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Full Length Research Paper

Does Intrinsic Honesty Accumulate with Employment Through Foreign Direct Investments: The Case of Mozambique

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Abstract

Given the influx of FDI in Mozambique, it is important to investigate how honesty and trust play a role in these economic interactions between the local community and foreign investors. To explore these issues, a case study was conducted at Novos Horizontes, the largest, fully integrated poultry farm in Northern Mozambique. Using a well established trust experiment, we find that participants associated with the FDI trust both strangers and members of NGOs more than those without such an association. This effect is increased when the interviewer is a foreigner, providing evidence that trust of forigners can be built through collaberations and institutions in an FDI context.

Keywords: Trust, Mozambique, Foreign Direct Investment, Honesty.

INTRODUCTION

Foreign direct investment (FDI) in Mozambique has increased by 1,565 percent from 2000 to 2019 mainly due to the large mineral deposit discoveries in the north of the country (World Bank, 2020). FDI increased moderately in terms of the percentage of GDP in the 1990s and early 2000s, growing to more than 30 percent of GDP in 2013, far outpacing foreign aid inflows (Jones and Tarp, 2016). This reflects investments in the coal sector, as well as exploration of offshore gas deposits. Mozambique offers the potential for high returns, but remains a challenging place to conduct business. Investors must consider corruption, an underdeveloped financial system, poor infrastructure, high operating costs, and labor issues.

There is an acute shortage of skilled labor in Mozambique, and as a result, many FDI employers import foreign employees to fill these skill gaps. The Mozambican government passed a labor regulation, Decree No. 37/2016, in 2016 to strengthen the requirement for employers of foreign nationals to devise a skills transfer program that trains Mozambican nationals to eventually replace the foreign workers (USDS, 2018). This could increase frictional costs for FDI countries like

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China who import domestic labor when working in Africa. China, one of the largest investors in Mozambique, is estimated to import 11 percent of its labor force in Africa from China (Financial Times, 2019). Jones and Tarp (2014) find that despite large investments in mining and related industries in Mozambique, and associated within-sector productivity growth, this has not translated into large aggregate labor productivity benefits due to the weak contribution of these new activities to overall employment. Thus, it appears that if FDI is to expand in Mozambique, it must rely more heavily on local Mozambican labor from both a legal (Decree No. 37/2016) and sustainability (domestic economic growth pressure from governments) standpoint.

According to Transparency International, Mozambique was ranked 146 out of 198 countries for corruption in 2019, which can hamper starting and maintaining a successful business (Transparency International, 2020). This coupled with the fact that Mozambique is ranked 176 out of 190 in terms of ease of starting a business (i.e., defined as "employs between 10 and 50 people, all of whom are domestic nationals") indicates that starting, maintaining and successfully operating a business in Mozambique has its challenges (The World Bank, 2020b). One of the main drivers of "ease of doing business" and "corruption" is trust, or lack thereof, amongst agents. Trust is an important issue that can significantly influence social and economic issues in Mozambique, and Africa in general. Mozambique was ranked 133 out of 137 countries in Trustworthiness in 2017 by the World Bank (2020c).

Compounding matters for economic growth is the lack of contract enforcement in Mozambique. In 2019, it was estimated to take an average of 220 days to enforce a contract dispute, ranking Mozambique just behind of Yemen (215 days) and just ahead of Syria (224 days) (World Bank, 2020c). Thus, in order for businesses with heterogeneous work forces to be successful in Mozambique, trust amongst employees and employers is essential given the lack of legal contract mediation. Regardless of its impetus, trust issues in Mozambique are likely hampering economic growth and development. Further, given the new laws passed in 2016 regarding replacing foreign workers with local Mozambicans, FDIs must now face the nexus of trust amongst its workers and profitability.

Given the influx of FDI in Mozambique, it is important to investigate how honesty and trust play a role in these economic interactions between the local community and foreign investors. To explore these issues, we chose to conduct a case study at Novos Horizontes, the largest, fully integrated poultry farm in Northern Mozambique, specifically located in Nampula, the third largest city in Mozambique. Novos Horizontes is one of the largest international agricultural companies in Northern Mozambique, and like many FDIs in Africa, they employ a mixture of local Mozambican and foreign labor across its management and labor force; however, the vast majority of non-management labor is Mozambican. The fully integrated poultry industry, in which Novos Horizontes participates, is a unique medium to test trust as financial success for employees is both a function of endogenous (how well local Mozambican employees can produce healthy chickens) and exogenous (the ability of the non-Mozambican management to provide quality inputs in a timely manner) factors. Likely more so than in other industries, poultry production requires trust from all agents, where foreign management needs to trust local employees not to steal chickens and feed, and local employees need to trust foreign management to supply and purchase back chickens at a negotiated price. If either party shirks on their contracts, either the supply (local producers) or demand (processing by foreign management) for chickens will be disrupted. Given its weak contract enforcement, trust amongst parties is essential for businesses to be financially successful and sustainable. Novos Horizontes provides an ideal organization in which to conduct a case study regarding trust in Mozambique given its consistent growth and viability in some of the harshest economic conditions in Africa.

Field experiments were conducted with the consent of Novos Horizontes, a vertically integrated poultry farm located in the bush area of Nampula Province in Northern Mozambique, surrounding the village of Rapale. Novos Horizontes started as a small operation in 2005 and has consistently grown; it now employs nearly 300 individuals on the farm, and contracts with about 250 outgrowers raising chickens as individual entrepreneurs. The outgrowers are supported by Novos Horizontes who provides them with initial training and follows-up with feed, vaccinations and technical support. As such, in an area where employment is virtually non-existent, the families that serve as outgrowers are afforded an opportunity that would be otherwise impossible. For those working on the farm itself, some come from the nearby village of Rapale while others commute in from Nampula City. Thus, the selection of employees on the farm likely differs somewhat from the composition of individuals working as outgrowers off the farm. This difference is something we considered as we designed our treatments and examined the results.

As might be expected in an area in which employment prospects are grim and the rates of poverty and food insecurity are extreme, the farm management faces a significant difficulty with thefts. It should not be surprising that when circumstances are dire individuals may have a very high discount rate. Moreover, with little experience with employment and stable institutions, one might expect that employees have not internalized the value of

delaying gratification for the purpose of retaining employment. Alternatively, with employment opportunities so scarce, the value of a job is high, and as such, once trust develops that this employment opportunity has future value, one might expect the willingness to risk losing it would be quite low.

The experiment focuses on the fact that the farm management is almost entirely foreign and mostly white. Although a few Mozambicans have now been promoted into management levels over time, that is a reasonably rare occurrence. As such, that generates other questions related to social distance. Specifically, this study sets out to estimate if interaction with the FDI (Novos Horizontes) leads to higher level of trust and trustworthiness. Second, do employees of Novos Horizontes who work on the farm have higher levels of trust and trustworthiness than employees off the farm (outgrowers who work for Novos Horizontes but often miles away)? Third, will greater social distance, which we define as relating to locals versus foreigners, lead to lower levels of trust and trustworthiness in general? Lastly, does greater social distance lead to higher levels of trust and trustworthiness for those with an affilation to the FDI compared to those without? The goal of the paper is to test if there is trust heterogeneity between agents and, if so, in which direction and to what extent. This case study focuses on understanding trust between the local Mozambican workforce and foreign employers as well as trust between employees of Novos Horizontes and non-employees. The implications of this study are myopic to the demographics of the Nampula area; the methodology can be more broadly applied where trust between the local workforce, foreign workers and FDI may exist. As FDI continues to grow throughout the low-income world and labor laws like the Mozambican Decree No. 37/2016, which mandates a percentage of local labor be in management positions, become more common, it is increasingly important to understand the dynamics which constitute trust through studies such as this.

Background Literature

To provide context on how trust relates to economic growth, Algan and Cahuc (2013) estimated that GDP per capita in 2000 would have been increased by more than 546 percent across Africa if the level of inherited trust had been the same as inherited trust experienced in Sweden. Like most African countries, Mozambique is heterogeneous in its languages and cultures amongst its tribes, with 10 languages spoken by at least 3 percent of the population. In their 2011 study, Nunn and Wantchekon analyzed 17 sub-Saharan countries and found that the slave trade altered the trust of modern Africans through internal factors, such as norms, beliefs, and values. Mozambique, its people and culture were at the heart of the Indian Ocean slave trade.

In developing countries such as Mozambique where institutions may be weak, social capital, otherwise known as “a network of relationships between the agents within an economy” (Barr, 2000), is important for business relationships and the overall well-being in an economy. Specifically, trust between individuals when institutions are weak or when contract law is not well enforceable can be very important for business relationships (Guiso et al. (2004)). As such, social distance between foreign investors and local workers may generate a lack of trust and honesty. Hence, social capital or trust among different groups of people could actually be a substitute for institutions (and could also substitute for human capital). Trust also has extrinsic value in helping to reduce risks and transaction costs of relationships (Nooteboom 2007). A cross-cultural study of cooperation networks in Northern Ghana and Oaxaca, Mexico found that social cohesion actually increases when the environmental resources are scarcer (Acedo-Carmona and Gomila (2015)), further suggesting the role of networks and trust in mitigating risks from scarcity.

Granovetter (2005) shows that social networks or trust between groups play a vital role in most labor markets. Employers and employees would rather learn about each other from personal sources whose information they trust. A high level of trust climate in an organization can be associated with greater employee loyalty, customer service, and better efficiency (Reece & Brandt, 1999). Elegido (2013) investigates whether, and under what conditions, it actually makes sense for an employee to offer loyalty to an employer and finds mixed results. Ladebo (2006) researches trust among coworkers and employees and management in an Agricultural Development Program (ADP) in Nigeria and finds that the perception of trust of coworkers -cognitive trust - was unrelated to the group cohesion; yet, employee’s and management cognitive trust is related to affective commitments. As such, further investigation into the issue of trust is warranted.

The notion of social distance can include race, gender, social class, sexuality, and measures people’s willingness to participate in social contacts based upon varying degrees of closeness with other social groups. Given the role of foreign investment in Mozambique, the social distance between investors and locals may play a role in levels of honesty and trust which can, in turn, affect the success of the ventures. Buchan et al. (2002) find that in four countries tested, cooperation decreases as social distance increases. Buchan et al. (2004) also examine the influence of social distance and communication on other-regarding preferences (e.g., trust, reciprocity, altruism) in several countries. They find mixed results in preferences around trust and social

distance and also find that other regarding preferences depend upon the nation and the individual's cultural orientation. Cox and Orman (2015) find that immigrants and native born American citizens are both very trusting, but immigrants seem to trust other immigrants less than native born American citizens. They also find that while women and older people are less likely to trust others, they are not more or less trustworthy than anyone else. Finally, highly religious immigrants are less trustworthy and less trusting than native born Americans and other immigrants. Askoy and Palma (2018) run a dice rolling trust experiment in Guatemala with an emphasis on whether scarcity affects honesty. They find that individuals cheat at high levels in both times of abundance and scarcity; however, they do find that there is an in-group favoritism that occurs, but only during times of abundance.

Taken together, the results surrounding trust and social distance discussed above are complex, and hence more investigation on this topic is needed. In our case study, we test the belief that workers in rural Mozambique might lie more to people with diverse social distances. We add to this discussion by examining truth telling behavior toward a foreigner or a member of one's local group. We find, in fact, that lying actually occurs more regularly when the social distance is closer. This effect is worsened when the information is asymmetric. This may suggest that exposure and interactions with the foreign management of the farm has generated some degree of trust.

When FDI involves the employment of local labor, the role of social distance and power within the workplace may affect outcomes. Power distance and individualism-collectivism (Hofstede, 1980), are two cultural dimensions that can influence an employee's trust of a supervisor or a foreigner engaging in development activities or investment. Power distance is the extent to which the organizational members and society as a whole believe power to be unequally shared (Carl et al. 2004), while individualism-collectivism is the idea that societal members can have pride, loyalty and attachment to family, friends, and organizations (Gelfand et al. 2004). Costigan et al. (2006) shows that both power distance and in-group collectivism do not actually moderate the trust-behavior relationship between the employee trust of the supervisor on enterprising behavior, again suggesting that trust relationships are complex and require more study. Furthermore, the relationship between power distance and trust of foreigners in a working relationship has not been adequately examined. This is an important topic since it can have powerful implications for those conducting work in developing countries. Our study examines the behavior of employees and non-employees, and finds a complex relationship to honesty. Specifically, we find that employees lie more than non-employees overall, and this is true regardless of with whom they interact. Interestingly, however, they are relatively more honest when interacting with a foreigner. The overall effect of employees lying more is consistent with the literature suggesting that those who are more highly educated lie with greater frequency.

Finally, as mentioned above, weak institutions within a country's political and economic system play an important role in a country such as Mozambique. Zucker (1986) states that the institutional basis of trust is the most important determinant of trust in a society. This basis is comprised of political, social and legal systems that monitor and sanction social behavior. Gachter and Schulz (2016) develop an index of rule violations and intrinsic honesty based on the prevalence of rule violations and the levels of corruption, tax evasion, and fraudulent politics. In their experiment, they found that the institutions and values are correlated. Weaker institutions and cultural legacies have an adverse effect on the level of intrinsic honesty within the society. Zaheer and Zaheer (2006) investigate trust in international collaborations. They not only look at the levels of trust across borders, albeit incredibly important, but also find that institutional and cultural support for trust varies as well. Given that institutions are weak in many developing countries, the idea that entrepreneurial activity can generate social enterprises that may substitute for weak institutions is important.

MATERIALS AND METHODS

To address our research questions, a field experiment in and around Nampula, Mozambique was conducted in June of 2017. Participants were approached on and off the Novos Horizontes farm and asked if they would like to participate in an experiment with the potential of winning phone cards. If a participant agreed, they were given a six-sided die that had three sides colored blue while three remained white. This methodlology is similar to that used by Olsen et al. (2019); Ableler, Nozenzo and Raymond (2019); Muehlheusser, Roiderand Wallmeier (2015); Maggian and Montinari (2017) and Lowes et al. (2017). Participants were told that it is a fair die (i.e., each side has equal probability of landing facing up). They were then asked to roll the die 10 times in private where they could not be observed by the experimenter, and return to report how many times the die turned up blue. Prior to the participants rolling the die, they were told that for each blue that was rolled, they would be given a phone card with a value of 10 Meticals (approximately $.30). Thus, they could earn up to 100 Meticals. Given that the rolls took place in private (mostly behind a tree or in the participant's house), there was no mechanism to verify their veracity. However, of course, across a population, truth telling behavior would result in an average of five

blue rolls per subject, and it is from this that we are able to measure deviations above five as dishonest behavior across a group.

After the participant returned and reported to the surveyor how many blue rolls they had earned, a questionnaire was given to obtain information regarding the demographic variables (age, gender, education level, religion, and residence). The questionnaire also included a number of questions designed to assess levels of trust of others. Specifically, participants are given a scenario in which they personally had lost their wallet and were asked who was most likely to return the wallet if found, including a police officer, a stranger, someone working for an NGO, and their neighbor. The final measure of trust asks participants if they would ask their neighbors to watch their house. Since the dice experiment was designed to measure trustworthiness, it was important to also assess the subjects' perceptions of trust toward others. Note that this survey was given after the dice roll experiment in order to not bias behavior by introducing thoughts about honesty and trust.

Treatments

Experiments were conducted both on the farm (165) and off the farm (145), including employees on the farm (127), outgrowers (60) who work for the farm offsite, individuals who interact with Novos Horizontes as consumers but are not employees (38), and individuals who have no affiliation with Novos Horizontes (85). In addition, for each of these sub-samples, the dice roll experiment was conducted both by a local Mozambiquan as well as by US students. When the local was conducting the experiment, the students were not seen by the participants.

The treatments are as follows:

1. Local Interviewer
2. Foreign Interviewer

Thetreatments were conducted over 4 sub-samples:

1. Employee on farm
2. Employee off farm (outgrower)
3. Non-employee on farm (consumer)
4. Non-employee off farm (no affiliation with the FDI)

Analyses of the sub-samples were used to test Hypotheses 1 and 2; i.e., if interaction with the FDI leads to higher level of trust and trustworthiness, and if employees of Novos Horizontes who work on the farm have higher levels of trust (with respect to their answers to the survey questions) and trustworthiness (with respect to their honesty regarding die rolls) than employees off the farm. Each of the above sub-samples were subsetted by treatment, i.e. the interviewer being foreign/local. This further division is used to test Hypotheses 3 and 4; i.e., does greater social distance lead to lower levels of trust and trustworthiness, and does greater social distance lead to higher levels of trust and trustworthiness for those with an affilation to the FDI compared to those without.

It is important to note that for all of these sub-samples, when a student conducted the experiment and survey, a local translator was present. Note also that the language on the farm and in the village is Portuguese while in the bush areas, the local language of Macua was spoken. As such, the translator was not the same person in every case. In total, 310 individuals completed both the experiment and the follow-up survey. 127 were employees surveyed on the farm (sub-sample 1). Of those, 46 were interviewed by a local (Treatment 1) and 81 were interviwed by a foreigner (Treatment 2). 60 individuals were employees surveyed off the farm (outgrowers, sub-sample 2). 20 of those individuals were interviewed by a local (Treatment 1) and 40 were interviewed by a foreigner (Treatment 2). 38 consumers were surveyed (sub-sample 3), 7 by a local interviewer (Treatment 1) and 31 by a foreign interviewer (Treatment 2). 85 individuals had no affiliation with Novos Horizontes (sub-sample 4). Of those, 24 were surveyed by a local (Treatment 1) and 61 were surveyed by a foreigner (Treatment 2). Table 1 below summarizes the sample demographics.

Regression Analysis

We first regress the number of reported blue dice rolls for each individual against a dummy for a foreign interviewer (Treatment 2) vs. a local interviewer (Treatment 1) and control variables age, gender, education level, religion and village of residence. The regression equation is as follows:

$$DiceRolls_{if} = \beta X_i + \gamma_f F \quad (1)$$

where X_i is a vector of control variables (age, gender, education level, religion, and residence) and F is a dummy variable, equal to 1 for a foreign interviewer (Treatment 2) and 0 for a local interviewer (Treatment 1). $DiceRolls_{if}$, for each participant i and location f, on or off the farm, represents the number of stated blue dice rolls.

We then use a logit model to regress measures of trust gathered from the survey on the same set of controls. Specifically, four of the trust questions give survey participants a scenario in which they personally had lost their wallet. They were then asked who was most likely to return the wallet if found, including a police officer, a stranger, someone working for an NGO, and their neighbor. The final measure of trust asks participants if they would ask their neighbors to watch their house. The

Table 1. Descriptive statistics of the participants.

Demographic Characteristic	Classification	Frequency	Percentage	Mean and Standard Deviation
Gender	Female Male	75 235	24.19% 75.81%	
Age	18-20 21-30 31-40 41-50 >50	52 143 75 27 13	16.77% 46.13% 24.19% 8.71% 4.19%	29.76 10.10
Residence	Nampula Rapale Nicala Other	102 161 2 45	32.90% 51.94% 0.65% 14.52%	
Education	None Primary Secondary University	3 134 169 4	0.97% 43.23% 54.52% 1.29%	
Marital Status	Never Married Married Divorced Widowed	89 215 6 0	28.71% 69.35% 1.94% 0.00%	
Religion	Muslim Christian Other	108 198 4	34.84% 63.87% 1.29%	
Household Income Past 2 Weeks	0 1-500 501-5000 >5000	47 137 112 14	15.16% 44.19% 36.13% 4.52%	1386.07 3004.594
Number of People Living in Household	1-2 3-4 5-6 7-8 9+	15 82 111 70 32	4.84% 26.45% 35.81% 22.58% 10.32%	5.70 2.27
Number of Children Living in Household	0-2 3-4 5-6 7+	114 123 50 23	36.77% 39.68% 16.13% 7.42%	3.22 2.06
Employee of Novos Horizontes	Yes No	187 123	60.32% 39.68%	
Have a Stable/Regular Job	Yes No	217 93	70.00% 30.00%	

first regression, equation 1, where dice rolls is the dependent variable, tests honesty, while the next five regressions are analyses of participants' trust of police officers, strangers, NGOs, and neighbors.

The regression equation is as follows:

$$Trust_{if} = \beta X_i + \gamma_f F \quad (2)$$

where X_i is a vector of control variables (age, gender, education level, religion, and village of residence) and Fis a dummy variable, equal to 1 for a foreign interviewer (Treatment 2) and 0 for a local interviewer (Treatment 1). $Trust_{if}$, for each participant i and location f, on or off the farm, represents the five measures of trust outlined above.

In addition to these regressions, in order to further assess honesty, we examined the simple means of blue dice rolls for on farm, off farm, employees, and non-employees. Differences in means between different demographics, including employees versus non-employees, on farm versus off farm, and others are also

Table 2. Means of blue dice rolls for sub-samples subsetted by treatments.

	Employees On Farm, Local Interviewer (sub-sample 1, Treatment 1)	Employees On Farm, Foreign Interviewer (sub-sample 1, Treatment 2)	Employees Off Farm, Local Interviewer (sub-sample 2, Treatment 1)	Employees Off Farm, Foreign Interviewer (sub-sample 2, Treatment 2)
Blue dice rolls	6.804***	6.321***	6.250**	5.9***
	(0.263)	(0.216)	(0.458)	(0.217)
Observations	46	81	20	40
	Non-Employees On Farm, Local Interviewer (sub-sample 3, Treatment 1)	Non-Employees On Farm, Foreign Interviewer (sub-sample 3, Treatment 2)	Non-Employees Off Farm, Local Interviewer (sub-sample 4, Treatment 1)	Non-Employees Off Farm, Foreign Interviewer (sub-sample 4, Treatment 2)
Blue dice rolls	7.429**	6.032***	6.208***	6.082***
	(0.685)	(0.260)	(0.289)	(0.203)
Observations	7	31	24	61

Notes: */**/*** correspond to 90/95/99% significance levels for $H_a$mean!=5.Standard errors are in parentheses.

Table 3. Differences in means of blue dice rolls across sub-samples.

	Employees (sub-samples 1 and 2)vs. Non-Employees (sub-samples 3 and 4)	On Farm (sub-samples 1 and 3) vs. Off Farm (sub-samples 2 and 4)	Employees On Farm (sub-sample 1) vs. Non-Employees and/or Off Farm (sub-samples 2, 3, and 4)	Employees On Farm (sub-sample 1) vs.Employees Off Farm (sub-sample 2)	Non-Employees On Farm (sub-sample 3) vs.Non-Employees Off Farm (sub-sample 4)	Employees Off Farm (sub-sample 2) vs.Non-Employees Off Farm (sub-sample 4)
Blue dice rolls	0.172	0.373**	0.376**	0.479**	0.172	-0.101
	(0.199)	(0.195)	(0.198)	(0.284)	(0.302)	(0.264)
Observations	310	310	310	187	123	145

Notes: */**/*** correspond to 90/95/99% significance levels.Standard errors are in parentheses. Columns 1 – 6 show differences in means of blue dice rolls between different groups.

shown. Those results are presented first to provide an indication of how honesty is affected by the association with Novos Horizontes, and the regression analyses examining trusting attitudes follow.

RESULTS

Trustworthiness

Table 2 presents the means of reported blue dice rolls for each of the sub-samples. Table 3 shows the differences in the mean number of blue rolls when comparing across subject pools, and Table 4 presents the differences in the mean number of blue rolls when groups are reporting their result to a foreign experimenter vs. a local experimenter.

Novos Horizontes.

As shown in Table 2, we first examine overall trustworthiness by measuring the magnitude of general lying; i.e, deviations in averages from the expected value of 5.On average, from Table 2 we can see that participants report 6.274 blue dice rolls, which is statistic-

Table 4. Differences in means of blue dice rolls for locals (Treatment 1) vs. foreigners(Treatment 2).

	Sample	Employees (sub-samples 1 and 2)	Non-Employees (sub-samples 3 and 4)	Employees On Farm (sub-sample 1)	Employees Off Farm (sub-sample 2)	Non-Employees On Farm (sub-sample 3)	Non-Employees Off Farm (sub-sample 4)	Employees and/or On Farm (sub-samples 1, 2, and 3)	Employees On Farm (sub-sample 1) vs Non-Employees and/or Off Farm (sub-samples 2, 3 and 4)
Blue dice rolls	-0.456**	-0.455*	-0.419*	-0.483*	-0.350	-1.396**	-0.126	-0.561**	0.412
	(0.209)	(0.278)	(0.320)	(0.349)	(0.445)	(0.634)	(0.371)	(0.252)	(0.360)
Observations	310	187	123	127	60	38	85	225	97

Notes: */**/*** correspond to 90/95/99% significance levels.Standard errors are in parentheses. Columns 1 through 8 report the difference in means of blue dice rolls for foreign interviewer versus local interviewer for different demographics. Column 9 reports the difference in means of blue dice rolls for employees on farm versus non-employees and/or off farm for the sample interviewed by a local.

Table 5. Difference in trust of others by affiliation (sub-samples 1, 2, and 3) vs. no affiliation with Novos Horizontes (sub-sample 4).

	Likely Wallet Returned by Police	Likely Wallet Returned by Stranger	Likely Wallet Returned by member of NGO	Likely Wallet Returned by Neighbor	Let Neighbor Watch House
Percentage of people	-0.125**	-0.058	0.079*	-0.151***	0.119**
	(0.054)	(0.063)	(0.055)	(0.063)	(0.055)
Observations	310	310	310	310	310

Notes: */**/*** correspond to 90/95/99% significance levels.Standard errors are in parentheses. Columns 1 through 4 report the difference in the percentage of participants who say that it is likely that their wallet would be returned by different groups by those on the farm and/or employees of Novos Horizontes versus non-employees off thefarm. Column 5 reports the difference in the percentage of participants who would let their neighbor watch their house by those on the farm and/or employees of Novos Horizontes versus non-employees off the farm.

ally ($P<0.01$) different from 5. For every demographic analyzed, employees, non-employees, those surveyed on farm, those surveyed off farm, employees on farm, employees off farm, non-employees on farm, non-employees off farm, and employees and/or on farm, we find a mean greater than 6, with the highest average at 6.496 for employees of Novos Horizontes who work on the farm.

Table 6. Measures of trust for participants with affiliation to the farm (sub-samples 1, 2, and 3).

	DiceRolls	Likely Wallet Returned By Police	Likely Wallet Returned By Stranger	Likely Wallet Returned By Member Of NGO	Likely Wallet Returned By Neighbor	Let Neighbor Watch House
FOREIGNINT	-0.481*	0.230	0.805**	1.817***	0.464	-0.596
	(0.28)	(0.40)	(0.33)	(0.39)	(0.33)	(0.42)
AGE	-0.087	-0.096	0.145*	0.174*	-0.012	-0.045
	(0.06)	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)
AGESQRD	0.001	0.002	-0.002	-0.002*	0.000	0.000
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
FEMALE	0.448	0.023	0.203	-0.109	0.838**	-0.290
	(0.32)	(0.48)	(0.40)	(0.46)	(0.40)	(0.44)
SECONDARYUNI	-0.227	0.078	-0.099	0.112	0.534*	-0.070
	(0.26)	(0.38)	(0.32)	(0.39)	(0.31)	(0.37)
MUSLIM	-0.138	-0.186	-0.109	0.089	-0.261	-0.304
	(0.27)	(0.40)	(0.32)	(0.39)	(0.31)	(0.37)
OTHERREL	-1.786	1.734	0.000	0.000	0.000	-1.037
	(1.27)	(1.47)	(.)	(.)	(.)	(1.45)
RAPALE	0.039	0.949**	0.029	-0.039	0.213	0.789**
	(0.27)	(0.40)	(0.32)	(0.41)	(0.31)	(0.38)
NICALA	-0.874	1.920	0.672	0.000	0.000	0.000
	(1.30)	(1.52)	(1.48)	(.)	(.)	(.)
OTHERRES	0.022	-0.636	-0.880*	-0.475	-1.154**	-0.340
	(0.43)	(0.84)	(0.52)	(0.60)	(0.56)	(0.54)
CONSTANT	8.491***	-0.703	-2.856**	-2.653	-0.649	2.453
	(1.17)	(1.65)	(1.43)	(1.68)	(1.40)	(1.66)
R-SQR	0.065					
DFRES	214					
BIC	942.3	272.6	337.5	251.6	336.5	279.1
N	225	225	223	221	221	223

Table 3 follows with an examination of the differences in means between groups. When comparing participants on and off the farm, we find that those on the farm lie more ($P<0.05$) by a difference of 0.373 additional blue roles. Further comparing those on and off the farm, we find that employees of Novos Horizonteswho work on the farm are more likely to lie than those who are not employees of Novos Horizontes and/or were surveyed off the farm, by an increase in the mean number of blue dice rolls of 0.376($P<0.05$), a result that explains most of the difference between employees and non-employees overall, as well as on and off the farm. In fact, there is no significant difference ($P>0.10$) in lying between employees and non-employees, employees and non-employees off the farm, nor is there a difference between non-employees on and off the farm. As such, it is emplo-

Table 7. Measures of trust for participants with no affiliation to the farm (sub-sample 4).

	Dice Rolls	Likely Wallet Returned By Police	Likely Wallet Returned By Stranger	Likely Wallet Returned By Member Of NGO	Likely Wallet Returned By Neighbor	Let Neighbor Watch House
FOREIGNINT	-0.265	1.418	-0.653	0.580	0.773	0.331
	(0.51)	(0.89)	(0.78)	(0.81)	(0.90)	(0.83)
AGE	0.035	-0.136	0.202*	0.256	0.091	0.002
	(0.07)	(0.12)	(0.12)	(0.16)	(0.17)	(0.12)
AGESQRD	-0.000	0.002	-0.002	-0.003	-0.001	0.000
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
FEMALE	0.499	0.478	0.357	0.824	0.461	0.389
	(0.36)	(0.57)	(0.55)	(0.61)	(0.66)	(0.56)
SECONDARYUNI	-0.236	-1.272**	0.052	-0.164	-1.226	-0.628
	(0.35)	(0.57)	(0.52)	(0.58)	(0.77)	(0.55)
MUSLIM	-0.426	0.320	-0.793	-0.906	-0.009	0.263
	(0.35)	(0.53)	(0.51)	(0.56)	(0.66)	(0.53)
OTHERREL	0.540	0.488	-0.494	-1.746	0.000	-1.599
	(1.13)	(1.63)	(1.58)	(1.66)	(.)	(1.96)
RAPALE	1.713***	0.412	0.381	-0.721	2.234***	-2.318*
	(0.54)	(0.95)	(0.80)	(0.97)	(0.86)	(1.24)
NICALA	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
OTHERRES	1.642**	0.482	0.013	-0.697	-1.127	-2.635**
	(0.64)	(1.13)	(0.95)	(1.07)	(1.18)	(1.30)
CONSTANT	4.156***	0.095	-2.572	-3.052	-2.132	2.240
	(1.51)	(2.59)	(2.40)	(3.09)	(3.33)	(2.61)
R-SQR	0.19					
DFRES	75					
BIC	339.1	140	148.1	136.3	109.5	144.8
N	85	85	85	85	83	85

yees on the farm who differ from the others, and are lying significantly more. This contradicts our initial hypothesis that interaction with Novos Horizontes generates more trustworthy employees. One possible explanation for this is that employees on the farm have received training and education that the other groups surveyed would not have. This aligns with current literature that shows that people who are more educated will lie more than those less educated.

However, when examining the interactions of survey participants with foreigners (Treatment 2), we find that those surveyed lied less ($P<0.05$) to foreigners than to locals, with a difference in means of 0.456 less. Table 4 shows that both employees of Novos Horizontes and non-

employees lie less to foreigners. We also find that employees both on and off the farm lie less to foreigners, by a difference in means of 0.483 and 0.350 respectively, although the result for those off the farm is not significant, with a p-value of 0.218. The result that employees on the farm lie more in general while they lie less to foreigners, implies some strategic lying. Similarly, non-employees on the farm, i.e., consumers, also lie less to foreigners but those off the farm do not, suggesting that it is not employment necessarily, but simply having interacted with the FDI, Novos Horizontes, that generates this result. In fact, when examined collectively, all categories that interacted with the farm (employees on farm, employees off farm, and non-employees on farm), lie less (fewer average blue roles) to foreigners than to locals by a difference in means of 0.561($P<0.05$). Finally, there is no difference ($P=0.127$) in lying to a local between employees on the farm and all other categories (employees off farm, non-employee on farm, and non-employee off farm).

Thus the results from Table 2 would suggest that employees, particularly those on the farm, lie more overall, but that effect is dominated by the fact that when facing a foreign interviewer, they lie less. Further, all subjects who have some interaction with the FDI, employee or not, lie less to the foreigner than the local. These results show that although this institution may not build trust overall, it does build trust with foreigners. This result may be surprising given that social distance is expected to generate the opposite result, making the role of the institution that much more powerful. Further, this effect is not simply due to fear of losing one's job, as consumers also lie less to foreigners.

3.2 Trust

In addition to honesty, we further examine measures of trust across all participants. Each participant was asked whether they believe their lost wallet will be returned by the police, a stranger, a member of an NGO or a neighbor; and lastly whether they would allow a neighbor to watch their children. We compare the levels of trust for participants who have some affiliation with Novos Horizontes (employee or otherwise interviewed on the farm) and for participants without such affiliation. Note that these questions were asked after the dice rolls experiment so as not to influence thoughts about honesty in that experiment. Table 5 shows the differences in the levels of trust between the two groups for each of the questions asked.

Table 5 indicates that participants who have some affiliation with Novos Horizontes are less likely to trust the police (column 1) or their neighbors (columns 4 and 5) but are more likely to trust a member of an NGO (Column 3). This is consistent with our findings for honesty as well. It appears that association with the institution generates not only greater honesty towards foreigners as shown above, but also appears to generate trust.

To further investigate this finding, we separate the sample into those with or without an affiliation with Novos Horizontes (employees or consumers versus non-employees surveyed off farm), using the results from equation (1). In so doing, after controlling for demographic measures that might affect trust, found in Tables 6 and 7, we dummy out if the interviewer was a foreigner. See Tables 6 and 7 for results.

With the exception of the fact that the village of Rapale (which is a small village away from the city) tends to trust their neighbors and the police more, the demographics tend to be insignificant ($P>0.10$). However, these regressions further indicate that when the interviewer is a foreigner, participants associated with Novos Horizontes report fewer blue dice rolls indicating less lying, but also are more likely to trust strangers and members of an NGO. That is, not only is this group (employees and/or those surveyed on farm) more trusting of members of NGOs in general, but when interviewed by a foreigner this affect is amplified, and trust in strangers in general becomes significant. This result is consistent with our findings regarding honesty above. Specifically, participants who have experience with this institution are more honest and trusting when interacting with foreigners.

CONCLUSION

We conducted a field experiment in Northern Mozambique in order to assess the role of a foreign run institution in a region where the population has little interaction with formal employment or institutions in general, and foreign run institutions more specifically. The goal was to ascertain whether experience with this institution increased trust and trustworthiness via repeated and stable interactions, or whether social distance resulted in the reverse effect.

The dice roll experiment indicated that although employees of Novos Horizontes tend to lie more overall, they lie less to foreigners; in fact, participants with an association with Novos Horizontes in general (employees or consumers) lie less to foreigners, indicating that their experience with the FDI increased their honesty to foreigners. The fact that employees lie more in general is consistent with previous literature indicating that more educated individuals tend to lie more on average.

When testing trust, we again find that those associated with Novos Horizontes trust both strangers and members of NGOs more than those without such an association. This effect is increased when the interviewer is a foreigner, providing further evidence that this institution is enhancing trust of foreigners. These findings are import-

ant not only in assessing the role of institutions in developing honesty and trust, but also suggest that social distance may not always be the greatest barrier to trust. As such, when interacting in such communities, it may not always be necessary to present the face of a local when conducting business if the population has been associated with a trust building institution managed by foreigners.

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