**Original Research Article**

**Employee Motivation, Land Administration Reforms and Service Delivery: Evidence from the Lands Commission of Ghana.**

**ABSTRACT**

Institutions set up in most developing countries to deliver products or services for the public good often hardly perform to expectations. One of the key underlying factors is employee motivation, because under the circumstances, private interests tend to take precedence over those of benefit to the public. To improve performance, incentives become inevitable to motivate the personnel. This paper examines the effects of intrinsic and extrinsic motivation on land service delivery by the Lands Commission of Ghana regarding the moderating roles of internal and external land administration reforms currently being undertaken in the country. An explanatory research approach was adopted, which led to a quantitative research design and execution. Following a stratified sampling procedure, a sample of 332 officials was drawn from the cluster of land commission subdivisions located in the capitals of the 16 regions of the country. Factor and regression analyses were conducted with SPSS. Results indicate that intrinsic (β = .232, p < .001) and extrinsic (β = .205, p < .001) motivation both have a significant positive effect on service delivery, with intrinsic motivation having a slightly greater impact. Internal reforms positively moderated the intrinsic motivation-service delivery relation (β = .114, p < .05), but external reforms did not significantly moderate (β = -.014, t = .211, p > .10). Implementing robust staff performance mechanisms, computerising land processes, and enhancing working conditions are priority measures that need to be taken to improve service delivery.

**Keywords:** Land Service Delivery, Lands Commission, Land Administration Reforms, Intrinsic motivation, Extrinsic motivation

1. **INTRODUCTION**

Employee motivation is one of the main concerns of organizational behaviour in Africa and worldwide. According to Dorta-Afonso et al. (2021), employee commitment and behaviour are heavily influenced by motivation, a key psychological trait that boosts performance. It determines service efficiency and effectiveness in most institutions. Motivation can be described as a driving force behind human action towards certain goals with sustained effort, thus, what makes an individual act or keep on acting. It contains various components: intrinsic motivation that comes from within oneself, like self-satisfaction or fulfilment, and extrinsic motivation that results from external rewards such as money paid for salaries and bonuses given out among others (Ryan & Deci, 2017). When faced with tasks involving creativity and problem-solving abilities, people should be intrinsically motivated because it leads them to be more committed than ever before, according to Ryan & Deci (2017). Parmenas (2022) noted that effective motivational strategies can improve staff engagement levels, which drive organizational performance. Ullah (2012) also revealed that service delivery determines the extent of value customers get out of their interactions with providers. This paper investigates the relationship between employee motivation and service delivery performance of a public sector institution in Ghana, examining both intrinsic and extrinsic motivational factors and the moderating effects of the country’s land administration reforms. The Lands Commission is responsible for land administration and management.

 Employee motivation is critical for the efficient delivery of land services in Ghana. The Lands Commission is responsible for land administration and management. Proper land service delivery is vital where land is central to economic activities and sustains diverse sectors such as agriculture, industry, and housing. The Lands Commission, mandated to facilitate land acquisition, registration, and management, plays a crucial role in ensuring that land resources are optimally utilized. In line with this, employee motivation can significantly impact the performance and efficiency of the organization. Given the scope of responsibilities, employee motivation within the Lands Commission is essential to enhancing productivity, efficiency, and service quality in land service delivery (Adzima, 2023). Studies, including Jain (2007) and Meybeck et al. (2018), emphasized that motivated employees show higher productivity, reduced turnover, and enhanced commitment, which translates to better service delivery outcomes.

Despite the importance of land service delivery, the Lands Commission of Ghana faces challenges in achieving optimal performance, potentially due to insufficient employee motivation. Reports of delays in land processing and inefficient service provision point to gaps in the motivational structures within the organization. Research suggests that inadequate motivation leads to poor employee output and diminished service quality, impacting stakeholders who rely on the commission for timely land services (Nkolola et al., 2016; Ngoma & Mulenga, 2019). Understanding the link between employee motivation and service delivery effectiveness within the commission is essential to identify strategies that enhance employee satisfaction and organizational performance.

This paper evaluates the extent to which employee motivation affects the service delivery practice of the Lands Commission of Ghana having sought to answer the following research questions: (i) what role does employee motivation play in land service delivery; (ii) how do intrinsic and extrinsic employee motivation influence land service delivery; (iii) what are the inhibiting factors causing the delay in service delivery at the Lands Commission; and iv) what recommendations are relevant towards improved service delivery in the Lands Commission?

1. **LITERATURE REVIEW**

Institutional theory explains organizational development and why practices become institutionalized as a result of legal, regulatory, and social pressures that are change-resistant. These pressures lead to organizational homogeneity, with varying responses depending on the context (Luiz et al., 2021). In Ghana's Lands Commission, coercive and mimetic pressures influence worker motivation and service quality. Public Service Motivation (PSM) is, as defined by Perry (2014), the drive to serve the public based on values like compassion. Ritz et al. (2016) state that organizational behavior and PSM are affected by cultural norms. Zakariya and Achimugu (2023) confirmed that regulatory supervision in Nigeria enhanced motivation and compliance. Vandenabeele (2014) also clarified that transformational leadership boosts PSM through fulfilling the psychological needs of employees. Such leadership may enhance motivation within Ghana's Lands Commission.

Maslow (1943) postulated a hierarchy of needs, ranging from lower to self-actualization. In organizations like Ghana's Lands Commission, the hierarchy of needs influences employee motivation. Poor salary and appalling working conditions keep employees at the lower levels, leading to low morale and ineffective service (Riggio, 2013). Disappointment of physiological and psychological needs discourages employees' commitment to organizational goals (Wright & Kim, 2004). Ghanaian bureaucrats often have to contend with limited resources, poor logistics, and little prospect of career advancement (Ayee, 2008), which erode their ability to achieve esteem and self-actualization.

Herzberg et al. (1959) identified motivators, such as achievement and recognition, along with hygiene factors like salary. Hygiene factors prevent dissatisfaction, but only motivators enhance satisfaction and performance. In Ghana, while some hygiene needs are met, motivators are often lacking (Alase & Akinbo, 2021), which fosters absenteeism, inefficiency, and counterproductive practices against land administration reforms. Antwi (2006) emphasizes that successful reforms require more than structural change; they depend on the morale of frontline workers. A lack of attention to hygiene and motivation will render land sector reforms unsustainable and ineffective.

The expectancy theory of motivation, proposed by Victor Vroom in 1964, posits that individuals are motivated by anticipated outcomes, comprising three elements: expectancy, instrumentality, and valence. Expectancy refers to the belief that effort will result in desired outcomes; instrumentality denotes the perceived connection between performance and reward; and valence signifies the desirability of the reward. Fang (2023) contends that expectancy theory facilitates the alignment of rewards with employee expectations, enhancing motivation when employees believe an effort will yield desired results. By applying expectancy theory, managers can tailor motivational strategies to individual employee needs, thereby improving productivity and satisfaction.

Despite its advantages, expectancy theory exhibits limitations. It presupposes rational decision-making, neglecting emotional and social motivators (Fang, 2023). It may inadequately account for intrinsic motivators, such as personal growth or job satisfaction, which are fundamental for ethical and sustained motivation (Eccles & Wigfield, 2020). Saleem et al. (2021) elucidate practical challenges in establishing a connection between effort and outcomes, particularly in creative tasks where performance quantification is more complex. In Ghana's Lands Commission, expectancy theory could inform motivational strategies by explicitly linking performance outcomes to rewards. Managers could articulate expectations transparently, establish measurable objectives, and incentivize achievements through promotions or financial bonuses, thereby enhancing land service delivery. However, the theory's limitations suggest that intrinsic motivators, such as career development opportunities and supportive work environments, are equally essential to fostering sustained motivation. The conceptual framework is deemed to operationalize the theory. Based on the theoretical framework and review of literature, the study adopted the following conceptual framework, as shown in Figure 1.

**Intrinsic Motivation**

**Extrinsic Motivation**

**Service Delivery**

**Internal Land**

**Administration**

**Reforms**

**External Land**

**Administration**

**Reforms**

**Figure 1:** Conceptual Framework

**Figure 1: Conceptual Framework**

Source: Authors’ Contract

1. **METHODOLOGY**

### 3.1 Study context

Ghana, located in West Africa south of the Sahara, has approximately 34.7 million and a growth rate of 1.92 percent (GSS, 2024). It has a land area of approximately 238,533 square kilometres and is bordered on the north by Burkina Faso, the east by Togo, the west by Côte d'Ivoire, and the south by the Atlantic Ocean. Ghana boasts sixteen administrative regions and a dual land tenure system, statutory and customary, and both title and deeds registration systems. Approximately 80 percent of land is held under customary ownership (Ghana et al., 2024), making Ghana a valuable case study in land administration research. Its robust recognition of customary land law is well-documented in literature (Lankono et al., 2023).

Notwithstanding several land administration reforms that have been backed by development partners, Ghana continues to experience insecure tenure, difficult access to land, inadequate land records, and inefficient service delivery. These symptoms are typical of more extensive difficulties in Sub-Saharan Africa (Antwi, 2002). The legacy of colonialism has been a primary force for the persistence of weak institutions that weaken development (Antwi, 2000; Hammond & Antwi, 2010). Nonetheless, Ghana's long-standing stable democracy since 1992 provides a solid basis for reform (Kwakye-Nuako et al., 2023). The consolidation of four land agencies into the present Lands Commission presents a chance to evaluate the extent to which institutional change can enhance land service delivery. The researcher's previous background and acquaintance with Ghana's land administration also account for the selection of it as the study area.

The Lands Commission of Ghana is a constitutionally established public service institution mandated under Article 258 of the 1992 Constitution and operationalized by the Lands Commission Act, 2008 (Act 767). Its primary responsibility is to manage public lands and provide advisory services to the government, local authorities, and traditional leaders on land use and management. The Commission comprises four main divisions: the Public and Vested Lands Management Division, Land Valuation Division, Land Registration Division, and Survey and Mapping Division. These divisions collectively work to ensure effective land administration, registration of land titles, valuation of properties, and the provision of geospatial and cadastral services across Ghana. The Lands Commission is located across the 16 regions in Ghana as indicated in Figure 2.

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**Figure 2: Map of Ghana showing the 16 Regions with their Capitals**

Source: Geography, 2023

**3.2 Research Approach and Design**

Given the research questions and objectives of the study, an explanatory research design was employed to examine logical connections among concepts and hypotheses testing founded on theoretical assumptions (Renjith et al., 2021). This research strategy enables one to determine if data confirms or rejects theoretical assumptions. A comprehensive literature review on employee motivation and land delivery services served as the basis to extract themes that guided hypothesis development and testing. A quantitative design of research was employed to obtain numerical data, hence allowing the use of statistical procedures in either confirming or rejecting these hypotheses. Explanatory research is most appropriate for causal relationship investigation and addressing "why" inquiries (De Vaus & De Vaus, 2001). It is quantitative in approach, alignment, which is more analytical and objective (Creswell & Creswell, 2017). The objective of this study was to determine the impact of employees' motivation on land service delivery and the moderating effects of internal and external reforms. Explanatory design reduces researcher bias and focuses on prediction, correlation, and causation.

**3.3 Population and sample selection**

Though there is some research that requires sampling an entire population, in most instances, this is not possible when dealing with large populations due to resource limitations. The study targeted the 1,936 Ghana Lands Commission staff across all regions (LC Annual Report, 2023). Where the population size is known, Levy and Lemeshow (2013) propose the utilization of the sampling fraction (n/N) in selecting systematically. Christman (2000) states that sample size is determined by desired precision and available resources. The researcher’s decision, however, regarding these factors depends on the following;

* How accurate the researcher wishes to be;
* How confident the researcher wants to be in the results; and
* What budget is available to the researcher?

In the determination of the sample size for the Lands Commission population, a formula was adopted since the population was known. That is:

 n = $\frac{N}{1+N\left(e\right)²}$

 Source: Yamane (1967).

Where;

N Total Population of the workers at Lands Commission = 1,936 (Source: Human Resource Department, Lands Commission of Ghana)

1 = Constant

e = Margin of error (0.05) and

n = Sample Size

NB: The (0.05) margin of error signifies that there is a 95 percent confidence level.

n = 1,936 n = 1,936 n = 331.5

 1+1,936 (0.05)2 5.84

Therefore, n ≈ 332. Hence, the sample size is approximately 332 workers.

Having used the sampling method to select the sample size based on the population of the study, the samples were put in clusters according to regions. The whole All Lands Commission (LC) staff made up the population, and as such, a convenience sampling technique was used. The respondents were sampled by region based on the LC office coverage. Staff were sampled based on accessibility and relevance to the study on land service delivery. This also enabled the effective gathering of data. The regions, population, and sample sizes are as indicated below in Table 1.

**Table 1: Regional cluster of Lands Commission staff sample**

|  |  |  |  |
| --- | --- | --- | --- |
| **Cluster Allocation****(Region)** | **LC Population per cluster** | **Percentage of total sample (%)** | **Sample per cluster per region (count)** |
| Greater Accra | 956 | 49.38 | 164 |
| Ashanti | 164 | 8.47 | 28 |
| Western | 129 | 6.66 | 22 |
| Eastern | 112 | 5.79 | 19 |
| Central | 106 | 5.48 | 18 |
| Northern | 78 | 4.03 | 13 |
| Bono | 75 | 3.87 | 13 |
| Upper West | 71 | 3.67 | 12 |
| Volta | 64 | 3.31 | 11 |
| Upper East | 42 | 2.17 | 7 |
| Bono East | 34 | 1.76 | 6 |
| Western North | 27 | 1.39 | 5 |
| Ahafo | 25 | 1.29 | 4 |
| Savannah | 21 | 1.08 | 4 |
| North East | 18 | 0.93 | 3 |
| Oti | 14 | 0.72 | 3 |
| **TOTAL** | **1,936** | **100%** | **332** |

Source: Lands Commission Annual Report (2021)

From Table 2, out of a total staff strength of 1,936, Greater Accra staff form the majority of 956 (representing 49.38%). The region with the least staff strength is Oti, with a total staff of 14 (representing 0.72%). The respondents relevant for this study were staff involved in the day-to-day land administration service delivery of the Lands Commission, viz. Plan Approval, Stamp Duty, Searches, and Deed/Title Registration. The researcher also presents a cluster of regional samples based on the various divisions of the Lands Commission, as shown in Table 2.

**Table 2: Cluster of regional samples according to the Divisions of the Lands Commission**

|  |  |  |
| --- | --- | --- |
| **REGION** | **DIVISION** | **SAMPLE PER REGION** |
| **SMD** | **LVD** | **PVLMD** | **LRD** |
| Greater Accra | 41 | 41 | 41 | 41 | 164 |
| Ashanti  | 7 | 7 | 7 | 7 | 28 |
| Western | 5 | 5 | 7 | 5 | 22 |
| Eastern | 4 | 4 | 7 | 4 | 19 |
| Central | 4 | 4 | 6 | 4 | 18 |
| Northern | 3 | 3 | 4 | 3 | 13 |
| Bono | 3 | 3 | 4 | 3 | 13 |
| Upper West | 3 | 3 | 3 | 3 | 12 |
| Volta | 2 | 2 | 5 | 2 | 11 |
| Upper East | 1 | 1 | 4 | 1 | 7 |
| Bono East | 2 | 2 | 2 | 0 | 6 |
| Western North | 1 | 1 | 3 | 0 | 5 |
| Ahafo | 2 | 1 | 1 | 0 | 4 |
| Savannah | 1 | 1 | 2 | 0 | 4 |
| North East | 1 | 1 | 1 | 0 | 3 |
| Oti | 1 | 1 | 1 | 0 | 3 |
| **TOTAL** | **81** | **80** | **98** | **73** | **332** |

Source: Authors’ Construct

The Division with the highest number of staff per regional cluster sample. Per the Divisional cluster sample, PVLMD has the highest number of staff strength. There are also no LRD staff at the six (6) new regions.

The total sample size for the study is 332, which statistically reflects the saturation point of data collected, significantly representative of the total population, and also can provide high accuracy of results. This estimation falls within the pragmatic approach to determining a sample size for a study as suggested by Denscombe (2010). Hence, the projection was made against the backdrop of focal literature, which revealed that a minimum of about 60% response rate is achievable from the sample size. Antwi (2000) obtained a total of 305 respondents, whereas Hammond (2006) in a research study in the study area got a total of 303 responses out of an initial 500 questionnaires. It has been argued that generally, the larger the sample size, the closer the sample data will match that from the population (Abdulai & Crawford, 2010). Thus, most results are analyzed at a 95% confidence interval to show that the sample sizes are significant.

**3.4 Data collection approach**

The aim of the study is to empirically assess whether intrinsic and extrinsic motivation exert a positive effect on service delivery with the contingent role of land administration reforms. In line with this, data was collected from key staff to help validate the conceptual model proposed in chapter two. For a quantitative study like this, a survey questionnaire was used to solicit the views of respondents. The questions were framed in such a manner that their responses flowed in a sequential order to satisfy the researcher’s quest in understanding how each participant views the various reform interventions and service delivery in the Lands Commission. The study mainly used closed-ended questionnaires to gather the relevant primary data for the study. The different ways surveys can be administered include face-to-face, by telephone, or by mail to respondents (Bosnjak, 2016; Zager Kocjan et al., 2023). In face-to-face questionnaire surveys, the researcher seeks information directly from the respondents through personal interviews. It involves one-on-one engagement of the respondent (Creswell et al., 2014).

### 3.4.1 Pre-testing the questionnaire

The questionnaire was pre-tested to ensure that it is clear and understandable by the respondents and there is enhanced accuracy, validity of the data collected reliability in any possible subsequent use of it as a research instrument. Acharya (2017) explains that the pre-test of a questionnaire is meant to check its general and specific use of language, consistency and ambiguity, and completion time. It leads to amendments and corrections of the questionnaire to improve the performance as a research tool. The pre-test was done on a sample of 14 respondents comprising three categories of persons: colleagues (peers), Regional Directors at the Land Commission, and target respondents, as suggested by Srinivasan & Lohith (2017).

The result of this pre-test led to an amendment of instructions and questions that appeared ambiguous, and modifications of an inappropriate set of statements. The review from the Regional Directors, consequent upon practical knowledge, contributed to improvement in various areas of the questionnaire designed including the wording and sequencing of questions, reference period for performance measures, and changes that improved the estimated time of its administration. The importance of pre-testing on the target respondents was to get detailed feedback on all areas of difficulty that could affect their disposition and answers (Newman, 2014) and identify any deficiency in the instrument (Srinivasan & Lohith, 2017). The pre-test exercise facilitated the production of the final version of the questionnaire with the bequeathed with qualities that allow for it to be used in collecting accurate and valid data, the mark of a reliable scientific tool.

### 3.4.2 Use of Likert scales for questionnaire

The response alternatives were assigned numerical values to each description on the scale in the questionnaire as follows: ‘‘1=Strongly Disagree’’, ‘‘2=Disagree’’, ‘‘3=Neither Agree nor Disagree’’, ‘‘4=Agree’’, and ‘‘5=Strongly Agree’’. Indeed, rating scales in this way have proven to be the most appropriate means to obtain information about respondents’ perceptions and attitudes or to analyze attributes compared to asking a long list of questions for respondents’ responses (Alabi & Jelili, 2023). The study employed a Likert scale to assess the concept of motivation and its impact on service delivery from the employees’ perspective. The choice of Likert scale in a study is largely informed by the nature of the variables being measured, the method of measurement, the type of analysis envisioned, and the research design (Schrum et al., 2023; Ji et al., 2023). Schrum et al. 2023 (1994, p. 31) suggest that the scale presumes the existence of an underlying (or latent or neutral) continuous variable whose value characterizes the respondent’s attitude and opinions. It is worth mentioning that the Likert scale has been used in this manner in informal urban land market studies by Antwi (2000) in one of the study areas (Accra, Ghana)**.** The 5-point Likert format scale was chosen for data gathering. The 5-point scale is usually used for most surveys. At the instance of this work, it had the advantage of complementing the intended statistical techniques and analysis being envisaged under the study to achieve the research objectives. (Newman, 2014).

**3.5 Data analysis procedures**

The main computer-based software that aided data analysis was the Statistical Package for Social Sciences (SPSS). It was adopted for running the data gathered from the field. Principal Component Analysis (PCA) was conducted to carry out on the factors based on the scales measuring each construct. Mendive-Tapia et al. (2023, p.1) assert that factor analysis is “a method in which a greater number of variables are condensed into a lesser number of variables”. This method is sometimes known as dimension reduction. The revised, smaller number of items was used to form the main composite factors or variables for the analysis. The PCA results have been detailed out discussed in section 4.2.4 of this paper. Multiple Regression Analysis was used to analyse the data to make inferences, and based on that, conclusions were drawn and implications of the results were given. In a cross-sectional study like this, multiple regression analysis is mostly used, unlike Structural Equation, which uses a confirmatory approach and not an exploratory approach. The multiple regression analysis was considered useful for evaluating explanatory variables.

**3.6 Measurement and validation**

Issues relating to the validity and reliability of the study findings and recommendations were of high interest while securing and ensuring the acceptability of the results or findings of this study. Whereas validity connotes the integrity of the conclusions drawn from a research activity, reliability is more concerned about the consistency of measurements in the research (He et al., 2023). Research validity, therefore, denotes the various inferences and deductions arrived at about the quality of diverse fragments of the research methodology. The quality of the approaches used in the various aspects of the research determines how near the final results are to a valid conclusion. The validity and reliability of the findings ensure that at the end of the research, the results could be applicable in subsequent research works. To ensure the validity of the constructs used for the study, a convergent validity and discriminant validity procedure was used. The Cronbach alphas of all the constructs were also assessed (section 4.2).

**4. RESULTS**

**4.1 Background of Respondent**

A questionnaire comprising 332 surveys was distributed to employees of the Lands Commission across the 16 regions of Ghana, with an 83% response rate. The demographic characteristics revealed that the majority of respondents were male, representing 63.3%, while 36.7% were female. The age distribution of respondents was as follows: 39.5% between 31-40 years, 26.4% between 18-30 years, 22.5% between 41-50 years, 10.6% between 51-60 years, and 0.9% over 60 years old. Regarding the place of work, 43.7% of respondents were located in the Greater Accra region, with the remainder distributed across various other regions, including Bono East (5.7%) and Upper East (5.1%), among others. In terms of educational attainment, 54.4% of the respondents held a Bachelor's degree, 18.0% had a Master's degree, 2.1% had a PhD/DBA, and 16.2% possessed a Higher National Diploma (HND).

## The majority (27.3%) of respondents worked in the Land Valuation Division, followed by the Survey and Mapping Division (25.2%), and the Public and Vested Lands Management Division (24.5%). Those in the Land Registration Division represented 22.4%, and 0.6% worked at the Corporate Head Office of the Commission. Regarding job roles, 31.3% were engaged in Land Administration, 24.1% in Geomatic services, and others were distributed across Estates, Legal, Finance, and Audit, and administrative roles. The participants' years of service varied, with 28.0% having worked for 6-9 years, 18.4% for less than 3 years, and 18.1% for 3-5 years. Additionally, 14.5% had worked for 10-13 years, 10.2% had 14-17 years of experience, and 10.8% had worked for more than 18 years.

## **4.2 Measures and Validation**

### 4.2.1 Independent and dependent variable- Motivation (Internal and external)

### Motivation encompasses both internal and external rewards that employees receive for task performance. The study utilized a five-point Likert scale (1-strongly disagree to 5-strongly agree) to measure the impact of these motivational factors on service delivery. For intrinsic motivation, seven initial items were evaluated: reduced promotion period, capacity-building opportunities, career progression, access to tools, working conditions, satisfaction, and feeling valued. Following exploratory factor analysis (EFA), four items remained significant with factor loading ≥0.3: capacity building, career progression, working conditions, and satisfaction. The construct achieved a Cronbach's Alpha of 0.832.

### Extrinsic motivation initially comprised seven items: additional income, overtime allowance, acting position benefits, donor-funding/government support, transport provision, welfare system, and conduct sanctions. Post-EFA, six items were retained (excluding transport provision), yielding a Cronbach's Alpha of 0.894. Service delivery: The dependent variable initially included five scales measuring service availability, timeliness, information reliability, quality, and client satisfaction. After EFA, three items remained: service availability, quality, and client satisfaction, with a Cronbach's Alpha of 0.771.

### 4.2.2 Moderating variable

### The investigation examined both internal and external land administration reforms. For internal reforms, five initial variables were evaluated: business plan-based decisions, customer feedback systems, budgetary allocation, staff results framework, and performance appraisal. After exploratory factor analysis (EFA), three variables remained significant: business plan-based decisions, customer feedback systems, and staff results framework. This construct achieved a Cronbach's Alpha of 0.717.

### External reforms initially comprised six variables: merger-driven collaboration, reduced bureaucracy, digitized land records, Enterprise Land Information System implementation, one-stop-shop concept, and technology training. Following EFA, three variables were retained: merger-driven collaboration, digitized land records, and technology training. The external reforms construct demonstrated good reliability with a Cronbach's Alpha of 0.764, as shown in Table 4. Both constructs exhibited sufficient reliability for further analysis.

### 4.2.3 Control variables

### The study examined three organizational variables. The region of location covered Ghana's 16 regions (from Northern to Greater Accra), coded 1-16. The division of work categorized employees into five departments: Survey and Mapping, Public and Vested Lands Management, Land Valuation, Land Registration, and Corporate Head Office, coded 1-5. Employee designation was classified into six units: Land Administration, Estates, Geomatics, Finance and Audit, Land Registrars/Legal, and Administrative and Records, coded 1-6. These variables provided the structural framework for analyzing organizational distribution and employee roles.

### 4.2.4 Measures and Validation

Factor analysis was conducted to identify key dimensions of motivation, service delivery, and land administration reforms. Exploratory Factor Analysis (EFA) was employed as a data reduction method, with Bartlett's Test of Sphericity (χ² = 2609.175, df = 171, p < 0.000) and Kaiser-Meyer-Olkin (KMO = 0.809) confirming significant correlations among variables. The analysis utilized Principal Component Analysis (PCA) with Varimax rotation, considering factors with Eigenvalues ≥1 and factor loadings ≥0.3 as indicated in Table 3. Of the 30 initial items, 19 were retained after addressing cross-loadings, explaining 67.815% of the variance. Eleven items were eliminated following Hair et al.'s (2010) recommendations due to cross-loading or insufficient factor loading. Scale reliability was evaluated using Cronbach's Alpha, with Bastos' (2025) recommended threshold of 0.70.

**Table 3: Rotated component matrix of construct measures and loadings**

|  |  |
| --- | --- |
|  | **Component** |
|  | **1** | **2** | **3** | **4** | **5** |
| IM1 |  | .816 |  |  |  |
| IM2 |  | .835 |  |  |  |
| IM4 |  | .773 |  |  |  |
| IM5 |  | .699 |  |  |  |
| EM1 | .711 |  |  |  |  |
| EM2 | .766 |  |  |  |  |
| EM3 | .730 |  |  |  |  |
| EM4 | .816 |  |  |  |  |
| EM5 | .872 |  |  |  |  |
| EM6 | .877 |  |  |  |  |
| ServiceDelivery2 |  |  | .780 |  |  |
| ServiceDelivery3 |  |  | .842 |  |  |
| ServiceDelivery4 |  |  | .813 |  |  |
| IR3 |  |  |  |  | .741 |
| IR4 |  |  |  |  | .794 |
| IR5 |  |  |  |  | .803 |
| ER2 |  |  |  | .836 |  |
| ER3 |  |  |  | .831 |  |
| ER4 |  |  |  | .754 |  |
| **Total** | **4.772** | **3.123** | **2.435** | **2.421** | **10.33** |
| Extraction Method: Principal Component Analysis.Rotation Method: Varimax with Kaiser Normalization. |
| a. Rotation converged in 6 iterations. |

Source: Authors’ Construct

**Table 4: Measures, factor loadings, and reliability of constructs**

|  |  |  |
| --- | --- | --- |
| **Scale and items** | **Factor loadings** | **Reliability of the construct** |
| **Intrinsic motivation**  |  | **.832** |
| 1. There are reduced periods of promotion in the LC | .816 |  |
| 2. There is an opportunity for training and capacity building in the LC | .835 |  |
| 3. There is easy access to working tools | .773 |  |
| 4. There are conducive working conditions in the LC | .699 |  |
| **Extrinsic motivation**  |  | **.894** |
| 1. There is additional income for employees who perform well in a given month | .711 |  |
| 2. Employees are given allowances for working overtime | .766 |  |
| 3. Benefits are given to employees in acting capacities in various positions | .730 |  |
| 4. Donor partners and the Government have provided funding for capacity-building | .816 |  |
| 5. Means of transport are provided to staff  | .872 |  |
| 6. There is a functional welfare system | .877 |  |
| **Service delivery**  |  | **.771** |
| 1. The Lands Commission provides services on time | .780 |  |
| 2. Land Ownership information provided by the Lands Commission is reliable  | .842 |  |
| 3. There is the quality of service provided by the Lands Commission  | .813 |  |
| **Internal land administration reforms**  |  | **.717** |
| 1. The LC has clear budgetary allocations for the Divisions  | .741 |  |
| 2. In the LC, there is in place a results framework for staff  | .794 |  |
| 3. There are frequent staff performance appraisals | .803 |  |
| **External land administration reforms** |  | **.764** |
| 1. Reforms have reduced bureaucracy within the LC  | .836 |  |
| 2. Digitization of land records has aided service delivery  | .831 |  |
| 3. The implementation of the Enterprise Land Information System (ELIS) has eliminated delays in service delivery | .754 |  |

Source: Authors’ Construct

**4.3 Correlation and descriptive statistics**

This section reports the statistics of key variables used in the study, as shown in Table 5. In terms of intrinsic motivation, there was a general agreement that intrinsic motivation (*Mean* = approximately 2.9, SD = .98) leads to service delivery. Respondents also felt that extrinsic motivation (*Mean* = 3.02, *SD* = .96) affected land service delivery.

**Table 5: Descriptive statistics, demographic variables, and latent constructs**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Indicators**  | **N** | **Min** | **Max** | **Mean** | **SD** | **Skewness** | **Kurtosis** |
| Region | 332 | 1.00 | 16.00 | 5.3253 | 5.12999 | .794 | -.906 |
| Division | 330 | 1.00 | 6.00 | 2.5333 | 1.14075 | .023 | -1.153 |
| Designation | 332 | 1.00 | 7.00 | 3.0482 | 1.83556 | .430 | -1.058 |
| Intrinsic Motivation | 330 | 1.00 | 5.00 | 2.9157 | .98275 | -.352 | -.617 |
| Extrinsic Motivation | 331 | 1.00 | 5.00 | 3.0252 | .96408 | -.416 | -1.075 |
| Service Delivery | 330 | 1.00 | 5.00 | 3.1828 | .85956 | -.286 | .030 |
| Internal Land | 330 | 1.00 | 5.00 | 3.8091 | .74801 | -1.255 | 2.327 |
| External Land | 330 | 1.00 | 5.00 | 3.6035 | .71587 | -.689 | 1.320 |

Source: Authors’ Construct

Table 5 presents descriptive statistics including Minimum (lowest value), Maximum (highest value), Mean (average), and Standard Deviation (value spread). Data normality was confirmed with skewness and kurtosis values between -2 and +2. The analysis revealed that internal land administration reforms scored highest (Mean = 3.8091) with a strong negative skew, indicating favourable respondent ratings. External land factors also showed high ratings (Mean = 3.6035) with moderate left skew. Intrinsic and extrinsic motivation demonstrated more balanced distributions, with means around 3, suggesting moderate motivation levels among respondents. The dependent variable, service delivery, showed a balanced distribution (Mean = 3.1828). These statistics provide insights into data distribution, central tendency, and variability. Correlation results are presented in Table 6.

**Table 6: Convergent and discriminant validity**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables**  | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
| 1. Service Delivery | .**811** |  |  |  |  |  |  |  |
| 2. Region | .046 | 1 |  |  |  |  |  |  |
| 3. Division | -.049 | .068 | 1 |  |  |  |  |  |
| 4. Designation | .027 | .090 | .112 | 1 |  |  |  |  |
| 5. Intrinsic Motivation | .308 | .017 | .077 | .196 | **.782** |  |  |  |
| 6. Extrinsic Motivation | .243 | -.281 | .201 | .010 | .386 | **.798** |  |  |
| 7. Internal Land Admin reform | .055 | -.041 | -.137 | -.029 | -.028 | .099 | **.779** |  |
| 8. External Land Admin reform | .028 | -.105 | -.047 | -.009 | .006 | .110 | .266 | **.808** |
| **AVE** | .659 | - | - | - | .612 | .637 | .608 | .653 |

Correlation is significant at the 0.01 level (2-tailed) and the 0.05 level (2-tailed).

Note: Diagonal elements are the square root of the Average Variance Extracted.

Source: Authors’ Construct

**4.4 Test of validity****- Convergent and discriminant analysis**

The study assessed construct reliability and validity through convergent and discriminant validity tests. Item loadings exceeded 0.50 for all constructs, indicating substantial commonality. The Average Variance Extracted (AVE) surpassed the 0.50 threshold for all latent variables, confirming that measures accounted for at least half of their variance with underlying constructs. Discriminant validity was evaluated using Fornell and Larcker's (1981) criterion, which necessitates that the square root of the AVE exceeds inter-construct correlations. The correlation matrix in Table 6 confirmed this criterion, demonstrating that constructs were distinct and measures were both reliable and valid.

## **5 ANALYSES**

### 5.1 The effect of intrinsic and extrinsic motivation on land service delivery

Hierarchical regression analysis examined the effect of motivation on service delivery through four stages. Stage one used control variables (location, division, designation) to predict service delivery. Stage two added independent variables (intrinsic and extrinsic motivation) to control variables. Stage three incorporated moderating variables (internal and external land administration reforms) alongside previous variables. The final stage introduced interaction terms between the moderator and independent variables to complete the analysis. Table 7 presents the regression analysis.

**Table 7: Regression analysis results of the relationship between intrinsic and extrinsic motivation on service delivery**

|  |  |
| --- | --- |
|  | **Service Delivery** |
| **Variables**  | **Model 1****B(t-values)** | **Model 2****B(t-values)** | **Model 3****B(t-values)** | **Model 4****B(t-values)** |
| Control variables |  |  |  |  |
| Constant | 3.213(23.100) | 2.171(10.734) | 2.031(5.725) | 2.319(5.816) |
| Region  | .041(.733) | .105(1.900+) | .105(1.880+) | .093(1.653+) |
| Division | -.055(-.982) | -.117(-2.163) | -.112(-2.031) | -.102(-1.830+) |
| Designation  | .031(.558) | -.014(-.252) | -.014(-.255) | .001(.020) |
| Independent variables  |  |  |  |  |
| Intrinsic motivation  |  | .235(4.013) | .238(4.034) | .232(3.885) |
| Extrinsic motivation  |  | .209(3.403) | .204(3.251) | .205(3.244) |
| Moderating variables  |  |  |  |  |
| Internal reforms (IR) |  |  | . .129(2.546) | 121(2.567) |
| External reforms (ER) |  |  | .002(.036) | -.028(-.468) |
| Interaction effect |  |  |  |  |
| Intrinsic motivation (IR) |  |  |  | .114(2.208) |
| Extrinsic motivation (IR) |  |  |  | -.055(-.703) |
| Intrinsic motivation (ER) |  |  |  | -.014(-.211) |
| Extrinsic motivation (ER) |  |  |  | -.087(-1.293) |
| R2 | .005 | .133 | .154 | .165 |
| F-Value | .556 | 9.819 | 7.024 | 4.835 |
|  R2 | .005 | .128 | .021 | .011 |
| Degrees of freedom | 3/321 | 5/319 | 7/317 | 11/313 |

*p* < .10, *p* < .05, *p* < .01, *p* < .001

Source: Authors’ Construct

The hierarchical regression analysis revealed progressive changes in explaining service delivery variance across four models. Model 1's control variables (region, division, designation) explained 5% of the variance. The addition of intrinsic and extrinsic motivation in Model 2 increased variance to 13.3% (ΔR² = 12.8%, F = 9.819, p < .05). Model 3's introduction of moderating variables (internal/external reforms) increased variance to 15.4% (F = 7.024, p < .010). Model 4's interaction terms raised the total variance to 16.5% (F = 4.835, p < .01). Control variables demonstrated significant relationships with service delivery: region (β = .093, t = 1.653, p < .10), division (β = -.102, t = -1.830, p < .010), and designation (β = .001, t = .020, p > .010). Both motivation types positively influenced service delivery, with intrinsic motivation exhibiting a stronger impact (β = .232, t = 3.885, p < .001) compared to extrinsic motivation (β = .205, t = 3.244, p < .001). These findings supported Hypotheses 1 and 2.

Regarding reforms, internal reforms positively affected service delivery (β = .121, t = 2.567, p < .01), while external reforms exhibited negative, insignificant effects (β = -.028, t = -.468, p > .10). For moderating effects, internal reforms positively moderated the intrinsic motivation-service delivery relationship (β = .114, t = 2.208, p < .05), supporting Hypothesis 3. However, internal reforms did not moderate the extrinsic motivation-service delivery relationship (β = -.055, t = -.703, p > .10), rejecting Hypothesis 4. External reforms demonstrated no significant moderating effects on either intrinsic motivation (β = -.014, t = .211, p > .10) or extrinsic motivation (β = -.087, t = -1.293, p > .10) relationships with service delivery, rejecting Hypotheses 5 and 6. Table 8 presents a summary of the hypotheses tested and discussed in Section.

**Table 8: Summary of hypotheses and empirical conclusions**

|  |  |  |
| --- | --- | --- |
| **Hypotheses** | **Expected sign** | **Conclusions** |
| H1: There is a positive relationship between intrinsic motivation and service delivery | + | Supported  |
| H2: There is a positive relationship between extrinsic motivation and service delivery | + | Supported  |
| H3: Internal reforms moderated the positive relationship between intrinsic motivation and service delivery | + | Supported  |
| H4: Internal reforms moderated the positive relationship between extrinsic motivation and service delivery | + | Not Supported  |
| H5: External reforms moderated the positive relationship between intrinsic motivation and service delivery | + | Not supported  |
| H6: External reforms moderated the positive relationship between extrinsic motivation and service delivery | + | Not Supported  |

# Source: Authors’ Construct

# **6. SUMMARY AND CONCLUSIONS**

## **6.1 Summary**

## This study examined the role of employee motivation in land service delivery, focusing on intrinsic and extrinsic motivation factors and the moderating effects of internal and external land administration reforms. The research utilized a sample size of 332 participants, with data collected through face-to-face structured survey questionnaires. Factor analysis was conducted to determine the dimensions of key variables, with all factors loading at 0.5 or above. The scales demonstrated strong internal consistency, with Cronbach's Alpha reliabilities ranging from 0.764 to 0.894, exceeding the minimum requirement of 0.50. Correlation analysis revealed significant relationships between most variables, with mean values falling between 1.0 and 5.0. Convergent and discriminant validity tests confirmed the reliability of the constructs.

## The study employed hierarchical regression analysis to test six hypotheses across four stages. Stage one examined control variables (region, division, and designation); stage two incorporated independent variables (intrinsic and extrinsic motivation); stage three included moderating variables (internal and external land administration reforms); and stage four introduced interaction effects between moderators and independent variables. Of the six hypotheses tested, three were supported: (1) intrinsic motivation exhibited a positive relationship with service delivery, (2) extrinsic motivation demonstrated a positive relationship with service delivery, and (3) internal reforms moderated the positive relationship between intrinsic motivation and service delivery. The remaining three hypotheses were not supported by the data. These findings contribute to understanding how different forms of motivation impact land service delivery and highlight the significant role of internal reforms in enhancing this relationship.

## **6.2 Discussion**

### 6.2.1 The effect of motivation on the quality-of-service delivery by the Lands Commission of Ghana.

Hypothesis 1 findings demonstrated that intrinsic motivation significantly influenced service delivery (β=.232, t=3.885, p < .001), indicating that a unit increase in intrinsic motivation results in a 23.2% increase in service delivery. This aligns with Berman et al. (2015) research illustrating that intrinsically motivated employees contribute more substantially to organizational success. Fukuyama (2017) further corroborates this, noting that internal motivation drives employees to better serve organizational and stakeholder interests, which is particularly crucial in land administration, where service quality affects public trust.

Hypothesis 2 revealed that extrinsic motivation positively influenced service delivery (β=.205, t= 3.244, p < .001), with a unit increase resulting in a 20.5% improvement in service delivery. This finding supports Locke and Latham's (2004) research on the importance of external rewards, including bonuses, promotions, and working conditions. Hasnain & Pierskalla (2012) further demonstrate that fair compensation enhances performance and service delivery. In the public sector context, particularly at Ghana's Lands Commission, extrinsic motivation through improved service conditions and compensation proves essential for quality service delivery and reform implementation. Both findings emphasize the complementary roles of intrinsic and extrinsic motivation in enhancing public sector service delivery, particularly in land administration reforms.

### 6.2.2 The moderating role of internal and external land administration reforms on the relationship between motivation and quality of Service delivery by the Lands Commission of Ghana.

### Hypothesis 3 analysis revealed that internal reforms significantly moderated the relationship between intrinsic motivation and service delivery (β = .114, t = 2.208, p < .05). This finding aligns with Bolino & Grant's (2016) research demonstrating that employees who identify with their organization exceed formal job requirements. Will (2012) further corroborates this, noting that internal reforms empower employees with the necessary tools and clarity, enhancing their intrinsic motivation. The synergy between internal reforms and intrinsic motivation at Ghana's Lands Commission creates an environment where employee ownership and commitment drive improved service delivery (Brunsson & Olsen, 2018; Steiss, 2019).

### Hypothesis 4 found no significant moderating effect of internal reforms on the relationship between extrinsic motivation and service delivery (β = -.055, t = .703, p > .10). This suggests that internal organizational changes may not significantly influence externally motivated performance factors such as financial incentives and career progression. The finding indicates that extrinsic motivation remains relatively stable regardless of internal reforms, emphasizing the necessity for direct incentives rather than organizational changes to enhance externally motivated service delivery.

### Hypothesis 5 analysis demonstrated that external reforms did not significantly moderate the relationship between intrinsic motivation and service delivery (β = -.014, t = .211, p > .10). While external reforms by stakeholders such as government and donor agencies aim to improve service efficiency (World Bank, 2016; Daniel et al., 2019), they may conflict with employee intrinsic motivation. Lassou & Hopper (2016) suggest that external reforms, though sometimes necessary, must be carefully implemented to avoid undermining employee autonomy and motivation.

### Hypothesis 6 similarly revealed no significant moderating effect of external reforms on the relationship between extrinsic motivation and service delivery (β = -.087, t = -1.293, p > .10). External reforms focusing on broader organizational goals may not address immediate extrinsic needs such as compensation and career advancement (Daniel et al., 2019). Gustavson (2013) notes that increased workloads or responsibilities from external reforms without corresponding benefits may decrease employee engagement and service delivery effectiveness.

### These findings highlight the complexity of implementing external reforms at Ghana's Lands Commission. As Fernandez & Rainey (2006) suggest, successful reform implementation demands a careful balance between organizational changes and employee motivational factors to maintain service delivery quality.

## **6.3 Recommendations**

This paper elucidates several key implications for enhancing service delivery at Ghana's Lands Commission. Both intrinsic and extrinsic motivation play pivotal roles in improving service delivery, suggesting that management should develop human resource policies that address these motivational factors to maintain employee engagement and productivity. The positive moderating effect of intrinsic motivation on land administration reforms and service delivery underscores the importance of continuous internal improvements, including capacity building, policy revisions, digitization, and decentralization. Management should implement these reforms while ensuring employee commitment to the process, as intrinsically motivated employees are more likely to drive successful outcomes. The paper recommends prioritizing employee motivation when implementing external reforms, as external interventions may prove ineffective without intrinsic motivation. If motivating staff proves challenging, policymakers could consider public-private partnerships (PPPs) to introduce efficiency and innovation in land administration. The paper also recommends enhancing systems through ICT integration, improved service conditions, and strengthened institutional collaboration with the judiciary and allied agencies. For the successful implementation of external reforms, adequate financial and technical resources are essential, along with personnel support. Management should seek donor partnerships, align with government policies, and review fees to ensure sustainable reform implementation.

The findings revealed significant positive relationships between both types of motivation and service delivery, with intrinsic motivation showing a slightly stronger impact. Internal reforms positively moderated the relationship between intrinsic motivation and service delivery, while external reforms showed no significant moderating effect on either type of motivation. These findings indicate the importance of balancing internal organizational improvements with employee motivational needs. It is recommended that management focuses on developing comprehensive human resource policies that address both intrinsic and extrinsic motivational factors while implementing reforms.

**DISCLAIMER (ARTIFICIAL INTELLIGENCE)**

The authors hereby declare that Grammarly was used for grammar check during the editing of this manuscript.

**Disclosure statement**

The authors report that there are no competing interests to declare

**Data availability statement**

The corresponding author can make the data used to support this study’s findings available upon reasonable request.

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