

Grabbed Trust? The Impact of Large-Scale Land Acquisitions on Social Trust in sub-Saharan Africa

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Abstract

The livelihoods of rural populations in sub-Saharan Africa are closely tied to small-scale farming and other types of land use. In recent years, private investors as well as governments have shown a growing interest in large-scale acquisition of arable land across the continent. While authors have started to analyze the local economic and environmental impacts of such investments, their socio-political as well as psychological consequences remain poorly understood. This paper investigates how changes in land ownership patterns caused by large-scale land acquisitions affect the level of interpersonal trust among rural communities. We maintain that the transition from community and individual-smallholder land ownership into large-scale investor property has a negative impact on this particular dimension of social capital. To test our hypotheses, we connect respondents from Afrobarometer rounds to georeferenced information on the location of land deals. Our regression analyses show that the global land rush indeed disrupts local social fabrics and social cohesion by reducing particularized and generalized forms of trust. Employing a difference-in-difference strategy, we find that trust in relatives is particularly affected by large scale-land acquisitions. In addition, our models reveal that the decline in trust is considerably stronger among women compared to men.

Keywords: Large-Scale Land Acquisitions, Interpersonal Trust, sub-Saharan Africa, Gender

Declaration of Interest: none.

Introduction

Interpersonal relations are a major asset in rural Africa. Livelihoods and the well-being of farmers are closely tied to the prevalence of social networks and interpersonal trust. Among smallholders and family farmers, social ties are a key determinant of economic wealth, access to education and health, collaborative land management, resilience of rural co-operatives and climate change adaptation. Rural sub-Saharan Africa – traditionally characterized by small and family-operated plots (c.f. Lowder et al. 2016) – has been considered a “storehouse of rich social capital” (Kansanga et al. 2019a, p. 1).

In the last two decades, the continent’s agrarian landscape has increasingly undergone a far-reaching structural transformation. The increasing penetration of smallholder agriculture by domestic and foreign capital through large-scale land acquisitions (LSLAs) is promoting mechanization, the adoption of market-oriented crops, land concentration and a shift from subsistence and family farming to agricultural wage employment. While several quantitative and qualitative case-studies have gathered empirical evidence on the potential economic, agricultural and environmental impacts of large-scale land investments, the effects on local social fabrics are still poorly understood.

Given the importance of cooperation-enhancing social structures for ensuring sustainable rural livelihoods, this paper addresses the extent to which the ongoing transformation of agricultural systems is affecting local social capital in sub-Saharan Africa. In particular, it investigates the impact of LSLAs on interpersonal trust. Theoretically, we claim that land deals erode social trust by transforming social reciprocity relations within families and villages through three main channels: the enforcement of structural shifts in rural labor regimes, the redefinition of land use rights (in particular, by transforming common property systems that have traditionally encouraged mutual cooperation into private property) and the promotion of intra-familial and interregional conflict.

To test our claims, we use georeferenced information on land deals from the Land Matrix project (Land Matrix Global Observatory 2016) as well as survey data from Afrobarometer (Afrobarometer Data) for all available sub-Saharan African countries. Distinguishing between deals that are planned (but not yet implemented) and active deals, we employ a difference-in-difference strategy. Our results largely confirm our hypotheses: respondents affected by land deals report lower levels of generalized and personalized trust compared to individuals that are yet to experience a land deal and a control group with no large-scale land investments in their neighborhood. Our difference-in-difference estimates further reveal that trust in relatives is particularly affected by LSLAs. Moreover, we also find that the negative effect of land investments on trust is particularly strong among women. In line with previous qualitative studies, we show that – in addition to threatening social cohesion – LSLAs may reinforce prevailing gender inequalities.

The paper is structured in the following way: the next section reviews the empirical evidence on the socio-economic and environmental effects of LSLAs and underlines the importance of investigating how the present transformation of agrarian systems impacts on local social relations in sub-Saharan Africa. We then proceed by defining key concepts and presenting our theoretical arguments and hypotheses. Section 4 outlines the research design and the employed data. Our analysis and discussion of results are presented in the subsequent section. The final section concludes.

The Socio-Economic Effects of Large-Scale Land Acquisitions on Rural Households

The emerging phenomenon of large-scale acquisitions of arable land in foreign countries has gained global momentum since the financial and food crises of 2008/09 and has generated considerable public debate and media attention. While estimates on the scope of land deals

diverge considerably (c.f. Schoneveld 2014, p. 34), there's consistent empirical evidence that – particularly between 2005 and 2012 – land investments have accelerated and reached a new level of internationalism.¹ In fact, recent data on the patterns of large-scale land deals reveal that land deals “seem fully integrated as investment strategies across industries” (Mechiche-Alami et al. 2019, p. 1).

The implications of large-scale land investments² on local living working conditions are the subject of a disputed scholarly debate. Proponents of a more optimistic view claim that – particularly under good land governance institutions and strong regulatory capacity – local rural populations could profit from land investments through different channels. Contract farming schemes, for example could improve local farmers' access to several inputs and training. Moreover, the supply of much needed capital and technology could foster rural development and encourage linkage to other economic sectors, thereby increasing job creation capacity and promoting (non-farming) income. LSLA may also ameliorate rural producers' access to world markets and local populations could benefit from community development funds. More critical voices maintain that the poor institutional and regulatory settings that characterizes most of the countries commonly targeted by land investments, render many of these potentially beneficial effects unsustainable and unlikely (c.f. Byerlee and Deininger 2013; D'Orico et al. 2017; Hall et al. 2017; Palliere and Cochet 2018).

A series of quantitative case studies have advanced our understanding of land deal's impact on job creation, household income, food security, environmental outcomes and local inequalities in selected African and Asian states. Most studies analyzing the labor market impacts of large-scale land investments find that job creation expectations - commonly

¹ For a recent contextualization of the evolution and patterns of LSLAs, see Mechiche-Alami et al. (2019) and Interdonato et al. (2020).

² Throughout the paper, we will use the terms large-scale land acquisitions, land rush, land deals and land investments interchangeably. Thereby, we rely on the definition from the Land Matrix' (LM) Global Observatory according to which LSLAs imply the (potential) conversion of land from smallholder production, local community use or important ecosystem service provision into commercial use. Only land leased or sold to governments or companies covering an area of 200 hectares or more are considered.

attributed to these agricultural projects – are rarely fulfilled. Several authors demonstrate that the net job creation effect of LSLA is negative: the destruction of jobs in family farming and smallholder agriculture seems higher compared to the creation of new jobs in industrial farming (Ali et al. 2019; Nolte and Ostermeier 2017; Palliere and Cochet 2018). In addition, the analyzed cases reveal that land deals are often tied to a transformation of rural labor markets: from subsistence, family and small-scale farmers to wage laborers and contract farmers.

Empirical evidence on the income effect of large-scale land investments is rather nonconclusive. Jiao et al. (2015), for example, find that economic land concessions have a negative impact on household total income as well as environmental income in Cambodia. Similar results are reported by Shete and Rutten (2015) for a large agricultural investment in Ethiopia. Relying on district-level evidence for Tanzania, Osabuohien et al. (2019) show that female-headed households living in areas hosting large-scale agricultural investments earned lower agricultural wages compared to those not working for land investments projects. Bottazzi et al. (2018), in contrast, find that villages in northern Sierra Leone impacted by large-scale biofuel investment exhibit increased total monetary income food consumption expenditure. The authors note that the agriculture investment transformed “livelihood structures toward a more wage-dependent system” (Ibid: 128).

In addition to land deals’ effects on employment and income, some authors have analyzed the extent to which LSLA impact on local food security. The regional quantitative evidence is also mixed: while some studies find that the transformation of smallholder agriculture into large-scale farming has reduced local communities’ food security status (Shete and Rutten 2015), others report that villages affected by large-scale agricultural investments show improvements in food and water security (Bottazzi et al. 2018). In a recent geospatial analysis comprising eleven sub-Saharan African countries, Müller et al. (2021) find that

large-scale land concessions induce a transition towards nutrition-poor export crops and decrease dietary diversity in Asia and sub-Saharan Africa.

Concerning the environmental consequences of land investments, a literature review by Dell'Angelo et al. (2017a) reports several negative environmental consequences of LSLA including water shortage, agrochemical contamination of water and land resources, accelerated deforestation or loss of biodiversity. A quantitative analysis by Davis et al. (2020) undermines these detrimental environmental effects. The authors shows that LSLAs are associated with tropical forest loss, particularly if projects focus on the establishment of new oil palm, wood fiber and tree plantations. Several authors also caution against increasing social and gender inequalities as a result of large-scale agricultural projects (Bottazzi et al. 2018; Osabuohien et al. 2019). In a comparative study of four large-scale land transaction in western Ethiopia, Hajjar et al. (2020), for example, find that deals led to considerable gendered structural labor market shifts and negatively affected women's wellbeing. The authors note that due to the loss of both communally-held grazing lands and forests, women have to spend more time on activities such as gathering firewood and water. This would have led to "to negative psychological, corporal, and material effects on women living in and near transacted areas" (Ibid: 566).

While the reported (mostly quantitative) studies have advanced our understanding of the socio-economic consequences of LSLA in a substantial way, most of them focus on specific regions within particular countries. Thus, the external validity of the findings is rather limited. Moreover, authors have largely failed to address the effect of land deals on one major asset for rural livelihoods: social trust. An increasing body of literature points to the key role of social capital in agricultural settings (Hunecke et al. 2017; Rivera et al. 2019). Particularly by facilitating reciprocity and cooperation, social networks and interpersonal trust have been shown to promote information exchange and the adoption of new farming technologies (Hunecke et al. 2017; Kansanga 2017; Saint Ville et al. 2016), to enhance collaborative

natural resource management (Musavengane and Simatele 2017;), to reduce rural household poverty (Baiyegunhi 2014), to strengthen rural cooperatives' resilience (Beltran Tapia 2012; Borda-Rodriguez et al. 2015), to foster positive food security outcomes (Sseguya et al. 2018) and to improve adaptation strategies and self-insurance against climate risks of smallholders (Groenewald and Bulte 2013; Ng'ang'a et al. 2016).

Considering the pivotal role of social networks and trust for rural societies, it is rather surprising that – to the best of our knowledge – there is no systematic study on the extent to which LSLAs affect local social ties. Historical case studies suggest that agrarian transformations encouraging larger-scale commercial farming at the expenses of collective farming traditions and smallholder agriculture may have long-lasting consequences for social fabrics. Relying on a comparative-historical method in order to explain changes of social capital across rice farmers in Vietnam's Mekong Delta, Tuan et al. (2014:69), for example, conclude that increasing land concentration and the privatization of rice production after the Land Law of 1993 was accompanied by a decrease in reciprocity, cooperation, mobilization capacity for collective action and social ties among farmers. Studying land enclosures in Spain in the 19th and early 20th century, Beltrán-Tapia (2016) shows that the privatization of common land led to a deterioration of social networks. In addition to these historical accounts, econometric studies suggest that land inequality – a common co-product of large-scale land investments – has a negative impact on the stock of social capital and cooperation (Fernández 2014; Krishna 2007; Zak and Knack 2001).

By focusing on the impact of large-scale land deals on interpersonal trust – a key dimension of social capital – our study addresses a question of utmost relevance for rural development that has been largely neglected by previous studies. Conceptually, we follow a widely-used definition according to which social (or interpersonal) trust is the horizontally stratified “belief that others will not deliberately or knowingly do us harm, if they can avoid it, and will look after our interests, if this is possible” (Newton 2007, p. 343). It entails an expectation that

individuals can rely on each other on the basis of “shared norms, mutual reciprocity and cooperative behavior” (Moreno 2011, p. 2672). The literature commonly classifies social trust in generalized trust (the ability to trust people outside one’s own family or kinship circle) and particularized trust (capacity to trust one’s immediate family, neighbors, or identity group).

In this paper, we concentrate on social trust for three main reasons. Added as a new component of social capital by Putnam et al. (1994), trust is viewed as the best or single indicator of social wealth by various authors (c.f. Delhey and Newton 2003, p. 94).

Furthermore, trust is considered a core condition for facilitating collective action and enabling cooperation (Ostrom & Ahn 2009, p.22; Putnam et al. 1994, p. 167). Sufficiently high levels of trust may allow groups and individuals to self-insure against various types of risks by encouraging joint action. Given its capacity of helping to solve collective action problems, promoting cooperation and strengthening property and contractual rights, trust is key for the livelihood of rural populations.

Agrarian Transformation and Social Trust: The Arguments

As noted by several authors, agrarian structures in sub-Saharan Africa are undergoing considerable structural transformations. Changes in land tenure systems, rural labor relations, land distribution, the degree of mechanization and reliance of new seeds and farm inputs are observable throughout the continent (c.f. Brooks 2014; Dawson et al. 2016; Dell’Angelo et al. 2017b). We maintain that LSLAs – a major source of agrarian transformation in Africa – affect local trust by promoting the privatization of common land, the transition of smallholder (family and subsistence) agriculture into wage-labor and contract farming, intrafamily and intergroup disputes as well as regional elite capture.

Common Grabbing and Shifts in Rural Labor Relations

While common property systems remain a dominant form of landholding in Africa, studies suggest that common land is particularly targeted by land investments (Boone 2014; Wily 2011). Dell'Angelo et al. (2017), for example, find that 44 out of 56 identified cases of land grabbing exhibit the characteristics of grabbed commons. In a similar vein, D'Odorico et al. (2017) present evidence that land held in common property is preferentially targeted by land investors, most likely because of the communities' inability to defend their land rights due to the lack of formal land titling.

As a result of LSLAs, land is often no longer held as common-pool resource with access granted to local individual farmers, families and other community members, but is transferred to private land (Adams et al., 2019). Long-term leases and concessions given to companies are tantamount to a redefinition of use rights to land and therefore a shift in agrarian property relationships between small-scale farmers and incoming investors (Adams et al., 2018; D'Odorico et al., 2017). Moreover, LSLAs do not merely induce a reorganization of production processes from individual smallholder, community and subsistence farming into large-scale commercial surplus production, but it often also induces far-reaching changes in land property relations, labor regimes and local livelihoods (Borras and Franco 2012; Bottazzi et al. 2016).

As noted by several authors, commonly managed land may be a reservoir of social trust. Traditionally, common land “played a crucial role in the organization of production in organic economies, source of pasture, fuel and wood” (Beltrán Tapia 2012, p. 514). Common property systems can be seen as the breeding ground that fostered the establishment of networks, values and norms that promote predictable behavior, mutual obligation, diffusion of information as well as the creation of shared knowledge and trust among individuals and communities (Beltrán Tapia 2016, p. 120; Ostrom and Ahn 2009). While trust can be

considered an important precondition for communal land management, common-property regimes strengthen social ties by formal or informal arrangements such as rotation schemes for water allocation or risk sharing institutions that prescribe reciprocal obligations in times of abundance or shortage (c.f. Cole and Ostrom 2012).

Under customary tenure and commonly managed ownership, livelihoods are secured mostly by subsistence production and economic exchange relations are based on reciprocity. Informal mutual support practices, for example, are one key characteristic of the complex social system of smallholder networks and common property management. In order to cope with seasonal labor shortage or to mobilize labor particularly during weeding or harvest periods, peasant societies across the developing world often rely on cooperative labor (c.f. Abizaid et al. 2015; Grimm and Lesorogol 2012). Also known as reciprocal labor, farmers receiving help on their fields are expected to reciprocate by working on others' field. These forms of traditional labor sharing arrangements are an important source of group identity and solidarity.

Another important informal mutual-aid practice based on reciprocity is the traditional seed exchange, according to which farmers swap seed for other seed or goods such as vegetables. It is an important assurance mechanism against harvest failure and enhances "social cohesion through strengthening community and familial ties" in sub-Saharan Africa (van Niekerk and Wynberg 2017, p. 1099). In a similar vein, smallholders' major source of information and knowledge is often based on interpersonal communication with friends, neighbors and relatives. Issues related to crop production, acquisition of agricultural inputs or marketing of farm products are discussed on a daily basis. Farmers' ability to make decisions may be closely connected with "the networks they maintain for daily information updates with friends, residential neighbors and relatives" (Tuan et al. 2014, p. 85). This interpersonal exchange is likely to foster social cohesion and trust.

The shift to private property, as induced by land deals, undermines the possibility of resorting to such cooperation mechanisms. Land investments enclose common land, replace the complexity of reciprocity networks with a single source of cash income and reduce rural employment opportunities. Different studies show that the privatization of commonly managed land has led to a decline of cooperative practices such as cooperative farm labor in Kenya (Grimm and Lesorogol 2012; Lesorogol 2005, 2008). A qualitative analysis of collective rice farming practices in Vietnam by Tuan et al. (2014) reveals that mutual aid groups, collective action and social trust declined after the 1993 Land Law that increased land concentration, wage labor and the share of absentee ownership. The outlined studies provide evidence for the assumption that when (non-cash) reciprocal solidarity expenses are replaced by merely monetary relations, divisions occur and trust may be destroyed among members of the broader family and the village (c.f. Adams et al., 2018). Consequently, monetization of reciprocal social networks is likely to induce processes of individualization and cannibalize the solidarity needed for collective action and trust.

We maintain that – by transforming rural neighborhoods, enclosing common land and shifting family and subsistence labor force towards wage labor – LSLAs weaken formerly established social ties, reduce the potential for mutual support activities and thereby negatively affect social trust.

Conflicts and Local Elite Capture

In addition to potentially hampering the kind of cooperation-enhancing activities that characterize smallholder and common land farming systems, LSLAs may erode trust by promoting interfamilial and neighborhood conflict or fostering elite capture and the discretionary power of traditional local leaders. Recent transformations in land tenure systems from commonly-owned agricultural land managed under extended family systems into private property may generate considerable local power imbalances, prompting

exclusion of certain community members and fostering inequalities and social differentiation (Samberg et al., 2016). Adams et al. 2019, for example, show how the introduction of contract farming schemes may alter family institutions by benefitting few influential household members. According to the authors, these schemes may lead outgrowers to grant land access only to their immediate family, leading to a “loss of trust among members in the broader family” (Ibid: 1449). Also, self-help strategies such as food sharing and exchange among family members – very common under customary land use – often disappear with the privatization and consolidation of land. These changes in agrarian structures may therefore disrupt the wider family organization and foster intrafamilial disputes.

In addition, land investors often take customary management rights of chiefs, elders and other authorities as ownership rights (c.f. Ahmed et al. 2018). This misperception can lead to alienation processes of those branches of family or kin who enjoy use and access rights but are excluded from management choices. Consequently, inter-lineage or intra-family conflicts may occur. According to Kansanga et al. (2018: 216), smallholder farmers in Ghana facing increasing agricultural modernization are “re-inventing custom to secure access to shared agricultural land at the family level, and thereby dispossessing weaker individuals of their land – either partially or fully.”

Large-scale land transactions may also prompt regional conflict. In cases in which land deals target areas where boundaries and jurisdictions are not clearly defined (flexible and permeable borders are a common feature of customary land use in Africa) or are disputed, demarcation activities inherent to land investment stiffen the borders and aggravate division among villages. Bottazzi et al. (2016: 971), for example, demonstrate how the formalization of customary land tenure through land registration has aggravated local social inequalities and spurred “interlineage, intervillage, interfamily and intergenerational conflicts” in Sierra Leone. In a similar vein, a study by Kansanga et al. (2019c) indicates that increasing pressure on customary lands by LSLAs shaped intergroup disputes in Ghana. According to

the authors, land investment has prompted intercommunity boundary contestations particularly by increasing the value of land and generating incentives for land leasing. Both intrafamilial as well as intercommunity tensions due to increased monetization of land is likely to threaten the maintenance of a village's sociopolitical structure and depress local levels of social trust.

Based on the channels outlined in our theoretical section - land deals promoting common land enclosure, shifts in rural labor relations as well as intrafamily land disputes – we hypothesize that:

H1: LSLAs reduce local levels of particularized and interpersonal trust.

Gendered Effects

For various reasons, we expect the effect of LSLAs on interpersonal trust to be particularly strong among women. Livelihoods of women are more affected by land deals compared to that of men. The traditional role of women in rural societies is often closely tied to the cultivation of subsistence crops and they constitute the majority of the rural labor force in developing countries (SOFA Team & Doss, 2011), being largely responsible for household food production, for example. by maintaining kitchen gardens or homestead plots.

Agricultural transformation promoted by LSLAs should therefore affect women's occupation and social interactions more than that of men. In fact, Hajjar et al. (2020) show how women's occupation in on-farm, herding and dairy production activities has decreased after large-scale land transactions in Ethiopia. At the same time, land deals have a negative effect on women's leisure time by increasing the time spend in domestic work, petty trading and the collection of water and firewood.

In addition, women often belong to the more vulnerable and marginalized groups in rural societies, lacking access to land titles and being more affected by low incomes and poverty compared to men (c.f. Meinzen-Dick et al. 2019). Women in rural African communities are often politically underrepresented as they are rarely entitled to serve as traditional authorities. Furthermore, studies indicate that women are often underrepresented in community decision-making and less involved in consultations for land registration programs compared to men (Kumar and Quisumbing 2014).

Due to discriminatory legal systems and patriarchal gender norms, women face high barriers in acquiring and retaining land throughout sub-Saharan Africa. Joint land rights assuring titles in both husbands' and wives' names is still rather rare in many African states. Nationally representative data in fact show that women own substantially less land in Africa (Doss et al. 2015). Also, most of the inheritance systems disadvantage women. They are particularly vulnerable to loss of land when their husbands die or leave, as in these cases the local community or the husband's family may take over the property. Furthermore, women are often not aware of their rights, lack the ability to enforce them and face entrenched gender norms limiting their access to more land rights. Since men are often the sole land title holders, women do not receive proper compensation for the loss of land (Salcedo-La Viña and Notess 2018). Thus, we expect women's social trust to be disproportionately affected by LSLAs.

H2: The negative effect of LSLAs on social trust is stronger among women than among men.

Research Design

In order to test our claims, we connect answers of circa 71'000 Afrobarometer respondents to georeferenced data on 226 large-scale land acquisition deals across Africa. To investigate

the effects of land deals on interpersonal and generalized trust (H1), we run OLS and logistic regressions on various dependent variables. We then divide our sample between men and women and run separate OLS and logistic regressions on the dependent variables to test for the gendered effects of LSLAs (H2).

Data and Variables

Information on land acquisition deals in Africa are drawn from the Land Matrix initiative (LMI). The Land Matrix' Global Observatory collects data on “intended, concluded and failed attempts to acquire land through purchase, lease or concession for agricultural production, timber extraction, carbon trading, industry, renewable energy production, conservation and tourism in low- and middle-income countries” (Nolte et al. 2016). For our sample, we only considered deals with a sufficient level of spatial accuracy. Besides, our sample is restricted to deals occurring before 2012 as this year marks the beginning of the latest Afrobarometer round that asks questions about social trust. The remaining observations were split into two sub-samples of land deals covering different timespans matched to Afrobarometer survey schedules.³

In order to assess local perceptions of trust, survey data provided by Afrobarometer – one of the most comprehensive data sources on socioeconomic development and attitudes of citizens in more than 35 African countries – is utilized. Afrobarometer conducts cross-national comparative population sample surveys that rely on a clustered, stratified, multi-stage area probability sampling design to ensure representativeness. Within a primary sample unit (PSU) sampling starting points are randomly selected. Interviewers then randomly select households. Within each household one individual respondent is randomly

³ Only considering concluded land deals reduced our sample from over 1,600 cases to roughly 1,300; excluding all deals without precise geo-referenced information further reduced our sample to 324 deals; limiting the time period provided the final samples: 117 deals before 2008; 226 deals before 2012. We replicate our results with a sample of land deals containing also deals with medium geospatial precision (10km to 100km; see Appendix 3: Table 1 to Table 4).

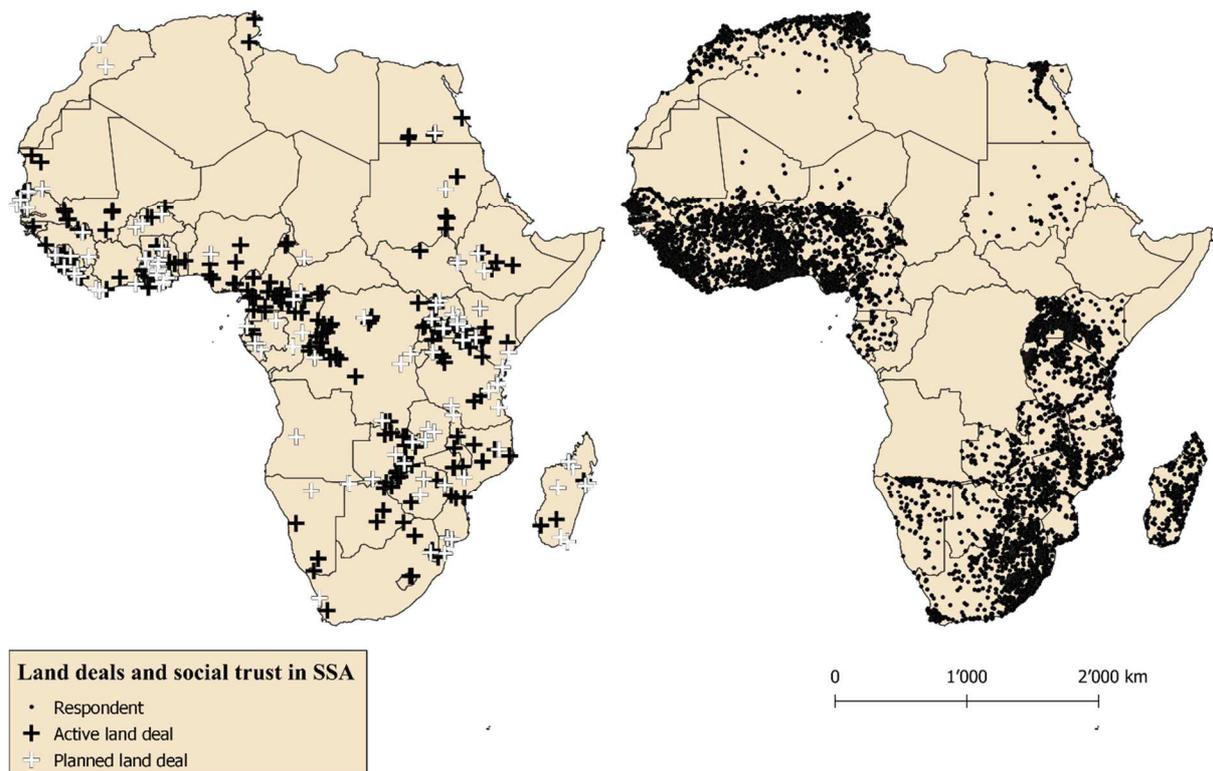
selected. Due to Afrobarometer's data policy, availability of questions on social trust as well as representativeness concerns regarding the earlier rounds, we only consider the 4th and 5th round.⁴

We focus on survey items related to interpersonal trust. Respondents are asked *"How much do you trust each of them?"* – with answer options on a 4-point Likert scale ranging from "not at all" to "a lot". Personalized trust is gauged via survey items on *"trust in people you know"* (rounds 4 and 5); *"trust in relatives"* (rounds 4 and 5); as well as *"trust in neighbors"* (round 5 only). Generalized trust is measured *"trust in others [Ghanaians/Kenyans/etc.]"* (round 4 only), and by a standard question *"Generally speaking, would you say that most people can be trusted or that you must be very careful in dealing with people?"* from round 5 which is mimicked from other surveys such as the World Values Survey (WVS).

Map 1 below provides an overview of all land deals in Africa for which geo-referenced information is available, as well as the location of Afrobarometer respondents in both round 4 (2008) and round 5 (2012-13).

Map 1. Land Deals with Georeferenced Information (Land Matrix Observatory) (left); Location of Afrobarometer respondents, round 4 and round 5 (right).

⁴ Round 4 covers 26,866 (mappable) respondents from 20 countries, with surveys conducted in 2008; Round 5 covers 47,007 (mappable) respondents from 34 countries surveyed between late 2011 and 2013.



Covariates

Trust levels of individuals may be affected by a range of household- and person specific characteristics. Table 1 shows summary statistics of a respondent's age, gender, level of education, living conditions and employment status as well as certain regional characteristics, i.e. information on whether a respondent lives in an urban or rural area; what sort of infrastructure is available in the area (schools), and which livelihood risks are reported (gone out of food or cash income). Table 1 in Appendix 1 reports the descriptive statistics and description of all our variables of interest, including the different operationalizations of our independent variable used for robustness checks.

Table 1. Descriptive statistics main variables.

Variable	Obs.	Mean	Std. Dev.	Min	Max
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<i>Dependent</i>					
Trust in people you know	71,143	1.463911	1.005824	0	3
Trust in relatives	71,143	2.412395	.8789882	0	3
Trust in neighbors	45,351	1.771714	1.002638	0	3
Trust in others	25,489	1.313351	1.01287	0	3
Trust in general	44,651	.1860429	.3891456	0	1
<i>Independent</i>					
Active Land Deal (10km) Most Precise	71,088	.0178933	.1325647	0	1
<i>Covariates</i>					
Gender	71,143	1.498194	.5000003	1	2
Urban (=1) vs Rural (=2)	71,143	1.605822	.4886768	1	2
Household size	71,143	3.109638	2.320285	0	54
Age	71,143	36.92369	14.5353	18	110
Education level	71,143	3.248696	2.068004	0	9
Employment	71,143	1.195381	1.130367	0	3
Living conditions	71,143	2.645545	1.174332	1	5
At risk: no food	71,143	1.072586	1.215368	0	4
At risk: no income	71,143	2.012735	1.409217	0	4
School in area	71,143	.8873115	.3162139	0	1

Empirical strategy

To address a potential selection of land deals into areas with particular characteristics – regions with lower levels of trust may be more targeted by land investors – we rely on a similar strategy proposed in Knutsen et al. (2017).⁵ We thereby account for the possibility that trust levels and other factors potentially associated with trust such as institutional quality may influence investor’s decisions on where to buy land. Investor may, *ceteris paribus*, find it easier to acquire land in areas exhibiting lower levels of trust. In our models, we thus consider three groups: (1) individuals living within 10 km from an active land deal, (2) within 10 km from a signed or planned (but not yet implemented) land deal and (3) more than 10 km from any land deal. We compare post-treatment individuals (active deals) and pre-treatment individuals (planned deals) with all other control individuals (non-deal areas) within

⁵ Investigating the spatial effects of mining on local corruption, the authors distinguish between active and inactive mines in order to address a critical source of endogeneity.

the same country and interview year. By testing the difference between active and planned land deals, we obtain a measure that mimics a difference-in-difference estimate, thereby accounting for unobservable time-invariant characteristics. According to our hypotheses, we expect interpersonal trust to be lower in areas hosting active land deals compared to areas with planned but not yet implemented deals. Equation 1 below is our baseline model:

$$y_{ilcs} = \beta_0 + \beta_1 LLA_{\text{active } lcs} + \beta_2 LLA_{\text{planned } lcs} + X_{ilcs}\theta + c_c + s_s + \varepsilon_{ilcs} \quad (1)$$

We designate y_{ilcs} as the response of an individual i about social trust in a locality l in a country c in a survey s . The variable y_{ilcs} indicates the 4-point answers to the various questions on social trust, except for the question on general trust, which is binary.

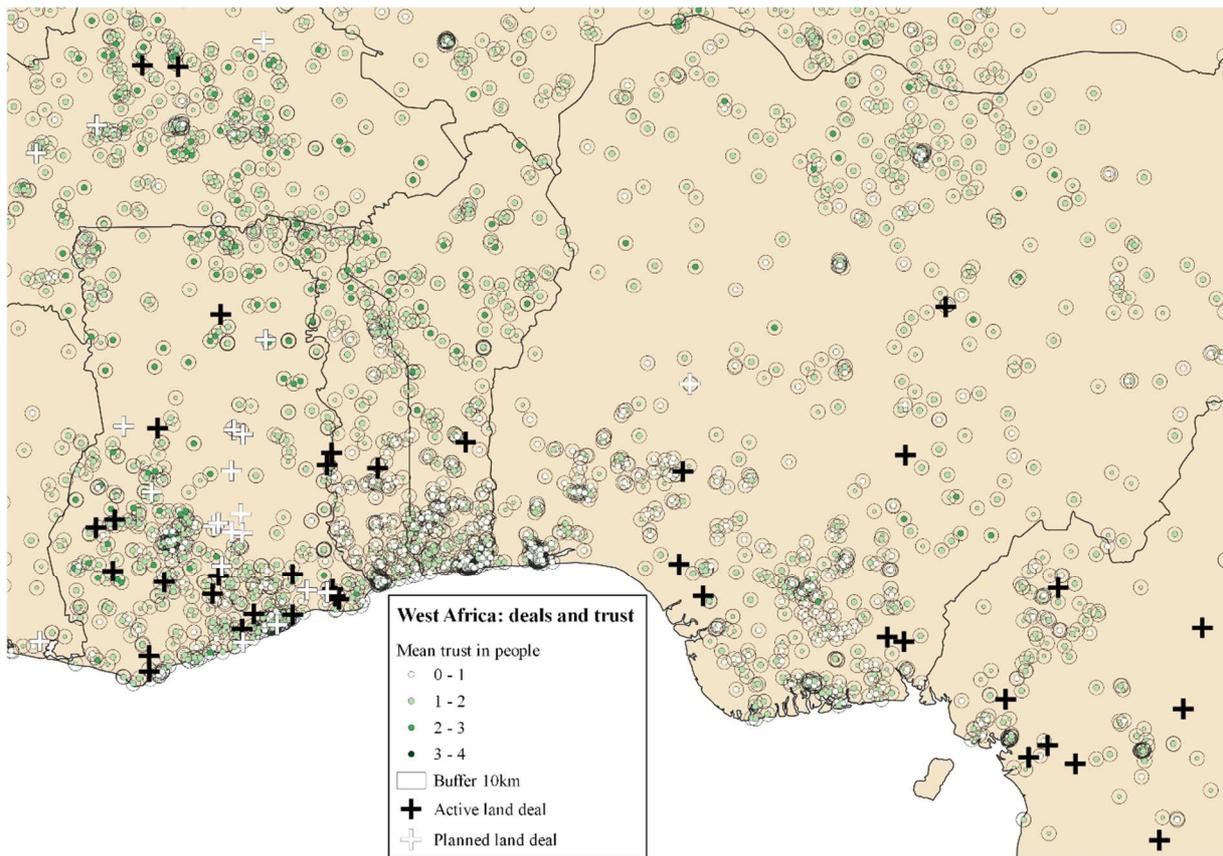
LLA_active is a binary indicator for whether there was at least one active LSLA-deal in a 10km-radius buffer-zone around an Afrobarometer-respondent *before* or *within* the same year that the survey was conducted. In a similar fashion, LLA_planned is a binary indicator that equals 1 if the respondent is within a 10km radius of a land deal which is planned, but not yet operational. Finally, $X_{ilcs}\theta$ indicate a vector of individual-level covariates, with their respective coefficients; c_c the country-level fixed effects; s_s the Afrobarometer survey round fixed-effects and ε_{ilcs} is the error term. Note that by including active and still inactive land deals in equation 1, we are able to compare individual living in areas with ongoing deals with those inhabiting areas where deals have not been implemented yet. We thus report test results for the difference between active and planned deals ($\beta_1 - \beta_2$).

There are several reasons supporting our choice for a 10km buffer zone. First, family plots of land or communal land are not necessarily in the vicinity of a household. We consider that 10km is a distance that can be covered by foot, bike or car, to commute to a plot of land. Actually, research on commuting distances suggests that 50km constitute a practical commutable distance in Africa (Chen et al. 2017). Several authors, including Knutsen et al. (2017), use 50km-radius buffer zones for the effects of mining activities on Afrobarometer respondents, a size 5 times larger than ours. Our 10km distance choice is therefore rather

restrictive compared to what is being used in the literature. Second, the LSLAs in our sample cover on average 350km² (mean radius of approximately 7km). This statistic, combined with the fact that LSLAs sometimes spillover to neighboring land without approval of communities, justify the use of 10km buffer sizes. Furthermore, smaller cutoff zones tend to quickly limit the sample of affected individuals which makes it hard to identify any effects. With a 10km buffer size, 1'272 respondents are affected by an active land (1.79% of the overall sample), while 442 respondents are within a 10km distance of a planned land deal (0.62% of the overall sample).⁶ Finally, smaller buffer zones may reinforce possible errors related to imprecisely referenced spatial data – which could cause nontreated individuals to be defined as treated, and vice versa. Map 2 below illustrates our empirical strategy by visualizing the location of planned and active land deals in West Africa, as well as Afrobarometer respondents' localities, the 10km buffer zones surrounding enumeration areas, and the mean trust for respondents in the locality across our trust indicators.

Map 2. Land Deals and Trust of Afrobarometer respondents in West Africa.

⁶ With the 10km buffer sizes and medium precision land deals (Appendix 3), 1'327 respondents are within 10km of an active land deal (1.87% of the overall sample), and 458 are within 10km of a planned land deal (0.64% of the overall sample).



Within applied econometrics, there is an ongoing debate whether ordinal categorical dependent variables can be estimated through linear regression models (Angrist and Pischke 2009; Kent 2019; Winship and Mare 1984). Employing OLS models on ordered outcomes may lead to a violation of the assumption of independent, identically distributed errors, which can be partly remedied by using robust standard errors (Wooldridge, 2013: 294). Given that the categories of our dependent variables are normally distributed and considering the complexity of interpreting non-linear outputs, we chose to estimate both linear as well as ordinal logit models. We report OLS models as our main estimates and present our findings based on ordered logit regression analyses in the appendix (see Appendix 2: Table 1 to Table 4). We already stress that results of both modelling approaches are highly consistent, making us confident that our findings are not driven by a particular model specification.

Equations (2a), (2b) and (3) below are our gender-specific models. Equations (2a) and (2b) are a sub-sampling of our baseline model by gender. The main advantage of sub-sampling is

that it allows for all variables to be estimated in gender-specific terms, i.e. as if we interacted gender with all our variables. Equation (3) includes a more traditional interaction term between gender active land deals.

$$y_{ilcs\ men} = \beta_0 + \beta_1 LLA_{active\ lcs} + \beta_2 LLA_{planned\ lcs} + X_{ilcs}\theta + c_c + s_s + \varepsilon_{ilcs} \quad (2a)$$

$$y_{ilcs\ women} = \beta_0 + \beta_1 LLA_{active\ lcs} + \beta_2 LLA_{planned\ lcs} + X_{ilcs}\theta + c_c + s_s + \varepsilon_{ilcs} \quad (2b)$$

$$y_{ilcs} = \beta_0 + \beta_1 LLA_{active\ lcs} + \beta_2 LLA_{planned\ lcs} + \beta_3 gender_{ilcs} + \beta_5 (LLA_{active\ lcs} * gender) + X_{ilcs}\theta + c_c + s_s + \varepsilon_{ilcs} \quad (3)$$

Analysis

Overall effect of Land Deals on Interpersonal Trust

Table 2 below reports the main results of our first analysis. In line with our expectations, areas hosting active LSLAs are associated with lower levels of both particularized and generalized trust. Active land deals significantly reduce all types of trust in a substantial manner. The coefficients of active LSLAs, for example, constitute approximately one-sixteenth of *trust in neighbors* mean (1.77) and one-eighth of *trust in others* mean (1.31). Model 5 – based on logit ordinal estimations due to the binary nature of the variable – reveals that respondents affected by a large-scale land acquisition are 23.5% less likely to be in the category “Most people can be trusted” as opposed to “Must be very careful in dealing with people”. Note also that planned LSLAs are not significantly related to most forms of trust. The positive and significant coefficient of planned land deals in Model 2 suggests that there is actually no self-selection into areas with lower trust.

The difference between the coefficients for active and planned LSLAs ($\beta_1 - \beta_2$) is negative across all models, suggesting that active land deals in fact decrease local levels of social trust. However, the performed F-tests reveal that this difference is only significant in the case

of trust in relatives. Thus, it seems that the effect of land investments is most pronounced among relatives; LSLAs seem particularly likely to weaken family ties and promote distrust among the broader family. As outlined in the theoretical section, the structural transformation in property rights systems and tenure forms induced by land deals may disadvantage more vulnerable family members that lose access to agricultural land.

Table 2. Results OLS & Logistic regressions. Dependent variable: *Trust in...*

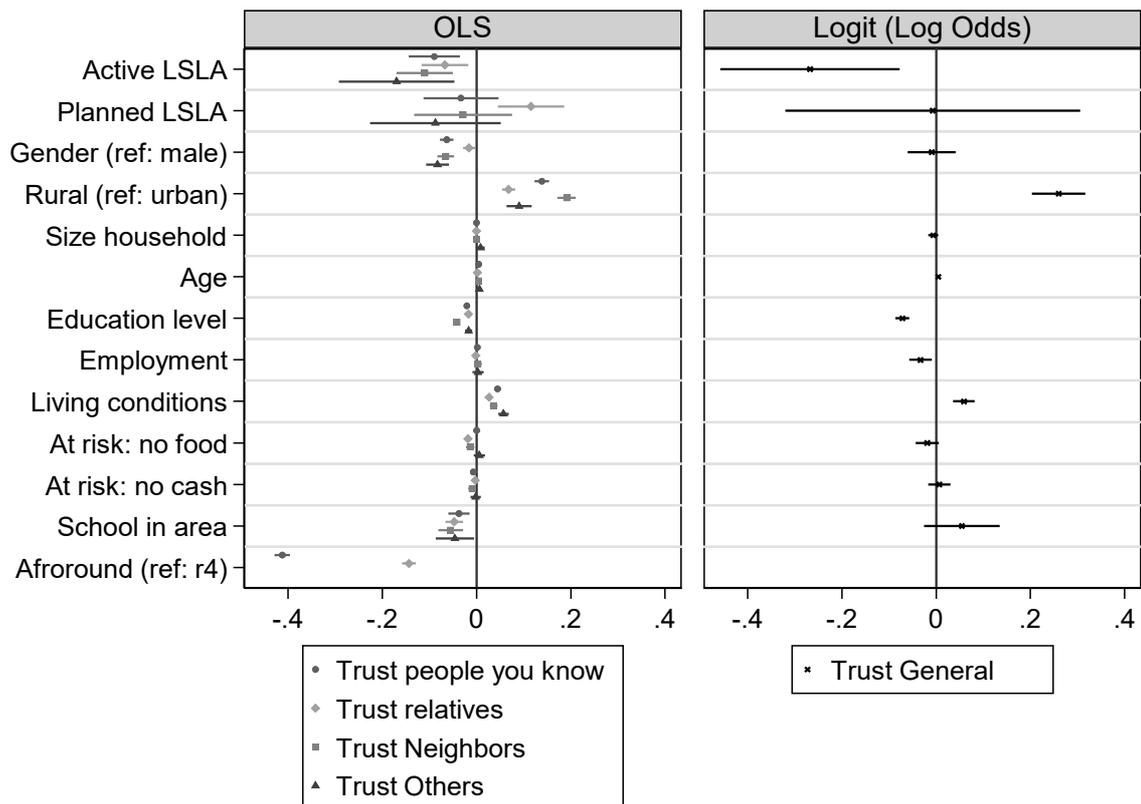
	<i>Particularized Trust</i>			<i>Generalized Trust</i>	
	(1) <i>OLS – People you know</i>	(2) <i>OLS – Relatives</i>	(3) <i>OLS – Neighbors</i>	(4) <i>OLS – Others</i>	(5) <i>Logit (Odds Ratio) – General</i>
Active LSLAs (10k)	-.0897** (.0277)	-.0674** (.0252)	-.110*** (.0305)	-.170** (.0625)	.765** (.074)
Planned LSLAs (10k)	-.0331 (.0407)	.115** (.0359)	-.0286 (.0531)	-.0874 (.0708)	.993 (.158)
Female (Ref: Male)	-.0632*** (.0073)	-.0162* (.00647)	-.0654*** (.00893)	-.0828*** (.0123)	.990 (.026)
Rural (Ref: Urban)	.139*** (.008)	.0681*** (.00731)	.191*** (.00989)	.0903*** (.0137)	1.297*** (.000)
Household size	-.000138 (.00175)	-.000288 (.0015)	.000551 (.0019)	.00862* (.00424)	.994 (.005)
Age	.00474*** (.000264)	.00161*** (.000226)	.00448*** (.000319)	.00605*** (.000455)	1.005*** (.001)
Education level	-.0206*** (.00213)	-.0171*** (.00191)	-.0416*** (.00257)	-.0168*** (.00383)	.931*** (.007)
Employment	.00162 (.00338)	-.00168 (.00301)	.00280 (.00407)	.00296 (.00609)	.967** (.012)
Living Conditions	.0445*** (.00339)	.0267*** (.00304)	.0361*** (.00418)	.0572*** (.00573)	1.060*** (.012)
At risk: No food	.000182 (.00362)	-.0183*** (.00309)	-.0136** (.00441)	.00594 (.00610)	.981 (.012)
At risk: No income	-.00712* (.00331)	-.00275 (.00293)	-.00935* (.00409)	-.00201 (.00552)	1.007 (.012)
School in area	-.0374** (.0114)	-.0474*** (.00961)	-.0551*** (.0135)	-.0460* (.0208)	1.056 (.043)
Round 5 (Ref: 4)	-.412*** (.00840)	-.144*** (.00747)			
Intercept	1.585*** (.0385)	2.182*** (.0347)	1.349*** (.0418)	.460*** (.0524)	
Intercept Category 2					1.725 (.116)
Difference in difference	-.057	-.183	-.081	-.082	-.227
F-test: active-planned=0	1.27	17.08	1.669	.763	
p-value, F-test	.261	.000	.196	.383	
Chi ² : active-planned=0					1.79
p-value, Chi ²					.182
Mean dependent v.	1.4639	2.413	1.772	1.313	.186
Country fixed-effects	Yes	Yes	Yes	Yes	Yes
<i>Observations</i>	71072	71072	45288	25481	44590
Log likelihood	-96918.2	-87764.6	-60444.5	-35123.9	-20013.854
R-squared	.115	.104	.159	.101	

Note: Logit and OLS regressions with robust standard errors; Standard errors in parentheses; * $p < .05$, ** $p < .01$, *** $p < .001$; Model (1) and (2) include both round 4 and 5 of the Afrobarometer; Models (3) and Model (5) include round 5 of the Afrobarometer; Model (4) include round 4 of the Afrobarometer.

When statistically significant, covariates behave as expected in all of our models. Two of the covariates have strong effects: being a rural dweller makes approximately one-ninth of *trust in neighbors'* mean, and about one-fifteenth of *trust in others* mean. The mechanism behind this effect is one that has been found repeatedly in the literature: urban dwellers are more socially isolated, are exposed to individualistic values and higher crime rates (c.f. McKenzie, 2008; Sommers, 2010; Gizelis et al., 2021). Also, we observe a stark decline of trust in people and trust in your relatives between 2008 (round 4) and 2012 (round 5). This is a worrying finding that deserves itself further scholarly investigation

Across the models of *Particularized trust* (Model (1) to Model (3)), we find that women have comparatively lower levels of particularized trust than men, which can be indicative of their subordinate positions in the communities included in the sample. Age has a small positive significant effect, which is consistent with the fact that youths – particularly in Africa – face issues of employment and often migrate to urban areas where they have to deal with isolation, competition between peers for jobs, and individualistic values (Sommers, 2010). Education level also reduces levels of trust, a finding rather uncommon but that can be explained by the context: in transitional societies, with high levels of social and political risks, and poor state efficacy, educated individuals tend to mistrust their peers (c.f. Güemes and Herreros, 2019; Wu, 2021). Improvement in living conditions significantly increases particularized trust, while in a similar manner, being at risk of having no food reduces levels of trust, although coefficients are not consistently significant across all models. The only coefficient that appears counterintuitive is school availability: respondents who live in the vicinity of a school seem to have comparatively lower levels of trust in the people they know, their relatives, as well as their neighbors.

Figure 2. Visualization of Table 2 coefficients.



Gendered effects of Land Deals

For the reasons outlined in the theoretical section, we expect the decline of trust within areas hosting LSLAs to be particularly strong among women. Table 3a and 3b below report the effects of active and planned deals among a subsample of men and women respectively.⁷

We find that, while consistently negative, the effect of active LSLAs is no longer significant for our subsample including only men (Table 3a). In contrast, active land deals have a significant and consistent negative impact on women’s interpersonal trust (Table 3b). The effect of active deals seems substantive: it constitutes approximately one-tenth and one-half

⁷ As our empirical strategy includes sub-sampling between men and women to test our 2nd hypothesis, we verified that being affected by a land deal is not dependent on one’s gender. Overall, our sample includes 35’700 men and 35’443 women: 98.22% of men and 98.20% of women do not live within a 10km radius of a land deal according to our most restrictive coding, i.e. 1.78% of men and 1.80% of women are coded as affected by a LSLA. We consider the difference of .02 percentage point small enough to assume that gender and large-scale land acquisitions are independent of each other.

of the mean of the variables *trust in people you know* and *trust in your relatives* respectively. Regarding generalized trust indicators, active land deals make up one-sixth of the mean of *trust in others*. Concerning our dichotomous variable measuring general trust (model 5), we find that women living close to active LSLA are approximately 30% less likely to be in the category “Most people can be trusted” as opposed to “Must be very careful in dealing with people”.

Our difference-in-differences estimates ($\beta_1 - \beta_2$) show negative sign for all models, except for Model 1 concerning the sub-sample of male respondents ($\beta_1 - \beta_2 = 0.005$). Similar to our all-sample results in Table 2, the difference between the coefficients for active versus planned deals is highly statistically significant for trust in relatives. Particularly women seem to mistrust family members after the implementation of land investments in their direct vicinity. In addition, the difference-in-difference approach also reports a negative effect of LSLAs on women’s trust in people in general (model 5). However, this effect is only significant at the 10% level. All in all, our results stress that land deals seem to further women’s vulnerable position within their families: they are likely to be among the first to lose access to agricultural land and be disadvantaged compared to male family members.

Table 3a. Results OLS & Logistic regressions. Sub-sample: Men only. Dependent variable: *Trust in...*

	<i>Particularized Trust</i>			<i>Generalized Trust</i>	
	(1) <i>OLS – People you know</i>	(2) <i>OLS – Relatives</i>	(3) <i>OLS – Neighbors</i>	(4) <i>OLS – Others</i>	(5) <i>Logit (Odds Ratio) – General</i>
Active LSLAs (10k)	-.0381 (.0389)	-.0384 (.0353)	-.0605 (.0431)	-.122 (.0843)	.828 (.110)
Planned LSLAs (10k)	-.0434 (.0542)	.120* (.0507)	-.0251 (.0742)	-.0385 (.0916)	.881 (.208)
Rural (Ref: Urban)	.146*** (.0113)	.0630*** (.0103)	.174*** (.0140)	.105*** (.0195)	1.233*** (.051)
Household size	.000597 (.00238)	.00229 (.00203)	.000972 (.00258)	.0121* (.00586)	.999 (.007)
Age	.00490*** (.000353)	.00186*** (.000299)	.00399*** (.000427)	.00650*** (.00061)	1.005*** (.001)
Education level	-.0159*** (.00297)	-.0168*** (.00263)	-.0416*** (.00355)	-.00787 (.00536)	.931*** (.010)
Employment	.00846 (.00461)	.00474 (.00404)	.00910 (.00553)	.00960 (.00835)	.988 (.016)
Living Conditions	.0487*** (.00478)	.0286*** (.00425)	.0420*** (.00596)	.0534*** (.00802)	1.080*** (.018)
At risk: No food	-.00249 (.00513)	-.0212*** (.00438)	-.0164** (.00625)	-.00271 (.00864)	.972 (.017)
At risk: No income	-.00297 (.00469)	-.00176 (.00409)	-.00954 (.00584)	.00379 (.00783)	1.020 (.018)
School in area	-.0331* (.0162)	-.0510*** (.0135)	-.0632*** (.0191)	-.0556 (.0297)	1.118 (.065)
Round 5 (Ref: 4)	-.410*** (.0118)	-.145*** (.0105)			
Intercept	1.430*** (.0527)	2.087*** (.0481)	1.258*** (.0568)	.403*** (.0734)	
Intercept Category 2					1.940 (.163)
Difference in difference	.005	-.159	-.035	-.084	-.053
F-test: active-planned=0	.006	6.389	.163	.456	
p-value, F-test	.939	.011	.688	.499	
Chi ² : active-planned=0					.05
p-value, Chi ²					.826
Mean dependent v.	1.498	2.419	1.802	1.360	.184
Country fixed-effects	Yes	Yes	Yes	Yes	Yes
<i>Observations</i>	35665	35665	22740	12788	22399
Log likelihood	-48547.4	-43873.2	-30337.7	-17673.0	-10009.008
R-squared	.112	.100	.146	.105	

Note: Logit and OLS regressions with robust standard errors; Standard errors in parentheses; * $p < .05$, ** $p < .01$, *** $p < .001$; Country fixed-effects in all models. Model (1) and (2) include both round 4 and 5 of the Afrobarometer; Models (3) and Model (5) include round 5 of the Afrobarometer; Model (4) include round 4 of the Afrobarometer.

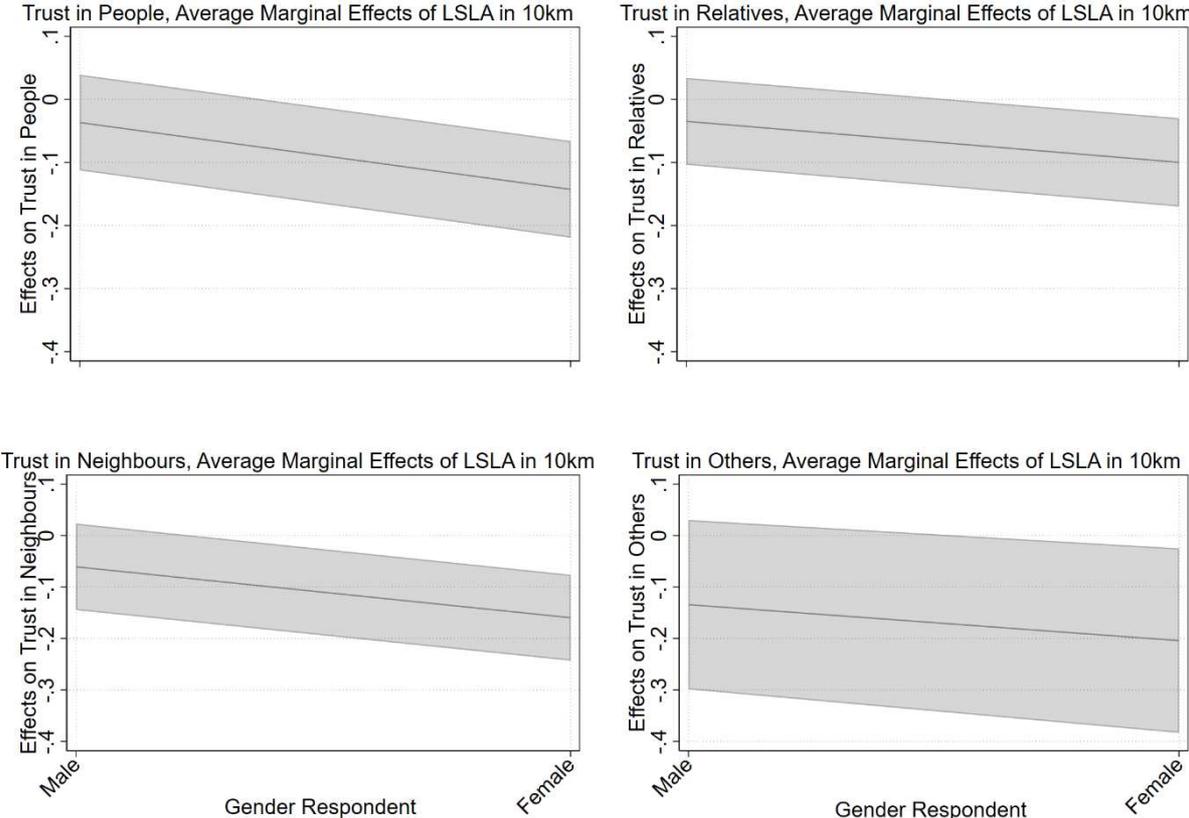
Table 3b. Results OLS & Logistic regressions. Sub-sample: Women only. Dependent variable: *Trust in...*

	<i>Particularized Trust</i>			<i>Generalized Trust</i>	
	(1) <i>OLS – People you know</i>	(2) <i>OLS – Relatives</i>	(3) <i>OLS – Neighbors</i>	(4) <i>OLS – Others</i>	(5) <i>Logit (Odds Ratio) – General</i>
Active LSLAs (10k)	-.142*** (.0392)	-.0967** (.0360)	-.160*** (.0428)	-.211* (.0918)	.701** (.100)
Planned LSLAs (10k)	-.0225 (.0605)	.111* (.0507)	-.0317 (.0762)	-.134 (.107)	1.114 (.241)
Rural (Ref: Urban)	.130*** (.0113)	.0726*** (.0104)	.209*** (.0140)	.0744*** (.0193)	1.362*** (.056)
Household size	-.000694 (.00259)	-.00300 (.00222)	-.000171 (.00282)	.00582 (.00612)	.987 (.008)
Age	.00459*** (.000401)	.00135*** (.000350)	.00516*** (.000486)	.00543*** (.000696)	1.004** (.001)
Education level	-.0256*** (.00310)	-.0177*** (.00282)	-.0420*** (.00375)	-.0268*** (.00551)	.930*** (.010)
Employment	-.00494 (.00503)	-.00713 (.00456)	-.00324 (.00613)	-.00323 (.00892)	.941*** (.018)
Living Conditions	.0400*** (.00483)	.0245*** (.00434)	.0298*** (.00587)	.0612*** (.00819)	1.040* (.017)
At risk: No food	.00300 (.00512)	-.0151*** (.00437)	-.0109 (.00621)	.0148 (.00865)	.990 (.017)
At risk: No income	-.0106* (.00467)	-.00342 (.00420)	-.00925 (.00574)	-.00672 (.00781)	.994 (.017)
School in area	-.0414* (.0161)	-.0433** (.0136)	-.0464* (.0189)	-.0358 (.0291)	1.000 (.057)
Round 5 (Ref: 4)	-.414*** (.0119)	-.142*** (.0107)			
Intercept	1.670*** (.0549)	2.257*** (.0491)	1.364*** (.0597)	.423*** (.0726)	
Intercept Category 2					1.541 (.162)
Difference in difference	-.119	-.207	-.129	-.076	-.412
F-test: active-planned=0	2.646	11.068	2.043	.298	
p-value, F-test	.104	.000	.153	.586	
Chi ² : active-planned=0					2.89
p-value, Chi ²					.089
Mean dependent v.	1.430	2.406	1.741	1.266	.188
Country fixed-effects	Yes	Yes	Yes	Yes	Yes
<i>Observations</i>	35407	35407	22548	12693	22191
Log likelihood	-48321.7	-43849.9	-30038.1	-17424.6	-9980.6006
R-squared	.118	.110	.176	.0967	

Note: Logit and OLS regressions with robust standard errors; Odds Ratio reported in Model (5); Standard errors in parentheses; * $p < .05$, ** $p < .01$, *** $p < .001$; Country fixed-effects in all models. Model (1) and (2) include both round 4 and 5 of the Afrobarometer; Models (3) and Model (5) include round 5 of the Afrobarometer; Model (4) include round 4 of the Afrobarometer.

For an improved understanding of the gendered effects of active land deals on trust, we replicate the results of Table 2 with an additional interaction term between *Active LSLAs* and *Gender* (see: Appendix 1, Table 2). The four figures below visualize the average marginal effects of *Active LSLAs* on our various indicators of trust.

Figure 3. Marginal effects of LSLAs and Gender (interaction) on Trust.



The visualizations show the systematic difference between the effect of active land deals on various types of trust among men and women. It is important to note that the confidence interval for men includes zero across all our models, but that the effect is almost exclusively negative. Hence, while the coefficients may not be significant for men, this does not mean that men’s level of trust are not affected by the nearby activity of land deals, but rather that *for some of these men, there is no effect*. On the other hand, women’s levels of trust are clearly systematically negatively impacted by the activity of a nearby land deal. Note that for

Trust in Others, the size of the confidence interval is large due the small sample: only round 4 respondents are included for this model (25481 individuals compared to over 45000 respondents in round 5).

Our findings are robust to various alternative specifications, including the use of logistic regressions, and the inclusion of land deals that have a geospatial precision at 10km to 100km in our models (see: Appendix 2 for replication with logistic regressions; Appendix 3 for replication with the alternative specification of the variables *Active* and *Planned LSLAs*).

Theoretical implications

We maintain that the redefinition of land rights and the consequent shift in agrarian property relations are responsible for a decrease in interpersonal trust among individuals affected by large-scale land acquisitions. As communal land is the prime target of large-scale land investment for commercial farming by multinational corporations, its privatization has far-reaching effects for social relations.

The privatization of communal land may bring about a disruption of relational values and social ties. While these relations might themselves be discriminatory, for instance towards women, migrants or youths, research shows that the transformation of land rights and tenure systems towards private property regimes aggravates the situation of vulnerable groups. Greco (2012), for example, demonstrates that the reconfiguration of land access rights induced by LSLAs increases the discrimination of individuals who were already disadvantaged in previous land tenure systems. In addition to transforming common land into private property, LSLAs often lead to a consolidation and concentration of land holdings. Due to the fragility and ambiguity of land rights in Africa, smallholders lacking formal land titling may be easily expropriated. Even when enjoying full ownership rights over their land, farmers

may be tempted to sell their property to investors in expectation of immediate financial returns.

This shift in property rights regimes and tenure systems has direct consequences for local social interactions. Individuals whose living has been closely tied to either communal land or smallholder and family farming have to find alternative livelihoods as for example contract-farmers, wage laborers or seasonal workers. Our results underline the idea that these structural changes in social relations have far-reaching consequences for trust. In particular, our difference-in-difference approach shows two main findings: first, the decline of trust is stronger among women, who are underrepresented in local traditional political institutions, face discriminatory inheritance laws and are often deprived from land rights. Second, trust in relatives seems particularly affected by the implementation of land deals. As outlined in the theoretical section, LSLA often generate intrafamilial disputes, since access to land or compensation payments is granted only to some family members. Our findings indicate that intrafamily conflicts and the consequential disruption of family institutions seem to play a major role for explaining the negative effect of land deals on local social cohesion and trust.

Conclusion

Agrarian transformations induced by large-scale land deals may profoundly change rural livelihoods. Although there is growing evidence on the socio-economic and environmental effects of land investments, we lack proper understanding on how the transition from smallholder farming to commercial, large-scale agriculture affects local social interactions. Considering the utmost importance of social capital for societal wellbeing, this paper is a first attempt to systematically test the effect of LSLAs on trust in sub-Saharan Africa.

Our findings suggest that policies aiming to transform African agriculture such as the Alliance for Green Revolution in Africa (AGRA) may disrupt local social fabrics in a considerable

way.⁸ Relying on georeferenced information on land deals as well as individual trust perceptions, we find that individuals living in the direct vicinity of land investments show lower levels of particularized and generalized trust. Furthermore, this effect is considerably stronger among women. Our difference-in-difference approach also reveals that particularly trust in relatives is negatively affected by LSLAs.

The substantial decline of trust in relatives among individuals living within LSLA areas suggests that land deals may in fact fuel intrafamilial conflicts as outlined in the theoretical section. Women may hardly prevail in these disputes. They are often underrepresented in customary bodies, excluded from consultation processes and compensation payments, disadvantaged by holding less land titles and by facing patrilineal inheritance laws. Thus, it is not surprising that – in the aftermath of land investments – particularly women lose trust in relatives.

Our findings highlight that – in addition to analyzing the impacts of land investments on economic outcomes such as local employment or income – more scholarly attention needs to be devoted towards how the global land rush may affect rural societies as a whole. The erosion of trust caused by LSLAs in rural areas may have far-reaching and irreversible consequences for social cohesion, climate change adaptation, functioning of democracies, conflict and poverty in sub-Saharan Africa.

Much room remains for future research. While we have for example highlighted several mechanisms through which LSLAs may affect trust (enclosure of common land, transformation of rural labor relations and the promotion of intrafamilial conflict), qualitative

⁸ The initiative focuses, among other things, on mechanization, land concentration, monocropping of commercial crops, external inputs such as agrochemicals and synthetic fertilizers and large-scale land acquisition.

research is needed to assess the plausibility of these channels. Future studies on the socio-economic, political and environmental consequences of large-scale land transactions should also better distinguish between different project types and investment purposes. Moreover, we need to better understand the conditions under which large-scale land acquisitions may foster local sustainable development while – at the same time – preserving social reciprocity and ensuring social justice. The kind of contract, for example, may be crucial: large-scale land investments that promote more inclusive commercial models such as outgrower schemes, for example, are believed to have higher potential to support local rural development (Büntrup et al. 2018; Glover and Jones 2019). Also, when land deals are signed, it may be imperative to enable that rural populations continue to have access to community land.

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