



LJMU Research Online

Abdulai, RT and Ochieng, EG

Land Registration and Landownership Security: An Examination of the Underpinning Principles of Registration

<http://researchonline.ljmu.ac.uk/3662/>

Article

Citation (please note it is advisable to refer to the publisher's version if you intend to cite from this work)

Abdulai, RT and Ochieng, EG (2017) Land Registration and Landownership Security: An Examination of the Underpinning Principles of Registration. Property Management, 35 (1). pp. 24-47. ISSN 1758-731X

LJMU has developed **LJMU Research Online** for users to access the research output of the University more effectively. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in LJMU Research Online to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain.

The version presented here may differ from the published version or from the version of the record. Please see the repository URL above for details on accessing the published version and note that access may require a subscription.

For more information please contact researchonline@ljmu.ac.uk

<http://researchonline.ljmu.ac.uk/>

LAND REGISTRATION AND LANDOWNERSHIP SECURITY: AN EXAMINATION OF THE UNDERPINNING PRINCIPLES OF REGISTRATION

Raymond Talinbe Abdulai

Built Environment and Sustainable Technologies Research Institute, Liverpool John Moores University, Liverpool, UK.

Edward Ochieng

Cranfield School of Management, Cranfield University, Cranfield, UK.

ABSTRACT

Purpose: The assertion that land registration guarantees landownership security is common knowledge. Thus, efforts at securing landownership in particularly, the developing world have concentrated on the formulation and implementation of land registration policies. However, over the years, whilst some studies claim that land registration assures security, a lot of other studies have established that security cannot be guaranteed by land registration. Also, there is evidence from research that has shown that land registration can be a source of ownership insecurity in some cases. This paper critically analyses the underpinning principles of land registration and their application in order to establish whether or not land registration can actually guarantee ownership security.

Design/methodology/approach: It is a literature review paper that looks at the existing literature on landownership, security and land registration systems. The land registration principles that have been subjected to critical analysis are the publicity function of land registration, the legality of ownership emanating from land registration and the warranty provided by the State in land registration, specifically, under the Torrens system.

Findings: An analysis of the underpinning principles of land registration shows that land registration per se cannot guarantee ownership security and this helps to explain the findings of the numerous studies, which have established that landownership security cannot be assured by land registration. The paper concludes by identifying the right role of land registration as well as a mechanism that can effectively protect or secure landownership.

Practical implications: Land registration policies and programmes in the developing world are often funded by the international donor community and the findings provide useful insights regarding the actual role of land registration and for policy change in terms of what can secure landownership.

Originality/value: Even though there are two schools of thought regarding research on the link between land registration on one hand, and landownership security on the other, none of the studies has made an attempt to consider the nexus by critically examining the principles that underpin land registration to support their arguments.

Keywords: Landownership, land registration, security, principles of land registration.

Paper type: Literature review

INTRODUCTION

The critical role that landownership security plays in any nation is well documented. For instance, landownership insecurity in the form of land disputes provide fodder for conflict entrepreneurs who normally use them to manipulate the emotional, cultural and symbolic dimensions of land for personal political or material gain, thereby, fomenting civil strife (USAID, 2005; Andre and Platteau 1998; cited in Abdulai and Owusu-Ansah, 2014). And as noted by Abdulai and Owusu-Ansah (2014), it is self-evident in war-torn countries in the developing world that civil strife normally reverses the clock of progress or economic development as many people are displaced and impoverished, human resources are lost via deaths, children are orphaned, a country's infrastructural base is destroyed and assets worth billions of US\$ destroyed. They also observe that land disputes negatively affect infrastructure and real estate development projects and other economic activities: for example, when a dispute arises over a plot of land where a development project is to be carried out, the development cannot proceed until the land dispute is effectively settled and this constitutes a source of major risks to investors. The negative impact is even more pronounced where there are delays in settling the land dispute in the State-sponsored courts and such protracted litigation often stifles land-based economic activities since court injunctions are normally issued against any use of the land until the cases are decided by the courts (Abdulai and Owusu-Ansah, 2014).

Thus, according to IFAD (2008) and Deininger (2003), landownership security is critical in establishing a structure of economic incentives for investing in land-related activities leading to poverty reduction and economic growth. Not astoundingly, the World Bank (2007) has identified landownership insecurity together with poor governance as a major factor inhibiting economic development in the developing world whilst landownership security has been identified by UN-HABITAT (1999) as one of the most important catalysts in stabilizing communities, improving shelter conditions, reducing social exclusion and improving access to urban services. The Millennium Development Goals (MDGs) launched in 2000 also give prominence to the role of secure landownership in helping to reduce poverty and to achieve economic development. The MDGs, however, expired in 2015 and the Sustainable Development Goals (SDGs), which appear to replace the MDGs, were subsequently launched.

Sjaastad and Bromley (1997) argue that investments in trees, irrigation furrows, buildings or other fixed structures may provide a litigant in a land dispute with an unassailable case and that even though landownership insecurity is a disincentive to invest, it is paradoxically, often also an incentive to invest for ownership security. However, such an argument is problematic and unsustainable since it implicitly assumes that the legal framework guarantees the protection of investors in land-based activities whether or not they truly own the land (Abdulai and Owusu-Ansah 2014; Abdulai and Domeher, 2012; Abdulai and Hammond, 2010). As these authors have aptly asserted, investing in a plot of land that one does not rightfully own will in itself trigger disputes or insecurity rather than protecting landownership and have concluded that constructing buildings or any other permanent structures on a disputed plot of land cannot in any way provide a disputant with an unassailable case.

The critical role of landownership security and the negative impacts of land disputes or ownership insecurity as outlined above have precipitated the search for a better system that will assure ownership security. Indeed, the quest for secure landownership dates back to several centuries ago; Feder and Nishio (1999, cited in Domeher and Abdulai, 2012b) referring to the books of Genesis 23 and Jeremiah 32 in the Holy Bible explain how Abraham and the prophet Jeremiah sought for secure ownership of different parcels of land some 4,000 years ago. Land registration is embraced as the panacea to landownership insecurity and it is premised on the notion that there is landownership security in the advanced world because every developed

country has a comprehensive land registration system. Thus, efforts at securing landownership have often concentrated on the implementation of land registration policies and programmes. There is a lot of research that has been carried out on the link between land registration and landownership security. Whilst some studies claim that it is land registration, which guarantees security, other studies have established land registration per se cannot assure security. The purpose of this paper is to critically analyse the principles that underpin land registration systems in order to establish whether or not landownership can actually be assured by land registration. Albeit there are two different schools of thought on the link between land registration and landownership security, none of the studies has made an attempt to consider the underpinning principles of existing land registration systems in order to support their arguments.

The next section looks at property theories followed by a section that explains landownership security. The debate on the nexus between land registration and landownership security is then reviewed. Following on, is a section that reviews the land registration systems that exist globally. The penultimate section critically examines the underpinning principles of the land registration systems and their application whilst the last section concludes the paper.

PROPERTY THEORIES

There are various theories on property ownership and this section reviews some of them in order to provide insights as to what landed property ownership actually means and how it is appropriated.

Bundle-of-Rights

Theory The concept of bundle-of-rights compares property ownership to a bundle of sticks with each stick representing a distinct and separate right of the property owner. Albeit as a concept, it grew out of a longstanding and serious philosophical debate about legal right and liberties, the bundle-of-rights as a theory of property did not present a new normative idea but an analytical and descriptive one (Johnson, 2007). As Johnson notes, whatever social choices were made as the various property rules evolved, the rules that preserved the institution of private property were made long before the bundle-of-rights came along to conceptualize how people think about rights in property.

Hohfeld (1913), in contributing to the theory of property rights, noted that property does not consist of things but rather fundamental legal relationships between people, which he categorised as four legal correlatives and four opposites often referred to as Hohfeld's Fundamental Legal Conceptions as shown in Table 1. Hohfeld broadly categorises legal rights into claim rights, privileges, powers and immunities and argues that a person who has a right is opposed by another person who has "no-right" and that these opposites are a set of legal relations that can describe any type of property. For instance, if A is the owner of a given property, he is entitled to exercise his claim rights over the property to the exclusion of others who have no-right to the property. Correlatively, the person who has no right to the property is duty-bound to stay off the property and can be sued for trespass.

Table 1: Hohfeld's Fundamental Legal Conceptions

Elements	Correlatives	Opposites
Claim right	Duty	No-Right
Privilege (Liberty)	No-Right	Duty

Power	Liability	Disability (No-Power)
Immunity	Disability	Liability

Source: Hohfeld (1913)

Honoré (1961), in his essay on ownership, identified the incidents of full ownership, which have come to be known as the bundle of rights: (1) right to possess (exclusive control of the property owned); (2) right to use and enjoyment (usufruct); (3) right to manage (right to decide how and by whom a property shall be used); (4) right to income (right to the benefits derived from forgoing personal use of property and allowing others to use it); (5) right to capital (right to alienate the property and to consume, waste, modify and destroy it); (6) right to security (immunity from expropriation); (7) right to transmissibility (right to bequeath or devise the property); (8) right to divisibility (right to divide the property); (9) prohibition of harmful use (a person's duty to refrain from using the property in certain ways harmful to others); (10) absence of term (indeterminate length of one's ownership rights – ownership not for a term of years but forever); (11) liability to execution (liability for having the thing taken away for repayment of a debt); and (12) residual character (reversionary right – it connotes the existence of rules governing the reversion of lapsed ownership rights).

Even though the above 12 strands of rights are necessary for full ownership, none of them is a necessary constituent of ownership per se since people may be said to own things in various restricted senses, which omit any one or more of the incidents. For example, if X rents his house to Y, X has the right to manage and receive income from his property, but he has restricted rights to use and possession during the currency of the lease. Thus, the bundle of rights may be thought of as a bundle of sticks that can be split into lesser bundles all of which can be owned by different people at the same time. Therefore, the rights exercisable by one person on a property may be subject to constraints set by the rights exercisable by other members of the society on the same property. According to Johnson (2007), Honoré's incidents of ownership demonstrate Hohfeld's concept of property rights as "different sorts of rights and rights-correlatives" that may aggregate in many different way to explain ownership.

Labour Theory

The labour theory was propounded by Locke in 1765 and so it is often referred to as the Lockean theory. It invests an individual with the ownership of property into which he has incorporated his labour. According to Locke, the investment of labour stamps the object with an element of a person's personality in which he has exclusive property and so invested with an individual's personality, the object assumes a quality of such personality whereby it becomes the private property of that individual. Locke proceeds from a premise of a utopian nature where an individual could be credited with the creation of an object through the investment of his labour. Thus, individuals are entitled to those things over which they have laboured (Ziff, 2000). As Ziff explains, the law is not the source of property rights; it is rather nature and the primary function of the legal system and of civil society is to protect the pre-political right to property.

First Occupancy Theory

The first occupancy theory awards ownership of an un-appropriated object to a person who occupies such object first with the intention of appropriating it to himself. Kant (1887, p.82) termed the theory as the Principle of External Acquisition, which he elaborated as follows: "What I bring under my power according to the Law of external Freedom, of which as an object of my free activity of Will I have the capability of making use according to the Postulate of the Practical Reason, and which I will to become mine in conformity with the Idea of a possible united common Will, is mine". From the theory, the notion is that being there first

somehow justifies ownership rights. Thus, Ziff (2000) refers to it as entitlements derived for occupancy where he observes first in times is first in right (the right of possession is treated as the labour that merits the granting of a reward). The theory was a recognised mode of establishing landed property ownership in Roman law and has persisted throughout legal history as a foundation of property; the Romans called it a mode of natural acquisition and as Pound (1954, p.109) observed: "taking possession of what one discovers is so in accord with a fundamental human instinct that discovery and occupation have stood in the books ever since substantially as Romans stated them."

Utilitarian Theory of Private Property: Property as a Positive Right

According to Panesar (2000), the theory regards property as a positive right created instrumentally by law to achieve wider social and economic objectives; property is said to be a positive right as opposed to a natural right and the essence of a positive right is that it is prescribed by State, the right is both given and protected by the State. Probably, the most influential advocate for the utilitarian justification for private property Bentham (1931) who argued that the total or average happiness of society cannot be maximized unless there exists rights to appropriate, use and transfer objects of value or interest. Bentham who rejected the notion of any natural law and natural rights, observed that all laws flowed from the State alone; States prescribed laws and such laws were positive laws. Thus, the principle upon which a law would be prescribed was the principle of utility. One of the shortcomings of Bentham's utilitarian justification for private property is that it does not address the question of how people become to own resources and how initial distribution arises in the first place (Panesar, 2000) and thus the theory on natural rights, which posits that the right to own property is a natural right, is equally relevant to property ownership.

Hegel's Theory of Property

Hegel (1770-1831) was a German philosopher, and his theory has been elaborated in the work of Sun (2010) and summarised as follows. Hegel sees the actualization of freedom as a historical process that entails different stages of human and social developments and one stage of such development deals with the freedom of being a person, namely personal freedom. According Hegel, to be a person, one must posit oneself in a way that is different from others and "The person must give himself an external sphere of freedom in order to have being as Idea". Thus, for Hegel, things like land, stones, and animals have no free will. They are by nature external not only to themselves but to all human beings and therefore, a thing naturally constitutes the external sphere a person can take control of for making his own choices. Consequently, a person can manifest his supremacy over a thing by placing his individual will in it: "a person has the right to place his will in anything. The thing thereby becomes mine and acquires my will as its substantial end (since it has no such end within itself), its determination, and its soul—the absolute right of appropriation which human beings have over all things".

Hegel identifies three means by which taking possession of things can be accomplished by the act of placing of the will, and each of the means involves the individualized judgment making process. Firstly, one's physical seizure of a thing enables him to create a connection with the thing concerned, because he is "immediately present in this possession and his will thus also discernible in it". Secondly, one can also give form to things in order to shape their characters based upon his personal knowledge and volition; this way of taking possession of things may include cultivating land, building a windmill, or training animals. Thirdly, one can designate ownership of things by putting his mark on them, for instance, building a fence outside his house. Hegel sees taking possession of things by externalizing will in them as the condition for a person to acquire property and he adds a second condition of acquiring property by requiring that one's ownership of

a thing must be recognized by other members of the society when he observes: "My inner idea and will that something should be mine is not enough to constitute property, which is the existence of personality; on the contrary, this requires that I should take possession of it. The existence which my will thereby attains includes its ability to be recognized by others". Thus, the theory promotes the well-being of social members and facilitates social recognition of concrete identities taken on by social members.

LANDOWNERSHIP SECURITY

Landownership security is defined as the perception of the likelihood of losing a specific right to cultivate, graze, fallow, transfer or mortgage (Barrows and Roth, 1990). This definition is, however, problematic and as aptly noted by Sjaastad and Bromley (1997), it is actually a definition of insecurity rather than security. Even as a definition of landownership insecurity, it is limited in scope since landownership insecurity can be associated with any of the 12 rights of ownership identified by Honoré (1961) above.

Commentators like Kvitashvili (2004), Brasselle et al. (2001), Bruce (1998), Roth and Haase (1998), Bruce and Migot-Adholla (1994), and Atwood (1990) define landownership security with respect to breadth, duration and assurance of rights. Commencing with breadth (scope or size), the argument is that if one does not possess certain land rights, which are considered to be key, ownership is said to be insecure because that person can only use the land in a limited way. Breadth or scope of rights is about the bundle of rights that a person possesses. Consequently, for instance, Place (2009) and Kvitashvili (2004) opine that landownership becomes insecure whenever any of the following exists: lack or perceived lack of some key property rights; lack of the right duration; and lack of certainty in continuous exercise of one's land rights. Furthermore, according to Place et al. (1994), maximum security is achieved when one has land rights on a continuous basis, free from imposition of interference from outside sources and the ability to reap the benefits of labour and capital invested in the land whether in use or on transfer to another person.

In terms of duration, Bruce (1998), explicates ownership security as the degree of confidence with which landholders expect to reap the fruits of their investments in land – it is thus about how long one can exercise one's rights on land. The argument is that because it may take some time before investments begin to generate enough returns, land rights are only secure when landholders can exercise their rights for a period of time sufficient to allow them to enjoy the fruits of their labour and any land rights that can only be exercised over a short duration is therefore regarded as insecure. Regarding assurance, Sjaastad and Bromley (2000) define it as the risk of losing land rights but as rightly noted by Abdulai and Owusu-Ansah (2014), such a definition is rather a definition of insecurity and not security; according to them, assurance of land rights should be appropriately defined as the degree of certainty that an owner will not lose his land rights.

In critiquing the above definition, Sjaastad and Bromley (2000, p.370) have explained that defining landownership security in terms of size, duration and assurance makes the concept of ownership security intractable and thus for ownership security to survive as a coherent concept, "...breadth of rights and duration of rights must be jettisoned, leaving only the idea of security-assurance to do the necessary work". Sjaastad and Bromley's observation is probably based on the fact that in terms of duration, it cannot be a measure of ownership security and that is because if a person is entitled to the exercise of rights over land for any given period of time, ownership security has to be measured in terms of that particular duration. For instance, if a person is entitled to exercise any bundle of rights over land in just two weeks, ownership security would have to be measured in terms of those two weeks. Duration can only determine the type of investment that can be undertaken on the land; potential investors will acquire land for the duration that

will serve the purpose for which the land is acquired. Any investor who acquires land for a short duration is therefore likely to go for an investment venture that would mature within that short period and ownership security should be measured in terms of that short period.

Regarding breath or scope of rights, Abdulai and Owusu-Ansah (2014) are right when they argue that even though the possession of a wide range of land rights may be described as desirable, the possession of a single right cannot amount to insecurity. As they explicate, security in this instance has to be measured in terms of the right that an individual is entitled to exercise over the land; it cannot be measured in relation to what the person is not entitled. The Latin maxim "Nemo dat quod non habet", to wit, "no one gives what he does not have" can loosely be applied here. Thus the fact that one is entitled to the exercise of a single land right in itself does not amount to landownership insecurity.

Consequently, it is only the assurance of land rights (which as noted above, is the degree of certainty that an owner will not lose his land rights) that adequately and rightly describes landownership security. It is based on this assurance principle that landownership security has been defined as the degree of certainty that a person's land rights will be recognized by law and, especially, by members of the society and protected when there are challenges to such rights (Abdulai and Owusu-Ansah, 2016 & 2014; Abdulai, 2010; Abdulai et al., 2007; FAO, 2005). Therefore, according to Toulmin and Longbottom (2001), landownership security involves two forms of validation, which are State validation by legal recognition and validation at the local level through recognition of one's land rights by his neighbours and other persons. Where one's landownership is secure, that person should be able to exercise his land rights peacefully or devoid of contestation and where disputes do occur, the ownership should be protected (Abdulai and Owusu-Ansah, 2016 & 2014; Abdulai, 2010). Consequently, societal and legal recognition of land rights, the absence of disputes over land as well as enforceability and clarity of land rights are all ingredients of landownership security.

Defining landownership security along these same lines, it has been explained as the enforceability of land rights against whom they are supposed to be enforced and immunity from expropriation (Antwi, 2000; De Souza, 1999; Li et al., 1998; Besley, 1995; Schlager and Ostrom, 1992; Honoré, 1961). Thus, Roth and Haase (1998) appear to be right in describing ownership security as a kind of perception held by individuals regarding their ability to exercise land rights both now and in the future in a manner that is devoid of interferences from others and at the same time allows them to benefit from any investment made in the land. This has been described by De Souza (1999) as the perception regarding the probability of eviction. The only way an individual can exercise his land rights without interference is when his entitlement to these rights are recognised by law and, especially, by members of the society.

According to Van Gelder (2010a and 2010b, cited in Franklin Obeng-Odoom and Stilwell, 2013) there are three dimensions of ownership security viz: (i) legal security (the removal of uncertainty by clear legal definition of land rights and the enforcement of such rights by the State); (ii) de facto security (protection arising from conditions such as length of time and conditions of property that, in "real life", confer some guarantee against and safety from losing one's rights); and (iii) perceived tenure security (the belief of people that their rights are protected). Regarding the second element, it relates to the acquisition of land rights by limitation or prescription through adverse possession where a trespasser may dispossess the true owner and be protected by law providing the conditions of adverse possession are satisfied. It is linked to the legal recognition element as in (i). The last element is equally linked to (i) since perceived security is about perception in terms of recognition of one's rights and their enforceability. World development agencies define security as the clarity and certainty of a system of land use, management and ownership

(FAO, 2012; UN, 2010; World Bank, 2010, 2003 & 1989; USAID, 1986; cited in Obeng-Odoom and Stilwell, 2013).

Authors like Bruce (1998) have looked at another legal angle of landownership security where it is argued that lawyers are more interested in how to argue cases in the State sponsored courts and a lot of the arguments are based on facts and the ability to provide hard evidence to prove one's case and in the case of landownership, it is achieved through land registration. Therefore, according to this school of thought, the attainment of security is synonymous to the ability of landowners to provide documentary evidence of their ownership. Based on this, Bloch (2003) asserts that security of landownership is an objective measurable variable in that it can be quantified and proven via documentary evidence. Wannasai and Shrestha (2007), in their classification of landownership security also note that landownership is secure if land holders possess registered titles or land certificates whilst the landownership is insecure where there is no documentary evidence of ownership. Also, it is argued that, it is only when land is registered and protected by legal title that maximum ownership security is afforded (Brasselle et al., 2001). It is based on this concept of landownership security that in the developing world, the traditional landownership systems, which are not based on any form of documentation, are often described as pure insecurity. Legality as noted above is an ingredient of landownership security but as to whether or not such legality comes from only documentation or land registration will be subjected to analysis later.

Premised on the various definitions of landownership security above and pulling those that are considered to be the appropriate description of landownership security in one way or the other, this paper considers landownership security in terms of the degree of clarity and certainty of: (a) land rights' recognition by the community members, especially adjoining owners (societal recognition); and (b) legal recognition of land rights and protection whenever there are challenges (recognition and enforceability) by the legal system.

EQUATING LAND REGISTRATION TO LANDOWNERSHIP SECURITY

As earlier noted, there is an argument that equates land registration to landownership security where it is asserted that land registration guarantees ownership security in the developing world. This argument dates back to the colonial era but probably gained momentum in the 1970s when the World Bank (1974) commenced to recommend registration of traditional land rights (in order to secure such rights) as a critical precondition for investment and modern economic development in, particularly, Africa. African countries subject to colonialism, have two basic types of landownership systems – formal/State landownership based on the property law of the colonial rulers, and traditional (customary) landownership systems. It is generally believed that the traditional landownership systems are insecure, creating a disincentive for investing in land-based activities, a perception premised upon the fact that traditional landownership is not formally documented, recorded or registered in a central system controlled by the State. Traditionally, proof of ownership of land is by physical possession and occupation, and the recognition of this fact by the community, especially adjoining owners (Abdulai, 2010 & 2006; Antwi, 2000). It is, therefore, argued that the absence of land registration in the traditional landownership systems implies pure insecurity of ownership, an argument used to justify the need for land registration policies and programmes.

Over the years, the apologists of the above World Bank's pronouncement that equates land registration to ownership have included authors like Wannasai and Shrestha (2007), MacGee (2006), Bloch (2003), Feder and Nishio (1998) and Larsson (1991). Larsson (1991), for example, has even argued that land registration prevents the occurrence of disputes over land, which significantly reduces the work of the State-sponsored courts. The other dimension of this school of thought is the assertion that land registration provides a secure

form of collateral for mortgage purposes and, therefore, guarantees access to formal capital for investment, wealth creation and economic development. This assertion reached its crescendo in 2000 when de Soto published a book on "dead capital" attributing the undercapitalised nature of the economies of developing countries and the existence of poverty in pandemic proportions and underdevelopment to non-registration of real estate ownership. He, however, claims the capitalism has triumphed in the West and made it an economically developed world because of land registration. De Soto's "dead capital" thesis posits that in the developing world, unregistered real estate cannot be traded or used as collateral to obtain loans from financial institutions and therefore the capital in such property is "dead". The apologists of the "dead capital" thesis include FAO (2012), Singh and Huang (2011), World Bank (2003) and Derban et al. (2002). In 2008, the International Commission on Legal Empowerment of the Poor, an independent international organization, hosted by the United Nations Development Programme argued that land registration is a necessary aspect of poverty reduction in the developing world (Bromley, 2008). Not surprisingly, developing countries, supported by the international donor community, have been pursuing land registration policies and programmes for many years up to this time, supposedly to guarantee landownership security and accessibility to formal credit for investment, poverty alleviation and economic development.

However, even though land registration has been equated to landownership security, empirical evidence from various studies conducted in countries like Ghana (Abdulai and Owusu-Ansah, 2014; Abdulai, 2010; Abdulai et al., 2007), Cambodia and Rwanda (Durand- Lasserre and Payne, 2006), Afghanistan (World Bank, 2006), Philippines and Honduras (World Bank, 2005), Egypt (Sims, 2002), India (Banerjee, 2002), Ivory Coast (Stamm, 2000), Uganda (McAuslan, 2000), and Kenya (McAuslan, 2000; Migot-Adholla et al., 1994), has shown that landownership security cannot be assured via land registration. The same evidence has been established by the studies of Payne et al. (2009), Bromley (2008), Toulmin (2006), Fitzpatrick (2005), de Janvry et al. (2001) and Barrows and Roth (1990). Indeed, in the developed world, there is evidence from case law that shows that genuine owners of registered real estate have lost their property through civil litigation; see for example; *Eliason v. Wilborn* (1929) (American case), *Attorney-General v. Odell* (1906) 2 Ch 47 (English case), *Gibbs v. Meyser* [1891] A.C. 248 (Australian case), *Gill v. Frances Co* (1937) (American case) and *Frazer v. Walker* [1967] 1 A.C. 569 (New Zealand case).

It is, therefore, not surprising that Payne et al. (2007) have done a critical analyses of various studies that have supposedly linked land registration to ownership security in the developing world and conclude that the residents in those studies already enjoyed ownership security before the introduction of land registration programmes. In unauthorised settlements, empirical evidence from studies conducted in Mexico (Angel et al., 2006), Tanzania (Kironde, 2006), South Africa (Allanic, 2003) and Peru (Ramirez et al., 2005; Kagawa and Turkstra, 2002) has also shown that residents in such settlements already enjoyed de facto ownership security before the introduction of land registration programmes and therefore ownership security did not emanate from land registration. In Ivory Coast, although reports of land registration under the Rural Land Plan in some parts showed that open landownership disputes or conflicts were non-existent when the land was being registered, it was because outstanding disputes had been dealt with by informal dispute resolution institutions prior to the land registration team's arrival (Okoin, 1999). This shows that the informal dispute resolution institutions had been able to resolve any disputes or conflicts before registration and the lack of open disputes was not due to land registration. According to Abdulai and Owusu-Ansah (2016) and Abdulai (2010), studies that have supposedly established that land registration assures ownership security either have research methodological problems or what constitutes ownership security appears to have been misinterpreted.

Indeed, it has been established by other studies that land registration can even be a source of insecurity in some circumstances. According to Durand-Lasserve and Payne (2006), land registration can disadvantage poor people who lose the security provided by the traditional systems of landownership whilst being unable to complete the bureaucratic process of land registration - in worst cases, it has created opportunities for the powerful in society to override traditional systems of ownership, thereby, displacing vulnerable owners. Re-echoing this point, Deininger (2003), Deininger and Feder (2001) and Janvry et al. (2001) note that land registration is not always necessary or sufficient for high level of ownership security and that in most cases, it creates new sources of conflicts if formal land rights are assigned without due recognition of traditional arrangements.

Migot-Adholla et al. (1994), have highlighted the negative and startling impacts of land registration in Kenya, which include: (i) heightened inequalities in landownership and agricultural incomes, leading to increased landlessness via land sales and growing rural urban migration; (ii) diminished food security and increased vulnerability to drought amongst groups whose access to land had been diminished by land registration; and (iii) increased level of land disputes. In Rwanda and Zimbabwe, land registration created more land disputes and uncertainty as well as denied land access to the poor and other marginalised groups like women whose rights were well protected under the traditional systems of landownership (Plateau, 1996).

De Soto's "dead capital" thesis as outlined above has equally be variously critiqued by authors where it is argued that the economically developed and advanced state of the West is not as a result of land registration and that land registration per se cannot unlock capital for investment, poverty reduction and economic development. For example, as cited in Obeng-Odoom and Stilwell (2013), Benda-Beckmann (2003) has criticized de Soto's unsubstantiated assertion that it was merely the registration of real estate that helped the West to develop capitalism; Benda-Beckmann notes it was due to access to free labour in the developing south, the unequal terms of trade and the massive exploitation of the colonies for raw materials that propelled the West to secure its lead in the process of capital accumulation and not land registration. Indeed, Obeng-Odoom and Stilwell (2013) rightly observe that there is social-economic differentiation when comparing the developing world or poor nations in terms of land registration. Thus, taking that into consideration, Van Gelder (2010a & 2010b; cited in Odoom and Stilwell, 2013), argues that land registration can also impoverish the poor or reduce their access to land, particularly, when it makes land too expensive.

Empirical evidence from Abdulai's (2011) study on the link between land registration and access to formal capital for investment is that registration alone is incapable of unlocking investment capital. The study established the problem with the poor to be that, where they own real estate, it is usually of low quality, inappropriately located and thus unsuitable for mortgage purposes; also real estate insurance is mandatory for mortgage purposes but insurance companies are unwilling to insure such real estate due to high risks. Thus, according to him, to argue that land registration is the panacea to the problem of poverty and under development is to prescribe a simple solution to a complex problem, a solution which is insufficient and is not working. Other studies that have concluded that land registration per se cannot unlock capital include Domeher and Abdulai (2012), Abdulai (2010), Abdulai and Hammond (2010), Bromley (2008) and Gilbert (2007). In developing countries, a very critical determinant of economic development is prudent management of a nation's resources and good governance; deficiencies in these have been identified by Abdulai (2011) to be among the major causes of poverty and economic underdevelopment in, particular, Africa. Greed and corruption constitute a manifestation of mismanagement of resources, it being estimated that 40–60% of national resources are lost through corrupt practices in Africa (Abdulai and Ndekugri, 2007; Food and Agriculture Organisation, 2005). Lumumba (2015) reinforces this observation when he attributes

Africa's problem to "misgovernance" and notes Africa's tragedy is that, Africa's creed is greed; he concludes by opining that many African countries are kleptocracies, which means governments where thieves have come together to conspire to rob their countries.

The preceding discourse shows that albeit land registration is considered as the panacea to landownership insecurity as well as a system that can unlock investment capital in the developing world, there is overwhelming evidence from numerous studies to the effect that land registration is incapable of guaranteeing landownership security and cannot equally unlock capital for investment, poverty reduction and economic development. Also, there are actual and critical causes of poverty and economic underdevelopment and land registration is not one of them.

TYPES OF LAND REGISTRATION

There are two types of land registration systems. These are Deed Registration and Title Registration (also called the Torrens system of land registration). According to Deininger (2003, cited in Abdulai and Owusu-Ansah, 2014), in Deed Registration, legally recognized and protected land rights arise upon conclusion of an agreement or contract between the land grantor/transferor and land grantee/transferee. Deininger explains that the entry of the agreement or contract and its key contents into the public registry is to provide public notice of the existence of the land rights and challenges to such rights will be handled through civil litigation. Therefore, as noted by Awuah and Hammond (2013) and Abdulai (2010), it is a record of landownership instruments or transactions and does not provide any guarantees regarding the actual legal ownership status of the land. The history of Deed Registration is often traced to the Romans who introduced it in, for instance, England and Wales in 397 AD when Britain became part of the Roman Empire where ownership and productivity of land was recorded - it formed the basis of a land tax called "tributum soli" in England and Wales (Pemberton, 1992; Dark, 2000). Even though Enemark (2005) has observed that it is commonly used in South America, parts of Asia and Africa, most parts of the United States of America and in Latin cultures in Europe, for example, France, Spain and Italy, it is used in other parts of the world.

In terms of Title Registration, it is the entry into the registry that gives landownership legal validity, guaranteed by the State and thus all entries in the register are prima facie evidence of the actual legal status of the land (Deininger, 2003, cited in Abdulai and Owusu-Ansah, 2014). The State guarantees the accuracy of the data entered in the title register and in some jurisdictions, the State indemnifies or pays compensation (from an indemnity fund set up) to owners who suffer any loss due to negligence, mistakes, errors and omissions from title registration as well as fraud unless the owners contributed substantially to the occurrence of these events. Title Registration is based on the work of Sir Robert Richard Torrens (1814-1884), which has been described in Abbott (2005). Sir Robert Richard Torrens was an Irish emigrant to Australia and a land law reformer who devised a system of land registration for Australia in 1858 based on the British ship registration system. This explains why Title Registration is often referred to as the Torrens system. The purpose of the system as Sir Torrens himself rightly put it was to simplify land transfer. He was looking for five qualities when he introduced title registration: reliability, simplicity, low cost, speed and suitability. Title Registration is commonly used in Central European countries like Poland, Slovenia, Croatia, Germany, Austria and Switzerland (Enemark, 2005) but it is also used in other European countries like the United Kingdom and other parts of the World, for example, Ghana.

Hogg (1920) in an attempt to differentiate between Deed Registration and Title Registration notes their close similarity and the difficulty in distinguishing them but argues that the presence of a statutory provision of title warranty in the Title Registration system is the single most important distinguishing feature between

the two systems. The other difference not considered by Hogg is the source of legal validity. Whilst Title Registration is a source of legal validity of ownership, Deed Registration is not. There are therefore two factors that differentiate one registration system from the other but these differences are from a theoretical perspective. This is because in countries like Germany, Sweden and Denmark, there are no State guarantees in Title Registration as protection for registrants is only derived from “public faith” (Zevenbergen, 2002). Consequently, from a practical perspective, the main difference between the two registration systems is rather the source of ownership legality. Thus practically Deed Registration can be appropriately described as the recording of mere transactions that have taken place between land grantors/transferees and grantees/transferees whereas Title Registration is about the recording of the legal consequences of transactions.

ANALYSING THE PRINCIPLES UNDERPINNING LAND REGISTRATION SYSTEMS AND THEIR APPLICATION

In the literature, there are three main dimensions to the argument that land registration assures landownership security, which are subjected to critical analyses in the sections that follow below.

Title Warranty/Guarantee Provided by the State under Title Registration/Torrens System

One of the bases for equating land registration to landownership security relates to the title warranty provided by the State under the Title Registration system. Authors like MacGee (2006), Jacoby and Minten (2005) and Simpson (1984) argue that land registration guarantees ownership security based on this State warranty. Simpson, for example, asserts that because of the State guarantee, Title Registration makes landownership indefeasible or unimpeachable. Indeed, the Title Registration laws of some countries specifically state that Title Registration is conclusive evidence of ownership and that it makes title or ownership indefeasible. In Ghana, for instance, Section 18 of the Title Registration legislation [Land Title Registration Law 1986 (PNDCL 152)] provides that the title register is conclusive evidence of title to any land and interest in it and therefore indefeasible, which is reinforced in Section 43 the same law. The Land Registration Act 2012 of Kenya provides in Section 26(1) that certificate of title issued under the Act is prima facie evidence that the person named as proprietor of the land is the absolute and indefeasible owner. Similar provisions are provided in the land registration legislation of countries in Africa like Uganda and Tanzania that use the Torrens system.

Land registration under the Title Registration system it is argued, guarantees ownership because of the ownership or title warranty provide by the State. However, it is obvious that the ownership guarantee or warranty is provided by the State and not the registration system per se. Thus, the State could decide not to provide that warranty as in the case of the Deed Registration system. Indeed, it is even possible for the State to guarantee title or ownership without any form of registration. Therefore, granted that the State warranty can potentially protect ownership, it is clear that Title Registration system by itself cannot provide that protection and that is why the State is providing it; if the Title Registration system could provide that warranty or guarantee, there will be no need for the State to provide it again. The facts of the American case of *Eliason v. Wilborn* (1929), already cited above are given below to illustrate how the Title Registration system per se cannot guarantee security and how the warranty emanates from the State.

In *Eliason v. Wilborn*, Mr and Mrs Eliason of Cook County in Illinois owned a parcel of land registered under the Title Registration system or Torrens Act. They entrusted their certificate of title to a prospective purchaser who used it to forge a transfer to himself, registered the land and proceeded to sell it to a man named Wilborn. After extended litigation, which ended in the Supreme Court of the United States, the defrauded proprietors failed to recover the land. They then filed a claim of losses from the State but were

advised that they must secure a judgment before they could be paid. They had already been in the courts for several years and were, as their attorneys expressed it, “so fed up with litigation that they decided to pocket their losses”.

First of all, the facts of the case show that albeit Mr and Mrs Eliason's land was registered under the Torrens Act and they were the true and legal owners, but were defrauded, they still failed to recover their land. If the Title Registration system by itself could guarantee ownership security, Mr and Mrs Eliason's will not have lost their land. Secondly, it is obvious that in the Cook County in Illinois, the Torrens Act made provision for the State to indemnify or pay compensation to owners who suffer losses as part of the warranty it provides. However, the case illustrates that the indemnity is not automatic and Mr and Mrs Eliason had to still secure a judgment in court to be paid compensation but because they had been in court for many years, they were fed up with litigation and decided to pocket their losses.

It is also important to note that in some jurisdictions like Germany, Sweden and Denmark as earlier indicated above, no State warranties or guarantees are provided under the Title Registration system and so protection for registrants is only derived from “public faith” just like the Deed Registration system.

Publicity Function of Land Registration

The publicity function of land registration as described above is another basis often used to argue that land registration guarantees ownership security. Scott (1981) for example, argues that during the earliest days of colonization, there was a clear understanding of the essential role of “Public Record” as a means of establishing ownership security of private interests in landholdings. In equating the publicity function of land registration to ownership security, Larsson (1991) as earlier indicated, posits that it prevents the occurrence of land disputes, which significantly reduces the work of State-sponsored courts. Before subjecting this basis to analysis below, the assertion of Larsson cannot escape critique. In a human society, land disputes are bound to occur and so it is unimaginable and disingenuous for anybody to argue that land registration prevents the occurrence of land disputes based on its publicity function.

The equation of the publicity function of land registration to the ownership security argument is problematic and unsustainable. This is because publicity of landownership and transactions is about making people aware of somebody's ownership or land transactions but that is completely different from ownership security that has been described above. Although premised on this publicity function of land registration, Larsson argues that land registration prevents the occurrence of disputes on registered land, the evidence adduced in various studies cited earlier sharply debunks such an argument. For example, in the studies of Abdulai and Owusu-Ansah (2014) and Abdulai et al. (2007) in Ghana, various cases relating to disputes on registered landownership had been filed in the State sponsored courts for resolution and some of the cases were decided against owners of registered land. In the Abdulai and Owusu-Ansah's (2014) study, for instance, out of the 91 land cases involving registered landownership that were filed in State-sponsored courts and resolved over a 10-year period, 43 cases (47%) were decided in favour of registered ownership, whilst 48 cases (53%) were decided in favour of unregistered ownership. The findings show that State-sponsored courts will normally examine the facts of each case based on the available evidence in order to establish to the requisite standard, the truth about who actually owns the land to ensure that there is no miscarriage of justice; thus, judgments are delivered based on the truth about ownership and not the fact of registration.

Legality of Ownership

The third argument equating land registration to security is based on the legal conception of ownership security. It is asserted that because legality emanates from registration, it secures ownership. This argument is critiqued as follows. First of all, under the fundamental principles of the Deed Registration system that has been described above, societal and legal recognition of ownership and its protection arise upon conclusion of the agreement between the land grantor/transferor and grantee/transferee. Ownership security does not therefore emanate from the fact of registration. Entry of the key contents of the agreement into the public registry is only to provide public notice of the existence of the land rights and challenges to such rights will be handled through civil litigation as noted by Deininger (2003). This clearly shows that the Deed Registration system does not play a role in the resolution of ownership disputes in the law courts or does not contribute to security or does not support security, let alone to guarantee security. Obviously, in resolving landownership disputes, the courts would of necessity rely on the contract or agreement that is entered into between the land grantor/transferor and grantee/transferee and not the fact of registration and this is corroborated by the empirical evidence from Abdulai and Owusu-Ansah's (2014) study referred to above. The findings of Abdulai and Owusu-Ansah are not surprising since as explicated by Awuah and Hammond (2013) and Abdulai (2010) *supra*, the Deed Registration system simply records landownership instruments or transactions and does not provide any guarantees regarding the actual legal ownership status of the land that is being registered. Examples of countries in Africa that use the Deed Registration system include South Africa and Namibia (Deeds Registries Act 47 of 1937), Tanzania (Land Act No. 4 of 1999), Botswana (Deeds Registry Act, Cap 33:02, 1960), Zimbabwe (Deeds Registries Act 1996), and Zambia (Lands and Deeds Registry Act, Cap 185).

Regarding the Title Registration system, admittedly, based on the principles that underpin the system, it constitutes evidence of legal ownership. Thus, in countries like Ghana, Kenya, Uganda and Tanzania where the Title Registration system is used, it can be argued that it can play a role in the resolution of landownership disputes in the State-sponsored courts or can contribute security as registered land title under the system can be tended as evidence of legal ownership. Consequently, the system can be described as a determinant of security or it can be said to support ownership security. Notwithstanding this, it has to be noted that the Title Registration system "being a determinant of ownership security" or "being able to support ownership security" cannot in any way be equated to "guaranteeing security" – these are completely two different things. For instance, if "A contributes to the occurrence of event B or A is one of the determinants of event B" it is not the same as saying that "A guarantees the occurrence of event B". The former means that A is one of the factors that would make event B to occur (in effect, there are other factors) whilst the latter means that the occurrence of event B is dependent on only A. The thrust of this paper is, however, about the latter and not the former.

Also, Title Registration is not the only source of legal ownership. In most jurisdictions in Africa, although proof of traditional landownership is not based on registration or any form of documentation, such ownership is recognised by their legal systems. In Ghana, for instance, the traditional landownership systems are recognised by the 1992 Constitution, the supreme law of the country and the Conveyancing Decree of 1973 (NRCD 175) and therefore admissible in State-sponsored courts as evidence of legal ownership in times of challenges (Abdulai and Owusu-Ansah, 2014; Abdulai et al., 2007). This recognition in Ghana dates back to the colonial era when Native Courts were established in 1925. Similarly in Nigeria, despite the nationalisation of land under the Land Use Decree of 1978, traditional landownership is recognised by the State-sponsored

courts (Ikejiofor et al., 2004) whilst in Mozambique, traditional land rights are legally recognised and protected regardless of whether they have been registered or not (Cotula et al., 2006).

Consequently, if the Title Registration system can be a determinant of security or can support security and it is equated to guaranteeing security, then the traditional landownership systems equally guarantee security as they are legally recognised and thus can support security. Therefore, from the legal concept of ownership security, land registration is not needed in the traditional landownership sector for security to be established. It is thus surprising that the customary landownership systems are considered to be purely insecure even though they are legally recognised but regarding the Title Registration system, the argument is that it guarantees security because it is a source of legal ownership or it makes ownership to be legally recognised.

Allied to the legal conception of security is the issue of documentary evidence of legal ownership. Traditional land rights are described as purely insecure because ownership is not documented. Undeniably, when ownership is documented, it is normally easy to prove when it is disputed. However, this does not in any way imply that ownership security is guaranteed. As noted above, in resolving disputes in State-sponsored courts, what has to be established to the requisite standard, is the truth about who actually owns the land to ensure that there is no miscarriage of justice - delivery of judgements is not merely based upon proof of documentary evidence of ownership or registered ownership. Indeed, documents are not sacrosanct as there can be phony documents and so the mere fact that ownership is evidenced by a document does not mean that the evidence is conclusive. It is also argued as if documentation is achieved through only land registration. If for the sake of argument it is assumed that documentation guarantees security, there can be documentation without land registration and so it is astounding that the focus is on land registration. It is common knowledge that there is documentary evidence of various things but such evidence is not registered or recorded in a central system controlled by the State.

Furthermore, as earlier outlined, physical possession and occupation as evidence of ownership in the traditional landownership systems is legally recognised even though it is not based on documentation. The potency of this form of evidence is amply demonstrated by the operation of limitation or prescription laws. Under such laws, a true owner of land can be dispossessed of his land through a reasonable period of occupation by a squatter. In Ghana, under the Limitation Decree of 1972 (NRCD 54), a trespasser dispossesses the true owner of land if the trespasser occupies the land for 12 years and within such period the true owner fails to assert his ownership. At the end of the prescription period, the true owner loses his ownership and the right to sue is extinguished. Even where the land has been registered by the true owner, he still forfeits it. In England and Wales, under the Limitation Act (1980), the limitation period is 12 and 10 years for unregistered and registered land respectively. Under the French Civil Code, the prescription period is 20 years where the true owner is resident outside the territory in which the land is located; if the true owner lives within the territory where the land is located, the limitation period is 10 years. Furthermore, it is not only the traditional evidence of landownership that is legally recognised even though it is not based on any form of documentation. It is common knowledge that in other cases, oral evidence from witnesses is admissible in the State sponsored courts as sufficient proof of one's case and it is possible for people without documentary proof of evidence to obtain judgement in their favour.

The preceding analysis of the principles that underpin the land registration systems that are used globally helps to explain why even though land registration is often equated to security, the overwhelming evidence from numerous studies have established that land registration per se is incapable of guaranteeing ownership security. Evidence from some studies have even shown that land registration can be a source landownership insecurity in some cases. The two relevant questions that then arise are: (i) what is the actual role of land

registration? And (ii) what mechanism can guarantee ownership security? The answers to these questions are contained in the work of Abdulai and Owusu-Ansah (2016 & 2014) and Abdulai and Domeher (2012).

They have defined the right role of land registration to be a record keeping system and have also identified its importance in the economies of countries to be that of overcoming the problems of asymmetrical information and moral hazard and creating a landownership database that facilitates land activities or transactions thereby reducing transactions costs. It is the same purpose Larsson (1991) alludes to when he explains two basic historical reasons for landownership record keeping, which are the need for: (i) the State to know all parcels of land for taxation or other fees; and (ii) prospective land purchasers to get publicity for their acquisition of land. De Soto (2000) also refers to the same purpose when he emphasises the role of land registration in facilitating communication, information sharing, networking and transactions. Regarding what mechanism can assure ownership security, Abdulai and Owusu-Ansah (2016 & 2014) and Abdulai and Domeher (2012) have identified title insurance as an effective tool. As they explain, in title insurance, the insurer indemnifies landed property owners if they lose the insured property; it therefore provides guarantees in landed property transactions by protecting the owner or lender against defective ownership or title, which results from problems like unknown recorded liens, forgeries, improperly delivered title deeds, defects in public records and incompetent grantors. Title insurance is definitely a very potent tool although, it can be a costly venture based on the experience of countries that are practising it; for example, USA as noted by the authors.

In the absence of title insurance, the other ingredients of landownership security they have identified are societal and legal recognition of landownership, availability of landownership dispute resolution and enforcement institutions, and clear land boundary demarcation; their treatment of these issues are summarised as follows. Regarding societal recognition, as Becker (1977) observes, if for example, John has the right to possess property, not only that other members of the society do not have the right to the property, but they have a duty not to interfere with the possession of John and perhaps even to see to it that the property is restored to John when lost. The issue of legal recognition has already been considered above.

Albeit societal recognition and respect of one's land rights is important for the enforcement of the rights, the chances that such rights would be violated cannot still be ruled out in a human society. However, if the rights were violated, the disputes would have to be resolved and therefore there is the need for appropriate dispute resolution and enforcement institutions that can authoritatively interpret land rights and resolve disputes, so as to enforce the land rights. Reinforcing this point, Cotula et al. (2006, cited in Abdulai and Domeher, 2012) observe that the availability of appropriate institutions for land rights dispute resolution and accessibility to such institutions provide enormous returns in terms of certainty and security of property rights; new technologies such as computerised landownership information systems can help put in place publicly accessible landownership records, but are not a substitute for legitimate process to adjudicate land rights disputes.

Where the legitimacy of such dispute resolution systems, whether informal institutions, often referred to as alternative dispute resolution institutions (ADRs) or formal institutions, is well established, then parties to any landownership dispute can seek redress from them with the assurance that whatever decisions are arrived at are deemed appropriate and can be effectively enforced; when there are institutions that can interpret landownership rights in an authoritative manner and people understand the way they work and are willing to abide by whatever decisions they make, landownership related disputes are amenable to resolution. In particular, the importance of ADRs as an ingredient of ownership security is succinctly summarised in the words of Gamey (2016) when he notes that it is very difficult to use State-sponsored

courts to resolve issues such as chieftaincy disputes, divorce, religious conflicts and land disputes and that ADRs are therefore the most appropriate methods in resolving such cases.

Regarding clear land boundary demarcation as an ingredient, when boundaries are clearly defined, land boundary disputes would be minimal; accurate and precise well-defined boundaries are easier to enforce and cost less to protect as they are easily observable by other community members. This ingredient is very critical when one considers Africa, particularly, in the traditional system of landownership where, generally, land boundaries are shown on the ground by a combination of streams/rivers, old trees/hedges, valleys, hills and paths. Certainly, this has sustainability problems as, for instance, trees can perish and paths can vanish. The solution to this problem, requires a scientific way of demarcating land boundaries – land surveying and pillaring to produce permanent boundary lines and maps or plans, which ensures that there is documentation of the boundaries, but doing this does not necessarily require land registration. The word “documentation” and “registration” are often used interchangeably and this seems to be the case with Larsson (1991) when he observes that the best way to clarify land boundaries is to register land. This in turn, he argues leads to less litigation and less work for the courts. However, it is misleading to use the words interchangeably since land can be surveyed and maps produced (an effective tool that clarifies land boundaries), which is a form of documentation without registering the land.

CONCLUSION

The critical role that security of landownership plays in the economies of nations cannot be overemphasised. This is because security provides incentives for investment in land-based economic activities which contributes to economic development and poverty reduction. Also, landownership insecurity in the form of land disputes are causes of civil strife in many developing countries with devastating human and economic consequences. In the developing world in particular, it is often argued that land registration is the panacea to the problem of landownership insecurity. Such an argument is premised on the belief that in the advanced world, there is landownership security because of land registration. This has led to countries in the developing world, supported by international donor agencies like the World Bank and advanced nations, to pursue land registration policies and programmes supposedly to secure land rights. Despite the implementation of these programmes over the years, the desired objectives have not been achieved. This has therefore triggered various studies into the nexus between land registration and ownership security in the developing world. These studies have resulted in two schools of thoughts on the link between land registration and ownership security. At one end of the spectrum is a school of thought that posits that registration assures security. At the other end of the spectrum is another school of thought which argues that land registration per se cannot guarantee landownership security. Indeed, allied to the latter school of thought is another argument that in some circumstances, land registration can be a source of land disputes or ownership insecurity.

The preceding context provided the basis for this paper, which critically examined the principles that underpin the land registration systems in order to explain whether or not land registration can actually guarantee ownership security. The principles considered are: (i) warranty provided by the State in the Title Registration/Torrens system; (ii) publicity function of land registration; and (iii) legality of ownership emanating from land registration. In terms of principle (i), it has been established that if at all the warranty provided by the State can assure landownership security, such warranty is provided by the State and not the Title Registration system; if registration could provide that warranty, it will be needless for the State to provide it again. The State could even decide not to provide that warranty as in the case of the Deed Registration system. And it is possible for the State to guarantee ownership without any form of registration.

Case law has also vividly illustrated how the Title Registration system by itself cannot assure security and how the warranty emanates from the State; the warranty is not automatically provided by the State and so there are instances where despite the State warranty, titles have been lost via litigation. Furthermore, albeit theoretically, under the Title Registration system, the State is supposed to provide warranty, in practice, in some jurisdictions like Germany, Sweden and Denmark, such warranty is not provided and for that matter, protection of ownership is rather derived from “public faith”.

Regarding principle (ii), the paper has shown that publicity of landownership and land transactions, which is about making people aware of somebody’s ownership or land transactions has been equated to ownership security and such proposition is problematic and unsustainable; publicity of one’s landed property ownership and land transactions are completely different from security and cannot therefore be the same. Another dimension of such a proposition is the argument that the publicity of landownership and land transactions prevents the occurrence of land disputes, which significantly reduces the work of State sponsored courts. Such an argument is equally problematic and unsustainable since in a human society, land disputes are bound to occur and so it is disingenuous for such an argument to be made. As evidence from case law has even shown, when land disputes are brought to the State-sponsored courts for resolution, judgments are not automatically delivered based on the mere fact of registration. What the courts do is to examine the facts of each dispute based on the available evidence in order to establish to the requisite standard, the truth about who actually owns the land to ensure that there is no miscarriage of justice.

In terms of principle (iii), the argument is that land registration assures ownership security because legality of one's landownership emanates from land registration. However, the paper has shown that such an argument is mendacious in term of the Deed Registration system. This is because under such system, ownership security does not emanate from the fact of registration as entry of the key contents of the agreement into the public registry is only to provide public notice of the existence of the land rights and challenges to such rights will be handled through civil litigation. Thus, land registration in this case does not play a role in the resolution of ownership disputes in the State-sponsored courts, let alone to assure ownership security. In landownership dispute resolution, the courts rely on the contract or agreement that has been entered into between the land grantor and grantee and not the fact of registration, which is supported by case law.

As regards the Torrens system of land registration, it is a source of legal ownership and it can be argued that it plays a role in the law courts when landownership cases are being adjudicated since title certificates can be used as evidence of legal ownership. It can thus be argued that the Torrens system can contribute to ownership security or support security. However, if the Torrens system contributes to ownership security that cannot be equated to security assurance as they are not the same. The paper has also established that the Torrens systems of land registration is not the only source of legal ownership since in most African countries, albeit proof of traditional landownership is not based on registration or any form of documentation, such ownership is recognised by their legal systems and accepted in State-sponsored courts as legal ownership. It is therefore astounding that the traditional system of landownership is legally recognised and also contributes to ownership security just like the Torrens system, yet the traditional landownership is regarded as "pure ownership insecurity" whilst the Torrens system is described as "pure ownership security". Indeed, despite the Torrens system being considered as pure ownership security, evidence from case law has demonstrated that landownership registered under the system has been lost.

Another issue associated with principle (iii) relates to documentary evidence of landownership where it is asserted land registration assures security because it is a source of documentary evidence of legal ownership.

Even though when ownership is documented it is easier to prove when the ownership is contested, it does not mean that it guarantees security. As it has been shown in the paper, in landownership dispute adjudication in the law courts, what has to be established to the requisite standard, is the truth landownership to ensure that there is no miscarriage of justice and so it is not about the mere proof of documentary evidence of ownership or registration. It is also important to note that there can be documentation of ownership without registration and thus granted that documentation assures security, it is surprising that the focus is on registration as if that is the only source of documentary evidence of ownership. There is documentary evidence of various things which is not registered or recorded in a central system controlled by the State. Documentary evidence of ownership cannot guarantee security any way since documents are not sacrosanct; there can be phony documents. Furthermore, oral evidence from witnesses is admissible in the law courts as sufficient proof of one's case and so it is possible for people without documentary proof of evidence to obtain judgements in their favour.

Policy Implications and Recommendations

In this paper, a critical analysis of the underpinning principles of land registration systems that are used globally has provided insights as to why land registration cannot assure land ownership security in the developing world. Land registration has been made to serve a purpose it is incapable of performing and that is why the desired impact has not been achieved despite the formulation and implementation of land registration policies and programmes over the years in the development world. Land registration plays a critical role but such an important role appears to be completely misunderstood. It is a record keeping system and the importance of any record keeping system in the economies of nations cannot be over-emphasised. Land registration creates a landownership database, which can be used for various important purposes.

Consequently, governments in the developing world as a whole, as well as the international donor community should promote land registration based on the right and critical role that it is supposed to play as established in this paper. It should be in the interest of governments to ensure that landownership is registered as the governments can, for example, sell that information to the public, which means, it constitutes a source of revenue. Indeed, historically, land taxation was the main reason for the introduction of land registration in various countries several centuries ago. The landownership database also facilitates land activities or transactions thereby reducing transactions costs. The continuous promotion of land registration based on the assertion that it makes title indefeasible or assures security can be an incentive for unscrupulous people to employ whatever fraudulent means available to register other people's landed property rights in their names, which is a recipe for confusion and can rather be a source of insecurity as illustrated in the *Eliason v. Wilborn* case. This is very important, especially, in Africa where politicians and their cronies may take advantage of the registration; as aptly noted by Lumumba (2015) above, Africa's tragedy is that, the managers of Africa's creed is greed.

Secondly, the identified determinants of landed property ownership security, particularly, title insurance, availability of landownership dispute resolution and enforcement institutions, and clear land boundary demarcation should inform policy formulation and programmes aimed at securing landownership instead of the heavy reliance on registration, which is obviously not working. In terms of boundary disputes, for example, in Africa, there is the urgent need for a scientific method of demarcating boundaries as the traditional approaches are unsustainable. Governments and the international donor community could support the traditional landowners to survey and pillar boundaries thereby creating permanent boundaries, which could aid solve the land disputes or ownership insecurity emanating from boundary demarcation.

Given the important role that land dispute resolution institutions play in securing landownership, there is the need for governments in Africa to strengthen particularly, the informal systems (ADRs) that already exist. The State-sponsored court system is increasingly considered to be insufficient in resolving, especially, land disputes. ADRs offer a less burdensome, cheaper, and faster form of justice for ordinary citizens, particularly, the poor who do not have access to the State-sponsored justice system due to lack of resources.

REFERENCES

- Abbott, D. (2005) *Encyclopaedia of real estate terms*, Delta Alpha Publishing, London.
- Abdulai, R. T. (2006) Is land title registration the answer to insecure and uncertain property rights in sub-Saharan Africa?" *RICS Research Paper Series*, 6, 6.
- Abdulai, R. T. (2010), *Traditional landholding institutions in sub-Saharan Africa – the operation of traditional landholding institutions in sub-Saharan Africa: a case study of Ghana*, Lambert Academic Publishing AG & CO KG, Saarbrücken.
- Abdulai, R.T. and Domeher, D. (2012) *Why Real Estate Ownership Security Cannot be Guaranteed Via Land Registration in the Developing World*, Nova Science, New York, NY.
- Abdulai, R. T. and Hammond, F. N. (2010) Landed Property Market Information Management and Access to Finance", *Property Management*, Vol. 28 No. 3/4, pp.228-244.
- Abdulai, R. T. and Owusu-Ansah, A. (2014) Land information management and landed property ownership security: Evidence from state-sponsored court system, *Habitat International*, Vol. 42, pp.311-13.
- Abdulai, R. T. and Owusu-Ansah, A. (2016) "Management of real estate market information and economic development in development countries" in Abdulai, R. T., Obeng-Odoom, F., Ochieng, E. and Maliene, V. (Eds.), *Real Estate, Construction and Economic Development in Emerging Market Economies*, Routledge, London, pp.205-223.
- Abdulai, R.T. and Ndekugri, I.E. (2007), "Customary landholding institutions and housing development in Ghana: case studies of Kumasi and Wa", *Habitat International*, Vol. 31 No. 2, pp. 257-267.
- Abdulai, R. T., Ndekugri, I. E., Olomolaiye, P. O. and Proverbs, D. G. (2007). Land Registration and security of land tenure: Case studies of Kumasi, Tamale, Bolgatanga and Wa in Ghana, *International Development Planning Review*, Vol. 29 No. 4, pp.475-502.
- Abdulai, R. T. (2011) "Land registration and poverty reduction in Ghana", in Home, R. (Ed) *Local Case Studies in African Land Law*, Pretoria University Law Press, Pretoria, pp.157- 170.
- Allanic, B. (2003) *La nouvelle coutume urbaine: Evolution compare des filieres coutumieres de la gestion fonciere urbaine dans les pays d'Afrique subSaharienne. Le cas de Mandela Village, South Africa*, ISTED, DFID.
- Andre, C. and Platteau, P. (1998) Land relations under unbearable stress: Rwanda caught in Malthusian trap, *Journal of Economic Behaviour and Organization*, Vol. 34, pp.1-47.
- Angel, S., Brown, E. Dimitrova, D. Ehrenberg, D., Heyes, J., Kusek, P., Marchesi, G., Orozco, V. Smith, L. and Ernesto, V. (2006). *Secure tenure in Latin America and the Caribbean: Regularization of informal urban*

settlements in Peru, Mexico and Brazil. Woodrow Wilson School of Public and International Affairs, Princeton University.

Antwi, A. Y. (2000) Urban Land Markets in sub-Saharan Africa: A Quantitative Study of Accra, Ghana, Unpublished PhD Thesis, Napier University.

Attorney General v. Odell (1906), English Case of Attorney General v. Odell, 2 Ch. 47, CA.

Atwood, D. A. (1990) Land registration in Africa: the impact on agricultural production, *World Development*, Vol.18 No. 5, pp.659-671.

Awuah, K. G. B. and Hammond, F. N. (2013) Prognosis of land title formalization in urban Ghana: the myth and reality of awareness and relevance, *African studies Quarterly*, Vol. 1 No.2, pp.57-75.

Barrows, R. and Roth, M. (1990) Land tenure and investment in African agriculture: theory and evidence, *The Journal of Modern African Studies*, Vol. 28, pp.265-297.

Benerjee, B. (2002) Background Note, prepared for the design of Kolkata Urban Services for the Poor Project, DFID Mimeo.

Becker, L.C. (1977) *Property Rights: Philosophic Foundations*, Henley, Routledge and Kegan Paul, Boston, MA, London.

Bentham, J. (1931) *The Theory of Legislation*, Kegan Paul, London.

Besley, T. (1995) Property rights and investment Incentives: theory and evidence from Ghana, *Journal of Political Economy*, Vol. 103, pp.903-937.

Bloch, P. (2003) "Economic impact of land policy in the English speaking Caribbean", in Williams, A. (Ed.) *Land in the Caribbean: issues of policy, administration and management in the English speaking Caribbean*, Land Tenure Centre, University of Wisconsin-Madison, Madison, WI, pp.13-30.

Brasselle, A., Gaspart, F., Platteau, J. (2001) Land tenure security and investment incentives: puzzling evidence from Burkina Faso, Centre De Recherche En Economie Du Développement (Cred), Faculty of Economics, University of Namur, Rempart De La Vierge, 8, B-5000 Namur, Belgium.

Bromley, D. W. (2008) Formalising Property Relations in the Developing World: The Wrong Prescription for the Wrong Malady, *Land Use Policy*, Vol. 26 No. 1, pp.20-27.

Bruce, J. W. and Migot Adholla, S. (Eds.) (1994) *Searching for land tenure in Africa*, Kendall/Hunt, Dubuque.

Bruce, J. W. (1998) *Review of tenure terminology*, *Tenure Brief*, No. 1, WI: Land Tenure Centre, University of Wisconsin-Madison.

Cotula, L., Toulmin, C. and Quan, J. (2006) Policies and practices for securing and improving access to land, Paper presented at the 18th International Federation of Surveyors (FIG) Congress, 8-13 October, Munich, Germany.

Dark, K. (2000) *Britain and the end of the Roman Empire*, Tempus –Publisher, London.

De Janvry, A., Platteau, J-P., Gordillo, G. and Sadoulet, E. (2001) "Access to land policy reforms", in de Janvry, A., Gordillo, G., Platteau, J-P. and Sadoulet, E. (Eds.) *Access to land rural poverty and public action*, Oxford University Press, Oxford, pp.1-26

- De Soto, H. (2000) *The mystery of capital: why capitalism triumphs in the West and fails everywhere else*, Bantam Press, London.
- De Souza, F. A. M. (2001) Perceived security of land tenure in Recife, Brazil, *Habitat International*, Vol. 25, pp.175-190.
- Deininger, K. (2003) Land policies for growth and poverty reduction, World Bank Policy Research Report, World Bank, Washington DC.
- Deininger, K. and Feder, G. (2001) *Land Policy in developing countries*, Development Note 3, World Bank, Washington DC.
- Derban, W. K., Derban, D. K., Ibrahim, G. and Rufasha, K. (2002) Microfinance for housing for low/moderate – income households in Ghana, Paper presented at a Conference on Housing and Urban Development for Low Income Groups in sub-Saharan Africa.
- Domeher, D. and Abdulai, R. (2012b) Land registration, credit and agricultural investment in Africa, *Agricultural Finance Review*, Vol.72, pp.87–103.
- Durand-Lasserve, A. and Payne, G. (2006) Evaluating the impacts of urban land titling: results and implications: preliminary findings, Draft Report prepared for Geoffrey Payne and Associates, London.
- Eliason v. Wilborn* (1929), American Case of *Eliason v. Wilborn*, 335 Ill. 352, 167 NE 101, 68 ALR 350. affirmed 50 S. Ct. 382, 281 US 457, 74 L. Ed. 962. 2.
- Enemark, S. (2005) A cadastral tale: week on geomatics, 8 – 13th August, Bogota, Colombia.
- Enemark, S. (2005) A cadastral tale: week on geomatics, Bogota, 8-13 August.
- Feder, G. and Nishio, A. (1998) The benefits of land registration and titling: economic and social perspectives, *Land Use Policy*, Vol. 15 No. 1, pp. 25-43.
- Fitzpatrick, D. (2005) Best practice options for the legal recognition of customary tenure, *Development and Change*, Vol. 36 No. 3, pp.449-475.
- Food and Agriculture Organisation (FAO) (2005) Access to rural land and land administration after violent conflicts, FAO Land Tenure Studies, No. 8, Rome.
- Food and Agriculture Organization (FAO) (2012) Voluntary guidelines on the responsible governance of tenure of land, fisheries and forests in the context of national food security, FAO, Rome.
- Frazer v. Walker* (1967), New Zealand Case of *Frazer v. Walker*, 1 AC 569 NLR.
- Gamey, A. (2016) Resort to ADR mechanism in resolving disputes [Online], Available at: <http://www.ghanaweb.com/GhanaHomePage/regional/Resort-to-ADR-mechanism-in-resolving-disputes-417282> [Accessed 20th February, 2016].
- Gibbs, v. Messer* (1891), Australian case of *Gibbs v. Messer*, AC 248.
- Gilbert, A. (2007) The return of the slum: Does language matter? *International Journal of Urban and Regional Research*, Vol.31, pp.697–713.
- Hohfeld, W. N. (1913) Some Fundamental Legal Conceptions as Applied in Judicial Reasoning, *The Yale Law Journal*, Vol. 23, No. 1 (Nov., 1913), pp.16-59.

Hogg J. E. (1920) Registration of title to land throughout the empire: a treatise on the Law relating to warranty of title to land by registration and transactions with registered land in Australia, New Zealand, Canada, England, Ireland, West Indies, Malaya & C. A sequel to "The Australian Torrens system" The Carswell Company Ltd., Toronto.

Honoré, A. M. (1961) Ownership: in Guest, A. G. (Ed.) *Oxford essays in jurisprudence first series*, pp.107-147, Oxford Clarendon Press, Oxford.

Ikejiofor, C. U. Nwogu, K. C. and Nwanunobi, C. O. (2004) Informal land delivery process and access to land for the poor in Enugu, Nigeria, Working Paper No 2, Birmingham, School of Public Policy, University of Birmingham.

International Fund for Agriculture Development (IFAD) (2008) Improving access to land and tenure security, IFAD Policy, Rome.

Jacoby, H. and Minten, B. (2005) Is land titling in sub-Saharan Africa cost effective? Evidence from Madagascar, World Bank and Cornell University, Washington DC.

Kagawa, A. and Turkstra, J. (2002) "The process of land tenure formalisation in Peru", in Payne, G. (Ed): Improving tenure security for the urban poor, ITDG Publications, London.

Kant, P. (1887), *Philosophy of Law*, Oxford Clarendon Press, Oxford.

Kironde, L. (2006) The regulatory framework, unplanned development and urban poverty: Findings from Dar es Salaam, Tanzania, *Land Use Policy*, pp.460-472.

Kvitashvili, E. (200) Land and conflict: a toolkit for intervention, USAID Office of Conflict Management and Mitigation, Washington DC.

Larsson, G. (1991) Land registration and cadastral systems: tools for land information and management, Longman Scientific and Technical, London.

Li, G., Rozelle, S. and Brandt, L. (1998) Tenure, land rights and farmer investment incentives in China, *Agricultural Economics*, Vol. 19, pp.63-71.

Lumumba, P. L. O. (2015) Good Governance: Whither Africa, Lecture delivered at the 2015 PAVA Forum, 28 August, Accra, Ghana.

MacGee, J. C. (2006) Land titles, credit markets and wealth distributions, United Nations University/World Institute for Development Economics Research, Research Paper No. 2006/150.

McAuslan, P. (2000) Only the name of the Country Changes: the Diaspora of "European" land law in Commonwealth Africa, in: Toulmin, C. and Quan, J. (Eds.): *Evolving land rights, policy and tenure in Africa*, DFID/IIED/NRI, London, pp.75-95.

Migot-Adholla, S. E., Place, F. and Oluoch-Kosura, W. (1994) "Security of tenure and land productivity in Kenya", in Bruce, J. W. and Migot-Adholla, S. E. (Eds.) *Searching for land tenure security in Africa*, Kendall/Hunt Publishing Company, Debuque Iowa.

Obeng-Odoom, F. and Frank Stilwell, F. (2013) Security of tenure in international development discourse, *International Development Planning Review*, Vol. 35 No. 4, pp. 316-333.

- Okoin, J. R. M. (1999). Cote d'Ivoire's rural land-use plan: an innovative approach towards an appropriate rural land tenure code. Paper presented at the DFID Workshop on Land Rights and Sustainable Development in Sub-Saharan Africa: Lessons and Ways Forward in Land Tenure Policy, 16-19 February, Sunningdale, UK.
- Payne, G. Durand-Lasserve, A. and Rakodi, C. (2007) "Urban land titling programmes", in Brother, M. E. and Solberg, J-A. (Eds.) Legal empowerment – a way out of poverty, Norwegian Ministry of Foreign Affairs, Norway.
- Payne, G. Durand-Lasserve, A. and Rakodi, C. (2009) The limits of land titling and home ownership, *Environment and Urbanisation*, Vol. 21 No. 2, pp.443–462.
- Pemberton, L. (1992) HM Land Registry: an historical perspective, HM Land Registry, London.
- Place, F. (2009) Land tenure and agricultural productivity in Africa: a comparative analysis of the economics literature and recent policy strategies and reforms, *World Development*, Vol. 37 No. 8, pp. 1326-1336.
- Place, F., Roth, F. and Hazell, P. (1994) Land tenure security and agricultural performance in Africa: overview of methodology", in Bruce, J. and Migot-Adholla, S.E. (Eds), *Searching for Land Tenure Security in Africa*, Kendall/Hunt Publishing Company, Dubuque, IA, pp. 15-39.
- Platteau, J. P. (1996) Physical infrastructure as a constraint on agricultural growth: the case of sub-Saharan Africa, *Oxford Development Studies*, Vol. 24 No. 3, pp.189-219.
- Panasar, S. (2000) Theories of private property in modern property law, *Denning Law Journal*, Vol. 15, pp.113-138.
- Ramirez, C. Daniel, G. and Riofrio, G. (2005) Land titling a path to urban inclusion? Policy and practice of the Peruvian model, Paper presented at the N-AERUS Conference, Barcelona, Spain.
- Roth, M. and Haase, D. (1998) Land tenure security and agricultural performance in southern Africa, Land Tenure Centre Paper, University of Wisconsin-Madison, Madison.
- Schlager, E. and Ostrom, E. (1992) Property-rights regimes and natural resources: a conceptual analysis, *Land Economics*, Vol. 68, pp.249-62.
- Scott, R. (1981) The Multipurpose Land Information System in the Public Sector Community of North American Continent, FIG Congress, Montreux.
- Simpson, S. R. (1984) Land law and registration, Surveyor's Publications, London.
- Sims, D. (2002) What is secure tenure in Egypt? in: Payne, G. (Ed.) Land rights and innovation: improving tenure security for the urban poor, ITDG, London, pp.79-99,
- Singh, R. and Huang, Y. (2011) Financial Deepening, Property Rights, and Poverty: Evidence from Sub-Saharan Africa, IMF Working Paper, WP/11/196.
- Sjaastad, E. and Bromley, D. W. (1997) Indigenous Land Rights in Sub-Saharan Africa, Appropriation, Security and Investment Dynamics, *World Development*, Vol. 25 No. 4, pp.549-62.
- Sjaastad, E. and Bromley, D. W. (2000). The Prejudices of Property Rights: On Individualism, Specificity and Security in Property Regimes, *Development Policy Review*, Vol. 18, pp.365-389.

- Stamm, V. (2000) Land tenure policy: an innovative approach from Cote d' Ivoire, Dry Lands Issue Paper 91, IIED, London.
- Sun, H. (2010) Designing journeys to the social world: Hegel's theory of property and his noble dreams revisited, *Cosmos and History: The Journal of Natural and Social Philosophy*, Vol. 6 No. 1, pp.33-59.
- Toulmin, C. (2008) Securing land and property rights in sub-Saharan Africa: The role of local institutions, *Land Use Policy*, Vol. 26, pp.10-19.
- Toulmin, C. and Longbottom, J. (2001) West African land: rights, poverty and Growth, IIED Dry Lands Programme, Edinburgh, UK.
- United Nations Centre for Human Settlements (UNCHS) (1999) *The Global Campaign for Secure Tenure*, Geneva: UNCHS.
- United States Agency for International Development (USAID) (2005) *Land and conflict: A toolkit for intervention*, New York: USAID.
- Wannasai, N. and Shrestha R. P. (2007) Role of land tenure security and farm household characteristics on land use change in the Prasae Watershed, Thailand, *Land Use Policy*, Vol. 25, pp.214–224.
- World Bank (1974) *Land Reform*, World Bank Development Series, World Bank. Washington DC.
- World Bank (2003) *Land Policies for Growth and Poverty Reduction*, World Bank, Washington DC.
- World Bank (2005) *Doing business in 2005: removing obstacles to Growth*, Oxford University Press, Oxford.
- World Bank (2006) *Afghanistan urban land policy notes*, Series 5.2, World Bank, Washington DC.
- World Bank (2007) *World Bank assistance to agriculture in sub-Saharan Africa: an IEG review*, World Bank, Washington DC.
- Zevenbergen, J. (2004) A systems approach to land registration and cadastre, *Nordic Journal of Surveying and Real Estate Research*, Vol. 1 No. 1, pp. 11-24.
- Ziff, B. (2000) *Principles of property law* (3rd ed.), Carswell, Toronto.