

Innovations in Government and Public Administration of Land in Lagos State

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Abstract

There is a growing perception that technological innovations will not only foster an inclusive land administration, it will also ease citizens' access to land and its related benefits. While innovation has been studied within the context of private settings, same cannot be said for the government sector. This paper, therefore, seeks to bridge this gap by examining how innovations in government fosters public administration of land in Lagos State. Specifically, this paper examines the effect of innovations in government on: (i) the exploitation of land as a source of wealth; (ii) securing rights to land; (iii) private land ownership; and (iv) the authoritative supply of information on land use in Lagos state. The paper uses the mixed research method in order to achieve the stated objectives. First, the paper engages in a systematic review of the literature with a view to establishing the dimensions of innovations in government and the possible effects on the exploitation of land, securing of rights to land, private ownership of land, and the authoritative supply of information on land use. After which the paper organises in-depth interviews with relevant stakeholders in order to have an understanding of whether the adopted innovations, particularly the e-administration of land matters, have fostered the benefits of land administration in Lagos state. This study is situated within the National Innovation Systems Framework. After which the paper organises in-depth interviews with relevant stakeholders in order to have an understanding of whether the adopted innovations, particularly the e-administration of land matters, have fostered the benefits of land administration in Lagos state. This study is situated within the National Innovation Systems Framework. Finally, the implications of the findings for sustainable practice of efficient land administration in Lagos state are carefully discussed.

Key Words: e-Administration, Innovation, Innovation in Government, Lagos State, Land Administration, Land Bureau

JEL Codes- B52, D73, D83, H83, O30, O31, O38

I. INTRODUCTION

Land, irrespective of where it is situated, constitute a global subject in its own right (Song, Hansen, Stehman, Potapov, et al, 2018). Advances in the knowledge of geography informs man that the earth comprises numerous features but the role of Land and water resources cannot be over-emphasized (Nazemi & Wheater, 2015). Globally, scientific evidences show that 71 percent of the available land surface on earth is habitable and the available land area is estimated to 13.2 billion ha (McMahon & Davies, 2018; McMahon & Parnell, 2018). This portrays land as a scarce resource and, no doubt, the competition for land use is increasing by the day (Haberl, 2015; Popp, Calvin, Fujimori, Havlik, et al, 2017). The changing dynamics of population growth rates, demand and supply of food, rural-urban

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migration, and the quest to develop 21st century cities are a few of the factors influencing the increase in demand-supply gaps in Land-use patterns globally. Consequently, there is an on-going effort to rekindle the Land Administration Reforms, especially in Africa (Walker, 2017; Lall, 2017).

Particularly, the need to put an end to poverty, achieve zero hunger, ensure gender equality, promote sustainable cities, and enhance decent life across the developing world by 2030 has re-opened scholarly discussions on governance and land administration reforms in Africa (Obeng-Odoom, 2016; Pedersen, 2016; Hall & Kepe, 2017; Boone, 2019). At present, rapid urbanization is putting pressure on land-use patterns across cities in Africa. According to the estimations from the World Population Review, Africa currently has at least 1.2 billion people and this is expected to hit 1.6 billion by 2030 at an average population growth rate of 2.23 percent. The spate of rural-urban migration in countries such as Ethiopia, Nigeria, Ghana, South Africa, etc has become a burning issue (Rakodi, 2016; Adepoju, 2018). The geometric increase in demand for housing and office spaces has further compounded issues of settlement density in Africa (El-hadj, Faye, & Geh, 2018). Unhealthy rivalry between customary and statutory land delivery systems is fast becoming the norm in several African urban settings (El-hadj, et al, 2018).

The need for African countries to embrace equitable land administration systems that are innovation-driven is long overdue. According to Lengoiboni, Richter, and Zevenbergen (2019), innovation breeds a “fit-for-purpose” land administrative approaches, which can minimize costs of land tenure documentation, and promote efficient-open-transparent citizens’ participations in land governance and administration. Earlier studies lament the inability of government to sustain gains in innovative land administrations beyond the initial phase. For instance, Spichiger, Broegaard, Pedersen, and Ravnborg (2013) decried government’s lack of strong will to train needed manpower in land administration and the over concentration of power at the centre. Siegel, Childress, and Barham (2013) also faulted government’s lack to enforce zero tolerance for the increasing lack of transparency in the negotiations of land prices. These scholars argue that innovations in government will not only deliver on the promises of land administration, it will also promote equity and fairness in access to and redistribution of land.

Three years ago, a sitting Governor mustered the courage to promote innovation-driven land administration reforms in Lagos State. At that time, the incidence of land-grabbing had become a monster weening down the image of the State. Purchase of land and structural development had practically become an unbearable venture marred with frivolous demands for publicly-unaccounted bills. The strangulating grips of land grabbers took a negative toll on the promising investment outlook of the State. Internally Generated Revenue (IGR) of the State was at risk and worse off, the life, the rights, and determined to curb the menace of land insecurity in the State, Governor Akinwunmi Ambode signed the Properties Protection Bill into Law on August 15, 2016. In addition, the State deployed the use of the Electronic Documentation and Survey Plans System (EDMS) with a view to protecting the security and integrity of land documentation.

At the 2017 Ministerial Press briefing organised to celebrate the second year of the Governor in Office, the Special Adviser to the Governor on Urban Development stressed that the gains of Land administration reform in Lagos State. For example, she mentioned that the will of the state to harness land resources for the good of the State has increased, land-related revenue in the state has increased, security of private rights on land has improved, and the supply of land-use related information has also improved. In addition, the State initiated a Special Taskforce on Land Grabbers in order to deepen and ensure

sustainability in the implementation of the Law. Two years down the line, empirical studies evaluating the effect of these innovations on land administration reform in Lagos State remain scanty. This study, particularly, examined the effect of innovations in government on: (i) exploitation of land as a source of wealth; (ii) security of rights to land; (iii) private land ownership; and (iv) authoritative supply of information on land-use in Lagos State.

This study is situated within the National Innovation System but with emphasis on public sector innovation (Sahni, Wessel, & Christensen 2013; Bugge & Bloch, 2016; Demircioglu & Audretsch, 2017; Demircioglu, 2017). According to these scholars, innovations in government is a multidimensional construct, which comprises organisational conditions and managerial practices that are specific to the public sector. Sahni et al (2013) acknowledged that innovations in government breed competitiveness, increased incentive and elimination of proliferations of red tape. Demircioglu (2017) argued that innovations in government breed experimentation, prompt feedback, improves incentives, and increase motivation, etc. This study extended these literatures in two ways. First, by contextualizing innovations in government from a developing country's point of view and engaging in a systematic analysis of the effect of innovations in government on public administration reform. Second, by using the mixed research methodology with a prospect of deeper insights into innovations in government and how it has affected land administration reforms in Lagos State.

This study tested twelve hypotheses in all with the aid of four multiple linear regression models. In each of these models, there are three predictors as follows: legal support from the state (LAW), systems innovation (IIGa), and process innovation (IIGb). There are four explained variables including exploitation of land (ELSW), security of private rights (SPRL), private ownership of land (PoL), and adequate supply of information (ASLUI). The findings of the study showed that: (i) law, systems innovation, and process innovations are statistically insignificant predictors of exploitation of land in Lagos state; (ii) both systems and process innovations are statistical significant predictors of security of private rights to land in Lagos state; (iii) systems innovation is a statistical significant determinants of both private ownership of land and supply of land-use information in Lagos state.

The remaining parts of this study is further structured into three. Section 2 focused on the methodology used in the process of carrying out the study. Section 3 discussed the data and results from the study. Section 4 is the conclusion.

II. RESEARCH METHODOLOGY

a. Sample

Respondents comprise 92 experienced stakeholders, in the built environment and whose day-to-day businesses include buying of land, construction of either residential or industrial buildings, and the maintenance of built facilities across Lagos State, and any other parts of Nigeria, from the 150 contacted. This reflects a response rate of 61.3 percent. The sample includes both men (63 percent) and women (37 percent) who are either employees in private companies/public agencies or are self-employed, managing their own companies. While 66 respondents are employees of private companies, 7 respondents are public servants. Others are self-employed.

The demographic data on the sample reported in Table 2.1 further shows that more than half of the respondents are young people (i.e. 34 years old and below) and only 1

respondent is 55 years and above. This confirms that the respondents are within the working age population and at least 50 percent of them are graduates. Besides, only 38 percent confirms their membership with at least one Professional body including the NIESV, COREN, FMP, IFMA, REDAN, LRN, etc

Table 2.1
Demographic Characteristics of the Sample

	<i>n</i>	Percent
<i>Type of Organisation</i>		
Private Company	66	72
Public Agency	7	8
Own Company	19	21
<i>Gender</i>		
Male	58	63
Female	34	37
<i>Age Group</i>		
24 years and below	10	11
25 - 34 years	50	54
35 - 44 years	26	28
45 - 54 years	5	5
55 years and above	1	1
<i>Highest Educational Qualification</i>		
WAEC/SSCE	2	2
OND/HND/NCE	4	4
Bachelor's Degree	50	54
Master's Degree	36	39
<i>Professional Membership</i>		
Yes	35	38
No	57	62
<i>Professional Bodies</i>		
Council of Registered Engineers of Nigeria (COREN)	1	1
Facilities Management Practitioners (FMP)	3	3
International Facilities Management Association (IFMA)	6	7
Ladies Realtors of Nigeria (LRN)	2	2
Nigerian Institute of Estate Surveyors and Valuers (NIESV)	10	11
Real Estate Development Association of Nigeria (REDAN)	1	1
Others (for example, ICAN, CIPM, NIM, etc.)	12	13
None	57	62

b. Research procedure

This study uses the mixed research methodology and the potential participants are carefully selected depending on the type of data to be collected. The study collected relevant quantitative data using the survey approach. In this case, a structured questionnaire was administered among real estate practitioners in Lagos State. Using the convenience sampling technique, respondents were approached in two major sites: (i)

during the 2019 Real Estate Summit held in Lagos State; and (ii) in University of Lagos, especially among the Post Graduate (PG) students offering Professional Programmes in Building and Estate Management.

Generally, public authorities opine that the innovations initiated over the last 3 years will restore investors' confidence in Land transactions in the State. Despite increasing hopes in the State's Land Administration Reforms, limited availability of data limits scholarly inquiry into the effectiveness of these reforms. This notwithstanding, the study gathered qualitative data in order to ascertain whether existing dimensions of innovations in government have possible effects on the exploitation of land, securing of rights to land, private ownership of land, and the up-to-date supply of information on land use in the State.

Table 2.2
Results of the Reliability Tests

	N	Mean	Std. Dev	Min	Max	Cronbach's Alpha	
<i>Effectiveness of Lagos State Property Law</i>							
Forceful possession of landed properties	92	2.97	1.33	1	5	0.857	
Encroachment of land	92	3.01	1.25	1	5		
Illegal sale and resale of land	92	3.08	1.41	1	5		
Enforcement of judgement on land matters	92	3	1.21	1	5		
Misconducts by professionals in land transactions	92	3.04	1.24	1	5		
Unlawful demands by land grabbers	92	2.99	1.36	1	5		
<i>Perceived Usefulness of Innovations in Govt</i>							
Land registry experiments new ideas	92	2.92	1.207	1	5	0.913	
Land bureau try new models	92	2.92	1.071	1	5		
Land registry eliminate sharp practices	92	2.88	1.098	1	5		
Land bureau eliminate poor job performance	92	2.98	1.016	1	5		
Land registry gives timely feedback	92	3.05	1.18	1	5		
Land bureau gives timely feedback	92	3	1.148	1	5		
Land registry encourages its employees	92	2.9	1.158	1	5		
Land bureau encourages its employees	92	2.83	1.055	1	5		
Land registry ease hardship of end users	92	2.9	1.158	1	5		
Land bureau ease hardship of end users	92	2.93	1.087	1	5		
<i>Perceived Improvement from EDMS Usage</i>							
Exploitation of land as source of wealth	92	3.01	1.16	1	5		0.846
Security of private rights to land	92	3.07	1.10	1	5		
Private ownership of land	92	3.04	1.19	1	5		
Authoritative supply of land use information	92	3.1	1.12	1	5		

c. Measures

Specifically, questions were written to assess the effectiveness of the State's law on protection of property, innovations in government, and the perceived gains of specific innovation introduced by the state (i.e. the Electronic Documentation and Survey Plan System – EDMS).

Within the first two years of Governor Akinwunmi Ambode in office, two laws were promulgated with a view to protecting the rights of residents and investors over Landed properties in the State. In order to assess the effectiveness of the laws, particularly the Lagos State Property Law (2016), the study identified seven items and each was measured using the five Likert-Scale (*1 = Not effective at all; ...; 5 = Extremely effective*). Following the initial test of reliability, the Cronbach's alpha obtained for the seven items was 0.602. Even though this result is greater than 0.5, the item-Total Statistics showed that if the seventh item (i.e. touting and other ills by land swindlers) is deleted, the Cronbach's alpha will increase to 0.857. Hence, further analysis on the effectiveness of Lagos State Property Law (2016) are based on the remaining six items summarized in Table 2.2

The study measured innovations in government with 10 items derived from a careful review of extant literature on public sector innovations (Bloch & Bugge, 2013; Sahni, Wessel, & Christensen, 2013; Demircioglu & Audretsch, 2017). These scholars identified at least five indicators of public sector innovation including experimentation, performance, motivation, budget, and practices. These indicators were carefully modified to reflect the local context. With emphasis on the Electronic Documentation and Survey Plan System (EDMS), respondents are expected to rate the usefulness of the technology over a 2-year period since it has been deployed for use in the State. The usefulness of the EDMS was measured using the 5 – Likert Scale (i.e. *1 = Not useful at all, ..., 5 = Extremely useful*). As presented in Table 3.2, the Cronbach's alpha for the 10 items is 0.913.

The study identified five important areas of impact of innovations in government within the context of Land Administration. These include exploitation of Land as a source of wealth, security of private rights private ownership of Land, authoritative supply of Land-use information, and public revenue. The respondents were asked to rate the level of improvement in each area of impact over a 2-year period since the deployment of the EDMS for use in the state and their responses measured along the 5 – Likert Scale (i.e. *1 = No improvement at all, ..., 5 = Extremely high improvement*). The Cronbach's alpha for the measure is 0.846 after deleting the fifth item (i.e. generation of revenue from public Land sales).

III. DATA ANALYSIS AND RESULTS

a. Factor analysis of innovations in government

We used the Exploratory Factor Analysis (EFA) to determine the dimensions of "Innovations in Government" as a construct in this study. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy at 0.830 (i.e. $KMO > 0.5$) confirms that the sample size ($n = 92$) is adequate for the factor analysis. The Bartlett's test of sphericity at $p = 0.000$ is statistically significant. This is an indication that there exist at least one correlation among the 10 items measuring innovations in government. Having fulfilled these conditions, the study examined the total variance explained and the scree plot respectively. These indicated that the study can only retain two factors, which explained 67.2 percent of the total variance. In an attempt to optimize the factor solutions, the study used the Principal Component Analysis (PCA) to extract the desirable factors. The Component Correlation Matrix, with a correlation coefficient of 0.63 is an indication that

the matrix is oblique. As such, the study used the Promax with Kaiser Normalization to obtain the rotated component matrix.

Table 3.1
Factor Analysis of Innovations in Government

	Factors	Cronbach's Alpha	
Land bureau encourages its employees	0.928	0.89	Factor 1: Systems Innovation
Land bureau ease hardship of end users	0.871		
Land registry ease hardship of end users	0.818		
Land registry encourages its employees	0.769		
Land bureau gives timely feedback	0.562		
Land registry gives timely feedback	0.44		
Land registry experiments new ideas	1.002	0.845	Factor 2: Process Innovation
Land bureau try new models	0.867		
Land registry eliminate sharp practices	0.767		
Land bureau eliminate poor job performance	0.581		
Cronbach's Alpha for the complete scale (N=10)	0.913		
Total % explained variance	67.28		
KMO measure of sampling adequacy	0.83		
Bartlett's test of sphericity	$p = 0.00$		

Source: Authors' compilation (2019)

b. Correlation analysis

The study used the Pearson's product-moment correlation coefficient in order to determine the possibility of multicollinearity among the explanatory variables (i.e. legal support from the state (LAW), Systems Innovation in government (IIG(a)), and Process Innovations in government (IIG(b))). There will be multicollinearity when two predictors share a strong correlation (i.e. $r = .9$). The results presented in Table 3.2 demonstrate that there is a significant positive correlation between Legal support of the state (LAW) and systems innovations in government - IIGa ($r = .25, p < .05$); between Legal support of the state (LAW) and process innovations in government - IIGb ($r = .22, p < .05$); and between systems innovations in government - IIGa and process innovations in government - IIGb ($r = .67, p = 0.01$). However, these significant positive relationships are not strong enough to induce the threat of multicollinearity.

Table 3.2
Correlation Matrix for multicollinearity

	K-S test	LAW	IIGa	IIGb
LAW	$p = .007$	1.00	.25*	.22*
IIGa	$p = .001$.25*	1.00	.67**
IIGb	$p = .003$.22*	.67**	1.00

Ns = not significant ($p > .05$), * $p < .05$, ** $p < .01$

Table 3.3

OLS results of the contributions of legal support and innovations in government to land administration

Variables	Model 1		Model 2		Model 3		Model 4	
	Coefficient [SE]		Coefficient [SE]		Coefficient [SE]		Coefficient [SE]	
Legal support	0.218	[.117]	0.136	[.103]	0.182	[.112]	0.057	[.108]
Systems' innovations in government	0.212	[.165]	0.295*	[.146]	0.378*	[.158]	0.336*	[.153]
Process innovation in government	0.241	[.168]	0.338*	[.148]	0.271	[.161]	0.295	[.155]
Constant	1.028	[.478]	0.802	[.421]	0.594	[.457]	1.077	[.442]
#Observation	92		92		92		92	
Coefficient of determination (R ²)	0.173		0.281		0.274		0.240	
F-statistics	6.153**		11.46**		11.084**		9.285**	

Notes: Values in parentheses are standard errors of the estimates.

Model 1: Land as a source of wealth is the explained variable; Model 2: Security of private rights to Land is the explained variable; Model 3: Private ownership of Land is the explained variable; Model 4: Authoritative supply of Land use information is the explained variable.

* Denotes 5% significance level

** Denotes 1% significance level

c. Test of normality

The study used the Kolmogorov-Smirnov test to ascertain whether the predictors (LAW, IIGs, and IIGb) are normally distributed. Looking at the result of Test of Normality for each predictor in Table 3.2, their calculated values of K-S are 0.111 ($p = .007$), 0.127 ($p = .001$), and 0.119 ($p = .003$) respectively with $df = 92$. The p -value of each predictor is greater than the level of significance of 0.05. As such, the study concluded that the sample data for each predictor is normally distributed.

d. Regression analysis

Table 3.3 contains the estimated results on the effect of legal support, systems innovation in government and process innovations in government on expected outcomes of land administration reforms, which is measured in terms of Land as a source of wealth (model 1), security of private rights to land (model 2), private ownership of land (model 3), and authoritative supply of land-use information (model 4) respectively. Overall, the four regression models show a good fit. The combined effect of the three predictors across the four regression models are statistically significant at 99 percent confidence level despite the variations in the coefficient of determination.

Determinants of land as a source of wealth

As shown in Table 3.3, legal support offered by the state ($b = .218$ (.117); $p > 0.05$) has a statistically insignificant effect on land as a source of wealth in Lagos State. In a similar manner, neither system innovations in government ($b = .212$ (.165); $p > 0.05$) nor process innovations in government ($b = .241$ (.168); $p > 0.05$) has a statistically significant effect on land as source of wealth in Lagos state. The coefficient of determination ($R^2 = .173$) shows that 82.7 percent of the total changes in exploitation of land as a source of wealth can be explained by other predictors not included in model 1. These results are not far from the thoughts of Solo (1955), Borrás Jnr, Franco, Gomez, and Spoor (2012), as well as Rognlie (2016) who allude to the rising value of land as a source of wealth.

In several developing countries, land ownership is a good measure of wealth (Solo, 1955). It is one asset with a potential for generating future streams of income either through residential, non-residential, or farming investments (Rognlie, 2016). Recent demands for land in Africa among global capitalist also lend support to the rising economic value land (Borrás Jnr, et al, 2012). Unfortunately, the accumulation of land rarely adds to the productive capacity of an economy. As such, land remains “*a source of disparity between growth of wealth and growth of productive capital*” (Stiglitz, 2016). No amount of law or innovations can change the elite citizens’ perception of accumulating land-based wealth (Borrás Jnr, et al, 2012). They would rather use “non-purchase land acquisition schemes.”

Determinants of security of private rights to land

As shown in Table 3.3, both system innovations in government ($b = .295$ (.146); $p = 0.05$) and process innovations in government ($b = .338$ (.148); $p < 0.05$) have significant effect on security of private rights to land at 95 percent confidence level. On the other hand, legal support offered by the state ($b = .136$ (.103); $p > 0.05$) is a statistically insignificant determinant of security of private rights to land in Lagos state. The coefficient of determination ($R^2 = .281$) indicates that 71.9 percent of the factors capable of explaining the variations in security of private rights to land are not captured in model 2. These findings align with Ghebru and Lambrecht’s (2017), as well as Makamu and Kazianga’s

(2017) views on the need to embrace innovations amidst growing commercialization on land transactions in Africa.

Land, no doubt, is a fixed asset and when individuals' private right to land is not assured, the negative consequences have limiting effect on economic growth and development (Makamu & Kazianga, 2017). Land is also a property and it must be embedded in relevant socio-econo-political institutions for it to gain desirable recognition (Broegaard, Vongvisouk, & Mertz, 2017). Private rights to land often do not have practical meanings whenever it is expressed in a law or tilt (Broegaard, et al 2017). In other words, offering legal support to private rights to land is generally a complex exercise. It is either faced with contradictions or partially implemented and enforced. Yet, private right to land-based assets is a potent tool for the prevention of illegal sale of land, productive transfer of land, and commodification of land (Dell' Angelo, D'Odorico, Rulli, & Marchand, 2017). In view of this, stakeholders have greater preference for new mechanism of land governance and administration above legal support by the state.

Determinants of private ownership of land

Table 3.3 also shows that systems innovations in government ($b = .378 (.158)$; $p < 0.05$) is significant determinant of private ownership of land at 95 percent confidence level. The coefficient of determination ($R^2 = .274$) explains that systems innovations in government, when combined with process innovations in government and legal support offered by the state, will only account for 27.4 percent of the variations in private ownership of land. In other words, the remaining 72.6 percent in variations are attributable of other predictors excluded from model 3. This finding, particularly aligns with Borrás, Jnr et al (2012) who posit that there is a strong correlation between private ownership of land and land control.

Within the context of land control, the legal status of the state and individual ownership of land is blurred (Borrás, Jnr, et al, 2012). Strong political interests are vested in land access negotiation, which further compounds the ease of attaining private ownership of land. This explain why navigating bureaucracies and managing perceptions of all stakeholders are carefully underlined (Broegaard, et al, 2016). These justify the statistical significance of systems innovation in government in model 3. As such, redistributive land policies and re-concentration of land ownership in individuals will be better achieved.

Determinants of authoritative supply of land-use information

In Table 3.3, while it is shown that systems innovations in government ($b = .336 (.153)$; $p < 0.05$) is significant determinant of authoritative supply of land-use information at 95 percent confidence level, the coefficient of determination ($R^2 = .240$) indicates that predictors that are capable of explaining 76 percent of the variations in this explained variable are not included in model 4.

IV. CONCLUSIONS AND SUGGESTIONS FOR FURTHER STUDIES

The present study examined innovations in government and the related effects on public administration of Land in Lagos State. In specific terms, this study investigated the effect of legal support offered by the state (LAW). Systems innovation, and process innovations in government on exploitation of Land as a source of wealth, security of rights to Land, private Land ownership, and authoritative supply of information on Land use in Lagos State respectively. These resulted in the test of twelve null hypotheses. The summary of the findings is presented as follows:

- i. Legal support offered by the state has no significant effect on exploitation of land in Lagos state.
- ii. Neither systems nor process innovations in government has significant effect on exploitation of land in Lagos state.
- iii. Systems innovations in government has significant effect on security of private rights on land in Lagos state.
- iv. Process innovations in government has significant effect on security of private rights on land in Lagos state.
- v. Systems innovation in government has significant effect on private ownership of land in Lagos state.
- vi. Systems innovation in government has significant effect on supply of information on land-use in Lagos state.

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