Land Governance in an Interconnected World

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MEASURING COMMUNITY PERCEPTIONS OF TENURE SECURITY: EVIDENCE FROM FOUR AFRICAN COUNTRIES

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Abstract

Despite decades of investment in rural land registration in sub-Saharan Africa, the empirical results of such programs, for example on agricultural productivity, remain startlingly mixed outside a few noteworthy exceptions. We hypothesize this may be at least partly due to limited analysis of the impact of land registration on tenure security, which we define here as the assurance that existing rights-holders will continue to possess their land. This paper therefore aims to provide pre-registration evidence on (i) rural landholders' perceived tenure security and (ii) potential drivers of tenure security in four African countries with extant customary tenure systems to understand whether there is room to further strengthen tenure in such settings. The findings indicate that existing tenure is perceived to be quite secure by the vast majority of respondents, suggesting that, to be successful, land registration efforts will need to be carefully tailored to address local threats to tenure security.

Key Words:

tenure security; land governance; Africa; land policy; customary tenure

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1. Introduction

In recent decades, a growing number of land registration campaigns have been undertaken in Africa to increase tenure security. These programs have largely been justified by the theoretical role of more secure tenure in motivating increased land investment (Besley 1995; Besley and Ghatak 2010), which depends on the expected increase in tenure security provided by government-backed formal land registration, as compared to the assurance provided by informal customary land tenure. While there is ample support for the first hypothesis from Latin America (e.g., Deininger & Chamorro 2004) and Asia (e.g., Feder et al. 1988), evidence on the investment impacts of land registration in Africa is decidedly mixed (Lawry, et al. 2014), which we suspect may be at least partly due to the limited analysis of the impact of formal land registration on tenure security.

A number of recent studies have analyzed the impact of land registration on farm investments in Africa. Despite promising results from farmland registration programs in Ethiopia (Deininger et al. 2007, 2009, and 2011; Holden et al. 2009) and Rwanda (Ayalew et al. 2011) – both contexts where customary rights were already highly transformed at the time of formal registration – in general land registration in Africa has shown relatively weak impacts on agricultural investment and productivity compared to other regions (Fenske 2011, Lawry et al. 2014, Place 2009). A recent global meta-analysis suggests two possible hypotheses to explain this so-called "Africa effect": (i) the lower levels of wealth and income among African farming households compared to their Latin American or Asian counterparts or (ii) the potentially higher levels of tenure security provided by extant customary tenure systems in sub-Saharan Africa (Lawry, et al. 2014). The latter hypothesis echoes Fenske (2011), who found that customary tenure systems in Africa confer a sufficient level of tenure security to induce positive development outcomes, such as investment. However, there is strikingly limited empirical evidence to rigorously test this hypothesis or indeed to effectively measure and compare the level of tenure security provided by customary tenure systems across countries in advance of formal land registration.

The existing evidence on the impacts of land registration programs globally is based on highly variable and sometimes questionable definitions of tenure security that range from definitions of the content or substance of rights conferred (e.g., rights to sell, bequeath, or use the land as collateral) to measures of the assurance of rights provided by different land administration systems (e.g., risk of expropriation, eviction, or other loss of rights) (Arnot et al. 2011). Moreover, recent evaluations of the impacts of land registration on investment implicitly assume that participation in land tenure formalization **is** associated with an increase in tenure security without explicitly testing this hypothesis (e.g., Holden et al. 2009; Goldstein et al. 2015). Even among those studies that do attempt to equate tenure security with the assurance of continued property rights, which numerous authors suggest is a more accurate measure of tenure security

than the content of rights conferred, program impacts are quite mixed, particularly in African settings where customary rights remain dominant (Sjaastad and Bromley 2000; Arnot et al. 2011; Fenske 2011; Lawry, et al. 2014).

Nonetheless, as customary land tenure systems appear increasingly vulnerable in the face of population growth and increased outside interest in rural land, for example for commercial agriculture and urban expansion (Deininger et al. 2010), a new wave of interventions that aim to secure land tenure by formally registering customary rights is underway across sub-Saharan Africa. We hypothesize that the extent to which this new era of land registration succeeds in achieving increased tenure security and associated impacts on on-farm investment by beneficiaries depends at least in part on whether customary landholders perceive their existing tenure status to be less than fully secure. While recognizing that perceptions are inherently context-specific (Place 2009; Bruce 2012), this paper provides descriptive evidence of the perceived assurance against land loss provided primarily by existing customary tenure systems across diverse rural contexts in four African countries (Ethiopia, Guinea, Liberia, and Zambia) and some possible drivers of this assurance: existence of written (formal) documentation of land rights and past experience with land-related conflict and land loss, for instance through encroachment or reallocation. In so doing, we aim to more rigorously examine current levels of tenure security in primarily customary contexts and to better understand the primary sources of risks to land rights as perceived by landholders themselves in the hopes of informing more locally-tailored land rights recognition interventions.

The remainder of this paper is organized as follows. Section 2 situates the country contexts and section 3 describes the data and methods used for this study. Section 4 presents a descriptive analysis of the assurance of land rights provided primarily by extant customary tenure systems in each country. Section 5 concludes with a discussion on policy and programming implications.

2. Country Contexts

The land tenure systems in the four countries represented in our study are characterized by situations of legal pluralism, with varying degrees of involvement by customary and formal institutions, as described briefly in the following paragraphs.

Ethiopia

Although the 1995 Constitution vests all land in the State and the peoples of Ethiopia, the Government embarked on an ambitious rural land registration program the following year to certify the long-term use rights of farming households in the highlands (USAID, 2014a). By contrast, the Government has only recently sought to strengthen land tenure and administration in the country's

expansive pastoral and agro-pastoral lowlands. In these areas, customary institutions have traditionally administered rules and regulations to manage access to seasonal rangelands and water points for generations. However, local government officials have at times reversed the decisions of customary authorities. This has significantly weakened the authority of customary rules and institutions over time, such that rule violators are no longer bound to appear before or abide by the decisions of customary authorities. These developments have prompted concerns that the introduction of decentralized local government structures into lowland areas may be undermining the authority of the customary institutions (McPeak and Little *under review*). At the same time, the limited staff and expertise of the local government institutions has restricted their ability to effectively implement their authority to administer and manage rangeland resources, leading to a *de facto* lack of administrative authority on the ground. Furthermore, despite constitutional protections, there are examples of local governments alienating pastoral land without adequate consultation and/or compensation and without recourse to appeal such decisions. Pastoral lands are also being lost to encroachment from both small-scale and commercial farmers from the highlands (Bekure and Mulatu 2014).

Guinea

Although the Land Code of 1992 requires that all land rights be registered and the Rural Land Policy of 2001 seeks to clarify and secure customary land tenure, their implementation remains limited due to the expensive and complicated procedures required to document customary land rights and insufficient capacity and resources for land registration (USAID 2010a; USAID 2014b). The resulting lack of clarity and formal support for customary rights has raised concerns about the security of tenure for rural communities, particularly in the artisanal diamond mining regions, where the Government has begun measuring and surveying parcels for artisanal mining. As the land targeted for this process is held under customary ownership, there is concern that subsurface rights may be given preference over the existing surface rights of customary land holders, particularly given that compensation for surface right holders has so far been lacking. The parceling of subsurface mining rights therefore has the potential to undermine tenure security for surface right holders and increase the risk of conflict among rural communities, miners (who typically include outsiders), and the government (USAID 2014b).

Liberia

Like many countries in Africa that experienced periods of settlement by foreign landholders, Liberia's land tenure has historically been characterized by a customary and statutory divide. Formally recognized holdings are found primarily in patches along the coast but also inland in areas settled by Americo-Liberians, while customary tenure systems remain throughout the rest of the country. Although there were multiple causes of Liberia's 14-year civil war that ended in 2003, conflict over land and natural resource

rights, and in particular a policy framework that permitted the state to transfer large areas of customary lands for private concessions and national parks, played a central role (USAID 2010b). Critically, Liberia's new democratically-elected government has made key reforms to address several inequalities and grievances. These include the development of a comprehensive new national Land Rights Policy (2013), a draft Land Rights Act, which would realize the rights-based vision of customary land ownership set forth in the Land Rights Policy but has yet to be adopted (Toe and Stevens 2014).

Zambia

Similar to Ethiopia, while all land in Zambia is legally vested in the President, the Zambian Constitution of 1991 does recognize individual property rights, and the 1995 Lands Act specifically recognizes both statutory and customary land rights. State lands, which include lands held publicly by the national government or privately by individuals who lease land from the state, cover only a small percentage (perhaps as little as 6%) of the country's land resources, whereas customary lands administered largely by traditional authorities (chiefs and village headmen) without formal documentation represent the remainder of lands in the country. The boundaries between statutory and customary lands are often not clear on the ground, however, and there is evidence of complex land disputes over boundaries, inheritance, and the occasional reallocation of customary land to wealthy individuals or firms (Persha et al. 2015). Even on customary lands, however, rights to key natural resources, including wildlife and forests, remain with the state, and government institutions, such as the Zambia Wildlife Authority and District Forestry Office, are legally responsible for managing wildlife and forest resources, respectively.

3. Data and Methods

We rely on six household datasets collected as part of the pre-intervention baseline of a portfolio of land tenure-related impact evaluations that aims to test the assumptions underlying and impacts of customary land rights registration, in particular related to landholders' perceptions of their rights. The six studies were thus designed to address common questions related to perceived tenure security, land conflict, and land use and management, as well as customary land rules and governance. While much of the available literature uses the existence of a title or other formal documentation as a proxy for tenure security (Arnot et al., 2011), we follow Arnot et al. (2011), Fenske (2011), Sjaastad and Bromley (2000) and others by defining tenure security as the assurance that existing rights-holders will continue to possess their land in the near future. Each household survey therefore asked a series of questions to investigate respondents' perceived likelihood of near-term land reallocation by various internal (within the household or village) or external actors (e.g., chief, government, investors), as well as potential drivers of these perceptions. These include the existence of written documentation of their land rights, which many studies use as a proxy for

tenure security (e.g., Holden et al. 2009; Goldstein et al. 2015), and the actual (reported) experience of land-related conflict, which Linkow (2016) identifies as a source of tenure *insecurity*.

Given that the concept of "tenure security" is inherently context- and respondent-specific (Place 2009; Bruce 2012), each study was tailored to the local context and to specific hypotheses related to each project's theory of change. In addition, we deliberately over sampled households headed by females (all studies) and other potentially vulnerable sub-groups relevant to each study site, such as youth and members of minority ethnic groups. While we acknowledge that households headed by females (or other potentially vulnerable groups) are not representative of the entire population of women (or other group) in the sampled communities, we were only able to sample more than one household member in one study (Luangwa Valley, Zambia). Nonetheless, by collecting similar data on various proxies for tenure security (assurance) and its potential drivers at the household level and by oversampling potentially vulnerable groups, we have attempted to standardize the way perceived tenure security is measured to promote long-term analysis, increase external validity, and begin to understand differences within communities.

The datasets were collected over a two-year period from 2014 to 2016 (Table 1). Probability-based sampling methods were employed for each survey. However, given the nuances of each study and local context, the specifics of the sampling methodology varied across studies. For the two Ethiopia studies, *gantas* (villages) in Afar and *olas* (villages) in Oromia were selected from within *woredas* (districts) with probability proportionate to size. In Guinea, all communities in the Forécariah and Kindia Prefectures were sampled. Similarly, in Liberia, the study sampled selected villages in Lofa, River Gee, and Maryland counties. In Zambia, one study included all villages within five customary chiefdoms located entirely within Chipata District and another included villages selected from within six additional customary chiefdoms in the Luangwa Valley with probability proportionate to size. Across studies, households within each village/community were randomly selected for the survey, with different subgroups of interest (e.g., female- or youth-headed households, ethnic minorities) represented disproportionate to their size within the sample to assess distributional effects. This paper represents an initial cross-country analysis and therefore focuses on the following comparable and/or identical tenure security indicators that were included in more than one dataset:

- Likelihood of Internal Land Appropriation—Perceived risk that family members or other households in village will appropriate land;
- Likelihood of External Land Appropriation—Perceived risk that neighboring villagers, investors, or regional elites will appropriate land;

- Written Documentation of Land Rights[3]—Household reports possession of any formal or informal document confirming their land rights;
- Land-Related Conflict—Reported disputes[4] related to boundaries, access, and reallocation for community land, household farmland, grazing land as well as inheritance, privatization/fencing of common land, land reallocation, or land rental;
- Experience of Land Appropriation—Reported past experience of involuntary land taking, such as through encroachment, expropriation, reallocation, or other forms of lost access to land.

Once indicators were selected, we standardized each one across all datasets, so that we could compare across study sites. For example, variables measured with a scale were converted to a five-point Likert scale with 1 as the negative outcome and 5 positive. In some cases, response categories were collapsed to enable comparison, resulting in the loss of some nuanced contextual information. We generated simple descriptive statistics of overall sample averages that are displayed through bar plots or reported as text and used a simple t-test to identify any significant differences in the means of male- and female-headed households for the tenure security variables.

4. Findings

To contextualize the perceived tenure responses, the findings presented here begin with an overview of the formal and informal land-related authorities reported to be most relevant across the four countries. This is followed by an analysis of the perceived likelihood of future land appropriation (involuntary taking) as a proxy for tenure security. Finally, we examine several contextual variables that could influence respondents' perceptions about the likelihood of future land appropriation, including reported land rights documentation and reported incidence of both land-related disputes and land appropriation.

Formal and Informal Institutions Involved in Land Management

The study areas are characterized by extant customary tenure systems with varying degrees of formal government involvement in land administration, offering a unique opportunity to compare and contrast existing perceptions of land tenure within and across study areas. Survey respondents in all four countries reportedly rely primarily on informal community rules and institutions to govern land and natural resource management in their communities. Still, the data indicate variation across the samples regarding the involvement of formal government institutions and processes in land management. Nearly all (99-100%) of the respondents in available Zambia data and Ethiopia (99-100%) report that customary leaders

[3] Note that the nature of the documentation varies by country and project. In the questionnaires for these four countries, the documentation questions are designed to capture whether there is any paper documentation available – formal or informal.

[4] The surveys defined disputes as confrontations that took a long time to resolve, led to violence or property destruction, or required the involvement of a third party to resolve.

are the primary land-related decision-makers. Government authorities are reported to be the primary decision-makers by a minority of respondents Liberia (9%), and especially Guinea (26%). Overall, though, the data highlight the continued prominence of various customary institutions in land and natural resource governance as perceived by the study communities.

The overwhelming majority of community members interviewed in Chipata stated that customary authorities, including village headmen 82% (N=2883) and chiefs 13% (N=460), are the most important authorities for land and natural resource management in the community. Similarly, in the Luangwa Valley sample, forest resource management decisions are reportedly made primarily through customary channels. Almost 50% (N=2129) of household respondents said the headman (a customary village leader) is the most important decision-maker about the forests used by the village, while 25% (N=1081) say the chief is most important. Among the 742 households that cleared land in the forest for farming in the past three years, permission was only sought by 177 (24%). When permission was sought, it was overwhelmingly requested from the headman (84%, N=177) and only rarely from the chief (15%, N=27). Moreover, although the incidence of land-related disputes is low, when they do occur, most respondents first approach either the headperson (42%, N=46) or chief (25%, N=27) for assistance with dispute resolution.

In Guinea, land management in the study area is primarily the domain of village elders (commonly referred to as “wise ones” or “sages”) and customary officials. Respondents recognize village elders and the traditional custodian or landlord as the most important actors in the process of land allocation, including to outsiders. Although conflict and encroachment are reportedly rare occurrences in Guinea, customary institutions are the dominant actor in conflict resolution (77% of reported cases) and farmland encroachment (78%). Moreover, 74% of respondents in Guinea reported that traditional authorities and village elders would be the most likely institution to punish individuals who violated artisanal diamond mining norms. Nevertheless, the findings show an important role for government institutions in matters of dispute resolution, land access, and resource protection: 20% of respondents reportedly rely on local government authorities to punish rule breakers, and 21% said they would rely on government officials if their farmland were being encroached upon.

Similarly, just over 82% (N=1468) of the community members interviewed in Liberia stated that customary authorities, including elders and the traditional custodian or landlord in the community, are the most important authorities for land and natural resource management in the community. And in Afar, 80% (N=2883) of respondents said that customary leaders are the most likely to punish individuals violating land rules, compared with roughly 7% (N=248) who said government officials would do so.

Still, inter-ethnic boundary disputes are reportedly often escalated up to government officials. Roughly three quarters of respondents that reported experiencing a regional boundary conflict (73%, N=55) noted that the conflict has been resolved, mostly through local government officials (71%, N=39).

Perceived Tenure Security

This section outlines important findings about landholders' perceived risk that a range of internal and external actors will appropriate their land in the near future. The results (Figures 1 and 2) confirm that there is a fairly high degree of perceived tenure security among survey respondents.

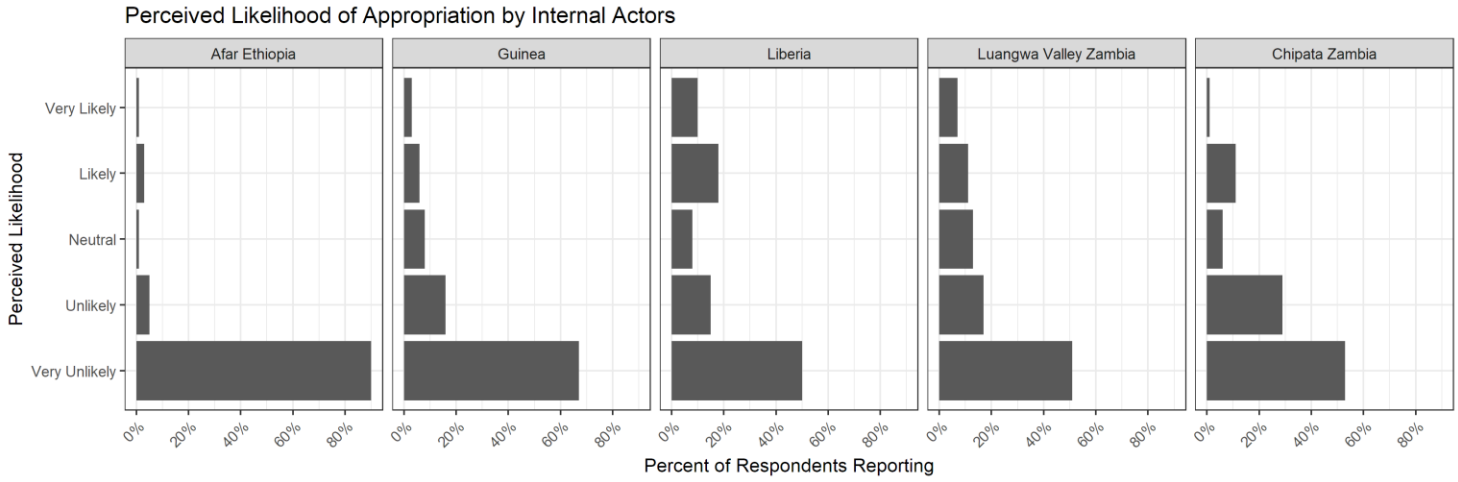

Figure 1. Perceived Likelihood of Internal Appropriation

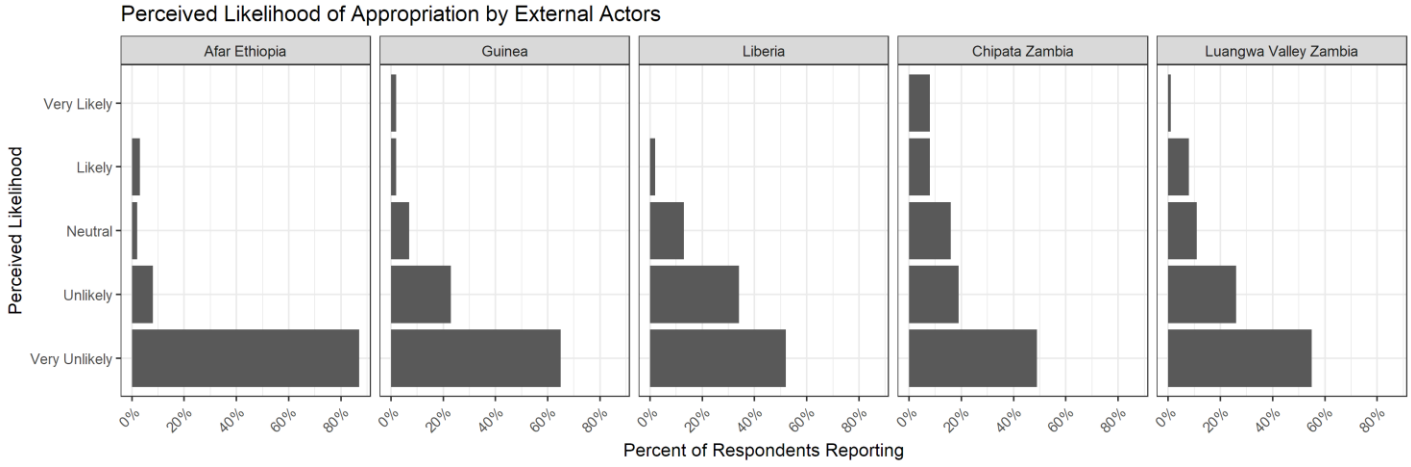

Figure 2. Perceived Likelihood of External Appropriation

Figure 1 displays respondents' estimation of the likelihood that *internal* actors, including their immediate or extended family, neighbors within the community, neighboring communities, or local customary authorities will appropriate their land against their will in the near future. Similarly, Figure 2 displays

respondents' perceived estimation of the likelihood that *external* actors, including urban elites, government actors, or outside investors, will appropriate their land against their will in the near future. For surveys that ask about these risks across short versus longer time horizons (Luangwa Valley, Chipata, Afar), we have averaged responses across the two time points to generate one overall average.

The results indicate that a clear majority of community members in the study sites do not perceive either internal or external appropriation as a significant threat. Across all studies, internal actors are perceived to pose the greatest threat to respondents' land use and access rights.

Specifically, in Liberia, there is evidence that a significant minority of respondents fear encroachment and/or appropriation by neighbors (28%, N=753) and neighboring communities (25%, N=506) in the near future. It appears the main concern is boundary disputes with neighboring communities, although 4% of respondents (N=77) said it was possible that elites or individuals from Monrovia would encroach on their land, and 7% (N=135) stated it was likely that outside investors or foreign companies would take or use their land without permission.

In Guinea, respondents reported the highest levels of perceived tenure security among all studies. Almost all respondents (98%, N=2,118) are confident their land is protected from appropriation and report that the boundaries of their farmland are clear and respected by people in their village. Of plots that are reported to be at risk of appropriation, the greatest perceived risk is losing land to members of the extended family (9%, N=354, in the next 5 years). Respondents are similarly confident that government officials or investors cannot take any of their land without negotiation and fair compensation. Only 5% of respondents (N=115) say there is a risk of local government authorities taking land without the household's permission. There is very little change in these likelihoods when the time frame of the question changed from short to medium term (1–2 years or 5 years into the future). A similarly small number of plots 4% (N=182) feel at risk of appropriation by investors, regardless of time horizon.

In Afar, more than 80% of respondents are confident that the boundaries of their primary land asset (wet and dry season grazing lands) are clear and respected. Less than 10% of respondents believe these lands could be appropriated by any actor, including customary leaders, investors, or members of outside clans. Respondents report similarly high levels of perceived security about their water points, another key livelihood asset. The greatest perceived threats to tenure security come from the national government and outside investors, but the magnitude is still small (6% of respondents, N=88). Over 70% of respondents are confident that their rights to access water points are clear and respected by the local government,

regional government, and investors. Similar to perceived risks to grazing areas, investors are seen as the greatest threat to water point access, but only a handful of respondents perceive this threat (N=13).

In the Chipata sample, the majority of respondents report that the likelihood of land reallocation, elite capture, or encroachment of fields the household customarily uses is 'impossible' or 'highly unlikely'. Respondents perceive that the greatest threats relate to chiefs offering their fields for investment purposes or to someone within their village encroaching on their land. Specifically, approximately 23% of fields are reported to be at some risk of confiscation by the chief.

The Luangwa Valley sample also demonstrates that most landholders feel fairly secure in their rights to farmland. Perceptions that farmland appropriation was 'likely' or 'very likely' ranged from 12% to 27%, averaged over surveyed fields across the six different sources of dispossession on which respondents were questioned.

Although across all studies, female-headed households (FHH) were somewhat more concerned about internal appropriation as compared to male-headed households (MHH) (average internal tenure security index of 4.07 / 5.00 for FHH vs. 4.19 for MHH, $p < 0.01$), there was no statistically significant difference in the likelihood of external appropriation reported by female- and male-headed households. Moreover, the few within-study differences that were significant go in the opposite direction. In Afar, female-headed households report significantly lower risk of both internal appropriation (average internal tenure security index of 4.87 / 5.00 for FHH vs. 4.80 for MHH, $p < 0.05$) and external appropriation (average external tenure security index of 4.85 for FHH vs. 4.77 for MHH, $p < 0.05$) in comparison to male-headed households. Similarly, in Chipata, female-headed households were significantly more likely to report higher levels of security on both the internal (4.25 for FHH vs. 4.17 for MHH, $p < 0.05$) and external appropriation (4.38 for FHH vs. 4.20 for MHH, $p < 0.01$) indices compared to male-headed households.

Land Rights Documentation

The vast majority of respondents in all study areas lack any written documentation of their property rights. With the exception of the Ethiopia Oromia sample, where fully 28% of respondents reported having land documents, less than 10% of respondents across the other samples reported having some form of paper documentation for any of their fields. In mostly pastoral Afar, only 5% of respondents reported documentation, and in Liberia, just 7% of respondents (N=146) reported possessing any documentation for their farmland. In Guinea, respondents report even lower levels of land documentation: 97% (N=3990) of household plots have no documentation. Among the 3% (N=61) of respondents that reported formal land documentation for at least one farming plot in the Guinea sample, the most common type of

documentation is a *titre foncier*, a colonial-era document. Finally, in Zambia, only a handful of respondents reported any kind of land documentation in Chipata (1%) or the Luangwa Valley (2%), and customary land certificates (an informal document) represent 66% and 83% of field documentation in Chipata and Luangwa, respectively, with some 15% of respondents in Luangwa reporting a formal lease.

Across all studies, female-headed households were significantly less likely to report any form of documentation than their male counterparts (5.5% for FHH vs. 7.6% for MHH, $p < 0.01$). Female-headed households were significantly less likely to report a document compared to male-headed households in Afar (3.5% for FHH vs. 5.4% for MHH, $p < 0.05$), Oromia (21.9% for FHH vs. 29.7% for MHH, $p < 0.01$), and Chipata (0.5% for FHH vs. 1.5% for MHH, $p < 0.01$).

Land Conflict[5]

The survey findings show that land-related conflict is a relatively rare occurrence in the study areas, though there is variation across study sites in the proportion of households that have experienced some form of land-related dispute on at least some of their land over the past three years. This figure ranges from 19% in Chipata to just 2% in Guinea and the Luangwa Valley. Among those reporting a conflict, disputes over boundaries are the most frequently cited across all sites.

In Guinea, despite the close proximity of diamond mining and agriculture activities, conflicts on household farm plots are very rare, occurring on only 41 plots (2%) over the last two years. Conflicts are rarely violent—just one conflict over the past two years involved violence by either party—and most conflicts are local (N=28), involving family or community members. Residents prefer disputes to be resolved between households or at the village level if needed.

In Afar, only 6% (N=153) of respondents reported experiencing any type of conflict over the past year. The most common type of land-related conflict reported is over boundaries between administrative regions (28%, N=75). In contrast to the other study sites, over half (52%, N=39) of the boundary conflicts take place with members of different (non-Afar) ethnic groups. Fully 70% (N=52) of such disputes have resulted in violence, and 64% (N=48) have led to destruction of property or the loss of livestock.

In Oromia, by contrast, 16% of respondents reported experiencing some conflict over the past year, with parcel boundary disputes being the most common (10% of all respondents). Disputes are mainly between members of the same ethnic group, except in areas that border the territories of two different groups. As

5 Note that a conflict series was not asked at the household level in Liberia due to concerns about the sensitivity of questions. However, a similar question asked of community leaders (data not reported here) indicated a very low level of conflict (roughly 2% of all households).

in Afar, high intensity conflicts are most likely to be resolved through government intervention (54% of all conflicts), particularly those involving inter-ethnic competition over territorial boundaries (75%) or grazing land (38%). However, traditional authorities, such as the elders council, are still involved in resolving 31% of reported conflicts, especially those related to intra-community disputes over communal goods, including water, grazing land, and migration within customary territorial boundaries.

Conflict reports are highest for the Chipata sample. In terms of actual land-related dispute experience, 19% (N=664) of respondents reported at least one land conflict on one of their agricultural fields in the past 3 years, with boundary disputes the most common type. In the Luangwa Valley sample, 15% of respondents reported disputes on farmland plots and 2% (N=93) report that their household had experienced a conflict about forest land, access, or natural resources in the past 12 months. Among the households involved in a forest-related dispute, 56% (N=54) were involved in boundary disputes. When conflicts do occur, they are most likely to be with other parties in the same village, as opposed to with other villages or with an outsider, and only five respondents reported that the dispute had led to violence or destruction of property.

Across all studies, there is no significant difference between the rates of conflict reported by male- and female-headed households. The only significant within-study difference is in Afar, where male-headed households were slightly more likely to report a previous conflict compared to female-headed households (7% for MHH vs. 4.2% for FHH, $p < 0.01$).

Land Appropriation

Data was also collected on reported incidents of land appropriation. Very few households across all study sites have experienced the loss of all rights to a parcel (i.e., involuntary reallocation of a parcel to a non-household member) or restricted access to land, and there were no significant differences in the rates reported by male- and female-headed households across all studies or within any individual study.

In Afar, less than 1% of respondents (N=14) report lost access to either wet or dry season grazing areas, and only a handful reported having been negatively impacted by lost access. Only 5% (N=132) reported that any areas used for grazing or water access were reallocated to farmland, and of those respondents, 39% (N=51) reported this reallocation affected their household's pasture or water use.

In Guinea, less than 1% of respondents (N=9) report losing access to a parcel used for household farmland. In Chipata, less than 2% (N=64) of respondents reported that their household's agricultural fields had been reallocated. Among those with land reallocated, the primary reason was that another

household in the village needed the land for cultivation (N=21). Similarly, in the Luangwa Valley sample, less than 1% of households (N=47) report experiencing a reallocation of household farmland.

Among households with access to forests in the Luangwa Valley sample, 15% (N=611) of respondents reported new restrictions within the past year that affected their ability to access or collect resources from forests. Most of these restrictions, such as permits for the collection of forest products, are related to conservation and rules to prevent harvesting forest products. Forty-four percent (N=269) of those noting restrictions said that they were imposed by the District Forest Office. The majority of those noting restrictions 65% (N=388) said that the restriction on access had no impact on their household, whereas approximately 25% (N=147) said that they had lost subsistence resources, and 16% (N=97) reported a loss of income.

5. Discussion and Conclusions

Given that, on the one hand, land registration interventions are based on the assumption that formalizing land rights will increase tenure security, and, on the other hand, most registration interventions in Africa have had mixed impacts on investment in practice, we argue that it is critical to test this assumption to increase the likelihood that such interventions will produce the expected results. As such, this research portfolio was designed to collect rigorous, standardized evidence of perceived tenure security and possible drivers of this security from six predominantly customary tenure contexts across four countries in Africa, both to inform the design of on-going interventions and to enable post-program impact evaluation. This paper represents an initial analysis of the pre-intervention tenure security context in the study areas and underlines the need to (i) carefully and consistently define the concept of tenure security within and across different contexts and to (ii) compare and contrast the levels of security reported by different respondents within the same community.

Customary land governance institutions appear to remain highly relevant in all countries, with more than three-quarters of respondents in each sample reporting that these institutions are the primary authority governing land and resource rights. Customary authorities are also the primary mediators of land-related disputes across all studies, except in Ethiopia, where government officials are more likely to be involved in resolving disputes over boundaries and grazing areas. The significant involvement of customary institutions in land administration and conflict resolution is striking given that governments have to varying degrees attempted to attenuate or replace the land-related authorities of customary institutions throughout the region. For example, in the pastoral areas of Ethiopia, where the formal government has stronger *de jure* authorities over land compared to customary authorities (McPeak et al., 2015), over 90% of respondents sampled in Afar and Oromia still indicated that customary authorities remain the most

important to land and resource management in practice. This, together with the extremely low rate (less than 10%) of households with written documentation of their land rights in all samples except Oromia indicate that customary tenure systems continue to govern the *de facto* land rights of the vast majority of landholders in these remote rural communities. Moreover, many of the documents that were reported, such as customary certificates in Zambia, are still outside the current formal land administration system.

In this predominantly customary context, then, our initial results appear to support Lawry et al.'s (2014) hypothesis that tenure security in Africa is relatively high as measured by the perceived risk of involuntary land takings. Less than one-third of respondents reported that encroachment or confiscation of their land is likely or highly likely, although these perceptions differ slightly for external as compared to internal actors. Well over half of respondents across all studies felt that outside actors (e.g. elites, government, investors) were 'unlikely' or 'very unlikely' to appropriate their land, and less than 20% of respondents thought this situation was 'likely' or 'very likely.' Respondents felt it slightly more likely that actors within the village would appropriate their land, with up to 30% of respondents reporting this situation 'likely' or 'very likely.' Still, well over half of respondents in each sample thought this 'unlikely' or 'very unlikely.' Although across all studies, female-headed households reported a slightly higher risk of internal appropriation than male-headed households, female-headed households reported a lower risk of appropriation than male-headed households in the two studies with significantly different means. Of course, female household heads are not representative of all women, and their tenure security may be endogenous to the social status that allows them to control land as individual females (Goldstein and Udry, 2008).

These preliminary results highlight variation across study contexts in several potential drivers of tenure security, including the possession of written documentation verifying land rights and past experience with land-related conflict and land appropriation. While overall rates of land documentation are low across all samples, they range from just 1-2% in Zambia to 28% in Oromia, Ethiopia, where some settled farming areas have previously benefited from the Government's farmland registration program. Across all studies, a significantly larger proportion of male-headed households report documentation than female-headed households, and these differences are significant within three of the samples (Afar, Oromia, and Chipata).

Interestingly, we find that the perceived risk of land appropriation is lowest in two of the areas with the lowest coverage of written documentation: Afar, Ethiopia (5% report documentation) and Guinea (3%). Moreover, female-headed households reported *lower* levels of appropriation risk than their male counterparts in the two studies where these results significantly differed within the study population, despite the females reporting lower rates of documentation. While we plan to conduct regression analysis

to further explore these relationships, these descriptive results suggest that at least some skepticism of the implicit assumption that formal land registration increases tenure security is merited.

The incidence of land-related disputes is fairly low across the samples and for the most part does not differ significantly across male- and female-headed households, although there is site-specific variation in the types of disputes reported. In line with the extremely high levels of tenure security reported by respondents in our Guinea sample, only 2% of all farming plots had reportedly been affected by conflict over the previous two years, mostly related to competing claims made by family or community members. In largely pastoral Afar, only 6% of respondents (significantly more male than female) reported a conflict within the previous year. Most of these conflicts related to administrative boundaries, which are supposed to align roughly with the customary territories of different ethnic groups, and our results confirm that violence is common along these borders (McPeak, Little & Doss, 2012). By contrast, in Oromia, where pastoral, agro-pastoral, and settled agricultural communities co-exist and are increasingly in competition for scarce arable land, 16% of respondents reported a conflict within the past year, and disputes over farm parcel boundaries were the most commonly reported (McPeak et al. 2015). Disputes over farmland plots were also relatively higher in Zambia (15% in Luangwa Valley, 19% in Chipata), with most disputes related to boundaries. These results suggest that competition for arable land may be relatively more common in Oromia, Chipata, and the Luangwa Valley, which could in turn lead to a decrease in tenure security. Indeed, among the studies where we have both tenure security and land dispute data, fear of land appropriation appears to be higher in Chipata and Luanguwa Valley than in Afar or Guinea.

Similarly, actual experience of lost access to land and natural resources is very low across all study sites, ranging from less than 1% of respondents in Afar (grazing areas) to 15% of respondents in the Luangwa Valley (forest resources), of which nearly two-thirds reported that lost forest access had not impacted their household. In Guinea, less than 1% of respondents (N=9) reported lost access to household farmland. In Chipata, less than 2% of agricultural fields had reportedly been reallocated, further underlining the extremely limited incidence of land appropriation in practice. There were no significant differences in the incidence of actual land appropriation reported by female- and male-headed households overall or within any individual study sample. These user-reported data do not provide evidence on the mechanism of assurance or ensure these rights will be upheld in future. Still, if extant customary systems do in some cases effectively uphold land rights, then it would be important to assess demand for formal land administration services prior to undertaking first-time registration of customary land rights.

Our research provides evidence that perceptions of tenure security can be measured in a standardized way to enable more rigorous assessment of the levels and drivers of tenure security, as well as comparison of

these indicators across contexts and time. To inform land registration efforts and improve the overall evidence base on the impacts of land registration in Africa, it will be important to expand collection of pre-intervention perceptions of tenure security, ideally through standardized methods and using common modules for different types of land (e.g. communally held land versus household farmland). Given that perception-based questions are subject to bias,[6] such questions could be complimented with alternative measures of the tenure status and drivers of tenure security to provide a more complete picture. For example, ideally, reported land documentation should be visually verified and could also be compared to official land administration records where government policy allows for access to these data. Drivers could be verified through, for instance, the existence of overlapping land records or concession licenses.

While our findings are of course not representative of all rural settings in Africa or all individuals within a community, these results nevertheless suggest that a more nuanced pre-intervention assessment of perceived tenure security is needed to ensure that land registration interventions are sufficiently targeted. In areas where customary or other informal tenure systems continue to function, legal recognition of customary rights *may* be sufficient to provide a majority of landholders with assurance that their rights will be upheld if challenged (Knight 2010; Lawry et al. 2014; United Nations 2012). By contrast, where landholders have less confidence that their rights will be upheld, formal land registration interventions may be needed to increase tenure security and thereby incentivize investment. Even in relatively tenure-secure areas, interventions may still be needed to strengthen the rights of vulnerable groups, such as women or minority ethnic groups. In this case, the overall cost-effectiveness of land registration in securing the rights of the most vulnerable landholders will need to be weighed against the cost-effectiveness of other means to achieve this end, such as raising awareness of women's rights and facilitating community- and household-level discussions about the benefits of protecting women's rights.

Thus, our results confirm that tenure security is context-specific and suggest that efforts to strengthen tenure security must effectively address the particular drivers of *insecurity* in each context to have a demonstrable impact on landholders' perceptions. For instance, in areas where land rights derive primarily from community membership, extant customary tenure systems continue to function, and outsiders pose the primary risk of land appropriation, land registration at the community level accompanied by formal recognition of customary tenure institutions may be sufficient to reduce insecurity

[6] In particular, we note that differences in landholders' awareness of potential threats may also influence their perceived tenure security. For instance, the incidence of large-scale transfers to investors is arguably highly relevant in Liberia, where the Government has leased large areas to commercial plantations (Deininger et al. 2010). However, only 7% of respondents thought it likely they would lose their land to an investor. Whereas, in Zambia, where such transfers are relatively rare, 23% of respondents reported a high near-term likelihood of land confiscation by the chief for investment. This highlights limitations in the reliance on perceptions-based data alone and underlines the need to assess multiple measures of tenure security to fully understand the local context.

(Jhaveri, et al. 2016). By contrast, where land rights are held primarily by individuals or families and actors within the community pose the greatest risk to tenure security, and particularly where informal land transactions involving outsiders are common, the more costly and time-consuming investment in registering land rights held by families or individuals may be merited. We acknowledge that perception-based data present an incomplete picture of the actual risks to tenure security in dynamic landscapes characterized by increasing competition for land. Nevertheless, we argue that careful consideration of landholders' existing tenure security perceptions as part of the design and evaluation of land registration projects is needed to increase the effectiveness and impacts of such interventions.

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Table 1. Overview of datasets

Country	Dataset	Survey Date	Sample Size	Focal Regions
Ethiopia	Afar	2016	2,656 households	Amibara and Chifra *woredas*
Ethiopia	Oromia	2014	2,541 households	Borana and Guji zones
Guinea	Guinea	2014	2,165 households	Forécariah and Kindia prefectures
Liberia	Liberia	2013	2,100 households	Lofa, River Gee and Maryland counties
Zambia	Chipata	2014	3,512 households	Chipata district
Zambia	Luangwa Valley	2016	4,274 respondents[1]	Nyimba, Mambwe and Lundazi districts

[1] To enable intra-household analysis of tenure security, adult respondents were randomly selected within selected households.