004)		-0.001 (0.004)
Pseudo R squared	0.055	0.079	0.055	0.079	0.055	0.079
Observations	314	310	314	310	314	310

161 The base outcome is hosts who have “Never had a land arrangement with refugees and are not presently willing to
 162 engage in any land arrangement” (N=50). Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1. represent
 163 statistical significance at 1%, 5% and 10% respectively.

164
 165
 166 Apart from trust and altruism, the results also show that female-headed households are associated
 167 with less willingness to engage in informal land arrangements with refugees at the time of the survey.
 168 They are more likely to be in the category of never been involved and unwilling to engage. Evidence
 169 shows that female-headed households are less likely to be involved in risky contractual arrangements
 170 because of their low bargaining power and being risk-averse (Gebregziabher & Holden, 2011; Holden
 171 & Otsuka, 2014). On the other hand, a 10 percent increase in the total assets is associated with a 0.2
 172 percentage point higher likelihood of having ever had a land engagement with refugees and willingness

173 to engage in informal land transactions with refugees. Therefore wealthy households are more likely
174 to engage in casual land arrangements with refugees.

175

176 *Refugee's previous engagement in land arrangements*

177 About 35 percent of refugees have ever engaged in a land transaction with either host or fellow
178 refugees. The descriptive statistics show that reciprocity is higher for those refugees who have never
179 participated in any land transaction with either refugees or hosts. Expectations of trust and transfers
180 in the dictator game that signals altruism are higher for refugees who have never participated in any
181 land engagements (Figure A3 and A4). For example, 12.3 percent of refugees who have ever engaged
182 in any land arrangement expect their partners to transfer a zero amount of their endowment compared
183 to 3.6 percent who have never been involved in any land arrangement. The differences are,
184 nevertheless, not significantly different. One factor that is quite different between refugees engaged in
185 land transactions and those that have not is the years of schooling (Appendix, Table A1). The former
186 has, on average, 4.9 years of education compared to 3.5 years of education for the latter.

187

188 Table A2 in the Appendix shows that social preferences are less associated with refugee's participation
189 in land transactions. Altruism and trustworthiness are not associated with refugees' likely engagement
190 in the informal land market. We reject our hypothesis that participation in informal land transactions
191 signals which refugees are trustworthy. The gender, age, and years of schooling of the household head
192 are the significant factors associated with refugees' participation in non-market land transactions.
193 Female-headed households are 18.7 percent less associated with involvement in the non-market land
194 transactions than male-headed household heads. An additional year to the household head's age is
195 associated with refugees' likely participation in informal land transactions by 0.5 percentage points.

196 Also, one other year of schooling for a refugee household's head is related to an increase in the likely
197 participation in non-market land transactions by 2.5 percent.

198

199 **5.0 Discussion**

200

201 The results show that trust and high expectations of trustworthiness are associated with an increased
202 likelihood of hosts engaging in land transactions with refugees. Trust is crucial for many operations
203 which remain informal and noncontractual. Given that most land transactions in the study setting
204 remain informal, trusts ensure that contracting parties do not relegate the agreements. In the focus
205 group discussions, some hosts associated refugees with theft showing their lack of trust in the latter.
206 It's also likely that hosts who have previously been engaged in informal land arrangements with
207 refugees will no longer have the will if refugees abused this trust. Trust is mainly due to individual
208 attitudes and the existing relationship between players, including cultural similarity, duration of
209 acquaintanceships, and geographic similarity (Glaeser et al., 2000; Karlan, 2005). Host's trust may be
210 higher towards refugees who have stayed longer with them than the newcomers because older refugees
211 have learned and adopted the existing norms from repeated social interactions. With time, hosts
212 perceived negative stereotypes against refugees might also change due to repeated social and economic
213 interactions and information received from peers and the media. Any efforts towards building trust
214 may involve increasing opportunities for social and economic interactions.

215

216 Literature suggests that previous exposure to violence increases prosociality towards people also
217 affected by violence (Hartman & Morse, 2018; Voors et al., 2012), resulting from empathy or from
218 the desire to reciprocate good deeds. In this study, we assumed that hosts who were once forcibly
219 displaced are likely to be more empathetic to refugees in their communities. The sympathetic concerns

220 are likely to drive land arrangements such as giving refugees free land for cultivation. Nevertheless,
221 our results are not supporting charitable concerns as a driver of land transactions between hosts and
222 refugees. Perhaps as Hartman & Morse (2018) suggest, norms of reciprocity are likely to be higher
223 amongst closely-knit groups . In this case, hosts may be more aligned to reciprocating trust to fellow
224 hosts than to refugees. Indeed in a separate analysis, we find that altruism is associated with land
225 arrangements between hosts and fellow hosts and not refugees. In this case, hosts may be more aligned
226 to reciprocating trust to fellow hosts than to refugees.

227

228 The results further show that if hosts perceive that refugees are better off, they are less willing to
229 engage in informal land transactions with refugees. It is plausible to think that hosts view refugees as
230 competitors for the scarce resources and likely to be better off. Kreibaum (2016) finds that hosting
231 communities surrounding refugee settlements in Uganda harbor negative views on their present
232 economic situation and feel neglected by the central government. Such feelings may cause resentment
233 of refugees by hosts. Indeed we show a negative association between hosts that perceive that refugees
234 are socially and economically better off with willingness to engage in informal land transactions.

235

236 Other factors explaining the host's willingness and engagement in informal land arrangements include
237 the value of assets owned, the gender of the household head, and the perceived relative socioeconomic
238 status of hosts to neighboring refugees. Wealthier hosts are also more likely to have participated or
239 are willing to engage in casual land arrangements with refugees. This is not surprising as wealthier
240 households have the land resource to engage in the land arrangements with refugees. For example, in
241 the land renting agreements, poor households in non-land resources such as farm equipment and labor
242 may find it difficult to participate (Holden & Otsuka, 2014). Evidence also shows that wealthier
243 households are more likely to benefit from refugee influxes because they are better positioned to tap

244 on the available opportunities (Maystadt & Verwimp, 2014). Female household heads are less likely to
245 have involved or are eager to engage in informal land arrangements. Female-headed households are
246 associated with 16 percent less willingness to engage in informal land transactions with refugees than
247 their male counterparts. This might be due to the fact that female-headed households lack access to
248 land or do not have land rights and might consider engaging in land arrangements with refugees a
249 risky venture. In some areas of Northern Uganda, females access land use rights through their
250 husbands and in the absence through their patrilineal family. This arrangement places females in a
251 disadvantaged position regarding land access (Adelman & Peterman, 2014; Whyte & Acio, 2017). Most
252 research also shows that women tend to take on less risky ventures (Harris et al., 2006). In this case,
253 given that refugees may only temporarily be settled (Zhu et al., 2016), they might consider it risky to
254 engage in land transactions with them.

255
256 For refugees, their high trustworthiness is not associated with their previous engagement in land
257 transactions. We had anticipated that informal land arrangements would discriminate against
258 untrustworthy refugees according to evidence that trustworthy individuals may be preferred to
259 dishonest individuals in many casual land arrangements for reporting and monitoring
260 purposes (Holden & Otsuka, 2014). The results show informal institutions' failure to ration land to
261 only trustworthy refugees.

262
263 As a limitation of the study, trusts and social preferences are intrinsic characteristics influenced by
264 observable and unobservable factors, some of which may explain the willingness of the individual to
265 engage in informal land arrangements. To the extent possible, the study controls most of the
266 observable factors but is unable to control for unobserved factors given its cross-sectional nature. In

267 this regard, we limit our explanations to associations rather than attribute the changes in the willingness
268 to engage in informal land arrangements to trusts and social preferences solemnly.

269 **6.0 Conclusion and Policy Recommendations**

270 Given the intensified resurgence of conflicts all around the globe (in particular in Africa) and
271 consequential migration flows, governments in many LMICs are asked to design policies to support
272 and integrate refugees. Humanitarian approaches to supporting refugees are leaning towards novel
273 program design that allows refugees to 'assist themselves' amid protracted displacement, waning
274 humanitarian assistance, and the inclusivity agenda 2030 (United Nations Development Programme,
275 2018; Zhu et al., 2016). Providing land to refugees for residential and agricultural purposes is one such
276 avenue through which refugee self-reliance and local integration can be achieved (United Nations
277 Development Programme, 2018). However, often host countries are themselves land constrained
278 and/or do not have a fully fleshed land law and registrar system. Therefore, government land
279 provision (as is the case in Uganda) may be insufficient and constraining to Government resources;
280 private land arrangements between hosts and refugees offer alternative ways by which refugees can
281 access land.

282

283 In this study, we examined the extent to which trusts and social preferences may encourage private
284 land arrangements in Uganda. Uganda has been conflict-prone for decades in the past in its northern
285 part and has recently experienced a high influx of refugees from South Sudan and the Democratic
286 Republic of Congo. We use experimental methods of measuring trust and social preferences among
287 and between refugees and hosts in the Northern Region of Uganda. Informal land arrangements that
288 are common in the developing world in rural areas are usually undocumented and may rely to a great
289 extent on social relations of trust and reciprocity. On the other hand, hosting communities that have
290 previously been forcibly displaced due to internal conflicts may exhibit norms of reciprocity and
291 altruism towards those presently displaced from the war due to empathetic concerns. In this regard,

292 we hypothesized that (1) trusting and altruistic hosts are willing or more likely to have engaged in land
293 arrangements with refugees, unlike non trusting and altruistic hosts (2) Trustworthy refugees are also
294 more likely to have engaged in land arrangements with refugees.

295 Our results render support to our hypotheses. In detail, the quantitative analysis showed that trusts
296 and social preferences largely explain previous engagement of hosts in land arrangements and their
297 willingness to do so in the future. Following evidence that trust and trustworthiness are likely to be
298 high when individuals are closer socially (Glaeser et al., 2000), opportunities that increase
299 socioeconomic interactions between refugees and hosts like social events and social groups may be a
300 worthwhile approach. Other interventions that build mutual trust between refugees and hosts include
301 spreading positive information that helps combat negative stereotypes. These programs could
302 complement government land provision and offer a cost-efficient way to create mutual benefits. In
303 addition, private arrangements between host and refugees are less likely to cause resentments against
304 refugees among the host communities and will contribute to social peace in these areas.

305 Although our study provides only a case study on refugee-host interactions and refugee support
306 policies, the findings may also have wider implications for other areas and contexts. Specifically, they
307 may be essential to host countries that have suffered from conflict and forced migration in the past
308 and that are therefore more sympathetic toward refugees. Nevertheless, the context of the study
309 remains specific since the culture and language of hosts and refugees are relatively close in the study.

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457

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459

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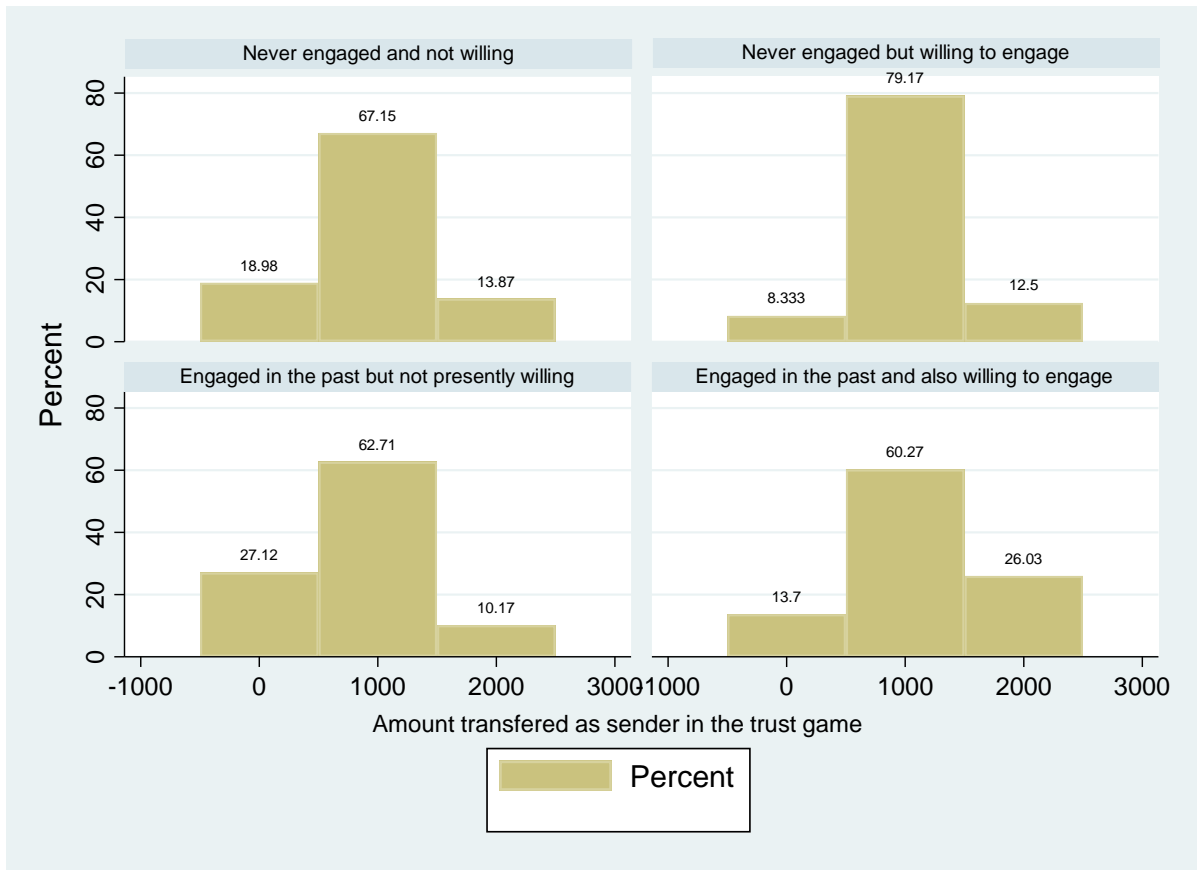
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474 **Appendix**

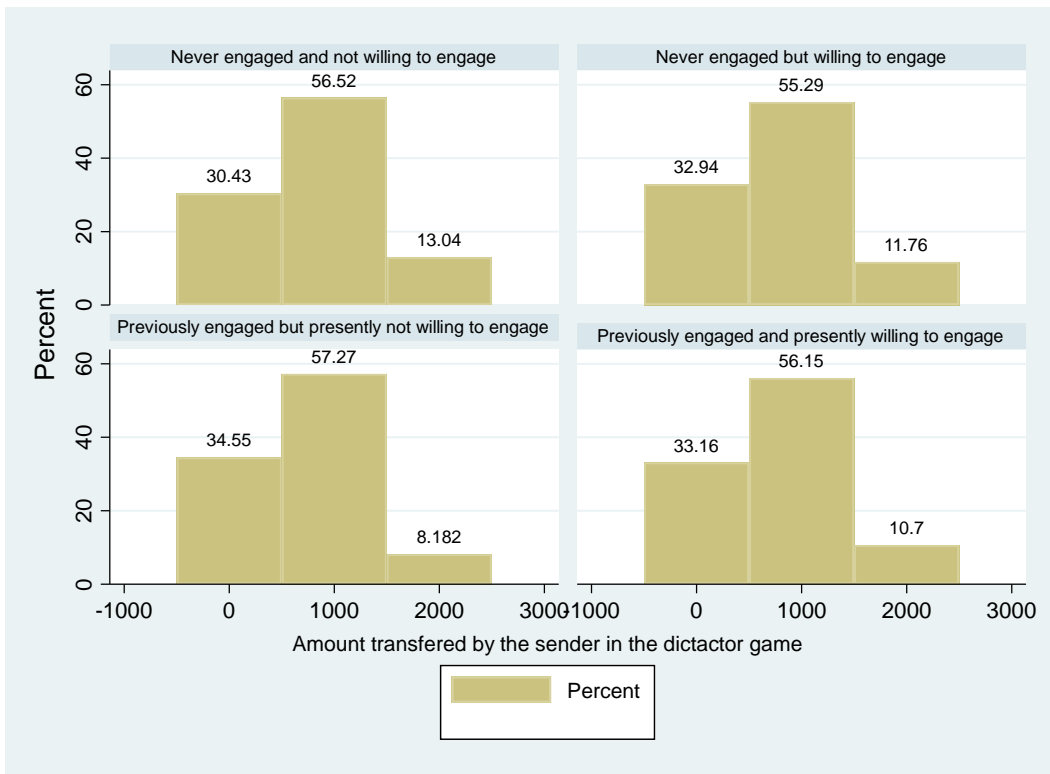
475 **Figure A1: showing host's transfers in trust game by previous engagement and future**
476 **willingness to engage in informal land arrangements**



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478 Source: Author's construction

479 **Figure A2: showing host's transfers in dictator game by previous engagement and**
 480 **willingness to engage in informal land arrangements**



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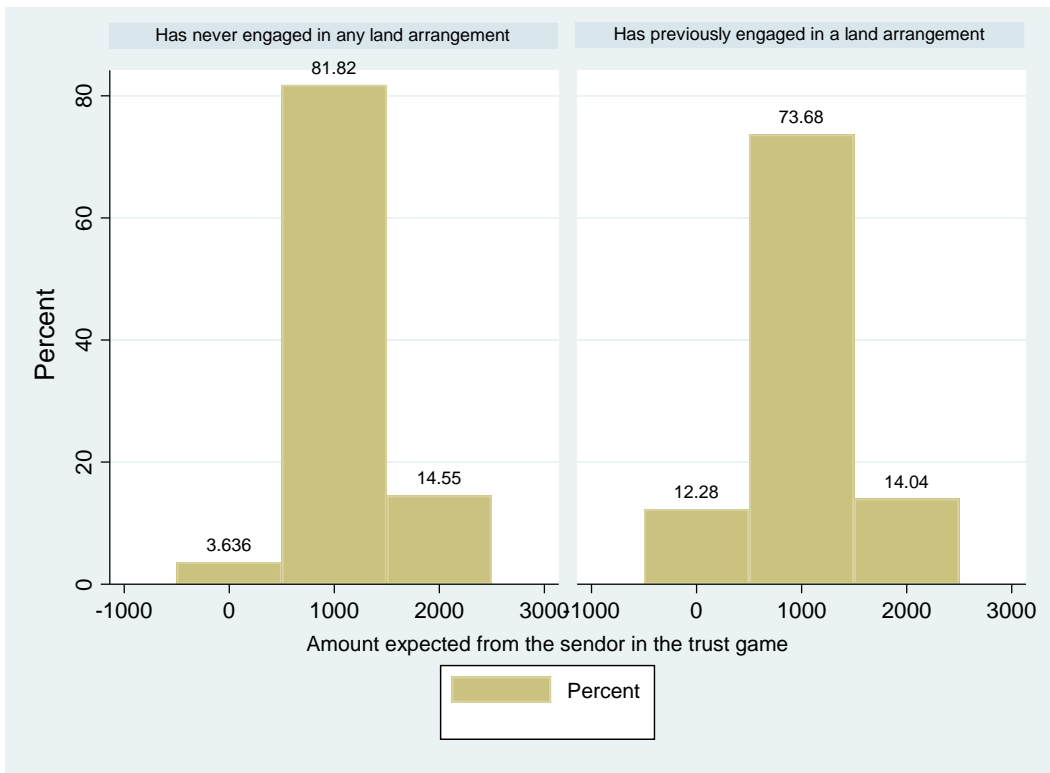
482 Source: Author's construction

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486 **Figure A3: Refugee's expectation of trust by previous land engagement**



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488 Source: Authors construction

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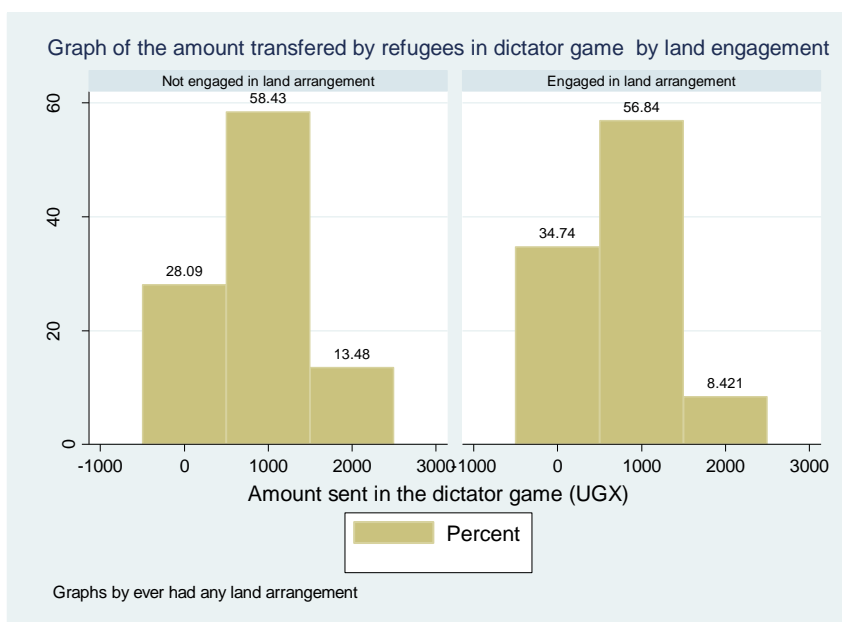
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501 **Figure A4: Amount transferred by refugees in dictator game by previous land**
 502 **engagement**



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504 Source: Author's construction

505 **Table A1: Characteristics of refugees by engagement in informal land transactions**

	Ever participated in an informal land transaction			t value of the difference
	Yes (N=95)	No (N=178)	All (N=273)	
Average trustworthiness	36.46(17.92)	38.55(19.24)	37.29(18.45)	0.911
Expectations of trust	1072.28(567.46)	1122.64(451.51)	1091.91(525.03)	0.771
Altruism (Amount sent in the dictator game)	736.84(605.12)	853.93(629.78)	813.19(622.71)	1.483
Gender of the household head	0.768(0.424)	0.820(0.385)	0.802(0.399)	1.022
Age of the household head	40.358(12.884)	37.758(15.414)	38.663(14.612)	1.403
Years of schooling	4.915(4.511)	3.548(4.279)	4.029(4.403)	2.459
Total value of productive assets	12384.21(84419.69)	2665.73(8858.54)	6047.61(50353.47)	1.523
Ratio of perceived socio economic status of self to refugee	1.145(0.787)	1.021(0.909)	1.065(0.869)	-1.119
Ratio of perceived socio economic status of self to refugee	0.831(0.897)	0.731(0.965)	0.765(0.942)	0.83

506

507 **Table A2: A probit model of factors associated with refugees engagement in land**
508 **transactions (margins)**

VARIABLES	If a refugee household has ever participated in an informal land transaction			
	(1)	(2)	(3)	(4)
Transferred in the dictator game (Dummy; 1=Yes)	-0.069 (0.057)	-0.019 (0.071)	-0.017 (0.067)	-0.018 (0.070)
Average percentage trustworthiness		-0.001 (0.002)	-8.82e-05 (0.002)	0.000 (0.002)
Household head is female (d, 1=Yes)			-0.192*** (0.071)	-0.187*** (0.07)
Age of the household head			0.006*** (0.002)	0.006*** (0.002)
Years of schooling			0.027*** (0.010)	0.025** (0.010)
The logarithm of total assets			0.004 (0.006)	0.004 (0.006)
Log perceived ratio of socio-economic status of self to members of the host community				-0.017 (0.045)
Log perceived ratio of socio-economic status of self to refugees				0.062* (0.037)
Pseudo R squared	0.003	0.002	0.105	0.110
Observations	272	270	270	270

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