Digital land administration a tool to curb corruption in the land sector: The case of Rwanda

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Abstract

Much and the role of digital land administration in land governance, property registration, and speeding up land related services is understood, its scale and impact is not always widely acknowledged especially in many African Countries. Hence, the role of digital land administration in fighting against corruption in land sector remains relatively unexplored. Digital land registration tends to have data that reveals the roles and acts of each actor within the structural framework of the land sector. Digital system eases monitoring of the land administration processes, where services are also digitally notified on each step of their dossiers. This reduces the risks and attempts of soliciting bribes and corrupting land administration officials to speed up services or to be given undue services. Core activities including land registration, land transfer, mortgage, and all other land administration activities should be entirely digitized – with public authority providing laws and regulations that will ease monitoring and evaluation. Recognizing the importance of digital land administration in land sector in curbing corruption seems important in market based economies, particularly those seeking to establish underpinning and sustainable land administration system. In many African Countries, where land governance is weak, land administration activities tend to be characterized by low levels of accountability, transparency, equity, and the rule of law. Under such circumstances, chances of corruption and bribes will be high due to frustration from service seekers and other unlawful land occupiers who need to legalize that that they unlawfully occupy the land. Rwanda has embarked on a nationwide land reform that has enabled all the land in the country to be mapped, registered with land titles being issued to all land owners. A web-based Land Administration system (Land Administration Information System - LAIS) that changed the old system of land administration from analogue to digital land administration was developed. This paper seeks to enlighten policy makers and professionals that the use of digital land administration can increase transparency, equity, and accountability and curb corruption in the land sector.

Keywords: Digital Land Administration, Corruption, Land governance, and Land Administration

Introduction

Land is globally a valuable commodity; especially in most African developing countries where economy depends on land. Most people in Africa survive on agriculture yet the land administration in most of African countries is still characterized by insecure tenure and poor land administration practices that attract malpractices of bribes and corruption (TI, 2017b). Effective land administration supports economic growth and governance and ensures sustainable peace and livelihoods that are essential for the people and countries that rely on land as one of their main economic, social, and cultural assets (UN-FAO, 2007).

Corruption in land sector has been a main challenge for many years. In the land sector, corruption has been reported in the following; land administration, customary tenure, management of public land, land use planning, land investments, expropriation for public interests, observing environment laws several to mention (TI, 2017a.). All these are either due to inadequate and unclear land laws and procedures, unclear institutional framework, responsibilities and mandates, lack of or limited property rights, lack of transparency in different processes and procedures of land administration and bureaucracy.

With increase of technology, many countries have unreservedly embarked on major e-government programs using new innovative technologies to improve and modernize government processes and make them more efficient (TI, 2016). Land sector being one of the sensitive areas that need government intervention has not been left behind hence embarking some African states to prioritize digital land administration.

Employing Information Technology and Communication (ICT) in land administration results into digital land administration. This can be possible when viewed into two angles namely; i)transactional reforms seeking to control and automate land administration processes, restrict discretion of officials and increase detection of corruption ii) transparency reforms that focus on opening up the state and increase the flow of information from the authority to citizens, making actions of the public institutions and its agents/ staffs more visible, answerable and accessible to citizens, civil society and private sector without any difficult (Schreiber, 2017).

Since 2004, Rwanda has embarked on a nationwide land reform that has enabled all the land in the country to be mapped, registered with land titles being issued to all land owners. A web-based Land Administration system (Land Administration Information System - LAIS) that changed the old system of land administration from analogue to digital land administration has been developed.

Problem Statement

In many African Countries, where land governance is weak, land administration activities tend to be characterized by low levels of accountability, transparency, equity, and rule of law. Under such circumstances, chances of corruption and bribes will be high due to frustration from service seekers and other unlawful land occupiers who need to legalize land that they unlawfully occupied.

This research therefore seeks to highlight how the employment of digital land administration can increase transparency, equity, and accountability and curb corruption in the land sector.

Research objectives

The general objective of this research is to highlight the role of digital land administration in curbing down corruption in the land sector.

Specific objectives

- To Identify the importance of digital land administration
- To Explore how digital land administration can increase transparency in land governance
- To Identify the role of digital land administration in curbing corruption

Methodology

To fully complete this research, desk review method was employed where journals, conference papers, reports, textbooks were used as a secondary means of obtaining data that ultimately lead to successful completion of this research. Also the research examined the broad concept of corruption in land administration and how ICT usage can be used to curb it. Thus, a structured interview was used to interview land administration officials, specifically those using LAIS and land owners who once went acquired services through analogue system and now in digital system to share their experience in as far as service delivery is concerned.

Literature Review

Information communication technology (ICT) has been regarded as one of the best tool to curb corruption in the governance sector, increase transparency and accountability. ICT has a significant role to play to achieve transparency, accountability, speeding of the public services and easy monitoring and evaluation of public officials.

As TI, (2016), states, in public services where ICT has been used in public administration and governance, positive outcomes have been reported and realized.

- It improves transparency in the public sector by increasing the coordination, dissemination and administrative capacity of the public sectors', as well as improving service delivery by employing user-friendly administrative systems.
- Use of ICT facilitates the collection of digital initials and footprints and complete audit trail which increase opportunity to hold individuals accountable and ultimately increase the possibility to detect corrupt practices.

- Where ICT is employed and services are digitized, this facilitates the work of civil society organization towards greater transparency and against corruption by supporting a mix of methods of campaigning on transparency and educating citizens on what corruption is about and their civil rights.
- ICT also facilitates information sharing and social mobilization and ultimately provide digital platforms where citizens can report incidents anonymously

A brief background of Land tenure and administration in Rwanda

The pre-colonial period was characterized by the concentration of power over land in the hands of the King with his Chiefs (GoR, 2004) . The land tenure system in that period was characterized by the communal and collective ownership, enabling a harmonious socio economic life for all Rwandans. During the colonial period, Germans recognized the King's authority preferring the indirect rule system before Belgians brought fundamental changes with the introduction of new written land law (GoR, 2004). To the customary law was added a written law that offered particular land tenure protection to white settlers, churches, etc.

With access to independence, important role was given to "Communes" (local authorities) without significantly affecting the customary tenure. Meaningful changes occurred in the 60s with the Government abolishing Ibikingi[1] and with the aim to put the vast land under "communal land" (Potel, 2014). The target was also to recover land abandoned by 1959 refugees. After 1994 Tutsi Genocide, the issue of land was problematic with many claims. The returning refugees of 1959 were not allowed to claim for their land abandoned when fleeing according to Arusha Agreement (Potel, 2014). There was however serious and pressing need for land for settlement and livestock. Different arrangements were initiated in short term perspectives such as land sharing scheme to allow at least the landless to have a shelter (GoR, 2014). The long term solution was found to be the initiation of a land reform. The reform started with a new policy and law in 2004 and 2005 respectively.

From 2007-2012, Rwanda implemented the Land Tenure Regularization Programme (LTRP), that resulted into regularizing of over 10 million parcels of land in a nationwide systematic land registration (Schreiber, 2017). The land was demarcated, adjudicated, surveyed using arthophoto maps, digitized and land titles were prepared. This LTRP not only promoted peace and stability, social and economic development, it also reduced land related disputes and increased transparency and accountability in land governance in Rwanda. However, the system could only be sustainable and successful if landholders registered subsequent changes on their land holdings like change in land use, land rights holder, land size etc.

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[1] Ibikingi *prural* Igikingi *singular* a form of land tenure arrangements where land was allocated for livestock farming

In 2015, WB research revealed that only 32% of subsequent transactions through purchase/sale or donations/inheritance were report (WB, 2015). This was an eminent challenge for the sustainability of the project and hence a need for an eminent solutions. The low level of subsequent registrations was linked to lack of information, accessibility of services and cost of registering the transaction. In response to this, Rwanda launched a nationwide campaign and termed it "land week" to raise awareness about the importance of titling and reporting all changes that happens on one's land. Land administration authorities simplified the procedures and registration forms. Through institutional reforms, land administration services were decentralized at the sector level, which is a second local administrative unit, which so easily to be accessed by local people especially in rural areas.

Results

The importance of digital land administration

This objective was achieved by the use of desk research, existing literature from different authors and the internet in the period of June and July 2019. It was observed that corruption in land administration is common and in different forms through data collection on land owners in Rwanda who have claimed to have been affected by corruption reported corruption in form of paying money to speed land transaction, access to land, building permits, change of land use, easy land registration, transfer of rights and legalizing illegal possession or act in favour of a person versus established legal regulations. With establishment of LAIS, the following benefits have been reported by respondents:

- Digitizing Land Administration Information has reduced irregularities between public land administrators and land service seekers, enabling the latter to assert their rights without corruption interfering.
- Employing ICT and digitizing land administration services through LAIS has limited the discretion of holders, reducing their opportunities to extract bribes / corruption tendencies
- The use of digital land administration facilitates the streamlining and automating of specific processes and this reduces the interactions between public land administrators and land service seekers that can create opportunities for the development of corruption networks
- Also digitization of land administration and employing ICT in land governance removes intermediaries that often facilitates bribery and increase corruption
- Applying ICT in land administration also reduces red-tape in public bureaucracies and thus removes potential entry points for corruption

- Use of ICT and digitization of land administration services increase the transparency of transactions with public officials, making them auditable to deter corrupt behaviour

Forms of corruption reported in land sector in Rwanda

According to the Corruption Perception Index (CPI) 2018, Rwanda is among five least corrupt countries in Sub-Saharan Africa (TI-Rwanda, 2018). The country has put in place different anti-corruption measures, together with strong anti-corruption laws, emphasizes the political will to fight corruption at all cost. However, in spite of these noteworthy improvements, some indicators were still suggesting that corruption remains widespread in different sectors in the Country including land.

TI defines corruption in land administration as the abuse of entrusted power for private gain while carrying out functions of land administration and land management. Since Rwanda embarked on statutory land reform, there have claims of corruption in form of bribery of land administration officials and law enforcement authorities and cases of fraud and production of false land claim documentation. This was due to lack of inadequate information on land laws and procedures, wrong/ or excessive and informal fees for land services, lack of recognition of land uses and rights, complicated land registration procedures, absence of up to date and accurate land records, limited accessibility of land related services and lack of effective compliant, grievance and monitoring mechanisms.

Many of these challenges were answered by introduction of ICT and digitization of land administration services; by introduction of land administration information system (LAIS). With the use of LAIS, the following have been so far achieved:

- Creation of a new landownership database (LAIS) which like any other record-keeping system plays a critical role in the economies of nations. Any proper record-keeping system overcomes the problems of asymmetrical information and moral hazard and facilitates land-related activities or transactions, thereby reducing transaction costs as land market participants can easily verify genuine owners of land in land-related transactions.

- Issuance of over 7 million land leases through Land Tenure Regularization (LTR) – an important factor in increasing security of tenure of landholders;

- Linking the landownership database to other systems

- Easy access to land information because of various platforms created to access all types of public land information;

- Emergence of a viable land market. Land registration has contributed positively to land market development. The dynamics of land market have changed with the registration of all land in Rwanda. People feel more confident to buy and sell their land because there is a system in place to support and legitimize their

transactions. Land registration seems to have increased the value of land and both land owners and potential land buyers would have more confidence in land because the rights and obligations associated to the land are known. All these facilitate land transactions as they instil confidence in the market;

- Increased land-based revenue. Linking LAIS to the revenue collection system to ensure that every parcel where land lease and fixed tax asset is due and paid has led to increased land-based revenue. With this interoperability in place, it is easier also to know how much money has been generated and know those who have not paid yet as well as identify gaps in tax and lease fees collection and mechanisms that can be used to broaden the tax base.
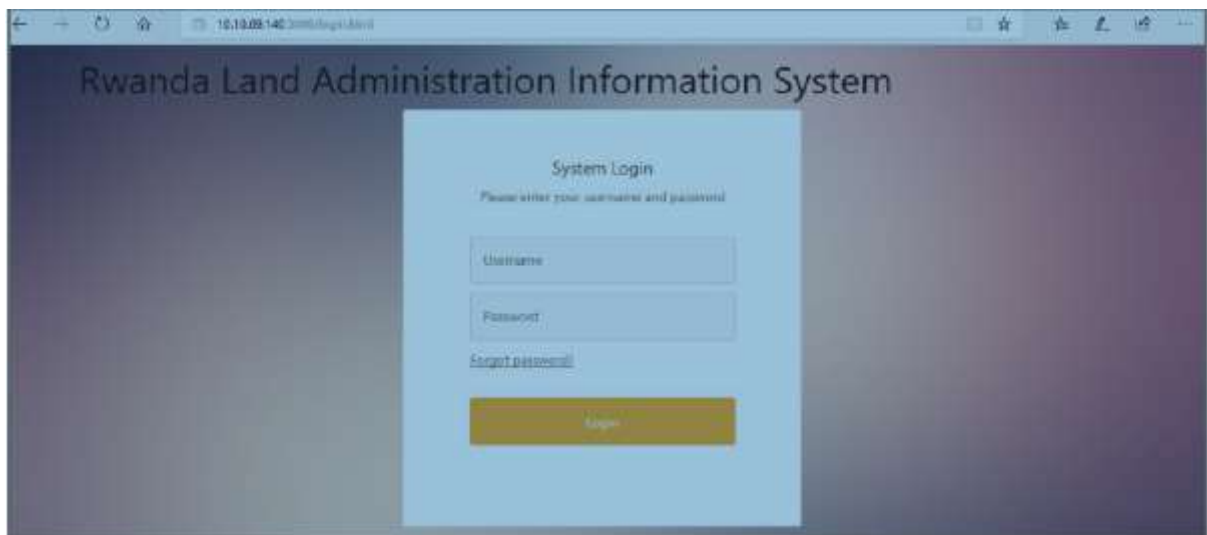
Discussion

Since the start of land reform in 2004, Rwanda has achieved drastic change in land administration system among which the notable ones are the institutional reform and legal frameworks. This has resulted into systematic land registration through land tenure regularization and creation of LAIS. LAIS which is a land ownership and cadastral database has increased the security of tenure, reduced land administration irregularities, and simplified good land governance. The role of ICT and digitization of land administration transactions here could be applauded as having played a big part.

To explain more on role of ICT and digital land administration, this paper will use Rwanda's land administration information system to explain how it has help the Rwandan government to fight corruption in land administration sector, increased transparency and facilitated good and responsible land governance.

Importance of digital land administration

Digitizing Land Administration Information has reduced irregularities between public land administrators and land service seekers in Rwanda. The System is a role based system, which means that the different steps of the registration process, roles are defined, and that can be connected to all different users. So depending on different roles that are given to a specific system user, the different parts of the system can be used. Every user of this system has to be registered as a user with the different roles. The registration is done by the system administrator. During the registration in the system, the registration account of the user is connected to his/her phone and official email. This means that to enter into this system, once one enters his password, a security question with a verification code is sent directly to his/her mobile phone or email. This makes it hard to hack or manipulate and keeps the record of who used the system.

Where one fill the username and password.

After submit and login, the min screen will appear. Users are authorized for one or more than one districts in the Province. Once limited, to specific districts, it is not possible to work on a parcel within other unauthorized district(s).

An overview of LAIS

LAIS has helped Rwanda land administration authority to maintain the transparency in activities of the personnel and institutions managing land administration. In many countries it is easy to lose trust in land administration institutions because of inefficiencies, bureaucracies, bribery, etc. Thus, transparent and accountable land

governance systems must characterize any institution involved in the delivery of land administration services to build public confidence in land administration institutions.

Following the systematic land registration and titling, the newly created land information system can effectively play its role of providing tenure security to registered landowners, by facilitating future land transactions and be generally accepted by the population that engage in subsequent land transactions as a credible landownership database, this is because the system is up to date at any point in time. Thus, it is important for any subsequent secondary land transactions to be captured in the land register and land owners be updated for the changes.

Many of the respondents argue that use of ICT and digitization of land administration has reduced transactions fees normally they used to pay. Since they can submit their transaction files online without incurring transport and other informal fees they normally pay.

Transparency in land governance through digital land administration

Through analysing the LAIS and interview with some LAIS users, it is clear that it has improved public service delivery and has also reduced corruption and increased transparency in land administration system of Rwanda. As data collection proves, use of ICT increased transparency by automating and streamlining land administration processes, restricting discretion of officials and the need for citizen interaction with land officials. This has improved monitoring of public land officials and by doing so, has enhanced the effectiveness of internal and managerial control of irregularities and increase of transparency and accountability in land administration sector.

With digital recordation of all land related information, access to land information has been eased and accessible in transparent and auditable way by even external organs. This has increased accountability and transparency in the land administration system of Rwanda by disseminating all land administration related information. This gives citizens and all land related service seekers to question arbitrary decisions and unresolved procedures.

The digitization of land administration has eased the keeping of history of information of the parcels. All documents related to changes of the rights are scanned and stored digitally within the system. Thus, it becomes easy to trace the origin of the property and the mode of acquisition for like buying, donation, inheritance etc. This increases accountability and transparency in proving the origin of property to property owners but also to land administration officers who worked on the documents.

The role of digital land administration in curbing corruption

With reference to the benefits of LAIS as mentioned earlier, the data collection has revealed how these benefits has played a significant role in fighting against corruption in land sector in Rwanda.

Since the digitizing Land Administration Information, irregularities between public land administrators and land service seekers has been reduced and this has enabled the latter to assert their rights without corruption interfering. This has been possible because in the functioning of LAIS, it is easy to trace the system user, meaning any irregularity may be traced to know the perpetrator.

Employing ICT and digitizing land administration services through LAIS has limited the discretion of holders, reducing their opportunities to extract bribes / corruption tendencies. The discretion of a land holder or a service seeker limits physical contacts of the between public land administrators and land service seekers, this limits the chance of soliciting bribes and corruption.

The use of digital land administration facilitates the streamlining and automating of specific processes and this reduces the interactions between public land administrators and land service seekers that can create opportunities for the development of corruption networks

Since the establishment of LAIS and digitization of land administration and employing ICT in land governance in Rwanda, this has removed intermediaries between public land administrators and land service seekers that often facilitates bribery and increase corruption in form of speeding the transactions, appointments, illegal transactions etc.

By giving all system users the use right credentials attached to their names and place of work, increase the transparency of transactions with public officials, making them auditable to deter corrupt behaviour. It is easy to know any public official who worked on a certain transaction. This not only makes public official accountable to what they did, it becomes the tool by anti-corruption agencies to track out all possible corrupt officials with easy evidence in case of any irregularity, that was normally not easy to trace in analogue system of land administration.

LAIS also has reduced red-tape in public bureaucracies and thus removes potential entry points for corruption. All processed documents will be in the system with dates, Unique Parcel Identifier, transaction type and the status of the transaction as seen below.

Conclusion

Initially, land administration; tend to be considered as a complicated matter. It involves many procedures and different requirements. This complication renders it difficult for the land holders especially rural land holders to easily understand these procedures, given the literacy rate within the country. The confusion of what to do and where to go, coupled with the necessity of obtaining land related services increases the chance of unnecessary bribes and corruption to different land service providers or public land officials.

Recognizing the importance of digital land administration in land sector in curbing corruption seems to be important in market based economies, particularly those seeking to establish underpinning and sustainable land administration system. However, as some literatures prior stated, ICT is not a silver bullet for addressing corruption alone. ICT can be a tool that can be used by a well-established institutional framework, legal instruments, and the political will to use these institutions and the digital information to monitor and evaluate land administration officials.

References

Amin EM (2005) *Social Science Research: Conception, Methodology and Analysis.* Kampala; Makerere University.

Deininger, K. (2003). *Land Policies for Growth and Poverty Reduction.* Washngton DC: Oxford University Press.

Golafshani. (2003). Understanding reliability and validity in qualitative research. *Journal of technology education*, 597-606.

GOR. (2008). *Rwanda: Poverty Reduction Strategy Paper.* Washington D.C: International Monetary Fund.

GOR. (2012). *The evolution of poverty in Rwanda from 2000 to 2011.*

GoR. (2014). *Rwanda Poverty profile report .* Kigali: NISR.

Schreiber, L. (2017). *Computerization of records Extending services to insecure or remote areas Land registration One-stop shops Property rights Resource protection & enforcement Training.* Kigali: Innovations for Successful Societies,.

TI. (2016). *Literature review: The use of ICTs in the fight against corruption.*

TI. (2017a.). *Corruption Perceptions Index 2016.* Transparency International.

TI. (2017b). *"Land and Corruption in Sub-Saharan Africa: Developing Gender-Sensitive Responses.".* Transparency International.

TI-Rwanda. (2018). *15 years of Transparency International Rwanda Experience: Citizen angagement as drivers to fight Corruption.* Kigali.

UN-FAO. (2007). *Good Governance in Land Tenure and Administration. FAO Land Tenure Studies No 9.* Rome.