Income Intervention Quick Scan: Land Tenure Security

Farmer Income Lab Intervention Quick Scan

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WAGENINGEN
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Abstract UK This quick scan, commissioned by the Farmer Income Lab, is part of a wider research effort looking at, “What are the most effective actions that lead buyers can take to enable smallholder farmers in global supply chains to meaningfully increase their incomes?”. The quick scan provides an overview of the publicly available evidence on the impact of land tenure security have had on raising farmer income. Such subsidies have had little positive effect on farmer income, are not notably beneficial for women nor is this effect long-term. They have been applied at large scale. This quick scan is part of a series of 16, contributing to a synthesis report “What Works to Raise Farmer’s Income: a Landscape Review”.

Keywords: farmers’ income, intervention, agriculture, smallholders, land tenure, land rights, investment strategies, land conservation

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List of abbreviations and acronyms

GRAD	Groupe de Recherche Actions pour le Développement
IIED	International Institute for Environment and Development
NGO	Non-Governmental Organization
NORAD	Norwegian Agency for Development Cooperation
RRI	Rights and Resources Initiative
SIDA	Swedish International Development Cooperation Agency
VGGT	Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forest in the Context of National Food Security
WCDI	Wageningen Centre for Development Innovation, Wageningen University & Research
WUR	Wageningen University & Research

1 Introduction

1.1 Definition

The topic of land tenure is a complex topic according to many of the authors writing about the topic. The term captures a range of different terms and descriptors. **Tenure (in)security** is one of the most difficult versions of the concept. Generally one can define this as "as the ''**bundle of land rights**" **held** with ''rights" being described along several dimensions (e.g., type and breadth, duration, and certainty of exercise). Thus, tenure insecurity arises from a sense of ''lacking" in single rights, combinations of rights, duration of rights, certainty of retaining rights, from actual or risk of dispute over rights, risk of expropriation of all land rights, among others" (Place, 2009, p. 1327).

While the debate on the importance and relation of land tenure to productivity, investment and poverty alleviation has attracted research for decades, a resurgence has lately been witnessed due to the work of Hernando de Soto. The argument posed by de Soto is that the poorest people in various continents all over the world have various 'things' but they "lack the process to represent their property and create capital. They have houses but not titles, crops but not deeds" (de Soto, 2000; cited in Sjaastad & Cousins, 2009).

A **wide range of interventions and processes can be considered to support land tenure security**. This may include various interventions that may be categorized under two types: first, **conversion of communal lands or non-demarcated lands to freehold title and registration of rights in official documentation**; and second, **statutory recognition and capturing of customary or communal land rights and registration of these rights in official documents**. Specific approaches under the first category primarily involve initiatives of land titling, certification and individual registration. The second type, involving processes of creating tenure security via increased legal stature of customary rights, seem most relevant to the African continent (Atwood, 1990; Lawry et al., 2014). Studies in Africa often indicate that inheritance is the main channel through which land acquisition takes place, but that these are often accompanied by strong long term private rights (often in the form of usage rights) (Place, 2009).

1.2 Theory of change

Three thought perspectives exist on the relation between tenure security and livelihoods. These are the economic, legal or adaptation lenses, and each perspective has a different focus. From an economic perspective maximum land tenure security is in the form of individual full ownership supported by land titles. The legal perspective primarily engages with how protection and enforcement of rights or interests in land are conducted. The adaptation perspective, often used by anthropologists and qualitative research on customary land tenure systems, considers that tenure security mostly is a form of "assurance as perceived by land right(s) holder that his or her land rights are recognized and enforced within the community norms and values". Land ownership is therefore not the crucial component but rather any right in land (Christine, Simbizi, Bennett, & Zevenbergen, 2014, pp. 233–235). For the purpose of this literature scan, the economic perspective offers the most insights on the relation to farmer income, productivity and investment.

Using an economic perspective, the positive link between land tenure security and productivity and investment is generally based on four theoretical arguments that researchers have sought to explore with empirical evidence (Abdulai, Owusu, & Goetz, 2011):

1. Secured property rights are expected to provide a **guarantee** for farmers to undertake long-term investment in land-improving and conservation measures, since there would be no fear of expropriation.

2. Secured land rights make it easier to use land as **collateral** to obtain loans to finance agricultural investments
3. Better possibilities for trade: if improved transfer rights enhance **factor mobility** by making it easier for farmers to sell or rent their land, investment in land-improving measures may be facilitated.
4. Land rights provide **freedom to innovate** (Fenske, 2011)

The first three arguments are often called “assurance,” “collateralizability,” and “realizability” effects (Brasselle & Platteau, 2002). The fourth argument is based on the idea that community rights over land may discourage investment because the community fears negative externalities from investments made, while individuals might be less discouraged by this (Besley, 1995: cited by Fenske, 2011). The link between land tenure security and farm efficiency appears to find much less support from evidence (Place, 2009). Also, long term effects in some cases do not happen via the credit pathway – but rather via long term investments in human capital of land titled households (Galiani & Schargrodsky, 2010). Lawry et al. (2014) developed a theory of change that explores the relations from interventions to outcomes (see figure 1). Here the focus is primarily on the final outcomes productivity and welfare of rights holders. Positive linkages are made by intermediate productivity outcomes such as increased investment in land, labor and inputs. Important moderating factors that support interventions include governance, social norms and practices, land use and markets. In a similar model, Place (2009) notes that a critical role is played by supporting land and credit markets to make the link between mechanisms and outcomes.

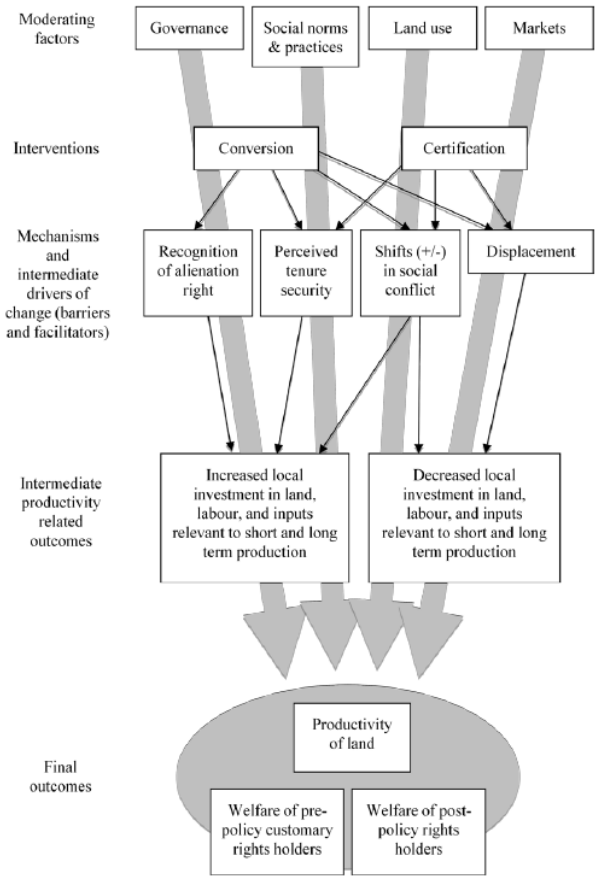

Figure 1: Theory of Change

Figure 1 *Theory of change (Lawry et al., 2014).*

1.3 Geography

In the work assessed for this literature scan land tenure systems and programs have been examined ranging from various continents, notably Africa, Asia and Latin America. Lawry et al. (2014) systematically reviewed studies on land tenure-related initiatives from countries such as Vietnam, Cambodia, Nicaragua, Peru, Ethiopia and Madagascar. Other research has particularly zoomed in on sub-Saharan Africa – for instance, Deininger and colleagues published various studies on land registration and reform in Ethiopia (Deininger, Jin, & Nagarajan, 2009; Deininger & Byerlee, 2011; Holden, Deininger, & Ghebru, 2009). Other research, from a more qualitative perspective and small-scale sample, shows that land tenure processes have been researched in West Africa, East Africa and South Africa as well. Fenske (2011) reviewed the evidence on the links between land tenure systems, investment and productivity based on datasets from Benin, Burkina Faso, Ghana and Ivory Coast.

It should be noted that not all the literature is about agricultural or rural settings. For example, Galiani and Schargrodsky (2010) explore a process of urban land occupation in Buenos Aires and the livelihood consequences of inhabitants accepting different forms of settlement arrangements.

1.4 Role of actors

Generally major stakeholders involved in initiatives of land tenure security have **been policy-making bodies (mostly national governments)** implementing changes to land tenure arrangements such as certification (in Ethiopia, see Houngbedji, 2015); but also agrarian land reform and titling programs such as described by Deininger and Chamorro (2004) in Nicaragua since 1990. Other example of land reform driven by governments post-second World War and post-colonial times include Korea, Japan and India, but also more recently Brazil, Bolivia, South Africa, the Philippines, Venezuela and Zimbabwe (Deininger et al., 2009).

It should be noted that **donors** such as the World Bank, supported by other international donors, are often providing strong support for land titling and reform programs (this is exemplified by the large scale programs in Nicaragua (Deininger and Chamorro, 2002), Ethiopia (Ali, Deininger, & Goldstein, 2014; Holden et al., 2009) (see also section on methodological weaknesses).

On a slightly smaller scale, various **development actors** seek to help, and understand how, small-scale rural inhabitants navigate the various opportunities available to increase land tenure security exist. Cotula et al (2007) for instance analyze findings from a program on 'Pastoral Land Tenure and Decentralisation in Mali' (1999-2003), funded by NORAD and implemented by IIED and by a Malian NGO, GRAD. Also, a wide range of civil society organizations and international NGOs have been heavily involved in tracking and challenging problematic issues of land grabbing in various low and middle income countries. Much of these more activist actors have highlighted the increased pressure of international commercial interests in land acquisition, limited possibilities for local communities to secure their land rights under customary law, and insufficient action taken by governments on these matters (Anseeuw, Wily, Cotula, & Taylor, 2011).

From the **private sector** perspective attention is moving toward the perspective of **'responsible agricultural investment'** (see for instance FAO, IFAD, UNCTAD, & World Bank Group, (2010). Key discussions have been on how to operationalize these principles in practical ways, particularly when it comes to land rights. Guidelines have been developed in collaboration with the private sector, such as the Voluntary Guidelines on the responsible governance of tenure of land, fisheries and forest in the context of national food security (VGGT) (FAO, 2012), and the Interlaken Groups' 'Respecting Land and Forest Rights': A Guide for Companies (The Interlaken Group and the Rights and Resources Initiative (RRI), 2015). It should be noted however that the literature studies assessed did not specifically explore private sector interventions related to land tenure security.

2 Summary and justification of assessment

Strength of outcome		
Assessment criterion	**WUR score**	**Rationale for score**
Scale: Size of the population intervention could impact and potential to scale to other contexts	HIGH (size of population) LOW (potential to scale to other contexts)	• The initiatives surrounding land tenure security are often implemented at a large scale. This can be at national level when legal land policies are involved, or at regional level where changes to land titling arrangements are initiated. o Do & Iyer (2007); Houngbedji (2015); Holden et al., (2009) • The potential to scale or replicate to other countries or areas is low. This relates to the complexity of land tenure arrangements and the political nature of land o Place (2009); Sjaastad & Cousins (2009); Houngbedji (2015
Impact: degree of increase in incomes	LOW (Africa) MEDIUM (Latin America and Asia)	• Generally the impact of increased land tenure security is found to be positive. However, these benefits are clearer on the long term: short-term impact of having land ownership is more difficult to assess as welfare and income benefits. o Lawry et al. (2014); Bezabih, Holden, & Mannberg (2016) • There are strong regional differences: particularly in Latin America and Asia much stronger positive effects are seen than in African studies (though this is also dependent on performance of credit, input supply, and product markets). For instance, o Lawry et al. (2014); Deininger, Jin and Nagarajan (2009); Galiani & Schargrodsky (2010) • The positive outcomes mostly relate to increased productivity and investment, and thereby can affect income. Productivity is supported by labor, inputs and assets. Examples of positive effects often focus on: increased likelihood to invest in trees, fencing, input use; or land monetary value o Place (2009); Lawry et al. (2014); Fenske (2011); • Qualitative studies confirm that social impacts resulting from tenure interventions can be significant. Important to realise (and not understood enough) is the impact of titling programs on both beneficiaries and the broader population including those who may not have received titles. o Fenske (2011)
Sustainability: financial ability of farmer income increase to endure independent of ongoing external support	HIGH	• Land tenure interventions such as laws, reform and land certification/titling often take a longer time period. Often land tenure security reforms are either kick-started by governments in a political process that takes time. Shortest period of land reform was in Japan and Taiwan – 4 years. Momentum of land reform may slow down after a time. o Deininger, Jin and Nagarajan (2009) • Short-term, low-cost land certification and registration programmes have been implemented in various countries across continents, at relatively low cost to governments and farmers. This appeared most effective when weak property rights and frequent land redistribution undermined land market development. o Holden & Ghebru (2016); Holden et al. (2009); Lawry et al. (2014)

Gender: Potential of intervention to positively impact women	MEDIUM	• Empirical effects on male-female relations in land tenure have not been studied enough. But it is clear that men generally have more access to land rights and titles than women. Also, unpredictable and in some instances negative consequences such as displacement or diminished property rights for women occur. o Place (2009); Fenske (2011) • Positive effects have been identified *where explicit attention is paid to women's land rights*, even though this is not often the case. o Place (2009); Meinzen-Dick, Quisumbing, Doss, & Theis (2017); Melesse, Dabissa & Bulte (2017) o
Strength of evidence		
Assessment criterion	**WUR score**	**Rationale for score**
Breadth: amount of rigorous literature that exists on the impact of the intervention, as defined by the minimum quality of evidence for this paper	MEDIUM	• There is ample literature that explores land tenure security interventions in relation to productivity and investment. However, the empirical research is biased towards themes exploring conversion of communal or non-demarcated rural land to freehold title and registration of such rights in an official registry. Recognition of and codification of customary or communal rural land rights is hardly explored , and if so, from a qualitative discipline. o Lawry et al. (2014) • Measurement errors are intrinsic to any study of the impact of land tenure. Choosing the appropriate measure of land rights is difficult. Place (1995; cited in Fenske, 2011) cites mode of acquisition, household long-term rights, household rights to plant trees, rights of women, rights to exclude livestock, disputes, access to off-farm trees, landholding size and fragmentation all as potentially relevant factors. Also, de jure rights may have little to do with de facto rights, and those rights that are measured may not be those most relevant o Fenske (2011) • There is some concern about selection and spill-over biases. These potential biases may cause the evidence base to overstate the beneficial effects of tenure recognition. World Bank-supported studies are well-represented in the literature, and may put a strong stamp on the debate. o Lawry et al. (2014)
Consistency: Degree to which the studies reviewed are in agreement on the direction of impact (i.e., positive or negative)	MEDIUM (for Asian and Latin American cases) and LOW (for African cases)	• Generally, most of the literature assessed is in favor of a positive link between land tenure security interventions (particularly when it comes to de jure recognition of land titles) in relation to productivity, investment and welfare. • However, there are caveats due to highly context-specific situations: in Asia and in Latin America the literature in general is much more positive and clear. In African countries the link is much less clear and less clearly positive due to poorly understood customary land tenure (conversion) processes. Also the issue of 'reverse causality' often materialises: land investments and use strengthening land tenure security. As Fenske (2011: 154) notes: "While the a priori case for a link between land tenure and agricultural investment is strong, twenty years of empirical studies have failed to show its robustness in Africa". o Lawry et al. (2014); Bezabih, Holden & Mannberg (2016); Deininger, Jin and Nagarajan (2009); Fenske (2011); Place (2009)

3 Methodology

Searches were conducted via search engines on academic databases (WUR library; Scopus and Google Scholar) and a non-academic (Google) search engine delivered a wide range of scientific and grey literature. A selection of literature was made, including systematic reviews, overview papers and empirical studies.
From a longlist of 36 documents, 20 documents were selected for closer review, primarily scientific papers. The following papers were reviewed in more detail:

- 1 systematic review of the impact of land property rights interventions on investment and agricultural productivity (Lawry et al., 2014):
    - This review analyses quantitative data from 20 robust studies from Africa, Asia and Latin America
    - This review also includes qualitative analysis from 9 studies
- 1 systematic review of the empirical literature on land tenure and investment incentives in Africa (Fenske, 2011). This includes:
    - Econometric results of an empirical review of 54 published and un-published studies
    - This study includes econometric analysis of 9 data sets from West Africa
- 1 comparative analysis of the economics literature on land tenure and agricultural productivity (Place, 2009)
- 1 literature review on land tenure reforms, tenure security and food security in poor agrarian societies (Holden and Ghebru, 2016)
- 1 review of literature exploring the link between women's land rights and productivity (Meinzen-Dick et al., 2017)
- Many of the other papers are country-level empirical studies, using a variety of different approaches including surveys, natural experiments or longitudinal data collected over time.

Many studies exist that look at various ways in which land tenure security affects the productivity and investment in land. This is the means through which income increases may be found. Other literature seeks to delve more into what kinds of land tenure interventions (such as land titling, reform or certification may affect livelihood changes).

Main weaknesses identified in the literature flow from **the difficulty of capturing 'land tenure security' empirically** (particularly in African contexts), and causally relating the main determining factors. Measurement errors often occur due to difficulty finding the right way to capture this since de jure land rights may have little to do with de facto rights. Additionally, many of the studies in Africa with small sample sizes, those that use binary investment measures, and those that control for household fixed effects are less likely to find a statistically significant link between land tenure and investment. Also, it appears that self-reported tenure security are not good at predicting investment outcomes (Fenske, 2011).

It appears that publication bias is not especially present in the literature review conducted by Lawry et al. (2014). However, **selection bias exists**: the evidence base may overstate the beneficial effects of tenure recognition, while showing limited attention to spill-overs. This relates to what happens when those with land titles expand and negatively affect others in the surrounding area with customary rights. Also, the importance of understanding why certain households or land parcels received tenure recognition while others did not is poorly explored (Lawry et al., 2014).
Finally a note about the type of studies that seem to dominate the debate: World Bank evaluation studies in Ethiopia composed of 20% of the quantitative studies assessed by Lawry et al. (2014) and they all come to similar findings. Deininger, a World Bank economist, was co-author in 9 of the studies. This shows that, in combination with methodological problems in excluded quantitative studies and disciplinary biases towards economic analysis over more sociological approaches, the World Bank agenda and research priorities have put a strong stamp on this topic in the past 10 years.

4 Impact

4.1 Effect on income, productivity and investment

There is a certain amount of consensus among economists that **better property rights lead to better economic outcomes** (Do & Iyer, 2007; Lawry et al., 2014). However, there are not many studies that are able to soundly link this to concrete income gains.
Lawry et al. (2014) note that various forms of land tenure approaches (be it formalisation or customary approaches) have "potentially different measurable effects on productivity and investment, though the effects in both cases may be positive". Bezabih, Holden & Mannberg (2016) write that tenure security in relation to investment and the allocative efficiency of the land market, and thus increasing land productivity, is well established.

It is noted however, that any type of **tenure *reform* may also have negative social effects.** Thus, an attempted change to land governance may lead to effects on women's access to land, displacement of poor people, limited access of actors with limited social or financial assets, and forms of imbalances whereby powerful actors entrench their power by being able to increase their share of land (Cotula, 2007; Lawry et al., 2014).

Land tenure interventions prioritize land owners. The literature assessed does not explicitly identify farmer segments that especially benefit from the link between land tenure security and economic outcomes. However, it is clear that in many of the debates the underlying emphasis on increased (individual freehold) tenure rights prioritizes land owners and not the rural (land-less) poor. Especially youth landlessness and unemployment is a growing challenge in agrarian societies where population growth still is high (Holden and Ghebru, 2016).

Regional differences exist, showing that for Asia and Latin America a stronger positive link exists, as opposed to more contradictory evidence in Africa. Many land tenure related interventions studied are in Asia, Africa and Latin America. As a generalization, ownership of land based on titled and registered private rights is the dominant form of rural agricultural tenure across Latin America, and to a significant degree in Asia – this underlines that benefits of land ownership are geared especially toward agribusinesses, commercial farmers and pre-commercial farmers. Particularly in Africa, many studies are oriented towards understanding customary land tenure systems where smallholders may not necessarily have ownership rights but rather usage rights of land (Atwood, 1990; Place, 2009; Lawry et al. 2014).

In a systematic review of 20 critically selected studies, Lawry et al (2014) find that the studies from Nicaragua, Peru, Cambodia and Vietnam found **statistically significant productivity effects of tenure interventions**, compared to much weaker effects recorded for African cases such as Ethiopia and Madagascar (see figure 2 and 3). Regarding income, it is seen that the effect is less strongly identified than productivity[1].

Interestingly, when other factors were controlled for, *region* emerged as a strong predictor of productivity effects. It appears that in African countries, levels of rural agricultural productivity may remain weak due to factors other than tenure insecurity such as small farm size, the importance of off-farm income to rural households, and employment migration of family members to other areas.

[1] In these figures, productivity is assessed by "multiplying farms' or households' output portfolios with prevailing market prices, or market value of the property, which is assumed to be a straightforward (that is, linear) function of the value of output that the land will sustain". Income and consumption: "Welfare of pre- and post-policy rights holders in terms of income/ consumption or poverty, measured via prevailing market monetary value of consumption (or its natural logarithm for example, monetary value of foodstuffs and nondurables consumed in the past month, tallied using a consumption roster such as that which appears in the World Bank Living Standard Measurement household survey instrument) or regular household monetary income".

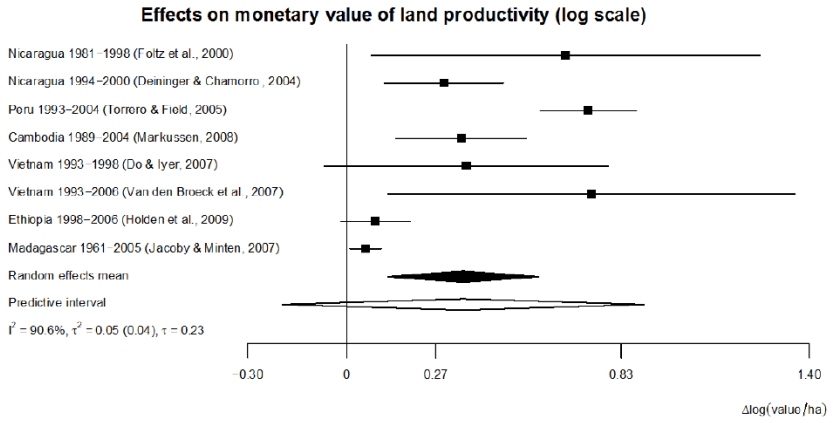

Figure 5a: *The forest plot shows estimates of the effect of de jure recognition of tenure on the monetary value of land productivity (log scale). See section 3.1.4 for operational definitions of the outcomes. Moves to the right on the x-axis indicate beneficial effects. See section 3.4.1 for details on the random effects model used to produce the random effects mean, predictive interval, and I² measure of heterogeneity.*

Figure 1 *Monetary value of land productivity (Lawry et al., 2014).*

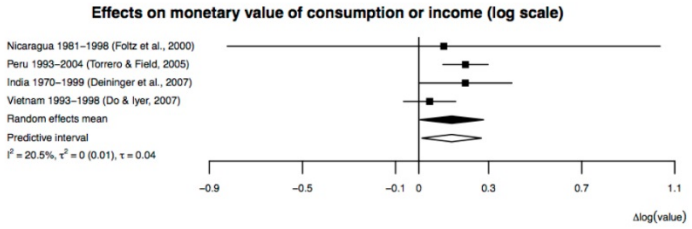

Figure 5b: *The forest plot shows estimates of the effect of de jure recognition of tenure on the monetary value of consumption or income (log scale). See section 3.1.4 for operational definitions of the outcomes. Moves to the right on the x-axis indicate beneficial effects. See section 3.4.1 for details on the random effects model used to produce the random effects mean, predictive interval, and I² measure of heterogeneity.*

Figure 2 *Monetary value of consumption or income (Lawry et al., 2014).*

In other sources perhaps showing these regional differences, Deininger, Jin and Nagarajan (2009) explored land tenancy reform in India using 20-year panel data. They found that tenancy reform, which on average affected about 10 percent of rural households, is estimated to have increased the growth rate for per capita income, per capita consumption and total assets by 0.9, 0.7 and 1.2 percentage points respectively.

In the context of urban land access in Buenos Aires, the long term effect of a law allowing land to fall to occupants showed long term positive effects. This actually does not happen via credit options via land collateral, but rather that entitled families substantially increased housing investment, reduced household size, and enhanced the education of their children relative to the control group. This shows that *human capital investments* on the long term happen. Interestingly, in this case, no differences were found between treatment and control groups in terms of income (Galiani & Schargrodsky, 2010).

4.2 Intermediate and other outcomes

Land tenure is often linked to agricultural investment strategies. Fenske (2011) finds that, in 9 data sets on investment and land tenure forms, that investment types are often labor, chemical or organic inputs. In most of these data sets, land-tenure measures are often captured as the method by

which the plot of land is acquired. In Benin, the finding is that fertilizer is used less on rented than inherited plots. In Burkina Faso, less securely held plots are left fallow for shorter periods, slightly decreasing soil fertility. In Ghana, it is seen that leased or borrowed plots in northern Ghana are less likely to be cultivated with household or hired labor. Also, tree planting in Ghana happens more often on owned and sharecropped plots. However, it is also seen that within plots with different forms of ownership tree planting is more common on those owned without a deed. In Mali, sharecropped, gifted, and municipal plots are less likely than inherited ones to be incompletely cultivated.

Investments can take the form of tree planting and soil conservation. In various studies from 4 regions in Ethiopia (discussed in Holden & Ghebru, 2016) it is seen that land transfer rights and tenure security are linked to higher investments: in one study low cost land certification had a significant positive effect on planting of trees and soil conservation; in a second study the same intervention was found to positively affect food production and food access for poor female-headed households who sharecropped out their land.

Land tenure security can have consequences for labour use strategies. In a survey in Amhara, Ethiopia, Houngbedji (2015) finds that households participating in a regional land certification scheme decreases the needed labour supply of households: due to less time needed to 'guard the farm' 8-14 days could be reallocated to other income generating opportunities. This could potentially lead to an income increase of between 48 and 112 Ethiopian Birr, representing 15.6 to 36.4% of the non-farming income.

Propensity of farmers to invest increases. Deininger and Chamorro (2002) explore the effect of agrarian reform in Nicaragua. The main finding is that having land that is registered (not merely titled) increases land values by 30% and at the same time greatly increases the propensity of owners to invest with 8 and 9%. Among plots that had been registered before the 1990 reform, the propensity to invest was 4% higher than the rest, showing a continuous positive impact of registration on investment.

The positive empirical evidence is occasionally challenged by scholars that identify **diffuse effects.** There is discussion about distributional impact of land titling: for instance if land improves access to credit particularly it may provide more benefits to those better off, while if titling initiatives are mainly oriented to improve tenure security of the poor it may help them significantly because the high cost of registration and countering legal challenges does not need to be spent (Deininger and Chamorro, 2004).

Regarding the nature of causality, a main challenge of economists is to deal with **the factor of land endogeneity**. This was raised by Brasselle & Platteau (2002), who found in Burkina Faso that farmers were actually investing in land (in the form of tree planting) to gain tenure security. Fenske (2011) notes that there are two reasons related to the above issues. Firstly, the context matters, especially for African customary systems. The context means that investment does not have to be driven by land tenure security: other factors like weak credit markets, experiences with land titling that may not be positive, or that customary systems offer adequate security to invest. Secondly, it relates to the manner and difficulty of empirical evidence gathering (see methodology section).

4.3 Scalability

The initiatives surrounding land tenure security are often implemented at a large scale. This can be at national level when legal land policies are involved, or at regional level where changes to land titling arrangements are initiated. For instance, regarding national level scale, Do & Iyer (2007) analyzed the impact of the changed Land Law in Vietnam in 1993, which issued 11 million land titles to rural households. Similar programs in Thailand (8,7 million land titles), Indonesia (1,87 million) and an urban land titling program in Peru (1,2 million titles) affected a large number of households. An example of a regional program in Ethiopia was explored by Houngbedji (2015), where the region of Amhara, with the support of the Swedish International Development Cooperation Agency (Sida),

implemented a land registration and certification program in 2002. This program reached more than 890,000 households.

The potential to scale or replicate to other countries or areas is low. This relates to the complexity of land tenure arrangements and the political nature of land. For instance, Place (2009) underlines that in Africa the tenure systems are so diverse, both fundamentally and subtly. Key factors relate to differences in institutional set-up, rates of population growth, market development, climates & ecologies, and the degree to which governments can actually influence local land arrangements. Sjaastad & Cousins (2009) note that the historical evidence with regard to land formalization programs is mixed, and that current universalist proposals contain numerous flaws. Houngbedji (2015) states that conclusions in the specific Ethiopian context show limited external validity due to factors such as: land size per adult member is relatively small; households control several small plots; land markets are fairly restricted; and peasant associations use land reallocation as a means to balance land access at community level.

4.4 Sustainability

Land tenure interventions such as laws, reform and land certification/titling often take a longer time period. Often land tenure security reforms are either kick-started by governments in a political process that takes time. Shortest period of land reform was in Japan and Taiwan – 4 years. Momentum of land reform may slow down after a time (Deininger, Jin and Nagarajan, 2009). Short-term, low-cost land certification and registration programmes have been implemented in various countries across continents, at relatively low cost to governments and farmers. This appeared most effective when weak property rights and frequent land redistribution undermined land market development (Holden & Ghebru, 2016; Holden et al., 2009; Lawry et al., 2014).

4.5 Applicability of impact

Generally it is found that the **gender dimensions in relation to land tenure have not been studied enough and evidence is still limited**. A key question regards land tenure security arrangements and the effects on women and men. It is generally clear that women's rights over land and other farmer resources in Africa are inferior to men's rights. For instance, while the majority of males reported unfettered rights to give land to family members, fewer than 5% of women could do so across sites in Zambia, Uganda, and Burundi (Meinzen-Dick et al., 1997; Place, 1995, Walker, 2002; cited in Place; 2009). It has been noted for instance that formalisation of land into title deeds gives men, who are often household heads, more influence than other less empowered members of their household (Simbizi et al., 2014).

It is seen that if women are to benefit from land tenure interventions, explicit attention needs to be on women's land rights. There are examples of this such as joint titling and joint land certification that have given more attention to the gender dimension, especially coming from Ethiopia (Holden and Gebru, 2016). Recent efforts at land certification and registration have increasingly recognized women's rights to land. Melesse, Dabissa & Bulte (2017) see that joint land certification in Ethiopia has a positive and statistically significant impact on various (but not all) dimensions of women's empowerment. Specifically, certified women are more likely to participate in household decisions and community activities, be aware of their land rights and land related provisions, have a higher perceived level of tenure security, and are more willing to protect their land rights.

Meinzen-Dick et al. (2017) analysed that 17 studies show that the evidence base is particularly high regarding the positive relation between women's land rights and increased bargaining power and decision making (see figure 4). On the other hand there is still limited evidence of women land rights effects on other livelihoods, credit, technology adoption and agricultural productivity.

Table 6.1. Assessment of quality of evidence on women's land rights and pathways to poverty reduction

		Amount of evidence		
		Limited	**Medium**	**High**
Level of agreement	**Low**	*Suggested but unproven* • Other livelihoods	*Speculative*	*Alternate explanations*
	Medium	*Tentatively agreed by most but unproven* • Credit • Technology adoption • Agricultural productivity	*Provisionally agreed by most*	*Generally accepted*
	High	*Agreed but unproven* • Poverty reduction	*Agreed but incompletely documented* • Natural resource management • Government services and institutions • Empowerment and domestic violence • Resilience and HIV risk • Consumption and food security	*Well established* • Bargaining power and decision making over consumption • Bargaining power and decision making on human capital investment and intergenerational transfers

Source: Authors.
Note: HIV = human immunodeficiency virus.

Figure 3 *Meinzen-Dick et al. (2017).*

5 Key success factors

In the literature the following key success factors seem to matter, relating to two issues that have slightly different emphasis.

Land tenure in general

Strong contextual understanding of legal, customary and political dynamics in a country is important. Conditions that might need more formalized and individual types of land tenure security interventions may be when there are high levels of land scarcity, major migration or population movements, limited legitimacy or accountability of current land governance mechanisms (including customary authorities), fast urban expansion and limited use of common-pool resources under community management. Demands for more community or customary tenure recognition might be when population and town development is more stable, when land governance legitimacy and accountability is accepted, and there is a higher dependence on common pool resources (Lawry et al., 2014).

Much depends on the implementation of existing laws and policies and making sure existing governance arrangements work to realise the benefits of current land tenure arrangements. This relates to the extent to which government agencies adequately conduct rights clarification and adjudication (Lawry et al., 2014).

Pragmatism, flexibility, and decentralization in government approaches to land governance is also key (Place, 2009)**.** This builds on the fact that 'de jure' and 'de facto' land rights might differ very much in communities. In (West) Africa, it appears that tenure security and subsequent investment in land most importantly hinges on land use rather than official titles. Recognition of this factor has implications for how to perceive different forms of land tenure ownership and titling, and underlines that linear relations between ownership and welfare can work in opposite directions (Fenske, 2011).

On changes in land tenure arrangements

The realisation that land is not only an economic asset but also a political power source is important. This means that a change in land laws and tenure security processes may have positive effects but also negative political effects not only pertaining to land owners (Cotula, 2007). Place (2009) notes that from a policy perspective it is now becoming clear that 1) land titling is not always the best policy option since property right do not always grant full ownership and do not always have to be individual; and 2) the most important issue for sustainable development is that property rights are deemed secure according to context.

Demand for change needs to be assessed. Donors have been driven to promote new arrangements due to perceptions that 1) customary tenure arrangements are inherently insecure; 2) that this presumed insecurity negatively affects investment in productivity enhancing practices and technologies; and 3) that the difficulty transferring customary land rights might hinder the flow of credit to farming enterprises. On the first two assumptions the evidence is not so strong – gradually it turned out that in many contexts the demand for land tenure process change was not so high as expected. On the third assumption there is evidence that customary rights do many land transfer and use as collateral more difficult, but that this is made less urgent due to a combination of other factors that make getting credit more difficult (Lawry et al., 2014).

National leadership and steering is key. Examples from Rwanda and Ethiopia show the limitations of donor driven land titling efforts and the importance of having a land rights policy and programme that is driven by national leadership and funded by national budgets. Success factors noted from here are that tenure conversion programs need heavy political commitment, need to be embraced by

national governments and implemented while knowing that high implementation costs can be involved (Lawry et al., 2014).

6 Barriers addressed

As mentioned above as part of the economic theory of change, land tenure security arrangements (and the possession of titles) have 4 pathways to support investments and productivity. These are 'assurance', 'collateralizability', and 'realizability', and freedom to innovate (Brasselle & Platteau, 2002; Fenske, 2011). In Asian and Latin American contexts these factors are more or less supported by evidence – mostly assurance and realizability. In African contexts these pathways are slightly more complex.

Land tenure interventions can help to overcome a number of barriers: the most important is the lack of security perceived by the user or owner of the land. The fact that land can be taken away negatively affects decision-making about use of land, investment in terms of labor, inputs and capital.

Other important barriers the land tenure security arrangements and interventions can address are access to finance through use of collateral and the ability to safely sell, rent or transfer land ownership. However, it should be noted that in African contexts (and in some cases in other continents) the credit link is far from established. In African countries it also appears that other factors and barriers to investment and productivity, such as small farm size, the importance of off-farm income to rural households, the high opportunity costs of agricultural labor, and the associated deployment of working-age family members to urban centers for work may be more important issues that land tenure only indirectly affects (Lawry et al., 2014).

7 Questions for further research

The following key issues are mentioned to be important for future research.

1. There still needs to be more rigorous research on the relations between income and wealth, customary tenure and investment in African countries.
2. A deeper understanding is needed on gender equality – this is because it seems that in many cases women's land rights are not taken into account in land titling. The evidence on this comes from qualitative approaches, but more quantitative research needs to further examine this.
3. There needs to be more attention to alternative processes of land ownership recognition through customary law – particularly studies on policy effects are lacking in this regard.
4. There need to be more long term studies tracing community titling initiatives because until now most research was on individual or household titling.

In conclusion, there is still not a strong sense of the dynamics that follow from land tenure policies and program in terms of overall access to land – not only for owners but also landless and surrounding communities (Lawry et al. 2014).

Methodologically, the following needs are mentioned as well by Place (2009): there needs to be more improvement in measurement and interpretation or results. A stronger comparative review is needed that takes into account population densities, market opportunities, agro-ecological potential, and farming systems. Measurements also need to carefully assess how tenure security is defined.

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