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**LAND REGISTRATION WITHIN THE FRAMEWORK OF LAND ADMINISTRATION
REFORM IN LAGOS STATE**

¹E. O. Thontteh and ²M. M. Omirin

**Department of Estate Management, Faculty of Environmental Sciences, University of Lagos, Akoka, Lagos,
Nigeria**

Email: ¹estherthontteh@yahoo.com ; ²momirin@unilag.edu.ng

Abstract

This study has identified certain key features of the current land registration system which addresses the effectiveness of Electronic Document Management System (EDMS) in land registration. The study used both qualitative and quantitative data. Population for the study includes Lagos land title registration officials, practicing firms of Lawyers and Estate Surveyors and Valuers out of which the sample size was systematically drawn. The study employed descriptive statistics, mean item score and factor analysis to isolate critical factors germane to title registration. The paper concluded that EDMS has not aided land dispute reduction neither has it increased number of applications processed nor increased revenue generated. However it has improved public confidence in transactions, centralized and consolidated file storage and facilitated availability of on-line document search and retrieval system at the registry. It has also reduced waiting time for obtaining information on land matters and improved managerial efficiency was identified as its strength. Furthermore, three critical problems of land registration were identified. These include lack of institutional framework, high land charges, high cost of registration and inadequacy of technical skills /competent staff. The paper concludes that there is need for all stakeholders in land administration to make a concerted effort towards surmounting the identified challenges.

Key Words: Challenges, EDMS, Effectiveness, Land, Title registration

1.0 Introduction

Land registration generally describes systems by which matters concerning ownership, possession or other rights in land can be recorded to provide evidence of title, facilitate transactions and prevent unlawful disposal. It is also a system by which ownership of real property is established through the issuance of an official certificate indicating the name of the individual in whom such ownership is vested. Land registration according to Riddell (2000); Joireman (2006) is necessary to enhance capacity to defend individual rights of ownership where the need arises. Despite its huge benefits, it is sometimes mitigated by poor administrative procedures experienced by applicants. Meadow and Arnot (2006); Pienaar (2009) also affirm land administration in most parts of Africa, and especially land registration, is often associated with old, gray men shuffling around with maps and deeds which is unnecessarily time consuming, results in poor service delivery, delays in obtaining information, continual frustration of registry staff and opaque official procedures. Nigeria is not an exception to this; recognizing the problems, Lagos State Government in 2005 introduced the EDMS (Electronic Document Management System) with the main objectives of firstly storing all available data electronically; secondly, to ensure proper indexing of documents, to centralize and consolidate file storage, to make information available in an on-line real time manner and to set up an on-line document search and retrieval system at the registry. The Land Registry co-ordinates the keeping and storage of proper records of all land transactions in the State. This includes registration of titles, deeds and certificates of occupancy, issuance of certified true copies of titles, judgment of land

registry cases, public information service on land matters, land registry court, certificate of titles and other registrable instruments affecting lands within the State. The aim is to ensure efficient and effective land resource management that promotes equitable access, enabling environment for land delivery, land information and ability to contribute to sustainable socio-economic development of Lagos State (Lagos State Land Bureau Handbook, 2010). Therefore, since land is a central issue in the development process and secure land rights underpin sustainable development by making it possible and attractive to undertake long term investment (Arnot and Meadow, 2006). It is thus necessary to assess the effectiveness of Electronic Document Management System on ease of land registration procedures and emerging trends in Lagos State being an emerging mega city. The objectives set to achieve this are as follows: assess procedures for land registration in the study location. Further, it seeks to identify significant problems affecting ease of land registration with a view to evolving appropriate solution. Formalization of land rights has been promoted as a pre-requisite for economic development. High on the agenda for formalization is the need to ensure security of land transactions, ease of acquisition of land titles and ease of title registration. The underlined benefits according to Deininger and Binswanger (1994) and de Soto (2000) include increased tenure security, regulatory environment that promotes transfer to more efficient land uses and improved access to credit for sustainable development.

Lagos being the most populous city in Nigeria and second fastest-growing city in Africa, also an emerging mega city, has taken a bold leap towards improving security of tenure, conflict resolution and land information system through the use of a technology referred to as Electronic Document Management System. The underlying question in this research is how effective is the EDMS (Electronic Document Management System) in the context of land titling and registration in Lagos. The following research questions were formulated to assess the effectiveness of EDMS in land registration: what is land registration; how effective is the EDMS technique used; what are the procedures of land registration and titling; what are the benefits of land registration and what are the problems mitigating effective title registration in the study area.

2.0 Literature review

The act of registration is the culmination of a number of processes that feed into the registration system. Formal planning, surveying and conveyancing are highly specialised sets of activities that prepare property for registration and maintain its technical and legal integrity. (Cousins, Cousins, Hornby, Kingwill, Royston, and Smith 2005). According to Arnot and Meadow (2006) Lagos land registry was plagued with many problems, not least is the manual nature of processing of land titles and registration. This gave rise to a variety of problems which include, tedious official processes, continual frustration of workers attempting to locate files, data loss due to poor filing, long wait for getting feedback or reply, users of the registry expressed continual dissatisfaction and opaque official procedures. The system gave rise to poor service delivery, delay in obtaining information and rampant corruption.

This situation could not be allowed to continue and Lagos State Government in 2004 had a vision for a more viable, modern, effective and workable land management system. Thus it was decided to embark on a comprehensive project whereby all title documents kept at the land registry were to be archived onto a data base to enable easier access for users of the registry. This led to the development of the Electronic Document Management System (EDMS) now in use at the land registry. The project itself began in January 2005. Janssen (2014) defines Electronic

Document Management System (EDMS) as a software system for organizing and storing different kinds of document. This type of system is a more specialized kind of document management system, a more general type of storage system that helps users to organize and store paper or digital documents. EDMS refers more specifically to a software system that handles digital documents, rather than paper documents, although in some instances, these systems may also handle digital scanned versions of original paper documents. Furthermore, an electronic document management provides a way to centrally store a large volume of digital documents. Many of these systems also include features for effective document retrieval. It is also a collection of technologies that are used to create, capture, index, distribute, review, maintain, store, retrieve and dispose of information assets. Major components of EDMS include imaging, document management and workflow processing. EDMS is often primarily used for archiving. In order to provide good classification for digital documents, many electronic document management systems rely on a detailed process for document storage, including certain elements called metadata. The metadata around a document will provide easy access to key details that will help those who are searching archives to find what they need, whether by chronology, topic, keywords or other associative strategies. In many cases, the specific documentation for original storage protocols is a major part of what makes an electronic document management system so valuable to an organization. However, from observation, Lagos lands bureau needs a more sophisticated software for decentralization of database and promotion of on-line processing as files are still been monitored from one office to the other. The five major keys to a successful implementation of Electronic Document Management System (EDMS) includes project planning, standard EDMS features, document management security, workflow automation and system integration. EDMS helps create a single centralized repository of all electronic documentation and features such as, version control, access control and audit trail. Its workflow ensures complete compliance with management guidelines since it resolves the crisis of managing, finding & tracking documents in a critical information-intensive regulatory environment. It also provides printing of barcodes on documents, helping to track details like date of printing, document code, author, version, origin and document validity. However, the interoperability of the reform is yet to commence as files were still been transferred from one office to the other manually instead of an online web interaction between processing officers.

The following are the major features of the EDMS employed by Lagos land registry:

Documents Creation:

- Document preparation
- Creation of reusable header Footer Templates
- Configurable review approval workflow
- Optional word or HTML based document Editor
- E-forms as documents

Document Publishing:

- Publish documents in PDF or word
- Publish created document to a category
- Publish external document to a category
- Organize documents
- Publish documents directly from external applications

Authorization and access control

- Configurable document access

Alerts & Intimations

- Configurable event based alerts

- controls
- Access policy setting for single or group of docs
- View permissions through HTML
- Document print controls
- Document edit controls
- Critical documents access alerts
 - Opened by
 - Printed by
 - Duration
- Review- due alerts
- Pending action reminders

Application Integration

- Document log in through external Applications
- Document view through external applications
- Organize documents through external application

Dash boards

- Documents stored in each category
- Documents under each department
- Documents coming up for review
- Tasks
- Usage behaviour

Steps taken towards implementation of EDMS include employment of an external consultant to the project - Proposals from different consultants were assessed to evaluate and assess the solution best suited to the need of the Land Registry and Survey Directorates. The company found to have offered the best solution was thus invited to commence the project. They moved to site in August 2004 and work commenced as follows: the physical sorting of files, purchase of file racks and shelves, installation of equipment, wiring of network, - testing of the system, - employment of staff, installation of software for scanning, managing, retrieval, searching of documents and for the database, testing of software on the network. Furthermore, total refurbishment of the land registry was done as there was need to create a better working environment to attract customers and lift staff morale, purchase equipment such as computers, shelves and photocopiers. In addition, steps were taken to ensure adequate security and fire alarm system, security monitors were also placed in strategic locations around the premises to monitor the movement of visitors to the registry, re-organization of staff and offices, staff training, scanning backlog of documents- This has paid off as over 9.6 million pages of documents have been scanned (Arnot and Meadows 2006). Thereafter, new document are being scanned as they trickle in and finally, EDMS Management Committee was set up comprising representatives of the external consultants managing the project, and senior staff from the land registry was established. The role of this committee is to monitor the progress being made in the computerization process as well as solve any/all operational problems which may arise

2.1 Challenges of Lagos Land Registration

According to Arnot and Meadows (2006) the UK Government's Department for International Development (DFID) supported the reform of Nigeria's land registration processes under the auspices of its Security Justice and Growth programme between 2005 and 2010. The British Council supported by Her Majesty's Land Registry provided both practical and technical assistance to a number of Nigerian State Lands Bureau in order to improve physical security of records and buildings, enhance organisational capacity, and encourage greater participation in land markets. The provision of such assistance is seen as a pre-requisite to promote greater confidence in land markets and assist with economic development.

According to Griffith-Charles (2004) land titling is the initial process of formally recognizing rights to land while land registration is the process of initially recording legally valid rights to land. He asserted further that title registration carries the additional guarantee not only of those rights being valid but also of the transactions regarding those rights being legally recognised by virtue of the recording process. Moreover, subsequent transactions in land must be recorded in the registration system at the time of transaction to be legally valid or to have legal priority over unregistered transactions. The conversion of land records from paper to digital began in the 1970s where paper records with large number of staff were replaced with computers and trained managers and technicians in the western world (Williamson, Enemark, Wallace and Rajabifard, 2009). Therefore, Nigeria needs to brace up for the challenge of converting manual titling and registration to digital for interoperability. According to Department of International Development, (DFID) (2010) government needs to monitor and manage the ownership and value of land in order to enable and stimulate growth process. It is for this reason that land registration systems play an important part in the growth process as an effective land administration system which determines records and disseminates information about the ownership, value and use of land. Oboli and Akpoyoware (2010) reported that various steps have been taken by government to improve surveying and land registration. At the Federal level; the Federal Land Information System (FELIS) has been set up to facilitate land transactions and administration while Abuja Geographic Information System (AGIS) was introduced in the Federal Capital Territory (Abuja) under an electronic data capture scheme. In Lagos State attention is being paid to registration of land titles, business enterprise identification while standardization was given high priority. Other states that have taken a bold leap forward to modernize land administration include Ogun, Benue, Anambra, Kano, Jigawa, Niger, Ekiti, Ondo, Cross River, Enugu and Delta. Moreover, DFID (2010) affirms that effective land administration may reduce poverty by giving people guaranteed protected land rights, which serve as a source of personal wealth and provide opportunities for economic independence. Furthermore, accessible land administration systems can also serve to protect land transactions, allowing citizens to buy and sell land securely. More so, when land related court cases and conflicts are taken into account, the lack of an effective land administration system can represent a significant financial burden upon both state and federal governments alike. This is why efficient land registration has a positive impact on access to justice. Arnot and Meadow (2006), Griffith-Charles (2004) and UNECE (2005) further identified the importance of land registration as giving government capacity to manage a valuable natural resource; sustaining the rule of law by regulating real estate and land markets; providing security not only for landowners but also for national and international investors and the finance sector. Moreover, it assists the development of labour markets by easing labour mobility; assisting the development of financial markets by providing collateral security; assisting in the creation of new business entrants; providing government with a source of revenue which may be used for a variety of purposes. Furthermore, it brings transparency to the allocation, distribution and other transactions on land; providing information for land reform or land redistribution policies; providing access to a secure tradable commodity; providing access to formal services and rights and providing access to credit for investment in either business or human capital and promote good governance. Binswanger and Deininger (1993) assert that there are some exogenous economic and social factors that complicate the relationship between land titling and formal land markets. Van der Molen (2002) added that the problems of land registration includes; granting of land title too slow and time consuming, land title hardly reflects what is on ground and threatening the security of many customary right holders. Kuntu-Mensah

(2006) identified some challenges to effective land registration system as institutional, technological, and financial constraints. The institutional issues revolve around lack of comprehensive approach as there are too many agencies involved in the registration process. For instance, the activities of surveying, conveyance and registration of land parcels are spread among different agencies resulting in duplication of efforts. The processing of a Governors Consent for example, may involve the Survey Department, Town and Country Planning, Lands Commission, and the Land Title Registry, each of these successively depending on the other for some certificates. This generally causes delay, with a title registration taking on the average between two to three months. Technological and resource constraints revolve around the available technologies, most agencies are inadequate to match the current demand for land transactions as many simple tasks take a long time because of lack of appropriate tools and technology necessary to execute them, while more personnel need to be trained in information technology and computing procedures. Financial constraint revolves around financial support and grant from international bodies. Typically, the registration fees may not generate enough revenue; even so, the registration fee of about 13% of the total land value seems too high for some landowners and makes them unwilling to register their title; hence, it is rather uncertain if the registration system can support itself without government subsidy.

2.2 Benefits of Electronic Document Management System (EDMS) at Lagos Registry

The EDMS scans and captures data which allows an organization to control the production, storage, revision, management and distribution of electronic documents, yielding greater efficiencies in the ability to re-use information and control the flow of documents within an establishment (Arnot and Meadow, 2006). The registry has been transformed by the introduction of the EDMS and the associated changes which include the following: documents have been archived into a database for easy accessibility by users, manual searching of documents has been eliminated and there exist in its place an online searching capability which makes searching of documents less time consuming, it aids easy monitoring and control. Availability of industrial photocopiers which contain a backup system that can cope with large volumes of Certified True Copies of documents has increased the effectiveness and service delivery. Alongside the establishment of the EDMS, progress has been made in the production of digital base maps to provide accurate and up to date information. - An ethos of staff training has been developed and computer training has been to the fore. External Consultants have given training in customer service, change management, time management, project management, supervisory management, and systems administration. Finally the land registry website- www.lasg.com has been established to promote easy access to information.

2.3 Historical Background- Lagos Land Registry Directorate

There was no Land Registry in Nigeria until after the cessation of Lagos by King Docemo to the British in 1861. Therefore, before the advent of the colonialist, land was simply administered under Native Law Custom. That meant land in Lagos was administered according to Yoruba Custom. The first type of land instrument operated in Nigeria was known as Crown Grant and the first one was registered in 1863 while the last of such was registered in 1918. In the same year, compulsory survey of land before registration was introduced. However, modern survey did not come into being until 1934. The Land Registry used to be known as Federal Land Registry and was located at the Federal Survey Office at Igbosere road, Lagos. With the creation of Lagos State in May 1967, the Registry became known as the Lagos State Land Registry and it moved to the premises of the High Court of Lagos State Complex, Igbosere. The State therefore,

enacted its own version of all laws, which included Land Instrument Registration Law (1925) and State Land Law (all Registration Laws). The Land Instrument Registration Law confers authority on the Registry to have custody of all registered land instruments, which include Deeds of Assignments, Leases, Sublease, Mortgages, Releases and Assents, Orders of Court/Judgements, Purchase receipts, among others and in recent times, to include Certificates of Occupancy. In Lagos, the deeds and titling systems are in operation. Deeds operate under the Land Instrument Law and Land Use Act, while titles operate under the Registration of Titles Law as well as the Registered Land Law 1965. Currently, the Land Registry Directorate in the Lands Bureau is the most developed land registry in Nigeria and indeed West Africa (Lagos State Land Bureau Handbook, 2010). As a result of current state government's vision to revamp and computerize land management system in the State, a viable, modern storage and tracking of land titles system was put in place.

There are three types of land registration in Nigeria according to Oluyede (1978). These include: registration of instruments, registration of title and registration of encumbrances or charges. The technical evolution of land registration according to Williamson (2008) emerged from manual systems where hard copy maps and indexes are used prior to the computerization stage where scanning of survey plans and other relevant document take place. This has further moved to online land administration with the aid of web enablement; e-land administration which allows for interoperability and i-land administration which spatially enables government and private sectors in land transaction. Lagos Lands Bureau according to DFID (2010) has been at the forefront of improving land registration processes in Nigeria. Since 2004 and from early 2005 the bureau has been engaged in a programme of improvement and reform aimed at upgrading facilities, modernising operations and making information more accessible to citizens. At the initial stage, the system was paper based and extremely cumbersome. Processes were time consuming and open to malpractice and abuse. The objective was to computerise the land records and reduce the administrative burden to both the Lagos State government and the ordinary citizens transacting with land. The first stage was starting with the deeds and file records, Lagos undertook a mass scanning exercise for all their land records culminating in the creation of an electronic document management system. This innovation reduced access times for information and ensured the preservation of valuable existing land administration information. The next step was the creation of a public access interface to the records which now allows external practitioners to undertake searches online being a key process in property transactions. Now property searches that previously took days can be completed in minutes while public confidence in the system has also increased as a result of this dynamic computerised service. Further consultancy input from the Department for International Development in conjunction with Nigeria's Security Justice and Growth Programme (SJG) has enabled the Lands Bureau to continue to develop this resource to create a framework for recording and processing subsequent property transactions online, again increasing their potential to improve customer service. Having computerised the vast majority of their records by late 2005, the focus shifted to reducing application processing period. The result was a reduction in completion times from over a year in many cases to just thirty days for a correctly lodged application. By the end of 2006, the number of land transactions being handled at the Lands Bureau had doubled when compared to 2004 (DFID, 2010). This was also due to new transparency initiatives and simplification of the fee structure enabling ordinary citizens to calculate their own transaction costs. Further process analysis and consultancy input supported by Security Justice and Growth Programme (SJG)

resulted in additional efficiencies, enabling the state government to lower overall fees and taxation by 50% whilst simultaneously increasing overall revenue due to the increased uptake of these services. In fact, according to DFID (2010) the rate of revenue generated by the land registry in 2008 was almost five times higher than in 2004 and is continuing to grow steadily and across all categories of transactions.

2.4 Effectiveness of EDMS in Land Registration

Land registration reform is a critical requirement to reduce the administrative burden to Lagos State government, stakeholders and ordinary citizens transacting on land. Where countries lack robust and tested land administration systems, significant dysfunctions can occur which includes; weak land markets, conflict over ownership, social disharmony, reduction in yield, negative impacts on the environment, lack of an essential policy tool that can assist governments in creating a civil society with democratic norms and reduced potential for economic growth. The overall effectiveness of any land administration system is directly dependent upon the extent to which land is registered. The state realized that historically low level of statutory titling meant that many citizens still did not hold formal, legal titles and the increasing rate of urbanization was adding to this problem on a daily basis. Moreover, the essence of land registration according to Williamson (2008) include; improving security of tenure, simplify prudent land management practices, developing land market, establishing an efficient and sustainable system of land registration in local, state and federal constituencies. Furthermore, if land registration is to play a pivotal role in promoting economic growth in Lagos then a new strategy would be required. Traditionally, allocation of land has been the primary means of increasing the number of registered properties, but this process ignores the reality on the ground – that the overwhelming majority of land rights are implemented through customary and informal tenure systems. Accordingly, a new directorate of land regularisation was established to provide the means by which informal land right holders are granted a statutorily recognised right of occupancy or title document that can be exercised and traded as secured property rights in the legal market place.

The directorate has been closely supported by Security, Justice and Growth programme (SJG) as a significant concept in bridging the traditional gap between informal and statutory sectors. From its inception in 2006, the new directorate has enabled over 6,000 citizens of Lagos State to regularise their property rights, helping to move them from the uncertainty of informal tenure into the realm of statutory titling providing them with security of tenure and access to protect future transactions on land (Arnot and Meawo, 2006).

Lagos State has also benefited from the Electronic Document Management Systems (EDMS) through an increase in the overall scope of land registration in the state. However, the sustainability of reform in land registration requires a fiscal mechanism to enable reinvestment of revenue streams generated by state land bureaux and ministries. The ability of Lagos State Government to implement this simple EDMS concept has been the key enabler for change and has enabled rapid improvements in both administrative infrastructure and customer service delivery within a very short time-frame. For instance, governor's consent which takes minimum of 200 days to process has now been reduced to 30 days.

2.5 Systematic Land Titling and Registration (SLTR)

The objective of systematic land title and registration process is to accelerate land title registration process using the section by section, block by block, parcel by parcel and one parcel,

one visit principle where all relevant information required for issuing land title can be captured on a single visit to the property. However, this system is yet to be adopted in Lagos State due to bureaucratic bottle necks, extensive funding requirements and political structure of the country as affirmed by some of its officials. Presently, there is an on-going project on SLTR which commenced in 2012 and tagged supporting project implementation by Adam Smith International (ASI) in conjunction with DFID / World Bank funds to support improved business regulation through Growth and Employment Project (GEMS) in some parts of the country.

GEMS3 works with private and public stakeholders at national, state and local government levels to build and deliver a systemic framework that will help make it easier to do business in Nigeria. This is to achieve lasting improvements in economic opportunities for the poor, especially women. The goal of the project is to improve the business environment in order to increase employment and economic growth and thus GEMS3 is targeting the improvement of land, tax and investment systems in a number of 'focal' states. The goal of the proposed intervention is to raise the supply of securely titled land in pilot States by regularizing and bringing a substantial number of informally held properties within the realm of the land rights' statutory system, thus offering right-holders in particular the women and the poor a higher degree of protection and enforcement. Some of the States where the pilot study is on-going include Niger, Kano, Kaduna, Kogi, Cross River and Ondo. The consideration of Systematic Land Titling and Registration (SLTR) is crucial because, as asserted by Adebisi (2013), since formal land registration began in Nigeria in 1863, not more than 2.5 per cent of the land in the whole country has been registered. There is therefore an urgent need to implement SLTR in various states of the federation.

2.6 Theoretical Framework: Integrated Land registration System

According to Van der Molen (2002) there are three basic requirements of the traditional (western) land registry and cadastre; (a) persons exercising real rights are unambiguously identified, whether as individualized right holders or as defined members of a legally recognized body; (b) rights to land are unambiguously defined either by statutory law or customary law and (c) the object of exercise of rights is well defined and eligible for determination by geometrical processes which could either be individualized or mapped.

Land registration theory asserts that land activities support the economic, social and environmental development of a country, Gershon (1999). A good land registration system should provide a country with the infrastructure to efficiently implement land related policies and land management strategies. Land in modern administration includes resources and buildings which are the land itself and, all attached to it or under the surface as well as the marine environment (UNECE 2005). This exploration of land registration system provides an integrated framework to aid decision makers to make choices about improvement of systems. This is based on the organised systems used throughout modern western economies where the latest technologies are available. It is also applicable to developing countries that struggle to build even rudimentary systems. (Williamson, Enemark and Rajabifard, 2008). The improvement of integrated land administration involves using four basic ingredients in the design of any national approach which includes: the **land management paradigm**, with its four core administration functions of land tenure, land use, land valuation and land development; **common processes** found in every system; a **toolbox approach**, offering tools and implementation options, and a **role** for land registration in supporting sustainable development.

3.0 Methodology

The is a longitudinal enquiry spanning ten years (2005-2014), covering the period over which Lagos State has embarked on land registration reform. Land registration involves, procedures by which land rights are recognized, the definition and delimitation of boundaries between parcels, recording of information about land rights, right of holders and parcels, procedure governing land transaction, resolution of uncertainty or adjudication of disputes concerning land rights and boundaries, institution and processes for land planning, controlling and monitoring of land use, land valuation and taxation procedures and land reform programs aimed at redistributing or reconfiguring land areas. However, this study is limited to the effectiveness of Electronic Document Management System (EDMS) in registration of C of O, Governor's Consent in Lagos State. This study, therefore, outlines some of the challenges which emerged administratively since the introduction of the land registration reform in Lagos in 2005 with a view to evolving appropriate solutions.

The methodology is structured according to a series of questions that serve to demonstrate the effectiveness of EDMS in land registration in the study area. Primary data about EDMS (Electronic Document Management System) in relation to land registration between 2005 and 2014 were obtained through questionnaires, interviews and observations. The sample frame considered for the study are the 318 practicing firms registered with The Nigerian Institution of Estate Surveyors and Valuers, Lagos State Branch and the 1,214 registered firms of the Nigeria Bar Association, Ikeja Branch, Lagos State. A systematic random sampling technique was adopted in the sample selection in which every 10th firm on the registration list was drawn for the study. This gives a total of 153, representing sample size for the study. Questionnaires were randomly distributed among the sampled firms while interviews were conducted among the members of staff of the Lands Bureau. Qualitative data were collected from open interviews with stakeholders including the Land Bureau officials while quantitative data were collected through structured questionnaire. These questionnaires were designed to examine the effectiveness of EDMS objectives in relation to land registration in the study area. To complement the primary data collected, a thorough review of the historical documents, official reports, news articles and interviews with stakeholders was carried out to facilitate a detailed understanding of the present situation of Lagos land registration system and its challenges.

4.0 Data Analysis - EDMS-Registration

This section present responses of interviewees and respondents on the EDMS registration system within the framework of land administration reform embarked upon by Lagos State government. The EDMS software installation was outsourced; however, the EDMS-title registration process was carried out by the Lagos State Land Bureau staff members only. 71% of the interviewees reported that their cadastral map is available on-line. The finding also showed that titles on the digital map are yet to be indexed by way of a link to the title registers. In the event of a loss of title and record the respondents indicated that it took average of a month to restore full customer services as against the 2-weeks acclaimed by Lagos State Lands Bureau. Even though the EDMS-registration aspect of the land administration is manned by the staff in the Ministry, in about 66.7% of all available cases, the process of boundary mapping/cadastre is outsourced. The objectives of EDMS which is to store all available data electronically; to ensure proper indexing of documents; to centralize and consolidate file storage; to make information available in an on-line real time manner and to set up an on-line document search and retrieval system at the

registry has been achieved to a large extent. However its effectiveness is sometimes mitigated by power failure, internet disruption and over centralization of work.

Effects of the Current Land Registration Practice

The analysis examines effect of the current land registration practice in Lagos State. In the second column of Table 1, the magnitude of the effect of the listed factors is given in terms of average score. The factors are ranked in the order of the mean scores. The last three columns of the table report the result from one-sample t-test that delineates significant factors.

Table 1: Effects of the EDMS Land Registration Practice

| | Mean | t | df | Sig. |
|---|------|--------|----|-------|
| Improved security of tenure | 4.60 | 4.532 | 4 | 0.011 |
| Improved public confidence in transaction | 4.50 | 4.517 | 5 | 0.006 |
| Centralized and consolidate file storage | 4.50 | 3.499 | 3 | 0.040 |
| Availability of online document search and retrieval system at the registry | 4.33 | 4.000 | 5 | 0.010 |
| Reduction in waiting time for obtaining information on land matters | 4.33 | 4.000 | 5 | 0.010 |
| Improved managerial efficiency | 4.17 | 4.060 | 5 | 0.010 |
| Management of information and statistical data | 4.00 | NA | NA | NA |
| Noticeable improvement in the work ethics of the registry | 4.00 | NA | NA | NA |
| Better administrative effectiveness | 4.00 | 1.975 | 5 | 0.105 |
| Land disputes reduction | 3.83 | 0.855 | 5 | 0.431 |
| Improved number of application processed | 3.83 | 2.060 | 5 | 0.094 |
| Increased revenue generation | 3.40 | -0.177 | 4 | 0.868 |
| Overall | 4.11 | 8.242 | 5 | 0.000 |

From the above, the first six (6) factors in the table; improved security of tenure, improved public confidence in transaction, centralized and consolidate file storage, availability of on-line document search and retrieval system at the registry, reduction in waiting time for obtaining information on land matters and improved managerial efficiency are considered most important on two grounds. Firstly, they all yield a score above 4.00 units bound. Secondly, they are statistically different from a test value (benchmark) of 3.49; $p < 0.05$. This indicates that electronic document management system in Lagos State has improved land registration effectively. However, it has not aided land dispute reduction nor has it increased the number of applications processed nor increased revenue generation which is essential in land reform administration. This study indicates that contrary to Arnot and Meadow (2006), who identified improvement in revenue generation for the State as one of the likely benefits of EDMS, there has not been any substantial improvement in revenue generation in the state.

The study also investigated average time taken in processing application for change of ownership, application for C of O, application for Deemed grant and re-certification. Findings showed that for majority of the respondents, it took more than 120 days to complete the processing of any of the aforementioned titles. However, about 3.5% of the sampled population affirmed completion of Governor's consent and C of O processing within 30 days.

Principal Component Analysis

The study involves the conduct of a Principal Component Analysis (PCA) to explore critical problems affecting land registration in the state. The results are shown in Table 2-5. The data displayed factorability potential based on the Bartlett's test of sphericity. Initially, four components were identified and these together explained 82.52 per cent variance, with high impact emanating from first and second components as implied from the percentage of variance.

Table 2: KMO and Bartlett's Test

| | | |
|--|--------------------|--------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | 0.359 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 924.52 |
| | Df | 136 |
| | Sig. | .000 |

Table 3: Total Variance Explained (Eigenvalues)

| Component | Initial Eigenvalues | | |
|-----------|---------------------|---------------------|-----------------------------------|
| | Total | Percent of Variance | Cumulative Percentage of Variance |
| 1 | 7.196 | 42.332 | 42.332 |
| 2 | 4.327 | 25.452 | 67.784 |
| 3 | 1.329 | 7.815 | 75.599 |
| 4 | 1.176 | 6.917 | 82.516 |

With a clear cut at third point from the Scree plot (the Figure below), three factors were extracted for rotation using Varimax method.

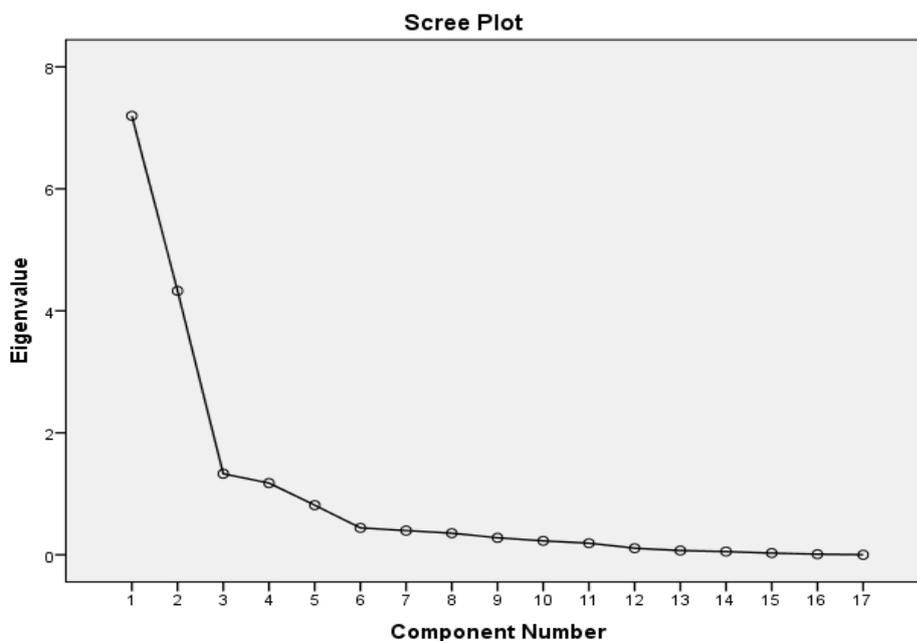


Figure 1: Scree Plot from Principal Component Analysis

The three explored factors together explained 75.59 percent variation as seen in figure 1 compared to 82.52 percent by un-rotated factors.

Table 4: Total Variance Explained after rotation

| Component | Initial Eigenvalues | | |
|-----------|---------------------|---------------------|-----------------------------------|
| | Total | Percent of Variance | Cumulative Percentage of Variance |
| 1 | 7.196 | 42.332 | 42.332 |
| 2 | 4.327 | 25.452 | 67.784 |
| 3 | 1.329 | 7.815 | 75.599 |

The rotated component matrix indicates sufficient loading on three components. The dominant variables on the first component are lack of institutional framework, lack of legal backing and lack of supportive policy. These have a common theme centered around institutional factors. The second component centers on the ambiguous legal framework; high land charges and high cost of registration being high loading factors. On the third component is inadequacy of technical skills/competent staff.

Table 5: Rotated Component Matrix

| | Component | | |
|---|-----------|-------|-------|
| | 1 | 2 | 3 |
| Lack of institutional framework | 0.907 | | |
| Lack of legal backing | 0.898 | | |
| Lack of supportive policy | 0.862 | | |
| Over reliance on manual method | 0.845 | | |
| Inadequate use of information and computer technology | 0.738 | | 0.424 |
| Political instability | -0.725 | | |
| Tenure encumbrances | -0.594 | 0.520 | |
| Lack of transparency of directorate of lands bureau | 0.583 | 0.502 | |
| Financial incapacity of prospective applicant | -0.581 | | |
| Ambiguous legal framework | | 0.920 | |
| High land charges | | 0.919 | |
| High cost of registration | | 0.866 | |
| People's unwillingness to register/process inheritance | | 0.800 | |
| Inadequacy of technical skills/competent staff | 0.443 | | 0.829 |
| High land taxes | | 0.443 | 0.734 |
| Complexity of modern methods | 0.569 | | 0.582 |
| Lack of incorporating land professionals into the process as partners | 0.425 | | 0.577 |

Conclusion and Recommendation

This study has identified certain key features of the current land registration system which addresses the effectiveness of EDMS in land registration. On the average, the purpose of EDMS in land registration has been achieved as improved security of tenure, improved public confidence in transaction, centralized and consolidated file storage, availability of on-line

document search and retrieval system at the registry, reduction in waiting time for obtaining information on land matters and improved managerial efficiency were identified as its strengths. However, it has not aided land dispute reduction nor has it increased number of application processed. It has also not increased revenue generation. Furthermore, three critical components were identified as problems of land registration this include lack of institutional framework, high land charges and high cost of registration and inadequacy of technical skills/competent staff. This study therefore recommends an all encompassing technique of land registration which will increase government revenue in area of land tax, systematically increase registered title, reduction in land charges/cost as well as reduction in dispute resolution.

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