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Analysis of Constraints With Access to Secure Property Rights Registration in Akure, Nigeria

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Abstract: A reasonable proportion of economic achievement is derivable from active land market system that is supported with improved and formalized land right registration. However, there are still constraints with access to secure property rights registration in many states of Nigeria in contrast with the experience in developed economies. This situation inhibits a healthy real estate property market development. The paper elicited data form 150 professionals in the built environment within Akure, the capital of Ondo state, using a structured questionnaire. Twenty one variables were identified as constraints to property rights registration in the study area and the principal component of Factor analysis was adopted to classify them. The results show that six components accounted for 77.23% of the total variance explained and a total of six factors were extracted which converged in 10 iterations. Time taken in achieving land title registration, bureaucratic procedure involved, inappropriate document to work with, poor knowledge of ICT among officials and poor internet connectivity are among inhibiting factors. Geographic Information System (GIS) as well as modern Land Information System (LIS) needs to be introduced into property right registration process to make data more secure, enhance huge data storage, easy access and retrieval.

Keywords: Land Access, Land Registration, Property Rights, Factor Analysis, Security

1. Introduction

Access to secure property rights in Nigeria contrast the experience in developed worlds. Land market in Nigeria is still adversely affected by inability of the land market being actively supported with improve and complete formalization of land rights registration. The process involve in recording of land rights in the forms of deeds registration or registration of title are still encumbered with prolong processes that discourage prospective property owners. Mabogunje (2006) rightly observed that constraints with access to secure property rights registration inhibit real estate property market development in Nigeria

In advance economy of the world, Land Information System (LIS) as well as Geographical Information System (GIS), as example of modern tools and technique, Satellite Imageries and Remote Sensing are highly integrated into the processes and procedures of land rights registration. This enhanced easy storage and retrieval land information. However, there are lacks of synergy among institutions saddled with land rights registration in Nigeria. There are

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existence of practices that hampered effectiveness with which individual access secure property rights; among them are legal and extra-legal procedures

The formal access to Land rights registration is not only costly but involves complicated processes that is devoid of simplified procedures. Majority of people find it difficult to formalize their informal land right due to difficult procedures involved. Formalization of property rights in Nigeria presents different social, economic and political constraints. There are unclear land rights, weak land governance, and dysfunctional Land administration. There are further legal and institutional framework challenges compounding the process.

Omirin (2009) observed that formalization of land rights in Nigeria involved passing through some complicated procedures. Besides, titling procedures and rights registration are characterized with widespread corruption and weak information management system. Like many developing nations of the world, the bulk of land in Nigeria are still supplied through customary land tenure system despite the promulgation of 1978 Land Use Act by which all land in each state of the nation come under the management of its governor, who holds same in trust for the common use of the people.

Access to secure land rights in urban and peri - urban areas are further compounded, most especially among low and medium income earners, by wide spread poverty and increase in urban population (UN-Habitat, 2010). The vast majority of the populations are excluded from access to secure property rights registration by regulatory framework. There exist a wide gap between lay down rules and practices. The land administration lacked the capacity to cope with demand for secure tenure or formalization of rights. Furthermore, there are widespread reports on corrupt practices associated with tenure rights registration and the inability of government to realize the fact that improve access to land rights is highly political (FIG, 2007; Törhönen, 2006, UN/Habitat, 2004)

2. Literature Review

Discussions on security of access to land tenure abound in literature most especially in favour of the urban poor. Rakodi and Leduka (2003) observed that rule of law cannot be divorced from good governance coupled with improved access to tenure security and property right. Mathieu, (2006) opined that equitable and transparent land administration process are most often facilitated by good governance and that land issues are profoundly political. Through a secure access to land, fund can be raised by holder of rights in land, stabilize their income, and also enhance their participation in economic growth (Oxfam, (2007). Furthermore, it is an essential requirement for sustainable agriculture, poverty elimination, preserving people's culture and attainment of property market development. It is observed that there are links between food security, peace and security, reduction of poverty and secure access to land rights. Sometimes to achieve these, political induced negotiation, management of vested interest and conflict resolution are employed (International Land Coalition, 2007). Similarly, Deininger (2003) posited that through secured property right, individual as well as households can gain opportunity to invest.

FAO (2006) opined that poor land access rights and insecure tenure often deepen poverty and impede rural development. The International Federation of surveyors (FIG) argued for the need for transparency and measures against corruption in land sector (FIG, 2007, pp6, 9). To curb corruption in the sector, FIG recommended: Inventory on creation of land tenure, Openness of information on ownership, Standardization of procedures for land information determination, recording and dissemination, and Land operations computerization. Inequalities in land allocation, corruption and management were found to be real. The consequences on the poor results in difficulty of access to land assets, lacks of awareness on land policies and legal framework, misallocation of land rights, land grabbing and abuse (FIG, 2007).

In Africa generally, the frameworks for property rights protection for the displaced on account of poverty, discrimination and conflicts are very weak; unrealistic and not adequate. According to Payne (2002) standards restriction and complex procedures also complicates land security access. UN-Habitat (2004) estimated that 924 million people in informal settlements in urban areas of developing countries lack secure tenure. This was further supported by Deininger, (2003) who asserted that more than half of the population in peri-urban Africa and about 40 per cent in Asia operate informal land tenure; this often is highly insecure.

In a bid to resolving the issues of tenure security, Raphodi and Leduka (2004) recommended toleration and accommodation of informal land delivery system because it is an effective means of land delivery for housing especially in Africa; its social legitimacy and user-friendliness are its strength and its weakness can be identified and addressed in Africa as a means of secure access to land rights. Furthermore, the public sector agencies that manage land are to accept innovations in procedures and documentation.

3. The Study Area

Akure is an important town in the South-Western part of Nigerian among the traditional Yoruba cities. It existence predates the arrival of the government of the British colonial masters in the country. It was pronounced the capital of Ondo state on 3 February 1976 but in 1996, the present Ekiti state was carved out of it leaving the state with eighteen local government areas. Akure is dominated by the Yorubas, other ethnic groups in the city include Ibos, Hausa, Ijaw,

Fulani among others who have come to settle in the city. It locates about $7^{0}25^{1}$ North of the equator and $5^{0}19^{1}$ East of Meridian. According to National Population Commission (NPC, 2006), the population of the city was 353,211 as at 2006. This population is comprises of artisans, civil servants, traders, farmers, professionals and students. As a state capital, Akure is characterized with enormous economic, political and social activities. Transactions on land are perfected at the Akure land registry which is at the State Ministry of Lands and Housing. Figure 1 shows the geographical location of Akure city.

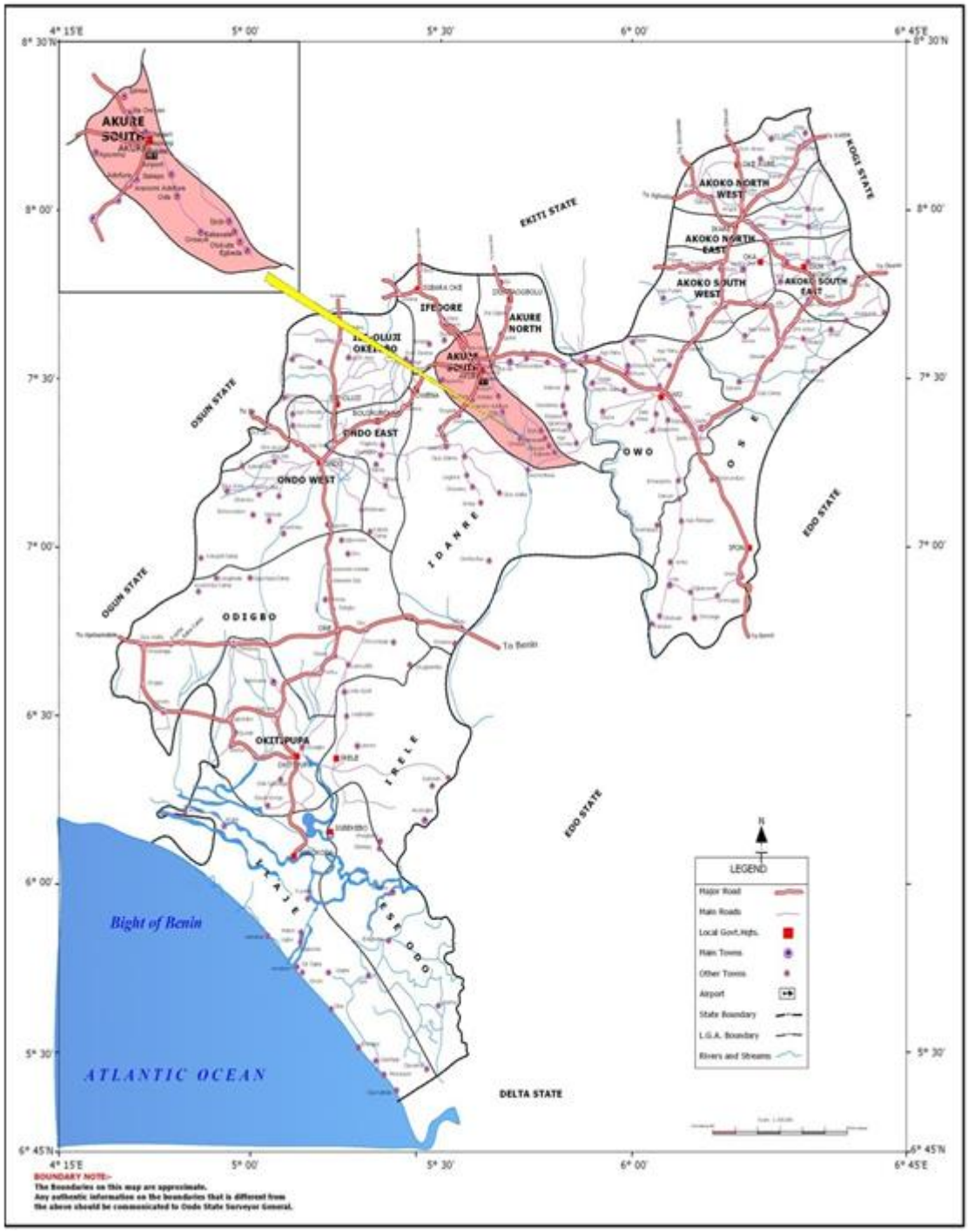

Fig. 1 - Ondo State Map Showing the location of Akure

Source: Abuja Geographic Information System, Maitama, Abuja

4. Methodology

The data employed for the study was sourced through questionnaire administered on 150 professionals in the built environment industry within Akure, the state capital of Ondo state. These professionals engage in processing of land title/rights registration with the Ministry of Lands and Housing, Akure. They are made up of 20 Estate surveyors and valuers, 35 Architects, 28 land surveyors, 15 town planners and 52 lawyers who are based and have their practices in Akure. Census method of sampling was adopted for the study because the population was considered to be sizable and manageable. The questionnaire design centered on the demographic characteristics of the respondents and twenty one (21) variables that constitute constraints to property rights registration in the study area. Respondents were requested to express their individual opinion on the twenty one variables using five-point Likert scale type.

The study adopted principal component of factor analysis by principal components in the data analysis. The factor analysis summarizes how a given phenomenon is influenced by the interrelationship of variables and levels of variance in them. A factor is a linear set of variables and factor analysis makes use of correlation or heterogeneity between a set of observed variables in terms of a smaller set of unobserved variables.

According to Tucker and MacCallum (1993) and Olorunleke (2006), factor analysis requires a set of data points in the form of a matrix with the row and column identifying the matrix. The factor analysis model is expressed as

$$(Xi/\tilde{y}, \lambda, fi\ m) = \tilde{y} + \lambda fi; + \varepsilon i \qquad (1)$$
$$(P \times 1) \quad (P \times 1) \quad (P \times m)(m \times 1) \quad (P \times 1)$$

Where $\tilde{y}$ is the overall populations mean Vector
λ = the factor – loading matrix,
fi = the factor score
m = the number of factors
p = the observed variables
εi = the error variance, and
i = the number of observation.

Here, attention is paid to the central limit theorem and errors (εi) are assumed to be normally distributed having mean equal 0 and constant variance. Factor analysis assumes that all variables are dependent without any independent variables. The following variables were used as indicators by the professionals, as suggested by literatures to access the constraints associated with access to secure property title registration in Akure Land Registry. Therefore, the variables that were used in factor analysis and their codes are as presented in table 1

Table 1 – Variables and Codes used for Factor Analysis

S/N	Name of Variable	Code
1	High cost of processing –(COST)	COST
2	Prone to official corruption- (CORRUPTION)	CORRUPTION
3	Time taken too long- (TIME)	TIME
4	Cumbersome procedures- (PROCEDURE)	PROCEDURE
5	Loss of interest by the owner- (INTEREST)	INTEREST
6	Bureaucratic delay- (BUREAUCRACY)	BUREAUCRACY
7	Lack of proper record keeping- (RECORDS)	RECIORDS
8	Lack of e-Land transaction process- (e-LAND)	e-LAND
9	Defective organizational approach- (ORGANIZATION)	ORGANISATION
10	Lack of establishment of geo-spatial data base- (DATABASE)	DATABASE
11	Lack of networking and logistics- (NETWORK)	NETWORK
12	Insufficient technical expertise in ICT- (EXPERT)	EXPERT
13	Lack of transparency in working process- (TRANSPARENT)	TRANSPARENT
14	Inadequate cadastral coverage and out dated maps- (CADASMAP)	CADASMAP
15	Non utilization of satellite imagery and GIS (GIS)	GIS
16	Unreliable topo- maps and out dated aerial photographs- (AERIAL)	AERIAL
17	Lack of automation of process- (AUTOMATION)	AUTOMATIUON
18	Non provision of textual and graphic data on land – (GRAPHICD)	GRAPHIC
19	Prolong and delayed process –(DELAY)	DELAY
20	Shortage of training and manpower – (MANPOWER)	MANPOWER
21	Inadequate physical infrastructure -(INFRASTRUCTURE)	INFRASTRUCTURE

Bartlett's sphericity test was used to verify the appropriateness of the sample of the population and the relevance of the factor analysis. As observed by Alese and Owayemi (2004), Bartlett's test of the adequacy of the sample was a true representation of the study population. Data analysis was performed using version 21 of Statistical Package for Social Scientists (SPSS).

5. Results and Discussion

The Table 2 shows the SPSS Output- the Kaiser-Meyer –Olkin which measures sampling adequacy and Bartlett's test of sphericity. The Table also shows a Chi-square of 1764.592 and a significant level of 0.000. These figures indicate the adequacy of the sample. Kaiser-Meyer-Olkin (KMO) measures adequacy of the sample by providing index for comparing magnitudes of the observed correlation coefficients of all pairs of variables. A KMO value of 1 represents a perfectly adequate sample while 0 indicates a perfectly inadequate sample. Thus, the closer the value is to1 the perfect the sample. The value of KMO in the data analysis as shown in Table 1 is 0.667; this indicates a reasonably adequate sample.

Table 1 - KMO and Bartletts test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**0.667**
Bartlett's Test of Sphericity	Approx. Chi-Square	1764.592
	Df	210
	Sig.	0.000

Table 3 presents the communalities (which range is between 0 and 1) before and after extraction, showing the proportion of the variances explained by the common factors. A zero (0) value indicates that the common extracted factors do not explain any of the variance in the variables while 1 indicates that they explain all of the variance in the variable. This can also be expressed in percentages. For instance, the variable - 'high cost of processing' (COST) is 0.746 indicating that 74.6% of the variances in this variable is accounted for by common factors while the remaining 25.4% is attributed to unexplained unique factors. The initial communality is always 1.00 before extraction of a factor, owing to the fact that at that level every variable is considered a factor having 0 and 1as mean and standard deviation respectively.

Tables 3 - Communalities

Variables	**Initial**	**Extraction**
COST	1.000	0.746
CORRUPTION	1.000	0.765
TIME	1.000	0.818
PROCEDURE	1.000	0.490
INTEREST	1.000	0.633
BUREAUCRACY	1.000	0.799
RECORDS	1.000	0.768
e-LAND	1.000	0.915
ORGANIZATION	1.000	0.792
DATABASE	1.000	0.819
NETWORK	1.000	0.788
EXPERTS	1.000	0.848
TRANSPARENT	1.000	0.847
CADASMAP	1.000	0.789
GIS	1.000	0.797

AERIAL	1.000	0.742
AUTOMATION	1.000	0.763
GRAPHICD	1.000	0.783
DELAY	1.000	0.842
MANPOWER	1.000	0.832
INFRASTRUCTURE	1.000	0.739

Extraction Method: Principal Component Analysis.

5.1 Factor Extraction

Factor extraction by principal component was applied on the 21 variables used in the study and the output is presented in Table 2. The initial component matrix was subjected to rotation in order to refine the loading of each factor. Table 3 presents the initial Eigen values, extracted sum of squared loading and rotation sum of squared loading as the total variance explained. The results as displayed in the table show that the first 6 components accounted for 77.23% of total variance explained while 22.77% of the variance of the variables is explained by external factors that were not considered in the study. The values under the extraction sums of squared loadings is the same as the value under initial Eigen values except that only 6 factors having Eigen-values greater than 1 were retained in the later. This is because these are the factors that their variances explain most of the factors accounted for. Consequently, others are then discarded. Under the sums of rotation of square loads, the eigenvalues of the factors after rotation have the effect of optimizing the structure of factor and the consequence for these data is that the relative importance of the 6 factors is equalized. Prior to rotation, factor 1 had higher variance than the remaining five factors (i.e. 28.29%, 17.28%, 9.97%, 8.60%, 6.86% and 6.22%), however after extraction it accounted for only 17.39%, 14.03%, 13.35%, 11.62%, 10.80% and 10.05% of the variance of the six factors.

Table 3 - Total Variance Explained

Component	**Initial Eigenvalues**			**Rotation Sums of Squared Loadings**		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.941	28.290	28.290	3.651	17.388	17.388
2	3.630	17.284	45.574	2.945	14.026	31.414
3	2.094	9.973	55.548	2.803	13.349	44.763
4	1.807	8.604	64.151	2.440	11.620	56.384
5	1.441	6.862	71.014	2.268	10.798	67.182
6	1.306	6.221	77.234	2.111	10.053	77.234
7	.958	4.563	81.798			
8	.675	3.212	85.010			
9	.592	2.818	87.828			
10	.528	2.513	90.341			
11	.489	2.329	92.670			
12	.354	1.684	94.354			
13	.259	1.234	95.588			
14	.191	.911	96.499			
15	.156	.741	97.239			
16	.134	.640	97.879			
17	.116	.553	98.432			
18	.107	.511	98.943			
19	.088	.421	99.364			
20	.077	.369	99.733			
21	.056	.267	100.000			

Extraction Method: Principal Component Analysis.

Abdi, (2003) noted that rotation of factors can be orthogonal or oblique. While orthogonal rotation assumes that there are no correlation among the factors, oblique rotation on the other hand allows some minor correlations among them. Varimax, equamax, promax, direct oblimin and as means of conducting factor rotation were explored. However, the study adopted Varimax which is a type of orthogonal factor rotation method because it has more meaningful loadings results and converges after a least of ten iterations. Furthermore, all factor loadings that were less than 0.4 were suppressed. The suppression of loading less than 0.4 also make interpretation considerably easier. The varimax rotated component matrix is shown in Table 4.

Table 4 - Rotated Component Matrix Varimax

Variables Used in Factor Analysis	Component					
	1	**2**	**3**	**4**	**5**	**6**
DELAY	0.897					
TIME	0.873					
COST	0.803					
CORRUPTION	0.761					
PROCEDURE	0.610					
RECORDS		0.827				
AERIAL		0.751				
BUREAUCRACY		0.697				
ORGANIZATION		0.669			0.504	
GRAPHICD			0.870			
DATABASE			0.789			
INTEREST			0.634			
AUTOMATION			0.609			
INFRASTRUCTURE				0.844		
GIS				0.640		
CADASMAP				0.639		
MANPOWER				0.554		
NETWORK					0.833	
EXPERT						0.882
e-LAND						0.713
TRANSPARENT					0.564	0.623

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 10 iterations.

The numbers of retained factors were based on Tucker & MacCallum (1993) which specified factors to be considered should be such that have their loading not less than 0.4 in absolute term and their percentage of variance more than 1. Consequently, Table 4 presents a total of six (6) factors extracted and summarized as follows:

Factor 1: Time involved in achieving land title registration

(a) Prolong and delayed process (0.897)

(b) Time taken too long (0.873)

(c) High cost of processing (0.803)

(d) Prone to official corruption (0.761)

(e) Cumbersome procedures	(0.610)
Factor 2: Inappropriate organization structure	
(a) Lack of proper record keeping	(0.827)
(b) Unreliable topo- maps and outdated aerial photographs	(0.751)
(c) Bureaucratic delay	(0.697)
(d) Defective organizational approach	(0.669)
Factor 3: Obsolete/ Archaic process	
(a) Non provision of textual and graphic data on land	(0.870)
(b) Lack of establishment of geo-spatial data base	(0.789)
(c) Lost of interest by the owner	(0.634)
(e) Lack of automation of process	(0.609)
Factor 4: Absence of modern facilities	
(a) Inadequate physical infrastructure	(0.844)
(b) Non utilization of satellite imagery and GIS	(0.640)
(c) Inadequate cadastral coverage and outdated maps	(0.639)
(e) Shortage of training and manpower	(0.554)
Factor 5: Defective organizational Structure	
(a)Lack of networking and logistics	(0.833)
(b)Lack of transparency in working process	(0.567)
(c) Defective organizational approach	(0.504)
Factor 6: Inadequate Human capital	
(a) Insufficient technical expertise in ICT	(0.833)
(b) Lack of e-Land transaction process	(0.713)
(c) Lack of transparency in working process	(0.623)
(d) Shortage of training and manpower	(0.528)

6. Conclusion and Recommendations

The study revealed that only 6 components accounted for 77.23% of the total variance explained and remaining 22.77% constituted other extraneous factor. Varimax rotation was employed which converged in 10 iterations. A total of six (6) factors were extracted which were grouped and summarized under the following factor headings:

Factor 1: Time involved in achieving land title registration

Factor 2: Inappropriate organization structure

Factor 3: Obsolete/ Archaic process

Factor 4: Absence of modern facilities

Factor 5: Defective organizational Structure

Factor 6: Inadequate Human capital

The factor analysis grouped the major constraints into six components factor. There is the need to study these factors and profound solution to the identified constraints. The Akure land registry can be made more effective, efficient and respond to modern ways of doing business by addressing each of the identified factor component revealed by the study. Emphasis now should be on how to improve on systematic approach to land data determination, recording and dissemination. The following are the recommendations put forward in this study.

- Introduction of Geographic Information System and Land Information System into property right registration process to make it more secure. It has the capability of holding cartographic information that facilitate capturing, retrieval and querying of information and produce tools for different analysis.
- There must be inter-ministry collaboration through internet connectivity and working process synergy.
- New skill and training that enhance human resources development must be pursued as well as the needed political will to enforce it
- There is need for more transparency in land governance
- The procedures for determining, recording and disseminating information on land matter should be standardized.
- Corruption in land registration process must be brought to the barest minimum. Corruption is defined by UN/Habitat, 2014 as "the misuse of office for private gain"
- Technically, there is the need for procurement of physical equipment such as computers, Geographical Positioning Systems (GPS) receivers, software, and highly trained technical personnel in database computerization management, computer networking, cartographers and LIS/GIS specialists

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