

Does Secured Tenure matter on Land Investment? A Review on Literature

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Abstract

Secured nature of land tenure is of current importance among many factors that determines the land quality improving investment in land productivity. A vast number of scholarly work has been developed, yet the results are contradictory. This article attempts to provide a critical review of the available literature on secured tenure and the impact on farmers' decision to invest on the land. Reviewed results argues though a very few has identified with no influence, majority confirms that secured tenure provide incentives for investment and positively impact on productivity. Strong policy actions can help to improve the security of land rights and promote socially desirable decision of the farmer to maintain the soil quality and thereby improve the land productivity.

Key words: Tenure Security, Land Investment, Soil quality, Land Productivity, Property Rights

Introduction

The term 'land' in economics has a specific meaning. It is a factor of production as well as a natural resource. Theoretically natural resources are of two types, such as renewable and non-renewable. Resources once used cannot be renewed are called as non-renewable such as mineral deposits and deposits of coal. Renewable resources are those which go on being used again and again and year after year for production. Thus, agricultural land can be used for cultivation again and again. Appropriate quality of soil of the land is one of the productivities enhancing measures

among the many factors that contributes to land productivity. The productivity of agricultural land can be maintained by human effort with continuous attention on maintaining the soil quality of land. Therefore, land in the sense of agricultural soil is a renewable resource.

Theoretically, all-natural resources are in relation to the quality of elimination with a lack of close attention. Therefore, the land being a natural resource subject to degradable limitations and produce possible loss in productivity. The utility of land is obvious in the agricultural stage for how else could man grow his crops. In most developing countries including Sri Lanka, the agricultural land is still the main source of livelihood investment and wealth. The supplies of natural resource can be increased as a result of technological changes or through transforming into a useful resource. There are some restrictions that act on land hindering the productivity of land. Scholars often distinguish them among four main underlying factors causing such harmful effect. Market failure (externalities), government failures (environmentally adverse policies), population growth and property rights failure are being discussed as such factors.

Among these aspects the property rights to land and its associated impact on conserving soil is of current important. Property rights to land, play a fundamental role in the decision-making process of a farmer in preserving the soil quality in land. If property rights are poorly defined, it may have an effect on the practices of applying land quality improving investments which will direct influence on the output. However, the rights need to be secured; hence the risk of any loss that might arise through legal context or the possible expropriation is minimized. The concept of property rights comprised with a bundle of rights and derives from secured tenure. Many scholars have identified the influence of secured tenure on land quality improving investments, yet the

results are contradictory. Hence, this article attempts to provide a critical review of the available literature on secured tenure and the impact on farmers' decision to invest on the land.

Security and insecurity of tenure

The word tenure comes from English feudal times derived from Latin for holding land. Tenure means the conditions under which something is held: the rights and obligations of the holder. From the perspective of society land tenure can be described as the legitimate manner of holding land and the behavioral characteristics stemming there from in that particular society. Several scholars state that land tenure is a legal term which means the right to hold the land rather than the simple fact of holding land. Importance of land tenure in the legal aspects rely on the rights over land and its resources thus, land tenure can be defined in terms of a 'bundle of rights' or a collection of specific rights to do certain things with land. It is a bundle of rights simultaneously received by a land title holder including multiple rights such as use, sell, mortgage etc., and they are like the sticks of the bundle. The number of sticks in the bundle may become different among the tenure types prevails in different countries or within the same country.

Tenure security refers to the degree of certainty which farmers attach to the economic returns resulting from their investments to land (Kung 2000). There should not be a threat for the expected fruits of the investments. It is therefore obviously associated with a 'bundle of rights' a farmer can exercise on the current plot cultivated. The security depends on the defined conditions assigned to the rights according to the hierarchical order of use right to transfer right. Thus, property rights involve a relationship between the right holder and others. It is therefore, need to define how property rights of land are allocated within societies, how access is granted for the rights to use, control and transfer etc., (Piyasena 2009). Without security in rights when

income increases the incidence of land disputes and land grabbing increases, and consequently tenure insecurity increases (Reddy 2002).

The insecurity arises from any deficiency in government policy that would hinder the land development in a country. According to Ossmi & Ahmed (2015) a research done in Iraq presents that government policy has a strong bearing on securing the land rights of people. They suggest the policies should be placed high on the government's agenda. What is required is a rather more active attitude from the matrix of legal, social, and economic factors linked with the land aspects.

Economic theory suggests that these rights are complete, with the possibility of a corollary. Then the tenure is most secure in private property. Farmers are best protected from any arbitrary loss when the rights are clearly delineated. Delineation is the way in which the boundaries of the bundle of rights have been defined or in other words defining the conditions under which the rights can be exercised (Havel 2014). Public laws and private laws play an important role in delineating the rights.

Tenure security and effects of land titling

Many economists (Feder 1988; Li et al. 1998; Besly 1995) and political scientists have emphasized the state's role in creating, defining and enforcing property rights. Piyasena (2009) emphasized that the rights in property develop social links and should be protected. Property rights defined with clear rules and regulations assure the efficient use of the land resource. It is generally accepted that land titles protect the rights and provide security, so that less conflicts in society. A title stands on the same foundation of currency in a country (Bromley 2008). It is a must to be backed by the government for the currency that is in circulation of the country to have any value in exchange. The currency is a fact of legitimacy. Similar to currency a title also become

meaningless without the full backing of the government. Therefore, a title is rather a 'promissory note' guaranteed by the government indicating it is ready to protect the title holder against the destructive actions of others.

Among the various processes activated by different countries to protect tenure including traditional systems, the land titling programme is significant. Most of the developed countries have already applied the techniques and are free from weaknesses associated with poorly defined tenure systems. In sequence following the said developments land titling have been undertaken in several less developed countries. However, in many less developed countries, systems for titling land are deficient. In less developed countries and in transition economies, political authorities are weak or ineffective, and people do not enjoy security of property rights (Teraji 2008). Small holders may find that the cost of acquiring a title to their land is prohibitive. The rights are more economically related but as it deals with human rights it plays a role on social life as well. When property rights over economic resources are insecure, people typically have to pay transaction costs to enforce their claims on such resources. Transaction costs are incurred by individuals attempting to protect property rights (Teraji 2008). In many developing countries the literature has little guidance to policy makers' interest in increasing the security of property rights in land (Deininger & Jin 2009). This is an important view that state representatives may have been unable to activate their power on securing the property rights. The discussion highlights that providing a title to land through a state recognized body would secure the tenure.

Beyond the concept of secured tenure and valid document land tenure security is considered as a physiological feeling in an individual's mind. It is the individual's perception of his/her rights to a piece of land on a continual basis, free from imposition or interference from outside sources, and the ability to reap the

benefits of labour or capital invested in land (Roth 1998). Dekker, (2003) also states that the term land tenure is used as a legal term and is more as an emotional term Emotional significance of land tenure deals with the way, individual perceives benefits, enjoyment and obligations in respect to real property. Therefore, how does the operator perceive on the rights has become important. The operator who does not possess a document but used the land may live in fear of expropriation (Holden and Yohannes 2002; Deininger and Jin 2006). This implies the uncertainty in the possible loss of the benefits to be derived from the investment. Therefore, the security is not merely an issue of a valid title but also a physiological feeling.

A legal system that protects contracts and property rights encourages investment and ensures effective use of scarce economic resources. It can thus be viewed as a fundamental precondition to achieving many of the outcomes under appropriate macro-economic policies. If property rights are secure, well-defined and publicly enforced, investors of land need to spend little time on resources guarding because the assets are already protected. Systems for documentation and verification of land ownership enhance tenure security (Deininger 2010). This documentation can be named as having a title to land to prove the ownership. Land tenure security is needed to facilitate the highest and best use of land resources. A stronger view is that individual ownership evidenced through fee-simple title is the ideal institutional vehicle for such security. The direct way in which title can positively affect investment and output is referred to here as the *tenure security channel* (Schweigert 2006).

The economic significance of Land tenure security

Tenure security is arguably important for sustaining long term agricultural productivity and output growth because only when farmers find it secure to appropriate the fruits of their investment would make that invest for long-term, most notably

through an intensive use of organic fertilizers and undertaking a range of land augmenting activities (Kung 2000). In the absence of a stable set of long term use and other rights, tenure becomes insecure, and therefore farmers will possibly reduce their investment in land to improve the soil quality as they assign a meager probability to gain the continuous benefits from their currently assigned plots. This in turn adversely affects agricultural output growth.

The economic importance and the linkages between tenancy and soil fertility improvement investment have been studied by the past researchers and still continue by the more recent researchers. Economists such as Adam Smith, John Stuart Mill and Alfred Marshall, have argued that share tenancy causes inefficient resource allocation because the share tenant receives only a fraction of the value of his marginal product of labour thus reducing the incentives to supply labour or other inputs (Pender 2005).

The discussion indicates that the way land is instituted and distributed may have an impact on the security of tenure. However, the ownership conflicts are to be resolved since the consequences are far beyond the agricultural production obtained from land (Deininger et al. 2007). The interest of tenure security emerged with respect to forest squatters in Southeast Asia in about 1987. Once the empirical evidence was apparently established there, the interest in 'unclear' tenure spread to sub-Saharan- Africa (Bromley 2008). Then onwards the economic importance of tenure security has attracted a great attention of both the researchers and the policy makers and therefore, the role of land tenure on soil quality improvement investment as a productivity enhancing measures in developing countries has been studied and documented widely in economic literature.

One of the critical arguments advanced by many economists in defense of property rights is that titled lands provide

secured property rights (security in tenure) and facilitate greater incentives for higher investments in soil quality improvement (Teraji 2008 ;Deininger and Jin 2006; Fenske 2011). On theoretical grounds there are three important economic relationships such as ‘assurance effect’, ‘collateral effect’, and ‘realizability effect for a positive link between secured rights and land investment (Feder 1988; Li et al. 1998; Besly 1995; Brasselle et al 2002). The first positive effect is the assurance effect. It is believed that title to land guarantees the security in property rights and offers an assurance to farmers that the benefits of their investment will not be expropriated by others. Thus it encourages them to invest in the long-term and this is called as the ‘assurance effect’. Further elaborations on this provision of assurance defined as breadth, duration and assurance effects (Place 2008). Breadth refers to the quantity of bundle of rights whereas duration is the length of time that sufficiently adequate to recoup the full benefits generated by the respective investment. Assurance act as a bridge to build the above concepts. It implies the rights and duration that are known and held with certainty. The experience in sub-Saharan Africa, emphasize the necessity of establishing free hold title to land in order to stimulate agriculture growth (Brasselle et al. 2002). Brasselle et al. (2002) explained the provision of titles increase the assurance effect for two reasons. Farmers feel more secure in their rights or ability to maintain long term use over the land, and it becomes a great incentive on soil quality improvement investments and in other hand the return of improvements are higher. Further, it is argued that soil quality improving land investment can only flourish when there is a reasonable chance of reaping its rewards exist (Jacoby, Li & Rozelle 2002).

The longer the farmer has held the plot the more secure he must feel about keeping the plot to future, the more he invests on land (Jacoby, Li & Rozelle 2002; Tenaw 2009)). This is because that the farmer’s investment decision may be affected if they are

not sure how long they would be allowed to use the right. Especially the tenant cultivators are reluctant to make soil fertility improvement investments on land, as they do not live with secured land tenure rights that making them vulnerable.

The second positive effect is in the circumstances where freehold titles are established, farmers are more able to invest because, land acquires ‘collateral value’ and hence access to credit becomes easier. Title to land can stimulate investment since it turns land into a mortgageable and transferable commodity, so that farmers can use it for collateral access. The experience in Fiji is the uncertainty of renewal of leases has halted major long term investments (Reddy (2002). The collateralization effect is important regarding formal lending sources which reduces the information cost for the lender and provides the basis for using land as a collateral asset (Li et al. 1998; Place 2009; Deininger 2010). Same idea is developed by Carter and Olinto (2003) in which they stated that, the effects of legally secure property rights on investment are typically hypothesized to occur through a security-induced investment demand effect (households increase investment when they perceive a reduction in the likelihood of losing the land in which they might sink attached capital); and, a collateral based credit supply effect (lenders become more willing to make loans when assured that land pledged as collateral is secure) and free of competing claims.

A land title is often a prerequisite for commercial or official bank loans. Without secure titles people have to rely more on informal lenders, who usually charge much higher interest rates than those on formal market. The title can be used as collateral to improve access to credit for agricultural investment. A secure title may thus provide easy access to credit especially from formal lenders who do not have personal and detailed information on the potential borrower.

Third positive affect i.e. the realizability effect functions through improved possibilities for sale. When land can be easily converted to liquid assets through sale (that is when superior transfer rights have the effect of lowering the costs of exchange if the land is either rented or sold), improvements made through investment can be better realized, thereby increase its expected returns (Deininger 2003; Ali 2011). Ability to exploit gains from trade, enhanced investment incentives again (Besley, 1995). Brasselle et al. (2002) identify this phenomenon as the 'realizability effect'. Deininger (2003), noted that insecure tenure reduce access to land hence no improvements are to be expected. One of the pre-conditions for well-functioning land markets, both on the supply and the demand side, is the presence of secure and well documented title to land. Well-functioning markets require system of property rights (Benjamin and Brandt 2002). Lack of formal proof of land ownership is likely to reduce prices in the land sales market and to undermine supply of land. Key benefits from possession of formal land title for land sales are the ability to exchange land with strangers. The reason is that a reliable land registry provides a formal and low-cost way to identify land ownership without the need of physical inspection or certain inquiries with surrounding neighbors hence land is ideal for collateral. Land markets need to be sufficiently liquid to make a sale feasible within a given time. Even some profitable projects have to limit with legal restrictions in land sales.

In addition to this discussion the same is summarized by Deininger (2010), who states that reducing expropriation risk increases land users' confidence in their ability to enjoy the fruits of their labour thus making it more rewarding to manage land sustainability or make long term investment to improve the soil quality on land. It is not only reducing the risk but also reduces the cost in transactions in the land markets. Hence, the ability to

transfer lands more capable will increase the productivity. Land owners can participate in non-farm activities without losing their assets. On the other hand, lack of clarity on tenure security may undermine such effects.

At the same time, by reducing the ability to access to formal credit would also have an effect on demand in the land sales. The available evidence on research presents that the only document is from Nicaragua that confers fully secured ownership is a registered title. Land owners in the country hold different legal and illegal ownerships (Deininger et al 2003). Not only in Nicaragua, in many developing countries have experienced the same situation. Increasing entry of poor people to economic activities is one of the major concerns of the governments of these countries. Economic activities related to land are more or less bounded up with related to agricultural activities. Therefore, introducing safety policies such as title registration would increase the security of tenure. Deininger et al (2003) concludes that in Nicaragua with the introduction of this type of policies has strengthened the security of tenure and also it had a positive impact on productivity. The above discussion indicates that the absence of legal document such as a title deed is often viewed as a major hindrance to increase agricultural production and land investment. Therefore, the advocates of land titling and land registration contend that having a title improves investment in two ways. One is enhancing producer's security and the secured by opening access to institutional credit.

Based on particularly on the above three positive links, there are many studies on tenure security and soil quality improvement investment. Studies that have examined the link between land rights and investment have done well with solid arguments why there should be a relationship (Fenske 2011). According to Carter and Olinto (2003), in their study the secured property rights over land boost investment and economic growth.

The link between indigenous tenure arrangements and productivity enhancing investments is the key issue that most researchers got attracted in Sub Saharan Africa (Abdulai et al. 2011). Place and Otsuka (2002) noted that in most African countries, more than 90% of land remains under customary land tenure, and lacks legal recognition. Further, customary land tenure institutions and the inadequate incentives they give to farmers to undertake long-term investment may hamper agricultural development. Subsequently, these paths have been used by economist to test the linkages between tenure security, investment, and productivity.

The studies conducted on the relationship between tenure and investment suggests two categories of investment such as long term and short term. Tree planting, well-digging, surface irrigation, drainage and terracing are considered to be fixed or long-term investment (Besley, 1995; Jacoby *et.al* ,2002). Soil quality through the appropriate use of organic fertilizer, a mixture of manure, decayed vegetable matter, oxen use, machinery use, quality labour use (additional labor for weeding and soil conservation practices) are considered to be short term investments (Smith, 2004; Schweigert; 2006; Fenske 2011).

Critical Review on the Empirical evidences of land tenure, land investment and productivity

A special feature found in the literature reviewed is, that the studies on the relationships between tenure security, land rights, and land investments, have been mostly conducted in many African countries. The contribution of quantitative analysis on land rights and investments is also significant. However, authors have emphasized repeatedly the difficulty associated in quantifying the investment as a variable. There are two types of investments varied in nature and in some cases, it is difficult to identify the exact difference in long term and short-term investments. Therefore, majority of the authors depend on binary data collection i.e. merely asking whether the farmer do specific investment. In the case of the use of fertilizer both organic and chemical, a few

studies were able to quantify the investment. Based on the binary data collected, many researchers have relied on binary models. Studies such as Holden and Yohannes, 2003, Pender *et.al*, 2004) have applied MLM probit models. Authors such as Besley 1995; Jacoby *et al*, 2002; Smith, 2004; Deininger and Jin, 2006; Schweigert 2006; Mariara 2007; Deininger and Ali ,2008; Fenske 2011; Abdulai 2011 have used multivariate probit models, ordered probit models, Cobb-Douglas production function, and hazard model respectively to evaluate the relationships between tenure security and investment and investment on productivity.

Majority of the related empirical investigations have concentrated on the central issue of the effect of tenure security on investment and productivity. Yet the results are contradictory. May be that this literature is a combination of short-term investment such as use of fertilizer and long-term investment such as conserving terraces. Fenske (2011) states that the studies dealt with small samples have fewer opportunities for statistically significant relationships. Some studies conclude on no relationships, while the others conclude on positive relationships. Majority of studies found that the variations in tenure arrangements contribute differently on investments. Holden and Yohannes (2002) studied the impact of land redistribution policies in Ethiopia and found that tenure insecurity perceptions had no impact on purchased inputs. Though widening the scope to a broader set of agricultural inputs, Pender et al. (2004), similarly did not find evidences that land tenure arrangement has an effect on agriculture intensifications in Uganda. Due to limited input use in Uganda, land tenure found to have limited impacts on agricultural production. Also, this study emphasized, that because the most common forms of tenure are relatively secure and having access to credit is not a critical factor affecting agricultural productivity.

However, there are divergent effects. A recent literature survey by Place (2009) concludes that stronger land rights and the presence of land titles often are associated with an increased likelihood of making certain types of investments. Some of the examples cited are tree planting, fencing and manure. In the studies in Ghana (Besley 1995); as well as the in Malawi (Place and Otsuka, 2001) also confirm this conclusion. Besly (1995) disclosed that tree planting may initially be discouraged by insecurity of tenure and on the other hand tree planting can actually produce greater security of tenure too. Moreover, he added if better rights make it easier to use land as collateral, then constraints on funding investments can be overcome. Some of the results on the same views are themselves though statistically significant, would hardly qualify as important because of very low marginal impacts.

Nevertheless, some contradictory results were revealed in later studies done in some other regions of Africa. Whereas, previous studies cast doubt on the link between land tenure and welfare outcomes, Smith (2004) finds firmer evidences and concludes positive and significant relationship between title and productivity in Zambia where formal land title led to increased investments. This study has been conducted on a comparative sample of customary tenure and farmers from settlements on state lands. Data collection involved in the use of a questionnaire and sample comprised of 266 farmers from selected settlements from both types of tenure. His study views that the title holders and to a lesser extent lease-holders have greater fixed investment and credit than the other category which comprised of the customary tenure.

Similar results were obtained in the studies by Deininger and Jin (2006) in which they came across that more private transfer rights have a strong positive effect on investment in Ethiopia. They have concentrated on a larger sample to assess the potential impact of changes in property rights on investment and a production function has been estimated. The special feature in this

study is the more concentration on tenure security as the ability to transferability. Both studies provide important investment incentives but transferability has a larger impact on productivity enhancing investment. Hence, the study suggests that, well defined and enforceable rules for transferring land are important to producers' decisions taking on investments.

Bogale et al. (2006) also concludes a similar result to Deininger and Jin (2006), and in his study, in the absence of precise definition of property rights it was to induce human insecurity leading to conflicts between the farmers in Ethiopia. On similar grounds the fact that variation in tenure arrangements affect differently on investments is proved by the study of Fenske (2011). This study adopted an approach of multivariate probit model in Ghana and about 500 plots were taken as a sample. It was found that land tenure differences significantly influence farmers' decisions to invest in land-improving and conservation measures, and that tenure differences do affect farm productivity (Fenske 2011). He further concludes that the positive incentives associated with secured rights contribute to positive impacts.

There are more studies to support the same view. According to Reddy (2002) in Fiji, the uncertainty of renewal of leases halted some of the long-term investments. These investments will not be made unless a permanent solution is produced that would provide security to interests. With reduced investments there will be direct negative impacts on productivity. Not only that but also this will reduce farm improvements such as irrigation, soil conservation, drainage as well as even on introducing new crops. The results obtained through the stochastic frontier production function approach it shows that significant differences in productivity on different tenure patterns. The highest yield is recorded in crown land where the tenure is highly secured, while the lowest is found in informal arrangements. The fact that the mean technical efficiency of leased farms is 82% and

in the crown lands it is 93%, is another significant result of the study.

The argument that secured tenure support investment is backed further by the findings of Schweigert (2006). He applied the ordered probit model for the data collected from Guatemala (Latin America). The result indicates that having a title to land substantially increases the probability that household performs quality labour tasks which are associated with higher output levels. The study had been conducted in coffee plantation and 67% of the sample had a title to land. It further summarizes that the parcels with a title to land relatively had higher output level because title effects on quality labour investment.

Schweigert's results are confirmed by a recent study in Ghana by Abdulai et al. (2011). The study covers a sample of 286 families with four different tenure arrangements. He had applied the multivariate probit model on the basis of four categories in investment. Planting trees, applying organic manure, mulch and applying fertilizer are the four categories. The results confirmed that land tenure differences significantly influence farmer's decisions to invest in land improving and conservation measures. Secured land tenure tends to facilitate investment in soil improving and natural resource management. In particular, farmers who owned land with secured tenure were more likely to invest in tree planting and manure but not on mineral fertilizer. Also, the study examines the tenure security on productivity in which it identified a positive and significant effect. This is a finding that reinforces the significance of security in tenure which facilitates higher investments. As theoretically explained that secured tenure increases credit access, the study also revealed that access to credit is positive and significant among secured tenure.

Another supporting finding by Xianlei Ma *et al.* (2013) is that the households in China who consider land certificates as important for protecting land rights are found to invest

significantly more in irrigation canals improvement and maintenance as compared to those who assign lower importance to land certificates

Conclusion and Policy Implication

According to the above reviews majority of the studies conclude that secured tenure with a valid document such as state recognized title always facilitates land investment either in long term or short term. Authors have been more concerned on farmer's decision to improve the soil quality in different ways as land investments. Conversely, this investment enhanced the productivity. In the absence of acceptable recognition of land tenure, it is found that the tenure losses the required security and therefore, those farmers enjoy less number of rights. In most cases, the transfer rights are not allowed which is considered as a superior right among the hierarchical order of the property rights. Unprotected rights in tenure increase the farmers' fear of uncertainty and thus, negatively influences on the willingness of the farmer on land investments. Finally, it should be stressed that policy-if aimed at achieving broadly based agrarian growth-needs to be carefully sequenced, addressing the property rights issues specially securing them either as freehold or with long-term assurance. Given the considerable emphasis of the impact of tenure security on investment, there may be scope for re-visiting the issue of land tenure security and transferability in many countries in issuing a more sophisticated set of instruments both from the research oriented and from a policy perspective.

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