Land registration, credit and agricultural investment in Africa

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Abstract

Purpose – The purpose of this paper is to critically examine the argument linking land registration to agricultural investment and to provide theoretical reasons as to why this linkage may not materialise in Africa within the short to medium term.

Design/methodology/approach – The paper takes the form of a critical review of the relevant literature on land registration, access to credit and agricultural investment; arguments are built on empirical studies found in the literature and theoretical concepts.

Findings – It has been established in this paper that the links between landed property registration and agricultural investments are made defective in Africa by factors such as poverty, lack of appropriate agro-based infrastructure and the fact that land registration *per se* does not improve the profitability of agriculture, neither does it improve access to credit.

Research limitations/implications – The fact that this paper is based on literature review may be seen as a weakness to some extent.

Originality/value – Even though previous researchers have looked at the relationship between landed property registration and agricultural investment in the developing world, they fall short of critically explaining why land registration has been found not to enhance agricultural investment. This paper fills the gap through a combination of various theoretical and practical arguments which could call for a rethinking on the policies for promoting agricultural growth. The rigorous theoretical argument may also provide the basis for further empirical research.

Keywords Africa, Agricultural finance, Investments, Agricultural investment, Credit, Land registration

Paper type Literature review

1. Introduction

The quest for secure rights to land dates back to several centuries ago. Feder and Nishio (1999) referring to the books of Genesis 23 and Jeremiah 32 in the Holy Bible explains how Abraham and the prophet Jeremiah sought for secure rights to different parcels of land some 4,000 years ago. Land was and still remains a great symbol of wealth to many people especially in Africa. It is the most important resource on which most people in Africa earn their living. For instance about 3.4m households in Ghana own or operate a farm; 55.8 percent of all employed people between the ages of 15 and 64 are in employed in the agricultural sector (Ghana Statistical Service (GSS), 2008). The importance of land as a livelihood resource in the rural areas is even more pronounced as 85 percent of rural households are involved in farming compared to only 28 percent of the urban households (GSS, 2008). Therefore, securing one's rights to any piece of land held must be of paramount interest given its contribution to household livelihoods. The fight for securing one's land rights could thus be seen as a fight for survival.

According to Feder *et al.* (1986) and Roth and Haase (1998) secure land tenure increases demand for agricultural-related investments; such investments are then

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expected to increase output, farmers' income and subsequently reduce the level of poverty. It is also argued by Alston *et al.* (1996), Carter and Olinto (1996) and Lopez (1996) that land tenure security significantly influence land values, access to formal credit and subsequently agricultural investments. Thus, the lack of or low level of agro-based investments and hence the high incidence of poverty in Africa has been attributed to the insecure nature of land tenure; this assertion is made by De Soto (2000) in his argument that the third world is undercapitalised and underdeveloped because of the difficulty in identifying "who owns what" (alluding to absence of land registration and presence of insecure land rights). Consequently, security of land tenure is considered as a precondition for economic growth, development and poverty reduction (Deininger, 2003; World Bank, 1975). There is thus the need for a mechanism that can establish land tenure security in the developing world. As aptly observed by Abdulai (2010) traditionally, land registration has been perceived as the answer to insecurity of land tenure in the developing world. Land registration by implication is considered as the missing tool in the fight against poverty in the less developed countries (LDCs). Therefore, governments in the LDCs, supported by international donors have been religiously pursuing land registration programmes (Dower and Potamites, 2005). This is also evident in the huge expenses incurred in implementing these policies and programmes ranging from, US$20.51m in Ghana, US$27m in Malawi, US$106m in Bolivia, US$140m in the Dominican Republic to US$195m in Ukraine (Griffith-Charles, 2004).

There are two schools of thought regarding the link between land registration and security of land rights. One school of thought claims that land registration is the panacea to the problems of ownership insecurity, access to credit and investments (Feder and Nishio, 1999; MacGee, 2006; World Bank, 2007). The other however, argues that land registration *per se* is incapable of guaranteeing ownership security (Deininger, 2003; Durand-Lasserve and Payne, 2006; Abdulai, 2010).

Empirical research from most developing countries including Ghana, Kenya, Rwanda, Uganda, Senegal, Burkina Faso, Cameroon and Somalia have failed to establish any significant relationship between land registration on one hand and security, access to credit and investment on the other hand (Brasselle *et al.*, 2001; Migot-Adholla *et al.*, 1991; Pender *et al.*, 2004; Place and Hazell, 1993; Place and Migot-Adholla, 1998). Elsewhere, Angel *et al.* (2006) report that among all studies in Peru, none found a direct causal link between land registration and credit access. In Bogotá, Gilbert (2002) also found that the possession of registered title either made very little or no difference to formal credit availability.

As noted by Payne *et al.* (2009) in several areas including India, Mexico, Peru, South Africa, Tanzania, Senegal and Egypt, *de facto* security already existed before the introduction of land registration programs; indeed in Afghanistan and India for instance, it is reported that registration actually led to a reduction in tenure security. It is probably in this regard that Atwood (1990) argues that land registration could actually reduce security and lead to more conflicts. Land-related disputes persist despite the introduction of registration schemes and such disputes have sometimes erupted into civil conflicts in Africa (Abdulai, 2010). In fact Abdulai observes that out of the 12, 380 cases of land disputes filed at the law courts of Ghana within the eight year period from 1999 to 2006, 17 percent of such lands were registered; out of this number, about 195 of such cases were resolved in court but 53 percent of these cases

were decided against the registered owners. It is further estimated that about 10 and 15 percent of registered lands remain under ownership disputes in Honduras and the Philippines, respectively (World Bank, 2005).

Despite the seemingly lack of empirical evidence in the LDCs, The World Bank, donor agencies and governments in Africa have all come to accept and promote land registration as a tool for promoting tenure security, protecting property rights to land, securing investments, unifying land markets, improving access to formal credit, reducing poverty and promoting economic development through increased agricultural investments (Payne *et al.*, 2009). There is thus the need for a re-examination of the theoretical link between land registration on one hand and secure land rights, access to formal credit, investment and poverty reduction on the other. The aim of this paper is to attempt a theoretical and practical explanation of why land registration in previous studies has been found not to have a significant positive relationship with access to credit and agro-based investment in Africa. The rest of the paper is organised as follows. The next section gives an explanation of land tenure. Land registration is explained in Section 3. Section 4 looks at the link between registration and agricultural investment. Finally, Section 5 is devoted to the conclusion.

2. Land tenure

Land tenure refers to the manner in which people own land; this includes the principles and underlying guidelines for land holding, usage and transactions (Payne, 1997; cited in De Souza, 2001). Land ownership is exhibited by an individual's possession and ability to exercise a combination of various rights to a parcel of land (Honore, 1961; cited in Abdulai, 2010) listed below:

- The right to possess or exclusive right – ability to exclude others from using the land.
- The right to manage – ability to decide how the land should be used and by whom.
- The right to income – benefits of forgoing personal use in favour of other people.
- The right to capital – the ability to transfer, consume, waste, modify or destroy.
- The right to security – ability to enjoy protection against expropriation.
- The right to transmissibility – ability to bequeath.
- The right to divisibility – ability to divide in any way desirable.
- The right to prohibit harmful use – responsibility to use in a manner not detrimental to others.
- The right to absence of terms or duration – indeterminate length of ownership rights.
- The right of liability to execution – liability to have ones land taken away for the repayment of a debt or to satisfy a lawful action.
- The right to residual character – the right to reversion of lapsed ownership.
- The right to usufruct rights – the use and personal enjoyment without interference.

Land ownership can thus usually be thought of in a more restrictive manner as one individual may only have limited rights to exercise. While stressing on the exercise of these rights by land holders, it should be noted that one's rights tend to end where another's begin. Land holders should beware of the limitations of their rights to any property. They have the duty to responsibly exercise these rights in a way that does not infringe on the individual rights of other people.

Security of land tenure refers to the certainty that a person's land rights will be recognized by law and especially, by members of the society and protected when there are disputes or challenges to such rights (Abdulai, 2010; Food and Agriculture Organisation (FAO), 2005). Security of land tenure therefore involves two forms recognition/validation. These are state validation by legal recognition and validation at the local level through recognition of one's rights by one's neighbours. In every human society challenges or disputes are bound to occur over landownership but with security, these rights should be protected and enforced. Security is thus about the exercise of one's rights without the fear of unnecessary interference or fear of forceful eviction (De Souza, 1999). Thus, where land rights are unenforceable, land owners are faced with clear case of insecurity (Kvitashvili, 2004).

3. Land registration

Land registration is simply a process of recording legally recognized land rights in a central system controlled by the state; it therefore creates a landed property ownership database that can be used for various purposes in an economy (Abdulai, 2010). There are mainly two forms of land registration systems – deed and title registration. According to Deininger (2003) a deed registration process simply involves legally recording land transfers and this recording process takes place during the time of the transaction; in this system of registration, one is said to attain legally recognized rights to land upon conclusion of a transaction contract. The transactions are only recorded in the register to provide public notice of the existence of the land rights and challenges to such rights are handled through civil litigation (Deininger, 2003). It is argued by Larson (1991) that deed registration most often does not provide any guarantees apart from providing evidence in times of double transfers. Asiama (2000) and Larson (1991) also argue that transactions may be offered for registration without any enquiry regarding its contents and effect, and the fact of registration carries with it no implication of title prior to registration.

However, in a title registration system, it is the entry into the register that gives land rights legal validity, guaranteed by the state – all entries in the register are *prima facie* evidence of the actual legal status of the land (Deininger, 2003). The state guarantees the accuracy of the data entered in the title register and in some jurisdictions, the state indemnifies or compensates land owners who suffer any loss due to negligence, mistakes, errors and omissions from the registration system as well as fraud unless the owners contributed substantially to the occurrence of these events (Coveney, 2003; Clarke, 2002). It is often argued that the main difference between the deed and land title registration systems is the provision of title warranty, at least from a theoretical perspective; However, in some jurisdictions like Germany, Sweden and Denmark state guarantee is not provided under the title registration and protection for registrants is only derived from "public faith" (Zevenbergen, 2002). Thus, from a practical perspective, the main difference between the two systems is rather the source of ownership legality.

4. Why land registration cannot promote agricultural investment in the short term

As observed earlier, one reason why many countries are being encouraged to pursue land registration programs is the argument that it can enhance agricultural production, raise income levels and reduce poverty. Feder *et al.* (1986) and Roth and Haase (1998) observe that registration plays this role through two main channels – the demand-side and supply-side effects or channels; both channels operate on the belief that land registration promotes land tenure security.

Demand-side channel

The advantages of land registration and secure land rights which include: the reduction of land disputes; reduction of transaction costs in land transfers; reduction of risk in land transactions; enhancement of the confidence of landholders regarding their use of the land; reduction of ambiguity in property rights; and facilitation of land-related transactions (Adams *et al.*, 1999; Deininger and Chamorro, 2002; Kakuru, 2008) work together to provide farmers with the incentive to invest to increase productivity. It is argued that this is likely to happen because, with the improvement in security, farmers are more certain that they will remain to reap the fruits of their investments – this is the assurance effect (Brasselle *et al.*, 2001). With this assurance against expropriation of their land rights, it is reasonable to argue that farmers will be more willing to work harder to improve productivity especially where it has the potential to improve their economic wellbeing. It will be a complete waste of time and other limited resources to invest if there is a high probability that one may lose one's rights even before the returns on investments begin to trickle in. Second, according to Brasselle *et al.* (2001) with the consequent reduction in land disputes, farmers can now spend more of their productive resources on the land instead of wasting such resources through land litigations and other processes aimed at protecting their rights.

Even though land registration has the potential to provide incentives for agro-based investments, this argument, fails to identify the level of security or degree of certainty in land rights required to generate such investment incentives. Given the fact that security is nothing but a perception, it will be more helpful to define the threshold at which farmers will feel certain enough to invest. The question then is whether registration *per se* gives them such a feeling. Despite the fact that land disputes as observed earlier have persisted in several African countries even with the introduction of land registration, this may not be sufficient to conclude that land registration has failed in that the related laws are not often enforced.

For instance, in Ghana, there are instances where indefeasible titles issued have been quashed by the courts in times of conflicts as such titles are issued sometimes without due regard for certain constitutional provisions (Fiadzigbey, 2000). This implies two things. The first is related to the registration process whilst the second is to do with enforceability of the law protecting registered land ownership. All officials involved must be well trained and knowledgeable with all aspects of the registration process including the legal requirements.

The observation by Fiadzigbey (2000) implies that either officials are not well trained or they fragrantly ignore some of the requirements. Furthermore, the Title Registration Law (PNDCL 152) 1986 of Ghana and the Land Registration Act 2002 of England, state that all registered titles shall be indefeasible; therefore the fact that registered titles are

being quashed in the law courts may be an indication that the legal provisions supposed to be backing land registration in the country are not been defended by the judiciary system (may be the judiciary is not well trained or equipped to handle such matters). In fact failure to properly enforce the law may affect people's confidence in the registration system and even encourage more disputes which comes with its bitter consequences; it is possible that the increased insecurity of land ownership experienced after the introduction of land registration is partly caused by the fact that the land registration laws are not properly enforced land registration in Ghana has been beset with such problems as lack of land plans and maps for accurate identification which has led to multiple registrations for the same land (Sittie, 2006). Issues of this nature are recipes for more land-related conflicts and disaster in the implementation of land registration programs. The lack of plans and maps reiterates the fact that property boundaries are not well demarcated – a main source of boundary disputes.

Disputes over registered land could also be a case of people not having due respect or recognition for the law. Finally, it could also be that the law is too complicated and needs to be simplified to avoid ambiguity. As the rule of law and the institutional capacity of the judiciary are strengthened in the medium to long term, the security effects of land registration will be more visible in Africa and the rest of the developing world. It should thus be said that at the moment registration alone may not provide that security threshold required to invest given the circumstance discussed above.

It must be stated that disputes are anticipated to arise through the registration process and that is why the Ghana Land Registration law 1986 makes provision for an adjudication committee to handle any arising disputes before conferring rights to the deserving claimants; hence embedded in the registration process is a mechanism for resolving disputes. Therefore, the fact that disputes and insecurity increase after issuing titles is an indication that the adjudication process is not executed well and disputes are not resolved properly before titles are issued.

Security is an important factor influencing the investment decision-making process; it may however not be the most important as the demand-side argument appears to assume. Investment in agriculture could be risky but at the same time could require a lot of money which involves a sacrifice of current consumption. According to the GSS (2008) a total of 312.5m Ghana cedis was spent on all crop inputs in 2008 out of which 43 percent went to hired labour, 25.5 percent for fertilizers, 6.9 percent for insecticides, 4.6 percent for local tools, 4.3 percent to seedlings and 2.9 percent to transport. It is common knowledge that in Africa and the rest of the developing world raising the funds required to invest may be quiet a hurdle for most of the farmers living in wide spread poverty.

For instance, Draman (2003) points out that out of the 25 poorest countries in the world, 11 are found in west Africa. The proportion of the total population in sub-Saharan Africa living on less than a dollar a day is about 47.67 percent compared to 44.01 percent for south Asia, 27 percent for east Asia, 16.8 percent for Latin America and the Caribbean's, 2.39 percent for the Middle East and north Africa, and 1.56 percent for eastern Europe and central Asia (Chen and Ravallion, 2000; cited in Draman, 2003). In the last two decades The World Bank (2007) points out that the number of poor people in Africa has doubled to involve more than 40 percent of the region's total population. The average Ghanaian lives on less than 1.10 Ghana cedis a day (less than a dollar); this may be the reason why out of the total agricultural land area

of 13,628,179 hectors only 4,320,000 hectors (less than 50 percent of the total area) are under cultivation (GSS, 2005).

Though land registration may provide security to motivate investment, the low income level may limit the amount and quality of investment that is eventually undertaken. Haven said that, there is evidence that the economies of Africa are fast improving. It is reported that in 2011 almost 50 percent of the 12 fastest growing economies in the world are from Africa; Ghana outperforms bigger economies like China and India to take the top position with a growth rate of 20.15 percent. The list is completed by Liberia (9 percent), Angola (8.25 percent), Ethiopia (7.66 percent) and Mozambique (7.55 percent) in 5th, 7th, 9th and 10th places, respectively, Africa's GDP is also expected to rise by about 45 percent over the next five years (Economywatch, 2011). There is thus every indication that in the long term these economies will grow and the socioeconomic lives of the people will improves. As income levels increase, security will promote agricultural investment even more to sustain development.

Furthermore, land registration in Ghana, according to Zevenbergen (2002) still involves several organisations with a very poor level of cooperation amongst them, operations are said to be over-centralised in Accra, only six deed registry offices and four title registry offices were established in the country by 2002 (even though only one title registry actually issued certificates as at that time), some of these registries are said to lack registrars and, the official process involved is too lengthy and expensive. Such inconveniences and cost could be some of the key barriers to the success of the land registration programs; hence the need to decentralise operations and eliminate all unnecessary red-tape. Given the poverty situation many households will not be able to afford and that in itself will undermine successful implementation.

It is further argued that land registration makes possible the development of active land markets and facilitates their operations. In instances where the original land owners do not have their own financial resources to invest and do not wish to borrow for that purpose, land registration is argued to permit the transfer of land from such ineffective and incapable land owners to those who are financially able to invest (Feder and Nishio, 1999). Therefore, the absence of internal funds and credit may (at least in theory) not hinder overall agricultural investments. It must be noted however, that in Africa, most of the farmers are located in the rural areas where such markets may be unlikely to develop even with land registration. These rural areas are often cut off from essential socioeconomic infrastructural network (such as transport and communication networks, water, and electricity). For example, according to The World Bank (2007) rural population across the developing world have lower rates of infrastructure access than urban population; 65 percent of urban households in low-income countries have access to electricity, but only 17 percent of rural households do have this access. Whilst 73 percent of urban households have access to pipe borne water only 14 percent of those in rural area have access to pipe borne water (GSS, 2008).

Those who are well to do mostly reside in the cities; these city dwellers however, may not be very likely to move into such deprived rural areas to buy lands as they are perceived to be unsuitable for residential and commercial purposes. The only way to attract such buyers and potential investors in agriculture will be to put in place measures that will both open up the rural areas and improve on the returns of agricultural investments. Alternatively, when investors realise that government has a clear plan to develop the infrastructural base of the rural areas in the near future, that prospect could

motivate people to acquire rural lands (which may be relatively cheaper now) for further development or investment in the future when the place eventually opens up; in this case security may most likely be vital in the development of rural land markets. Again, given the fast growing economies in Africa discussed earlier, the ability of land registration to facilitate the development of active land markets will certainly be more pronounced with economic development.

It must be further stated that secure land rights though very important, is not and cannot be a sufficient condition on its own for promoting agro-based investments. The incentive, motivation or willingness to invest in agriculture in Africa may depend on several other factors which define the overall suitability and profitability of the agricultural investment environment. One of such important factors is the availability of agro-based infrastructure (such as irrigation, and storage facilities). A suitable investment climate should ideally reduce agricultural risk to enhance the prospects of related investment. It is common knowledge that agriculture is still rain fed in Africa. However, rainfall pattern appears to remain irregular. There is the need for artificial means of constant water supply to farm lands. There is no need stressing that the adoption of irrigation technology in Africa remains low. The percentage of land under irrigation in Africa is lower than what exist in Asia and Asia also has a more reliable source of water supply than Africa (Dorward *et al.*, 2002). In Ghana for instance, out of the total 4,320,000 hectors of agricultural land area under cultivation only 7,500 hectors are under irrigation (GSS, 2008). The consequence may be the high possibility of crop failure and the loss of any investments made by the farmers.

The risk of weather failures is highly related with price risk; systemic risk as adverse weather changes and global price fluctuations are said to be responsible for the lack of private investment in agriculture (Llanto, 2007). Price risk may partly be the result of the lack of proper storage facilities which compels farmers to sell all their crops at the time of harvest at highly depressed prices caused by the glut in the market. If farmers could afford to properly store their produce there will be no concerns of their crops going bad, therefore no need to sell them at very low prices. This could stabilise prices of farm output and make investments more profitable. The importance of price stabilisation cannot be overemphasised as noted by Rahim (1953) any agricultural reform program must include price stabilisation interventions if the reform is to achieve increased production levels (Rahim, 1953).

Furthermore, the density of paved roads in Africa in the 1990s is said to be far lower compared to that of India during its green revolution in the 1960s and transport cost as a consequence is higher in Africa than Asia (Dorward *et al.*, 2002). Improving on the transport network in the rural areas may reduce post-harvest losses and increase investment returns. Direct government participation in agro-processing or the creation of a friendly environment for agro-processing will go a long way to ease the problem of market access and also increase investment returns. To make agriculture profitable in Africa there will be the need to reduce all forms of losses to the barest minimum.

An enabling environment for agricultural investment as described above will increase investment returns and improve profitability. Once the sector becomes profitable, farmers will be more willing to go into commercial farming and the motivation to invest will automatically increase. The apparent absence of this enabling environment may be one of the biggest constraints to agricultural productivity in the continent. Thus, the findings of previous research that land registration has not

enhanced investment in Africa, must not be taken to mean registration cannot enhance investment; what appears to be a failure of the demand-side effect so far, is rather the result of the current poor nature of the rural and agro-based infrastructure, wide spread poverty which together appear to have made the agricultural investment quiet unprofitable commercially. With improvements in these over the long run there is no doubt that researchers will begin to make different conclusions about the impact of land registration.

Supply-side channel

As aptly observed earlier, the demand-side argument assumes implicitly that farmers are financially capable of investing in productivity enhancing activities but as argued above this is most likely not the case for most African farmers. If farmers do not have internal funds readily available to undertake investments, the funds will have to come from external sources – credit. The supply-side channel seeks to provide a solution to this apparent weakness in the demand-side argument. By this alternative argument, land registration through its security enhancing ability, is said to improve on the collateral properties and value of land; making it a better, more secure and acceptable form of collateral for investment credit (De Soto, 2000). Registration therefore by implication reduces the problem of lack of collateral which is perceived to be the one of the main factors responsible for the limited access to credit (Berger, 1989; De Soto, 2000; Kakuru, 2008; Pearce *et al.*, 2004). Land registration in effect is argued to make farmers more credit worthy to attract funding from private financial institutions for investment that will improve farm revenues and farmers welfare.

Given the wave of discussion so far, it must clearly be pointed out the registration *per se* will not make land the perfect collateral that will trigger credit supply. First and foremost registration does not change the location of various parcels of land. From experience, location appears to play a big role when formal lenders are to take land-base collateral. Location may affect demand for and the value of land. Land must be located in areas that can attract buyers more quickly to make it a more acceptable collateral to lenders; because as observed by Kibodya (2006) and Rouse (2002) an asset becomes a good and more acceptable collateral when it is easy to sell. Durand-Lasserve and Payne (2006) observe that there is a significant reduction in efficiency gains of taking land-based collateral where the lender for instance, places a value on the location of a land parcel as a slum. Bromley (2005) also notes that a good house in a bad neighbourhood is always burdened by its surroundings. As such he argues that registered titles may not automatically lead to land improvements. The location of a registered land may thus be an important factor in determining its intrinsic value. For most of the African farmers, the location of their lands in deprived rural areas may be a barrier to lenders when foreclosure becomes necessary. This "fear" may therefore scare lenders away from taking land-based collateral located in the rural areas. Gilbert (2002) notes that in Bogotá the challenge for lenders is the nature of the assets often offered as collateral; indeed Gilbert argues that in Colombia the savings and loans corporations put in place strict rules about the kinds of building and their locations on which loans may be advanced.

Second, registration may not improve rural land values. Assuming that a favourable credit decision will be taken based on the possession of land-based collateral, the value of the land will be of great importance to the lender. Rural lands can suffer depressed values

because of their location. Also the high degree of land fragmentation means that each farmer may just be entitled to small parcels of land whose relatively small value may not be sufficient to attract the desired credit. There is this argument that land registration raises land values (Payne *et al.*, 2009). Angel *et al.* (2006) for instance, observe that land values could appreciate by about 25 percent or higher upon registration. Durand-Lasserve and Payne (2006) also estimate that the market value of land appreciates by at least 20-60 percent upon registration. This may be true in that, if land registration is able to reduce land disputes then people will be prepared to pay premium to increase the price for registered land over and above that of unregistered land. However, it should be noted that even in such instances farmers may still not benefit because any such "price-enhancing" benefit of land registration will be far outweighed by the "price-depressing" effect of the rural and deprived location of their lands.

Third, land registration will not change the cash flows and profitability of agricultural investments. As discussed under the demand-side argument, the high risk exposure of farmers makes agriculture unprofitable and attractive to private investment as well as lenders. For instance, the consequence of price risk in Uganda and Mali are well documented in Uganda, the experience of very good maize harvest from 2001 to 2002 caused drastic fall in prices and farmer incomes and subsequently affected some banks as loan repayments were affected; in the case of Mali the proportion of the credit portfolio considered at risk for a number of credit unions increased from just 3 percent in 1998 to 12 percent in 1999 as a result of a significant decline in cotton prices (Llanto, 2007). Climatic conditions coupled with price fluctuations expose farmers' incomes to risk at a level above that experienced by people in other sectors and this affects their loan repayment capacity (Yaron, 1992) and consequently their access to credit. Formal lenders are not NGOs and every penny advanced is based on the conviction that it can be recovered with no significant problems. To be sure about this, they will scrutinise farmers to assess the profitability and cash flows of their farming business. These peasant farmers who can barely produce enough to feed their households the whole year round may not be able to generate sufficient cash flows from the unprofitable farming activities to attract credit from lenders. In the absence of the appropriate agro-based infrastructure and market access as discussed earlier, land registration *per se* will not make agriculture a profitably attractive business to lenders. Formal lenders out of their inability to understand and manage the peculiar risk associated with farmers (Llanto, 2007) often tend to avoid lending to them outright and the possession of a registered land alone may not be enough to change the mind of a lender.

Furthermore, land registration does not change people's attitudes. Supposing that the possession of registered titles is a necessary condition for obtaining credit, farmers by necessity must be willing to use their lands as collateral. Any unwillingness to do so will imply that possession of registered titles will not necessarily lead to increased access to credit until people change their attitudes towards formal credit and the use of land as collateral. The ability of land registration to promote greater access to agricultural credit is dependent on the policies, traditions and culture in different country; for instance, where the customs, traditions, culture or policies prohibit the use of land as collateral, there is no way registration will promote credit access (Feder and Nishio, 1999). Place and Migot-Adholla (1998) establish in Kenya that there exists a very limited use of land titles as collateral for credit purposes. Dower and Potamites (2005) also note that individuals who have both registered land and fixed income employments prefer to go

for loans secured by their salaries other than loans secured by their land. Also the introduction of land registration does not alter people's preference for informal loans as registered landowners are found to have very little or no interest in formal credit (Durand-Lasserve and Payne, 2006). It is argued that the poor (such as African small scale farmers) are often reluctant to borrow from banks due to the fear of the possible consequences of failure to repay (Gilbert, 2002). The lack of interest in applying for formal credit may therefore not permit the potential credit effects of land registration to be realised. The unwillingness to use land titles as collateral may be caused by the fact the land ownership remains mainly communal in Africa; with development and consequent individualisation one can expect a more positive attitude.

Deininger (2003) points to the fact that certain preconditions must exist to realise the credit effects of land registration. These conditions are said to include the existence of:

- an informal credit market; and
- a latent demand for formal credit that is not met because of lack of registered title.

These preconditions identified above could imply several things. One is that registered titles should be a necessary requirement for obtaining formal loans. However, land can be used as collateral even if it is not formally registered as people are able to use informal documents to demonstrate ownership (Dower and Potamites, 2005). Therefore, in areas where it is not a necessary requirement, obtaining a registered title may not enhance an individual's chance of getting a formal loan. Second, there should also be a general preference for formal credit. This makes theoretical sense since collateral-based lending is believed to be more prominent in formal credit markets (Mutesasira *et al.*, 2001). Therefore, even though registration may improve on the collateral value of land, if people prefer informal credit for which reason there is very little or no demand for formal credit, then wide spread land registration may not also yield the expected credit effects.

Apart from the arguments raised so far, it must also be noted that land registration does not make land the most important determinant of credit access to farmers. In other words there are other more important factors that formal lenders consider in granting credit. Dower and Potamites (2005) for instance, find that the use registered land titles as collateral is not an important determinant of credit in Indonesia; this is because possessing a registered title to land does not necessarily imply that the associated rights are fully transferable; and finally, collateral may not be the most important factor determining credit supply. The first point deserves a little explanation. It draws attention to the fact that registration merely records existing rights to land into a register but does not grant people rights that they do not possess originally – it does not create new rights to land. Even though an individual's rights to land may be registered, such rights may not be good enough to permit them to use the land in question as collateral for a loan. For instance, the individual may not have the right to mortgage the land even though he/she may have the right to physical occupation/possession and use and even the right to bequeath. Once the potential borrower does not have the right to mortgage the land, the fact of registration will be non-consequential in the credit decision-making process. But such a problem may only exist because of communal ownership.

Even though land registration can enhance access to agricultural credit for investment, Carter and Olinto (2003) argue that biases usually exist in the credit

market in favour of the more affluent large-scale farmers to the disadvantage of the poor majority small scale farmers. In Paraguay, Carter and Olinto (2003) also observe that land registration only increased credit access for the large farmers while those with small plots (least wealth households) failed to benefit. Large-scale commercial farmers are likely to be wealthier and less risky which make them more attractive to commercial lenders. Unfortunately in Africa, agriculture appears to remain largely on subsistence basis. Therefore, increasing security of tenure through land registration for as many farmers as possible will not increase the number of potential borrowers in Africa (Atwood, 1990).

The main reason why people may be denied credit according to Angel *et al.* (2006) is the low borrower repayment capacity and not the absence of registered land-based collateral. Gilbert (2002) also establishes that the formal lending decision-making process is based on the ability of borrowers to demonstrate that they have a regular income source. Formal lenders thus seek that assurance that a loan will be repaid. It may be difficult to find such an assurance from Africa's majority poor small scale farmers and as Gilbert (2002) thus argues, formal lenders usually do not have confidence in the repayment capacity of such poor people as it often turns out to be unprofitable. Apart from the fact that income level of the poor farmers in Africa may be too low to attract formal credit, the cost of managing credit advanced to them (given the small loan amounts often borrowed) relative to their returns may work to impede credit access even if borrowers possess registered titles to land (Durand-Lasserve and Payne, 2006).

Land registration does not also eradicate all the significant cost elements involved in collateralising a loan. Such cost could still be high enough to deter lenders from granting credit even when the borrower possesses registered titles to land. There could still be significant cost elements to both lenders and borrowers. Collateral cost incurred by the lender is said to increase the more specific and the less liquid the asset is; the cost to lenders may include cost of evaluation and monitoring, filling fees for security registration, cost of liquidation and asset utilisation and other administrative expenses; borrowers may also face significant cost in terms of a more restrictive asset usage which may be part of the agreement (Menkhoff *et al.*, 2003). Since the assets may be a key part of the productive resources of the borrower, it may not make economic sense to restrict their usage in the loan contract as that by itself could trigger loan default. The borrower may need to be able to use the assets pledge to a certain extent to be able to generate sufficient cash flow to repay the loan. The law may proof to be one of the most difficult challenges lenders face in taking collateral. For instance, apart from the collateralisation process in many developing countries being complex, the liquidation process is also time consuming and costly (Menkhoff *et al.*, 2003). Whenever the legal framework complicates or delays the process of creating, repossessing or sale of collateral and enforcing collateral agreements, the economic value of the collateral asset is affected and this may renders such assets less acceptable by lenders (Fleisig *et al.*, 2006).

Fleisig *et al.* (2006) identify three main stages in the collateral enforcement process which may be a big hindrance to lenders. First, on default of a loan, the lender files a court complain and the borrower is given time by the court to respond. Borrowers may take this opportunity to delay proceedings legally or otherwise. Second the court must give a ruling on the case. If judgement favours the lender, an order is issued for the seizure and sale of the property. Finally the appraisal and sale of the assets involved is usually administered by the courts. There is no need stressing that the outcome of such court proceedings could

be very uncertain. This likelihood of losing the legal battle to recover outstanding loans through the sale of collateral presents a big challenge to lenders. The mere fact that a loan is collateralised does not mean that the land will certainly be foreclosed in times of default. The lenders may tend to be very cautious and may thus depend less heavily on collateral as a tool for loan recovery. Another aspect of the legal barrier arises when the law prohibits the sale of the collateral below a certain value with the aim of protecting the borrower (Fleisig *et al.*, 2006). This may further delay the process as it may be difficult to get buyers for the property at or beyond a certain price level.

The law may also prohibit the sale of certain assets where such an action is believed to have an adverse effect on the borrower's survival. Kibodya (2006) observes for instance that amendments to the lands act of Tanzania in 2004 require all banks to seek approval of the courts for any intended repossession of residential property or agricultural lands. This kind of legal requirements may be a barrier to the use of such assets as collateral as banks may tend to be too conservative in accepting them for the fear of losing out in case of default. It is reported that in Tanzania, about 100 billion Tanzanian shillings belonging to the banks is locked up in the courts (Kibodya, 2006). Some group of borrowers especially poor farmers whose only valuable assets may be agricultural lands and residential property may thus be effectively cut off from the credit market with all the consequent damaging effects on the fight against poverty.

It is thus apparent that even the best forms and programs of land registration will not in any way take away these very important legal elements of cost associated with collateral use. Admittedly, as the financial sector becomes more competitive and efficient with the adoption of modern technology, transaction cost is more likely to reduce.

5. Conclusion

Land registration has been heralded globally for its potential to promote land tenure security, facilitate land market operation, improve access to agricultural credit generate investments, raise income levels and increase economic growth. It is thus regarded as the magic formula for poverty reduction and the solution to the development problems of the developing economies by authors like De Soto.

Though many governments are implementing various registration programs, empirical research have raised doubts over the purported potential of land registration. Instead of promoting tenure security, registration has been found to increase tenure insecurity in some countries. It has also been found to have failed to enhance access to agricultural credit and investment in Africa.

There are essentially two channels through which land registration could promote agricultural investment (demand-side channel and the supply-side channel/credit effect). It has been argued in this paper that the reasons why previous studies found the demand-side channel to have failed to provide the incentive for investment are: the wide spread poverty in Africa and the rest of the developing world, the lack of appropriate agro-based infrastructure – irrigation, storage facilities, the deprived state of the mostly rural-based agricultural communities in terms of access to socioeconomic facilities – transport and telecommunication network, water and electricity and finally, the highly risky nature of agriculture in Africa.

Regarding the supply side, the failure of past studies to establish any significant positive relationship between land registration and access to credit is the result of the fact that land registration:

- does not alter the location of land which is a very important factor considered in taking land-based collateral;
- may not improve rural land values given the current deprived nature of the rural communities;
- does not change the profitability or cash flow of agricultural activities or improve the repayment capacity of farmers;
- does not change farmers attitudes towards formal credit and the use of land as collateral;
- is not the most important factor considered in granting credit; and finally
- has not eliminated most of the significant cost elements in loan collateralisation.

The best way to stimulate agro-based investment and wide spread poverty reduction is through greater state commitment to improve on the agricultural investment climate in Africa in order to reduce the level of risk, increase agricultural commercialisation and profitability. Such a move will then provide the bedrock on which the supply and demand-side effects can materialise.

To stimulate agricultural investment, various critical factors need to be given the required priority and these include various interventions by government to tackle the very basic problems that have made African agriculture highly risky, unprofitable and unattractive. The pursuit of land registration in isolation as an agricultural development tool may fail woefully unless it is accorded a holistic view as part and parcel of the overall agriculture development agenda.

This paper has thus enumerated the essential factors that have impaired the ability of land registration to contribute to Africa's development process. Therefore, the mostly negative findings of previous research on the impact of registration in Africa should not discourage governments from continually improving and promoting the system. As part of the overall development package, similar attention should be given to: strengthening competition and efficiency in the banking system; capacity building within the judiciary to handle land-related cases, improving enforceability of the law on land registration and deepening the rule of law; reforming laws that are inimical to credit access; the continuous improvement of the rural and agricultural infrastructural base. There is also the need for comprehensive mapping to properly demarcate boundaries to reduce if not eliminate boundary disputes. Dispute resolution should be given topmost priority in the registration process to ensure that all parties are satisfied before titles are conferred; this will go a long way to reduce the conflicts arising after titles are issued. As the overall living standard of the people improves, land registration will take its rightful place in generating further investment to sustain the growth process in the long run.

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