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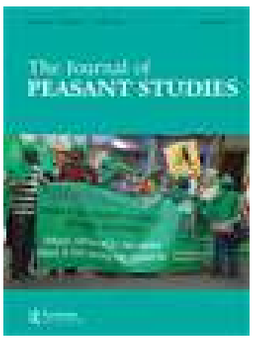

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Capital, labor, and gender: the consequences of large-scale land transactions on household labor allocation

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ABSTRACT

Contemporary large-scale land transactions (LSLTs), also called land grabs, are historically unprecedented in their scale and pace. They have provoked robust scholarly debates, yet studies of their gender-differentiated impacts remain more rare, particularly when it comes to how changes in control over land and resources affect women's labor, and thereby their livelihoods and well-being. Our comparative study of four LSLTs in western Ethiopia finds that the transactions led to substantial land use change, including relocation and decrease in size of smallholder parcels, loss of communally-held grazing lands, and loss of forests. These changes had far-reaching impacts on household labor allocation, the gendered division of labor, and household wellbeing. But their effects on women are both more adverse and more severe, expressed in terms of increased wage labor to make up for lost land and livestock, more time spent gathering firewood and water from increasingly distant locations, and an increased intensity of household responsibilities where male members underwent wage labor migration. These burdens led to negative psychological, corporal, and material effects on women living in and near transacted areas compared to their situation prior to transactions. This article both responds to the deficit in studies on the impacts of LSLTs on gendered livelihoods, labor relations, and wellbeing outcomes, and lays the groundwork for future research.

KEYWORDS

Tenure changes; gendered impacts; agricultural investments; Ethiopia

1. Introduction

The scale and pace of ongoing large-scale land transactions (LSLTs) are historically unprecedented. Financial investments in 45–200 million hectares of land – the exact extent remains a matter of discussion – have occurred over the past decade primarily in lower-income countries (Deininger et al. 2011; Anseeuw et al. 2013; Zoomers et al. 2017). Both

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scholarly writing and media reports employ terms such as 'land grabs', 'new enclosures', and 'land rush' to describe LSLTs, evoking not only their pace but also their contested nature and the historical struggles that populations in many countries are experiencing in relation to land (Borras et al. 2011; Dell'Angelo et al. 2017).

Proponents of LSLTs suggest that the introduction of new capital, new crops, and technological inputs will intensify the use of previously 'under-utilized' land in subsistence agricultural contexts. Such structural transformation through intensification is necessary, the argument goes, to serve the demand for food and other agricultural products by growing and more prosperous populations nationally and globally (Deininger et al. 2011). In principle, new capital investments in land and agriculture can enhance national agricultural output, promote commodity exports and trade in agricultural goods, and contribute to national economic growth. Over time, these changes can reduce poverty in rural areas through the provision of employment for wage workers, new opportunities for contract farming, and payments to rural households for land they lease (Deininger et al. 2011; Li 2011). Supporters also highlight the importance of large-scale capital projects in agriculture to tie together land, labor, and capital, especially in contexts where capital investments are a binding constraint on agrarian transformations and economic growth (reviewed in Borras and Franco 2010; Deininger et al. 2011; Baumgartner et al. 2015).

Critics of land transactions, on the other hand, argue that in most cases, governments and those acquiring land do not recognize the presence and interests of local populations affected by the new arrangements. In many cases, land transactions have led to displacement of households (Feldman and Geisler 2012), declines in incomes and food security (D'Odorico and Rulli 2013; Shete and Rutten 2015), and social upheaval and violence (Grajales 2011). Land transactions not only involve expropriation and enclosure of land and resources but also drive semi-subsistence farmers into labor markets (Regassa, Hizekiel, and Korf 2018). This has increased problems of unemployment where companies have continuously pushed down the price of labor (Baird 2011).

Available studies from some countries also report that such changes in land tenures have led to increases in the labor burden of women, reduced women's incomes and contributed to their exclusion from spaces of consultation and decision making (see e.g. Chu 2011; Daley 2011; Behrman, Meinzen-Dick, and Quisumbing 2012; Chung 2016; White and White 2012). Existing research also provides evidence that LSLTs can reduce women's land and resource access and tenure security, and produce negative effects on women's livelihoods and household well-being (Tsikata and Yaro 2014; Verma 2014; Chung 2016), but also that more research is sorely needed (Doss, Summerfield, and Tsikata 2014). Sometimes governments and investors have recognized the need to consult local communities and households and have pledged to conform to follow international guidelines on land acquisitions. Such commitments, however, are all too rare (Salverda 2018), and in practice seldom engage women explicitly in discussions of free, prior, informed consent or in compensation negotiations from loss of access to land. Many of these adverse effects are mediated by changes in the labor allocation of women and men. Our study therefore focuses in particular on how LSLTs generate gendered effects in relation to household wellbeing and labor allocation by men and women household members. In so doing, it responds to calls for more work on the impacts of LSLTs on gendered livelihoods, labor relations, and wellbeing outcomes.

There is broad consensus that LSLTs, by inviting new capital into existing agricultural relationships, by altering tenure arrangements and shifting land rights to new investors, and by intensifying agricultural production practices over large tracts of land, often displace farmers and change labor allocation of affected household members. These processes of contemporary land dispossession have multiple gendered consequences, as indeed did similar historical large-scale changes in land tenure (Levien 2017). We rely on in-depth studies in six communities in western Ethiopia to investigate the gendered consequences of LSLTs. Four of our study sites underwent LSLTs and two nearby sites did not. By examining labor allocation changes in these sites, we explore the dynamics of gendered labor practices and their relationship to wellbeing. In particular, we examine: (1) how the (collective and private) tenure changes associated with LSLTs have changed household labor allocation in affected villages; and (2) what the gendered consequences of these changes are, especially in relation to household and individual well-being.

Ethiopia is well-suited to study these issues. It is one of the most frequent sites of such transactions in sub-Saharan Africa (Oakland Institute 2011; Anseeuw et al. 2013; Moreda 2017). Government decision makers, keen to improve agricultural output and productivity, and to extend state authority and influence, have sought to attract both domestic and international investments especially in the less populated lowland regions of the country. The Ethiopian state's tight grip on land rights for much of its modern history endows it with a unique capacity to enter into agreements with investors and transfer control over large areas. Research on recent LSLTs in Ethiopia shows many of the same negative outcomes for local communities described in other parts of Africa and the world (Lavers 2012a, 2012b; Keeley et al. 2014; Shete and Rutten 2015). Households and farming are present in many transacted areas in Ethiopia (Messerli et al. 2014; Moreda 2015). In less populated areas of Benishangul-Gumuz (BG) and Gambella, uncertain land tenure is correlated with the displacement of households and livelihoods (Baumgartner et al. 2015). Moreover, reports show that jobs generated by new large-scale farms are often meager and filled by migrant workers, compounding the vulnerabilities of local households. This makes a study of the impacts of transactions on household labor allocation and their gendered consequences all the more relevant and urgent.

2. Background: agricultural production, land tenure, and gendered labor allocation in Ethiopia

'Land to the Tiller' was the motto of the 1975 popular revolution in Ethiopia, a slogan coined by peasant rebellions and student movements to fight the inequalities of landholding during the feudal regime. Following the revolution, peasants and tenants were allowed to hold and maintain land they farmed; all debt or obligation owed to the landlords was absolved. Although the Derg socialist regime implemented radical land reform that abolished the tenant-landlord relationship and actively promoted large-scale state farms, most of its programs were later found to be ineffective. Factors that contributed to low agricultural productivity during the socialist regime included increased frequencies of drought, extended civil war and political unrest, 'strict' centralized planning and government price control, forceful resettlement and villagization program, and the conscription of young peasants for military purposes (Ayana, Arts, and Wiersum 2013).

The Ethiopian People Revolutionary Democratic Front (EPRDF) that rose to power following the demise of the socialist regime in 1991 also treated land issues as a constitutional matter rather than merely a policy matter, highlighting the pivotal nature of land-related issues in the social, economic, and political life of the country. According to the Ethiopian Constitution (FDRE 1995), land belongs to the state. However, Ethiopian farmers have important rights stated in special constitutional provisions. These include the right to earn a living from farming, entitling them to land without charge (FDRE Const. art. 40(3), (4)), and that pastoralists have the right to free land for grazing and cultivation (Article 40 (5)). Still, this 'universal access' to rural land is tempered by other state-held powers such as of land reallocation, which may or may not take local needs and aspirations into account (Deininger et al. 2011). The current government claimed to prioritize smallholder producers as a cornerstone of economic development for the first ten years in office. Yet, despite the ostensible strengthening of smallholder land rights in the country, over time, smallholder subsistence producers came to be portrayed in the public discourse as inefficient.

Gradually, the government shifted to favor large-scale agriculture, justifying its choice mainly as a way to fulfill the critical shortage of capital resources in the country, by attracting capital inputs through foreign direct investment. The EPRDF government approach adopted a series of economic reforms with the philosophy of 'free-market policy' that promoted the role of the private sector in economic development. One such strategy was Agricultural Development Led Industrialization (ADLI), which aimed to accelerate economic development in the agricultural sector and then use it as a springboard for the development of other sectors. One element of ADLI is large-scale land investments using both domestic and foreign capital (Dessalegn 2008). This policy enabled many foreign and domestic investors to establish large-scale commercial farms across the country (Dessalegn 2008; Keeley et al. 2014). The Ethiopian government anticipated that large-scale commercial agriculture would enhance foreign exports, create job opportunities, introduce new technologies and practices, develop basic services and infrastructure, and provide inputs and raw materials to other sectors (Wendimu, Henningsen, and Gibbon 2016).

Land transactions in Ethiopia to promote more capital-intensive agriculture, and leading to significant changes in land use and land cover, are not limited however to large-scale investments. Smaller scale flows of investments, even when not directly tied to agricultural development, still can have significant agricultural impacts, including on smallholders as documented in Ethiopia and elsewhere in Africa (Hausermann et al. 2018; Hausermann and Ferring 2018).

Although land tenure remains precarious for most smallholders in the country, women have long faced additional mechanisms of property exclusion. This is despite several statutory provisions recognizing women's equal rights to land, devised with the explicit purpose of redressing their historical marginalization. The 1995 Constitution formally enshrined equal tenure rights for women and men (Article 35(7)). In 2003, joint certifications for agricultural holdings were introduced, naming both husband and wife. This progressive change aimed to replace land registration procedures that named only the 'head of household' – a traditionally male role. Yet, women's tenure insecurity persists (Dokken 2015). While some studies find that new land registration procedures empower some women (Muchomba 2017), others point out that implementation is erratic and

the traditional patriarchal relations with respect to land are not easily overcome (Girma and Giovarelli 2013; Doss, Summerfield, and Tsikata 2014). Conflicting and unclear legislation regarding inheritance in polygamous marriages, which persist in some regions despite being outlawed in federal law, also compounds tenure struggles for many women. Problems are visible for instance in discrepancies between the Civil Code (1960) (concerning laws of inheritance) and the Constitution, in terms of recognizing the legitimacy of marriages conducted under various systems (e.g. religious, cultural) (Flintan et al. 2008), and in differing regional practices regarding how subsequent wives may or may not be named on land certificates (Girma and Giovarelli 2013).

Gendered differences in labor allocation, knowledge, ownership, and utilization of natural resources are well documented in Ethiopia. Men tend to be the decision makers of livestock production and overall management including animal and meat sale, while women tend to manage feeding, cleaning, care of children and animals, and the production and processing of dairy products (milk, butter, cheese) (Yisehak 2008). Women tend to have greater control over small numbers of smaller animals (e.g. chickens, goats, and sheep) and importantly, over the income generated from small animals and the sale of dairy products (Frank 1999; Flintan et al. 2008; Yisehak 2008; Waithanji, Njuki, and Bagalwa 2013). However, women's participation in income generating activities is broadly restricted by cultural and religious norms that oblige them to seek permission from male household members and/or that restrain their physical mobility (not least due to their excessive share of domestic responsibilities, binding them to the home) (Ridgewell and Flintan 2007; CARE 2016).

A recent study in Ethiopia estimated the female share of total crop production labor (excluding food processing) to be 29%, with share of labor varying by activity (land preparation, planting, weeding, and harvesting) and crop type (Palacios-Lopez, Christiaensen, and Kilic 2017). Women almost exclusively manage the household garden, and supply meals to those working in the fields. In addition to their agricultural responsibilities, domestic activities (firewood and water collection, food preparation, child rearing) remain largely the domain of women (Ridgewell and Flintan 2007). Of course, gendered distinctions of labor blur somewhat in the context of female-headed households. Still, research comparing female/male-headed households finds distinctive land management choices and agricultural productivity gaps for women-headed households, stemming from gendered differences in access to tools and technologies, services, and other inputs (Tiruneh et al. 2001; Pender and Gebremedhin 2006). It is in this context of inequity between men and women, including women's high labor burden, that our study undertakes an in-depth qualitative investigation of the gendered outcomes of labor reallocation associated with LSLTs in Ethiopia.

3. Methods

The spatial focus of our research is Western Oromia and Benishangul-Gumuz (BG), two regions that have seen high levels of land transactions since the late 1990s. Fieldwork was conducted in two rounds of visits to sites in July and August 2016. After interviewing key informants during site visits in 12 villages in the area, we selected four case study communities (Loko, Mada Jalala, Jarso Wama, and Belo Jiganfoy) in three *woreda* (districts) in two regional states (Figure 1, Table 1). Our goal was to select sites where there was some

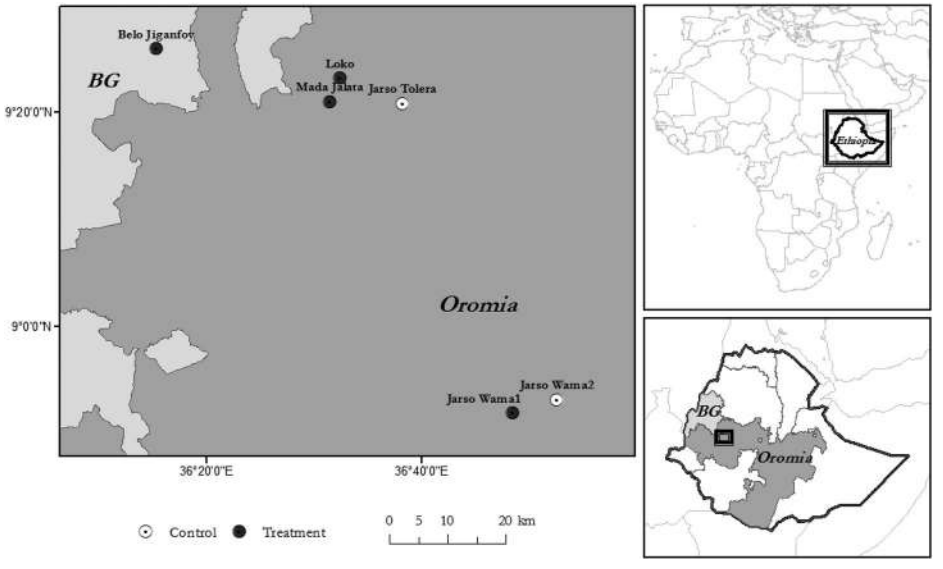

Figure 1. Location of study and control sites.

variation in the intensity and mechanization of farming practices on the transacted lands to examine these issues under various levels of capital investment. We also selected two quasi-control sites: Jarso Tolera, where no LSLTs had occurred; and part of Jarso Wama, where a subgroup of residents lived further away from the commercial land investment, and were less affected or unaffected by the land transaction. We used information from these two sites to compare outcomes that occurred in the affected areas. The predominant ethnic groups in the study areas are Oromo, Amahara, Gumuz, and Tigray.

For each case study, we conducted separate focus group discussions with men, women, and youth from 18 to 30 years old (see Table 1). In Belo and Sibu Sire, youth groups were divided by gender (one with four young men, the other with four young women). Otherwise, all focus groups consisted of eight participants. Selection of focus group participants, aided by village leaders and local development and agricultural officers,[1] aimed to represent a diversity of participants along several different axes: employment with the investor, different locations within the Kebele[2] in relation to the transacted areas, different ethnicities if applicable, and wealth status. For the women's groups, we also ensured the inclusion of a mix from female-headed households and households headed by both women and men.

Focus groups discussions began with a participatory mapping exercise where participants drew main physical features of their *kebele*, including the boundaries of the transacted lands in relation to their villages and their fields. The mapping was used as a tool to initiate the discussion about land tenure changes before and after the transactions, land use and decision-making, changes in food production and consumption and in

[1]We acknowledge that having the local officers and community leaders select focus group participants may have introduced bias in our sample. However, it was difficult to avoid this sampling method given local culture and the short time frame that prevented more extended field presence.
[2]Kebele is a lower administrative unit similar to a ward.

Table 1. Summary of fieldwork-based data sources.

Region and Woreda	Kebele	Focus groups	Key informants
Guto Gida, Oromia	Loko	3	1
Guto Gida Oromia	Mada Jalala	2	3
Guto Gida, Oromia (Control)	Jarso Tolera	3	1
Sibu Sire, Oromia	Jarso Wama	3	4
Sibu Sire, Oromia (Control)	Jarso Wama	2	0
Belo Jiganfoy, BG	Belo Jiganfoy	4	3
TOTAL		17	12

household labor allocation, and the process and impacts of the transactions. Focus group discussions lasted between 1 and 2.5 hours.

Besides the focus group discussions, we carried out key informant interviews with 12 informants from the case study areas and control sites. The interviewees included agricultural development experts, village-level development agents, agricultural investors (including foreign investors in the case of Sibu Sire and Guto Gida), and village leaders. Each interview took between one and two hours and focused on tracing the process and evolution of the LSLTs in the area and their implementation, the levels of mechanization and capital investment in the area, understanding changes in natural resource use and availability, and agricultural practices and livelihood strategies before and after land transactions.

We audio recorded and transcribed the interviews and focus groups. We initially coded and re-organized the transcripts thematically according to principle changes in tenure and its impacts, as guided by our research questions and previous theory, and emergent codes such as participation in resistance. This allowed for comparisons across impacted cases, between impacted and control cases, and between genders and age groups. To the extent possible, we sought to triangulate information provided by community members with available documentation and the key informant interviews. We then used axial coding to delineate different types of impacts, and used an iterative coding process to draw relationships between tenure changes and these impacts. While two research team members were primarily involved in the coding process, we used regular peer debriefing with other research team members, who were not part of the data collection process, throughout the process to enhance the validity of our interpretations.

Table 2 below presents some of the key characteristics of the case study communities, including land use prior to the agricultural investment-focused transactions.

4. Results and discussion

In this section, we describe the process of land tenure change associated with the LSLTs, how this land tenure change has caused labor allocation within households to shift, and, finally, the gendered impacts on individual and household wellbeing resulting from the labor reallocation.

4.1. Land tenure and use changes resulting from the LSLTs

Mada Jalala, Loko, and Jarso Wama Kebeles represent the norm for land transactions in the East Wollega Zone of Oromia. In these cases, land tenure changed from state owned and

Table 2. Land use characteristics of impacted case study sites.

Case	Zone/Woreda	Kebele	Nearby tree coverage	Farming history	Land use before transaction
1	E.Wolleg/Guto Gida	MadaJalala	Moderate (~20%)	Moderate (~45 years)	State farm and communal grazing
2	E.Wolleg /GutoGida	Loko	Moderate (~20%)	Moderate (since the Socialist regime, ~40 years)	State farm and communal grazing
3	E.Wollega/Sibu Sire	JarsoWama	Moderate (~25%)	Long (over a century)	State farm and communal grazing
4	Kamashi Zone/ Belo Jiganfoy	Belo Jiganfoy	Moderate (~20%)	Short (~20 years)	Forests with sparse settlements, some state farm

managed farms during the socialist (Derg) regime that ended in 1991 to private investor ownership (beginning in early 2000s). During the gap years, those who had worked on the state farms in Oromia (local inhabitants and those newly settled in the area to work as laborers on the state farms) were able to cultivate the land by themselves. Part of the state farm was used as communal grazing land. Beginning in the early 2000s, however, the erstwhile state farmland began to be contracted out to private investors, as it was considered marginal or unoccupied; smallholder presence and use for crops and grazing were ignored. We were informed that consultations did not occur with any of the local communities. Rather, after agreements were concluded with investors, the government informed smallholders that they must vacate their cropped fields and grazing areas. Compensation was promised in some cases, although it is yet to materialize. Figure 2 depicts some of the tenure and land use changes in Sibu Sire – one of our study sites – between 2011 and 2017. It shows how in the intervening years following an LSLT, both communal land and smallholder lands underwent substantial changes in cropping patterns and land cover. However, as Table 3 indicates, investors did not make use of all the land that was allocated to them (see 'contracted area' vs. 'cultivated area'), and most continued to farm crops like those farmed by smallholders, with modest technological inputs (see 'actual practice').

Land transactions generally follow a different historical path in BG, whereby most LSLTs have occurred in areas that were not previously state farms. However, for the case we selected (Belo Jiganfoy), the land informally used by smallholders was previously a state farm that had been abandoned for some time, and subsequently passed into private hands also in the early 2000s for agricultural purposes. The investment area eventually expanded beyond the former state farm zone, even encroaching upon surrounding forests.

In general, LSLTs have caused three principal changes in land ownership and use in the case study sites: (i) relocation and decrease in size of individually-held private lands, where villagers plant a variety of crops for subsistence and commercial purposes; (ii) loss of communally-held grazing lands for livestock; and (iii) loss of forests, either through direct deforestation by the investor, or through the resettlement of villagers and their agricultural lands into forested areas.[3] Relocated crop and grazing lands were in general

[3]It should be evident that the changes in land tenure introduced by land transactions involving outside investors are very different from the normal tenure uncertainty that characterizes smallholder landholding in general in Ethiopia (Moreda 2018).

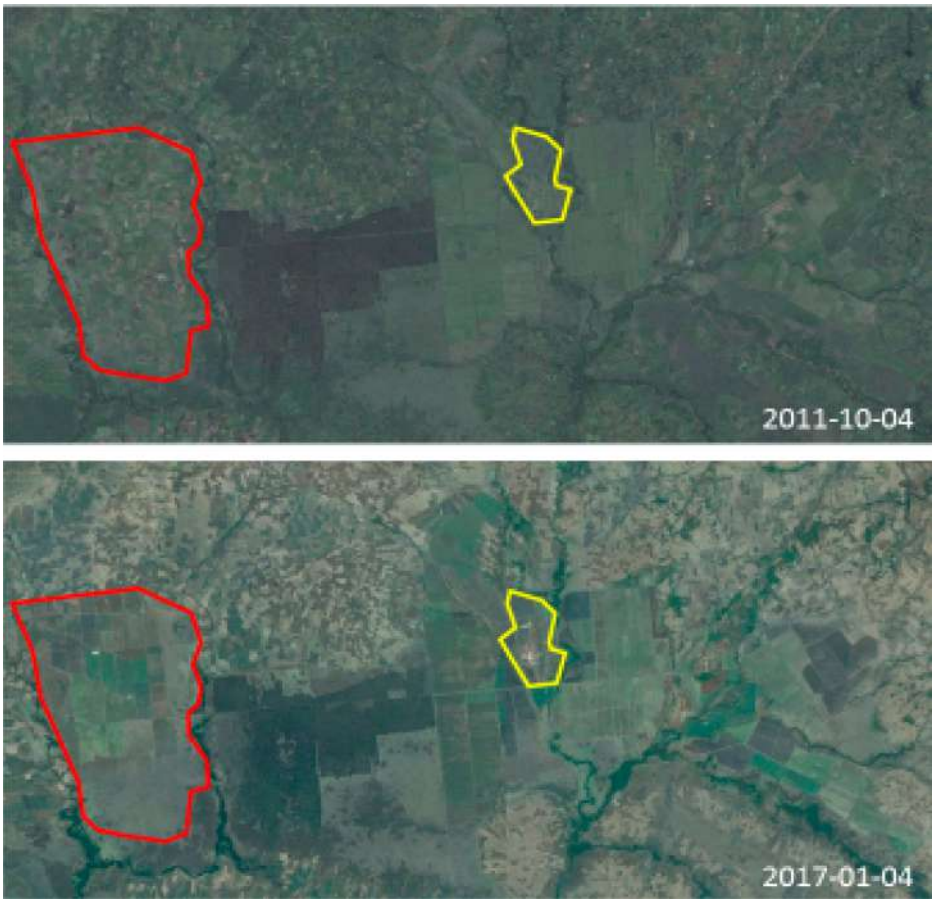

Figure 2. Land and agricultural conversion in Sibu Sire following LSLT.

Notes: Red polygons indicate the area converted from smallholder farm plots to sugarcane plantation; yellow polygon indicates the area converted from communal grazing area to sugarcane plantation and sugar processing factory. These land use changes correspond with changes in tenure of these polygons, from local private and communal to company-owned, post LSLT. Source: Google Earth. Similar before-and-after images for other study sites are not available.

smaller following displacement by LSLTs (decreased from 4–6 to 0.75–1 ha). While similar land use changes (i.e. forest encroachment and shrinking parcel sizes) were also in motion due to population growth in some non-LSLT impacted villages, our discussions with key informants and villagers in impacted and control communities indicated that the LSLTs either accelerated or exacerbated these trends in impacted areas. Fewer respondents from control communities experienced a decline in their parcel size, and existing parcel sizes in control communities continued to be larger than in impacted areas.

While LSLTs clearly challenged land access and tenure for many, the outcomes in terms of land redistribution procedures appeared to be relatively equitable across genders. Focus group discussions revealed that women had similar baseline formal land tenure rights as men, as stated in Constitutional provisions (see Section 2.0). Joint (husband and wife) ownership of land was common, female-headed households had the same land rights as male-headed households, and almost all respondents had statutory land

Table 3. Characteristics of the major land transactions in the four case studies.

Kebele	Private investment name	Investment start year	Cont-ract area (Ha)	Culti-vated area (Ha)	Main crops on investment land	Contract Agreement	Actual practice on investment land
Mada-Jalala	Olana Gobena agricultural development (domestic)	2001	424	260	Maize, soybeans, sesame rice	Selected seed, mechanized agricultural practice	Traditional farming, sharecropping. No community development* or technology transfer
Loko	Raj agro-industry Mango farm** (foreign)	2000	829	628	Mango	Mango farm and juice factory	Mango farm with irrigation, use of pesticide and fertilizer, juice factory to be established. No community development, high resentment
Jarso-Wama	Raj agro industry Plc. (foreign)	2008	3,500	2,700	Sugar cane	Sugarcane farm and sugar factory since 2014; outgrower scheme	Sugarcane, maize, niger seed, sorghum, chickpea, soya bean, pepper, and vegetables. No significant community development. No outgrower scheme yet.
Belo Jigan-foy	Ras Dashen Agro-industry (domestic)	2000	895	550	Maize, soybeans, peanut	Selected seed and mechanized agri-practice	Traditional crops, semi-mechanization. Poor management

Notes: All cases except Jarso Wama experienced multiple LSLTs within their Kebele boundaries; here, the investor with the most impact, according to our informants, is highlighted. **Community development* refers to infrastructure including roads and facilities for social services (clinics, schools) that were promised by investors. Information was obtained from document analysis and interviews with local development officials. **First established by Sat carter Hawas Agri Plc. in 2000, later transferred to Green Focus and finally transferred to Raj agro-industry.

ownership. Further, because displaced households were assigned new (though less) land through a lottery system,[4] female-headed households did not appear to be at a particular disadvantage in land reallocation. Yet, complications are expected to arise when considering increasing land shortages and inheritance traditions. Land scarcity is increasing in these sites, driven by population growth and exacerbated by new investments. Traditionally, both male and female children inherit land. In times of scarcity, families prioritize bequeathing land to male children. This is due to cultural expectations of male land ownership and expectations that female offspring will eventually marry into land, owned by the new husband and his family from another village.

4.2. Household labor reallocation following tenure changes

The tenure and land use changes that occurred in the studied LSLTs had substantial effects on labor practices of household members. Women's labor patterns and obligations appear to have experienced the most dramatic changes, but men also experienced labor shifts, both within and outside the household. Figure 3 describes the key changes in labor allocation by women and men, and the key drivers of these changes.

4.2.1. Decreased investment of labor and capital in private parcels leading to increased wage labor on investor's land and increased petty trade

In all affected cases, average household land holdings decreased post-investment. The smaller parcel sizes post-LSLTs, as well as agricultural pests coming from investment land monocultures, resulted in a decrease in quantity and variety of foods grown for subsistence and for sale: members of impacted communities reported no longer growing crops such as sorghum, teff, finger millet, sesame, pepper, niger seed, soy, and salad on their land. In contrast, control groups reported increasing the amount and diversity of crops planted over the past 10 years. Maize remained a staple for consumption and sale, and control communities reported no longer growing sorghum, teff, and finger millet, but they now grow pepper, chat, coffee, and haricot beans for consumption. Respondents in the control communities indicated that they were consuming more food than in the past while buying less food from the market.

Given the decrease in land size and food availability, both women and men were compelled to work as daily laborers on investors' lands to generate income to buy food they were no longer able to grow themselves. While the presence of employment opportunities in the area is positively perceived by proponents of LSLTs, focus group participants outlined numerous negative effects (described in Section 4.3). Thus, post investment, women and men were transformed from being mostly self-sufficient, small-scale agriculture entrepreneurs to wage laborers on investors' lands. In some cases, women also compensated for income loss through increased petty trade to purchase food and other household goods, yet overall, local peoples' labor has been reallocated from building their own capital (land) to shoring up the capital of the investors.

[4]A lottery system of land allocation is a traditional practice exercised in many parts of the country especially in western Ethiopia. It is a system used to fairly distribute land of variable quality (in terms of fertility, access to irrigation, slope, etc). The system inadvertently served to promote gender equality in land distribution.

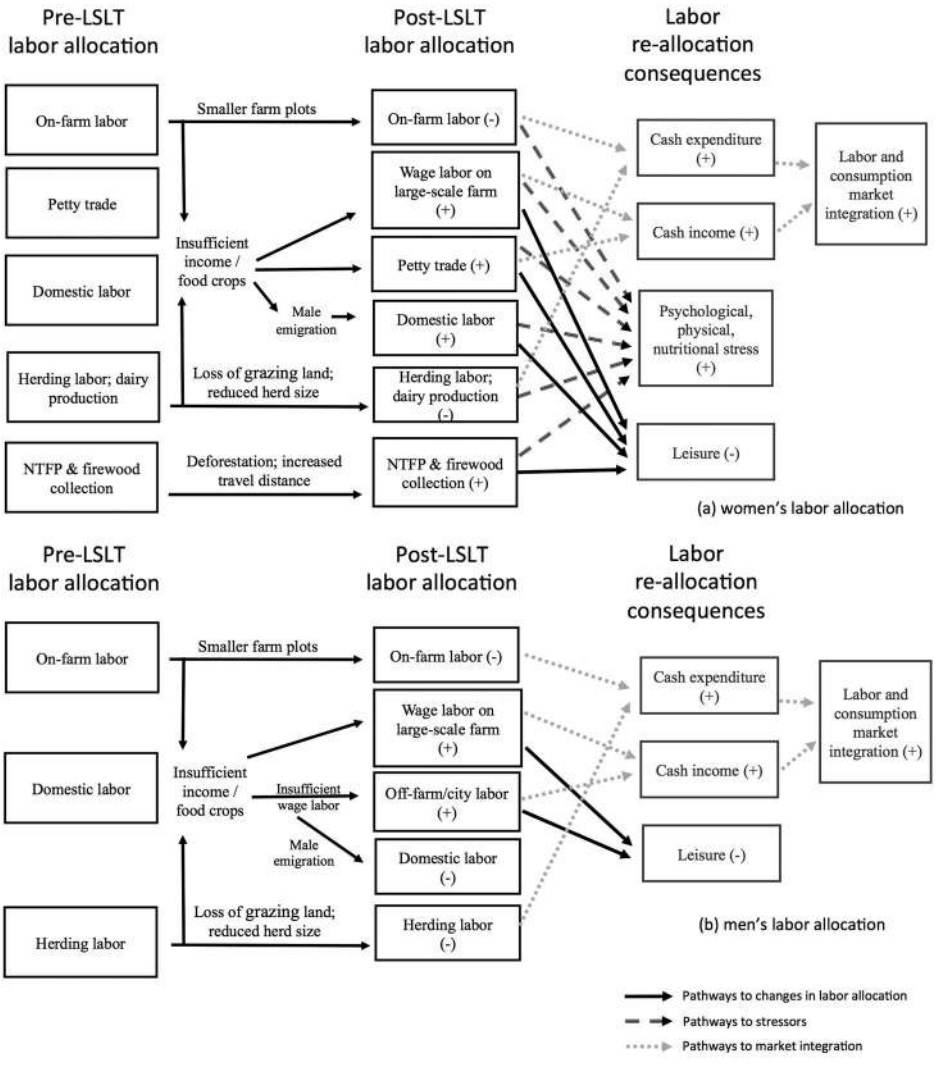

Figure 3. Changes in women's (a) and men's (b) labor allocation before and after large-scale land transactions (LSLT).

Notes: Changes in amount of labor post-LSLT are reflected by (+) increase and (–) decrease, as expressed by focus group participants. Under labor re-allocation consequences, (+) indicates an increase, and (–) a decrease, in the particular consequence. Solid black arrows indicate pathways to changes in labor allocation; solid grey arrows indicate pathways to stressors, and dashed lines indicate pathways to market integration. The figure represents the information that came out most prominently during focus group discussions. Both men and women spoke at length about stressors felt by women post-LSLT, even when prompted to speak of men's stressors; for this reason, the diagram does not depict stressors for men post-LSLT, even though it is likely that men also experienced some stressors, particularly having to do with government and investor responses to their acts of resistance (including violence and jail time). NTFPs: non-timber forest products.

4.2.2. Increased male outmigration in search of employment

The pressure of increasing labor obligations upon women is exacerbated by an outmigration of predominantly males from villages. The lack of available land for youth to inherit, and the lack of employment opportunities, has prompted especially younger men to leave their communities in search of employment. Jobs that were promised on the transacted

lands were generally fewer and less permanent than expected and privileged migrant workers of certain ethnicities over local villagers. This was due to the investor's perception that locals may prioritize their private plots particularly during peak harvesting seasons. In the case of BG, respondents stated that the investors consider the native Gumuz community as 'lazy' and largely depended on migrant workers from the highland areas. Both men and women noted that women are suffering from lack of help because their husbands have to go to town for work, leaving women to prepare land for cultivation and to assume other agricultural tasks for which men are traditionally responsible. Interestingly, one of the control groups brought up *in-migration* as an issue, rather than outmigration, with newcomers (mostly youth from elsewhere in Ethiopia) employed in sharecropping and casual labor on some local farmers' lands.

4.2.3. Increased burden of household tasks on women

Outmigration of males has broken up families and the daily routines of work and community. In addition, the new engagement in wage labor does not diminish the cultural expectations of women to fulfill most domestic chores such as collecting firewood, preparing food, cleaning, caring for children, etc. Women now raise the smaller children alone, adding to their daily labor burden. Female-headed households are particularly affected as the older male children leave home in search of work, resulting in a loss of a principal household resource. Thus, the decrease in parcel size resulting from LSLTs has shifted household labor in a way that has increased the burden on women: women are compelled to work in wage labor and petty trade to make up for the shortfall in income and food production, while also juggling an increased workload at home due to males emigrating for work.

4.2.4. Decreased investment of labor and capital in livestock

Across all cases, the loss of communal grazing land affected women more than men. While men are in charge of livestock sales, milk and milk products are the domain of women. Preparation for consumption and marketing of those products are traditionally women's tasks. With a decrease in communal grazing lands, families have had to sell off their livestock, resulting in reduced income for women. This income was typically spent on food for the family and for other household needs, again compelling women to make up the shortfall by working as day laborers on investor's land.

4.2.5. Increased female burden of fetching forest products including firewood

Forests in and near the study area have decreased in the last decade and a half due to both the investments and ensuing resettlements, as well as general population growth. Beyond a general decline in forest products for the household, this has increased labor demands disproportionately on women, as firewood is still the main cooking fuel and its collection is customarily the responsibility of women. Women referred often in interviews to the greater number of hours spent on firewood collection, describing an additional 5–10 km for each trip. These trips are particularly arduous during the rainy season when drier material is less available. Deforestation also impacts women as the primary collectors of traditional medicines and other non-timber forest products, again diminishing their opportunities for income as well as general household wellbeing.

4.3. Gendered impacts of changes in household labor allocation

As summarized above, tenure changes associated with LSLTs have changed household labor allocation in our case studies. Household labor reallocation has, in turn, caused gendered physical health, psychological, and material consequences on impacted villagers, particularly associated with women's increased workload. In all focus groups, even when directly asked about impacts on men, both men and women stated that women bore the brunt of the negative impacts of the LSLTs; as such, we report mostly on these.

Firstly, women seem to bear particular physical health implications as a result of the LSLTs. One of the reasons for this is the decline in food diversity and quantity, as families are compelled to reduce the diversity and quantity of crops they grow, and reduce their intake of meat and milk products due to smaller herd sizes. Both men and women stated that women are more burdened by the subsequent decrease in food availability, as it is their primary responsibility to provide food for the household. Respondents explained that women will often eat less, or skip meals altogether, to provide food for men and children during a food shortage. Women also complained of a lower quality of food because of a decline in the variety of crops grown for consumption that in some cases resulted in protein-deficiency diseases. These mechanisms of enhanced gender inequality resonate with similar ones identified in other contexts and historical periods (Levien 2017, 1127–30). Indeed, other studies have documented how such inequalities, even when there are efforts to recuperate better gender relations, tend to rebuild uneven relationships with the government and within communities (Doss, Summerfield, and Tsikata 2014; Lamb et al. 2017).

Our results seem to reiterate a larger cultural norm in the country. Preferential and sequential feeding is already common in rural households whereby men are expected to eat first (Hoddinott, Headey, and Dereje 2014); girls are generally advised to eat less to maintain a certain form and to tie their stomach with Mekenet, a tight traditional belt (Lenjiso, Smits, and Ruben 2016). The women in the focus groups believed the lower quantity and quality of food has affected their health and energy levels. A couple of women in one focus group described a decrease in their own strength, including difficulties in childbirth and breastfeeding, which they attributed to this change in diet. One commented,

> before investment, in terms of livestock, we were good. As grazing land decreases livestock number decreases. As a woman, we got better food [in the past], so we had healthy and strong children. But now, most of the time we get meat once in a year, on a holiday.

Negative physical impacts are also attributed to the added labor of working on investor land. A few women in the focus groups expressed concern with their declining health owing to the higher workload and a higher incidence of illness. Some also noted that due to their household obligations, they are not able to work as laborers for as many hours as men, and thus make much less on the investor's land, but that due to the shortage of land, they feel more vulnerable and compelled to engage in new kinds of labor such as petty trade. This is particularly difficult on female-headed households, who have the principal responsibility for working most of the day as casual labor, engaging in petty trade for additional income, on top of working on their own remaining agricultural fields and taking care of the household. One female household head said:

> Even you can look at our faces, we don't look good physically. If you take just this group, all of us have more than 5 children and some of us don't have cows. If a woman works the whole day for the investor, she will make 45 birr *[which is nearly two USD per day]*. So, tell me what can this money buy? School? Clothes? Food? Especially for household head woman, this is difficult. Even there are times we sleep only for 2 hours a day because the income we get from daily labor will never be enough. So I need to engage myself in many activities like small trade or something else.

Additionally, one participant in Mada Jalala described a range of problems associated with longer time spent gathering firewood: back pain from increased amounts carried per trip, greater time spent working in the sun, increased likelihood of encounters with wild animals, and sexual harassment.

Particular psychological health implications also seem to be borne by women. There were numerous descriptions of increased stress and tension as a result of much of the above. For instance, women disclosed how difficult it was not to provide food for their children.

> Children ask their mother to give them food not their father, so when we don't get anything to give them, it's very stressful. Even if men know the problem, as they don't hear the baby's cry, it's, somehow, better for them.

Women in Loko expressed increased stress in their lives as a result of the decline in nearby forests, worrying about having gathered enough fuel to last through the wet season. Breaking up of families due to outmigration has caused stress on women who suffer significant personal distress of separation, struggling to accept the fact that their children migrate away in search of jobs. Focus group participants in Jarso Wama said that, as parents, the investment made them feel '*alone*', that if they had enough land to give their children their homes would not be so empty.

As a result of the LSLTs, women have lost access to income, decreasing both their material and symbolic power. This outcome of LSLTs on women has also been documented in other parts of the country (see Daley 2011). Dairy products are the domain of women in much of the region, and their primary income-making activity. The loss of control over these products, as well as non-timber forest products, have important symbolic significance. Income is a critical negotiating tool in private and public spheres, and women's options for such income generation are typically fewer than for males. Material relations with certain products also contribute to identity, which when destabilized can also contribute to psychological trauma. Recent research in Brazil demonstrated that LSLTs have contributed not only to the dispossessing of women's access to certain products, but also to their socio-ecological knowledge (Miyasaka Porro and Shiraishi Neto 2014). Similarly, Arora and Rada (2017) indicate that long working hours and multitasking by women cause physical and emotional stress, which in turn cause a decline in their productivity on the farm. Therefore, increasing the labor burden on women will not only have adverse impact on their physical and mental health but also have negative consequences on the envisaged agricultural productivity.

Though women are engaging in daily labor to supplement household income, this has not compensated for their loss of more personal forms of income, such as income generated by the sale of dairy products. Moreover, they are typically paid less and work in less

favorable conditions as compared to men. In two of the cases, female youth are engaged as daily agricultural laborers, but they generally receive lower wages than male youth due to the nature of the tasks they are assigned, which are less physically demanding, labor-intensive, or require longer travel times. They also earn less because they have more household tasks than their male counterparts and thus have less time to work on paid jobs. Few female youths are able to save, as much of their income is devoted to household expenses. In Jarso Wama, male youth had more employment opportunities with the investor. The payment system seems to disadvantage women as well in Jarso Wama: based on individual contracts, should the worker be unable to finish what is assigned for the day, they will only receive a small portion of their wages, sometimes as low as 4 birr instead of a full day's payment of 16 birr. Thus women, who often cannot remain for the entire day due to household and family obligations, are often unable to complete what is assigned and are thus discouraged from working as daily labor. In Jarso Wama, all focus groups said that the youth, particularly female youth, are the most affected by the LSLTs. A study on the outcomes of development-induced displacement in China also revealed that men's higher literacy and mobility in multiple ways allowed them to take greater advantage of new employment opportunities, as compared to women (Tan, Hugo, and Potter 2005).

In one case, Mada Jalala, however, the increased hours of work on transacted land was viewed as a benefit to women, as adult women have been employed to a greater extent than adult men on the investor's land. According to our informants, roughly 60% of those hired for seasonal farm work, e.g. during harvest season, are women. This is because traditionally male-dominated agricultural activities such as plowing are now being carried out in a semi-mechanized way on the transacted lands, reducing the demand for the labor of men. As described above, many men have also migrated in search of work. In contrast, activities such as weeding are still being carried out manually on the new farms, leading to higher levels of wage labor availability for women. Among women, it is younger adults who have more time to work relatively longer hours on investors' farms due to their having fewer responsibilities at home. Men and women both expressed a low preference for wage employment on the transacted farms, citing unmet expectations[5] for better, more secure job opportunities. But participants in this Kebele saw the presence of large-scale farms as allowing women, especially those who are younger, to find work without leaving the home. Indeed, for most women, it would be difficult to travel alone to cities or nearby town to find work, as many women in rural areas are often illiterate and less empowered to travel to cities and navigate new lifestyles there. In this one case, according to our informants, there is little difference in how young women and men are treated on investor farms in terms of wage rate as long as the amount of work accomplished is the same. They accomplish their daily or hourly work amount in terms of rows completed (levels of work to be accomplished are decided prior to wage employment by farm foremen and supervisors). However, the handful of locals that were recruited to more permanent positions were men.

[5]We did not come across any specific agreements between investors and the local communities – these agreements are commonly signed at the federal or state level. Expectations are largely based on the rhetoric heard from the government and investors on creating new job opportunities, introduction of new technologies, developing social services, etc.

5. Conclusion

We find that the LSLTs changed labor distribution within impacted households, but, importantly, that this had largely increased women's labor burdens, with negative physical, psychological, and material well-being implications. Villagers in all affected cases have suffered losses of both private lands and communal grazing and forested lands, affecting food production and consumption, and food-related income. These changes resonate with other examples of substantial negative effects of LSLTs on pastoralists (Regassa, Hizekiel, and Korf 2018). Loss of communal grazing lands has affected women in particular, affecting not only their income and ability to pay for household expenses, but also their and their family's protein intake. Wages from daily labor on investors' land have not been sufficient to make up for this. If anything, it has mostly served to overwork women, who are obliged to add daily laboring on the investor's land on top of their long list of daily activities around the home and family plots, to make up for their inability to grow more food on their own land. While forests in some cases had already disappeared prior to the investments, in other cases the investments had expanded into remaining forests, or had displaced people, forcing them to move into the forests and woodlands. For women, this has mostly meant traveling farther to fetch firewood, or even resorting to theft of crop residue from the investor to meet their cooking fuel needs. This is significant in a country like Ethiopia where biomass fuel supports more than 90 percent of household energy demand (Gebreegziabher et al. 2012). This, in addition to not being able to produce enough food to feed their families, has caused women in these cases great stress. The prospects for young women in these villages are particularly grim, as they are less likely to inherit any of the limited land their parents might have to give, less likely to secure a permanent position or even a well-paying laboring position, or be able to migrate easily for employment.

Although some studies have highlighted technological spillovers from land transactions, leading to improved crop output in fields of farmers near transactions, this outcome was not visible in any of the four transaction sites we examined. In contrast to the expectation of government economic policy, most LSLTs in our study areas are not falling into the ranges of capital-intensive production of export-oriented high-value goods. The expectation of permanent job creation is meager as the labor intensity is typically much lower and requires largely unskilled workers. Some of the negative outcomes above also occurred in villages where there had been no transactions, but to a lesser extent. We believe these identified changes are consistent with expectations in an agrarian political economy that is characterized by low inputs and where tenure changes permit new external capital investments.

As is true for many other countries that have witnessed large scale recent changes in land tenure, the narrative in which transacted lands are classified as 'marginal' or 'underutilized' is actively deployed in Ethiopia as well. Such classifications provide a basis for facilitating transactions (Lavers 2012b; Regassa, Hizekiel, and Korf 2018). Marginal or idle lands are seen as target spaces for large-scale cultivation, yet, such decisions are rarely based on a thorough understanding of how land is used by local residents. Land that appears idle to outsiders is often used in different ways, at different times, for a variety of purposes, such as communal grazing and transhumance, shifting cultivation, hunting-gathering, recreation and cultural activities, and/or left as reserve areas for future community needs

(Chung 2016). While we were not able to collect data on agricultural productivity, it is questionable whether land productivity has increased in our cases, given limited investments in mechanization and other non-traditional agricultural practices post-LSLT (Table 3). Similarly, Li (2011), in comparing labor productivity of smallholders working on their own land versus wage work on large-scale farms, found cases from Sub-Saharan Africa where smallholder producers gained 3–10 times more money on one-hectare smallholding than they could earn in wage employment on the same crop. While there is still only patchy employment information with regards to recent LSLTs, a World Bank report suggests that land-based investments create far less jobs than are often expected, or promised (Deininger et al. 2011). Given this reality, Li (2011) suggests the possibility of parceling up large-scale farms into smallholdings through land reform, and calls for government or donor-sponsored land distribution programs that settle smallholders on viable land, with a viable crop and proper support.

An additional outcome for which we only identified suggestive evidence and that deserves further investigation concerns the larger nutritional impacts of land transactions. Loss of land and of opportunities to cultivate private land has occurred in all the land transactions cases we examined, resulting in a decreased diversity of household's cultivated crops. This loss of land co-occurred with new (but limited) wage labor opportunities on the lands where new investments took place. Wages from working on the investors' lands increased the incomes of households allowing them to shift from a primarily agricultural-production based household diet towards a diet where a significant part of the food they are eating is purchased in the market. The agricultural production to market-purchase shift in diets is accompanied by household members eating less diverse, more processed, and less protein-rich foods. These changes are analogous to results reported elsewhere in Africa, e.g. Ghana, where loss of land owing to ongoing land acquisitions resulted also in significantly reduced nutritional diversity for households (Nyantakyi-Frimpong 2017). These less overt, more slow-paced impacts of land transactions can also be contributing to the rise in the epidemic of non-communicable diseases in emerging economies that has been the subject of substantial recent research (e.g. Abrahams, Mchiza, and Steyn 2011; Bosu 2015).

Although it is difficult to use a small set of case studies from a single country to generate broad generalizations, our comparative examination of cases with controls and the preceding discussion point towards a few issues that are important to keep in mind for future work on gender and large-scale land transactions. It is evident that land investments in this part of Ethiopia are exacerbating an already precarious land situation where resettlement programs and demographic changes were making access to land difficult for many households. The investments are accelerating processes of deforestation in the few areas where forests still existed in the last two decades, compounding problems with land shortage and ensuing food and wood insecurity and outmigration. In detailing the gendered consequences of household labor reallocation, this study underscores and supplements some of the concerns raised in other examinations of tenure changes and land transactions, and the effects of such transactions on women and their interests. This is only as expected given the overriding importance of land to rural livelihoods and the role of women in household reliance on land in agrarian societies.

The vast majority of studies on gender and tenure changes, to date, have focused on agricultural investments across various types of commodities (Chung 2016). Yet, there are a number of other drivers of LSLTs, such as tourism, commercial forestry, mining

concessions, and so-called 'green grabs' or 'blue grabs', where land and water resources are acquired for environmental agendas (Krishna et al. 2017; Hausermann et al. 2018). Gendered analyses of land and resource concessions in these sectors are still scant. We welcome further studies, including those that compare amongst different groups of women, to see how gender intersects with other attributes and forms of identity (e.g. age, wealth, and culture) to (re)shape labor relations in the context of LSLTs. As an important foundation, our study shows that these processes can be deeply gendered and have alienating effects on different groups of women and men, thus meriting further research.

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