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Physical Asset Management Practices And Quality Service Delivery In Local Governments In Mid-North Sub-Region of Uganda

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Abstract: The purpose of this study was to establish how physical asset management practices affect quality service delivery in local governments in the mid-north sub-region of Uganda. This study aimed to fill the gap in understanding the weight of excellent physical assets on service delivery. The research specifically focused on four key aspects of physical asset management: lifecycle planning, risk management, information management, and performance management. A cross-sectional design with a quantitative approach was employed. Data was collected from 131 respondents, selected through simple random and purposive sampling of physical asset managers in local governments. The self-administered questionnaires provided quantitative data, which was analyzed using descriptive and inferential statistics through the Statistical Program for Social Scientists (SPSS Ver. 23). The findings revealed a significant positive correlation between physical asset management practices and quality service delivery (rho.506). Specifically, lifecycle planning, risk management, information management, and performance management were found to significantly impact the quality of service delivery in the local governments studied. In conclusion, the study highlighted the critical role of effective physical asset management practices in enhancing quality service delivery in local governments. The results underscore the importance of proper execution of these practices in various sectors, including engineering, infrastructure, estate, finance, and public procurement, to meet the expectations of different stakeholders. While the study was limited to a quantitative approach and two local governments, it provides valuable insights for both theoreticians and practitioners in developing countries, where research on this subject is nearly nonexistent. Further studies incorporating qualitative aspects and broader geographical coverage are recommended to enhance generalizability and understanding of the relationship between physical asset management and service delivery.

Keywords: Physical Asset, Management Practices, Quality Service Delivery, Sub-region, Uganda

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1. Introduction

Quality service delivery has proven to be an important yet contentious topic in strategic management, particularly in public procurement, propelled by the use of excellent physical assets. While many governments strive to promote the use of excellent physical assets for delivering quality services, more researchers are focusing on exploring the relationship between physical asset management practices and quality service delivery, a relationship still not completely understood, especially in developing countries. Against this backdrop, this study aims to fill the gap by hypothesizing that different practices of physical asset management individually and collectively affect quality service delivery in local governments. The study focuses on physical asset management practices and quality service delivery in local governments in the Mid-North sub-region of Uganda. Physical asset management practices, measured in terms of lifecycle planning, risk management, information management, and performance management, were the independent variables, while quality service delivery, characterized by responsiveness, reliability, assurance, and empathy, was the dependent variable.

Globally, governments assign significant importance to using excellent physical assets to deliver quality services to their citizenry. Failure to strategically manage practices inherent in elevating excellent physical assets may lead to poor service delivery. Maletić et al. (2017) identify four key practices for proper management of physical assets: lifecycle planning, risk management, information management, and performance management. In developed countries, these practices are encouraged to ensure the availability of excellent physical assets for government organizations' use. However, in developing countries, a lesser emphasis is placed on promoting and using excellent physical assets, as discovered by Hanis et al. (2011). This disparity has caused dissatisfaction among the beneficiaries of government services. Recently, policymakers have become concerned about the quality of services delivered by their governments.

In Uganda, the quality of service delivered to the citizenry is dwindling daily. Service delivery in the country is among the poorest in the developing world, as evidenced by

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recent studies (Okech, 2016). These studies acknowledge poor quality service delivery, significantly affecting the central and local governments' mission realization. Despite efforts to improve service quality, such as implementing recommendations from the annual national local government assessment reports produced by the Office of the Prime Minister, service delivery quality remains poor. The situation is even more appalling in the Mid-North sub-region of the country.

The Mid-North sub-region of Uganda has two higher local governments composed of districts, municipalities, municipal divisional councils, town/urban councils, and sub-county councils. There are 101 local governments in the sub-region, created at different times in the country's history. However, the local governments can be clustered into two categories: those formed before and after the introduction of the Decentralization Policy of 1997. The study selected one district to represent each cluster: the Gulu district for the pre-decentralization policy cluster and the Agago district for the latter. These districts were chosen because they were rated as the best and worst performing in their clusters, according to the annual performance assessment reports from the Office of the Prime Minister for the last three years. The reports highlight the fundamental issue of local governments failing to plan for using their available physical assets properly. This failure exposes the management of physical assets to risks and misinformation, leading to poor service delivery and the unlikely realization of local governments' missions.

1.1. Statement of the Problem

The Government of Uganda aims to achieve all-out quality services for all citizens by 2040. It has empowered local governments to plan, own, and manage their physical assets to compel them to deliver quality services. Several strategies (e.g., bottom-up planning, performance assessment, performance improvement plans, and technical support) encourage and elevate the use of physical assets in all local governments.

Despite these efforts, poor quality services are delivered by local governments, not meeting citizens' least expectations and desires. The government has acknowledged a "missing link" between resources (physical assets) and the quality of services delivered, as revealed in annual performance assessment reports by the Office of the Prime Minister. This gap between service delivery and managing physical assets in local governments needs addressing. If the "missing link" gap persists, achieving all-out service goals may be difficult. Therefore, there is a need to establish why this gap persists despite government efforts.

1.2. Objectives of the Study

The current study attempts to achieve the following objectives:

1. To examine the effect of lifecycle planning on quality service delivery
2. To examine the effect of risk management on quality service delivery
3. To establish the effect of information management on quality service delivery
4. To find out the effect of performance management on quality service delivery

2. Literature Review

2.1. Theoretical Underpinnings

This study is underpinned by contingency, resource-based, and stakeholder theories. These theories were applied to gain an understanding of the theoretical interconnection between the physical asset management practices of local governments and the delivery of quality services to satisfy the needs of local government stakeholders.

In this study, it is presumed that poor quality service delivery by local governments in the Mid-North region of Uganda is caused by the failure of responsible managers to consider contingency factors when executing physical asset management practices. Poor conceptualization of environmental/contingency factors may lead to inadequate practices in managing physical assets, likely resulting in a negative effect on the quality of services delivered to the beneficiaries.

Contingency theory upholds that management should effectively utilize contingency factors to improve an organization's performance. In this study, contingency theory was used to explain the institutional variables that influence physical asset management practices and the relationship between these practices and performance consequences (Zhang, Linderman & Schroeder, 2012) of quality service delivery. The use of the theory was therefore necessary to analyze quality service delivery against the practice of lifecycle planning, risk management, information management, and performance management practices in managing physical assets.

Resource-based theory has been used to examine resources in organizations. It demonstrates why some organizations perform highly while others do not, depending on the use of available resources at their disposal. Resources always permit organizations to achieve superior economic performance. In this study, resource-based theory was used to explain how physical assets obtainable in local government can aid them in accomplishing their functions or carrying out their activities.

According to stakeholder theory, the expectations of stakeholders, as embroiled in the resource-based theory, need to be met. Stakeholder theory was developed to help managers and other stakeholders who may be influenced by managerial decisions constructed inside the organization to meet their expectations as well. Those decisions are

often about ensuring that the wishes and aspirations of the stakeholders are fulfilled. Stakeholder theory emphasizes quality service delivery over the actual activities of physical asset management practices for quality service delivery. It is important to note that the theory considers the interests of all stakeholders while evaluating organizational performance since it is a multi-faceted phenomenon. It is useful in addressing stakeholder engagement in the process of physical asset management practices for quality service delivery, as is the case in this study.

2.2. Empirical review

Quality service delivery is one of the most important topics in strategic management research. It is arguably the most critical indicator for measuring an organization's overall success. An organization's quality service delivery is assessed based on standard or prescribed indicators of responsiveness, reliability, assurance, and empathy. In short, quality service delivery means meeting the expectations and needs of beneficiaries using excellent physical assets, which aid in achieving set targets and objectives (Baum & Vlok, 2013).

Lifecycle planning of physical assets involves creating long-term plans for effectively managing physical assets from inception to disposal (Yuan et al., 2017). Various scholars have examined this concept and found it to affect organizational functioning, including service delivery. A study by Hanis et al. (2011) in Indonesia revealed that overall platforms in the lifecycle management of physical assets have positive and significant relationships with organizational performance. However, a study by Cilia (2014) highlighted the lack of adequate models or guidelines to direct the management of physical assets in many organizations, which affects service delivery. This agrees with other studies that suggest lifecycle planning in physical asset management practices positively influences organizational functioning and impacts service delivery (Vermiglio, 2011). Therefore, the following hypothesis is proposed:

H1: Lifecycle planning positively affects quality service delivery.

Risk management refers to understanding associated risks as a crucial factor in ensuring valuable management of physical assets in an organization (Thatshayini, Rajini & Weerasinghe, 2018). Every physical asset has inherent risks and potential failures, even though the link between risk and physical asset reliability is not always clear. However, Mkanadawire (2015) found that proper risk management provides direction and control over organizational functioning, particularly service delivery. The study then hypothesized that:

H2: Risk management positively affects quality service delivery.

Information management involves efficient data flows across all activities in managing physical assets to achieve the organization's mission. A study by Baum and Vlok (2013) discovered that dysfunctional information flow and poor decision-making hindered physical asset management. Similarly, a study by Yuan and colleagues found that a data-driven decision-making process eliminated duplicate data collection efforts, reducing physical asset inventory expenses in the short term and leading to more effective physical asset management in the long term (Yuan et al., 2017). Such a reduction in cost could aid in promoting the delivery of quality services. This leads to the following hypothesis:

H3: Information management positively affects quality service delivery.

Various scholars studying strategic management agree that performance management aids in planning for decision-making and focuses on a better future. In his study, Ruitenburg (2017) found that managers' inadequate knowledge negatively affects the performance management of physical assets in an organization. Hanis et al. (2011) studied the management of physical assets in Indonesia and found that management is neither optimal nor the apparatus' capabilities adequate for managing physical assets. This contrasts with the fact that increasing physical asset management practices promote quality service delivery, leading to the hypothesis:

H4: Performance management positively affects quality service delivery.

3. Methodology

This study proposes a research model based on a literature review, as well as contingency, resource-based, and stakeholder theories. Contingency theory was used to examine the relationship between practices in managing physical assets and quality service delivery. Resource-based theory was used to explain the difference a properly managed physical asset could make in satisfying the needs and expectations of beneficiaries, who ought to be involved in the management process as well. Stakeholder theory was applied to demonstrate how such involvement could be made possible. Based on these theories, the research model is illustrated in Figure 1 below.

This study relied on a cross-sectional research design as it allows for the rapid collection of data and is cost-effective. A quantitative approach was employed for objective measurement and statistical analysis of the collected data from 131 respondents, using SPSS software. Ethical considerations, including confidentiality, anonymity, voluntariness, and informed consent, were strictly observed during data collection and analysis. The assumed knowledge of the respondents on the subject matter, the simplicity of the questionnaire items, and the respondents' willingness to participate were all supportive of the study's success.

In the data collection process, structured questionnaires were distributed to the selected respondents. The questionnaire was designed to capture information on various aspects of physical asset management practices,

including lifecycle planning, risk management, information management, and performance management, as well as their perceived impact on quality service delivery. The responses were then analyzed using descriptive and inferential statistics to identify patterns and relationships between the variables.

The results from the analysis were used to test the proposed hypotheses, providing insights into how different practices of physical asset management individually and collectively affect quality service delivery in local governments. The findings were discussed in the context of existing literature, highlighting the practical implications for improving physical asset management practices and enhancing service delivery in the public sector. Recommendations for future research and policy-making were also provided based on the study's conclusions.

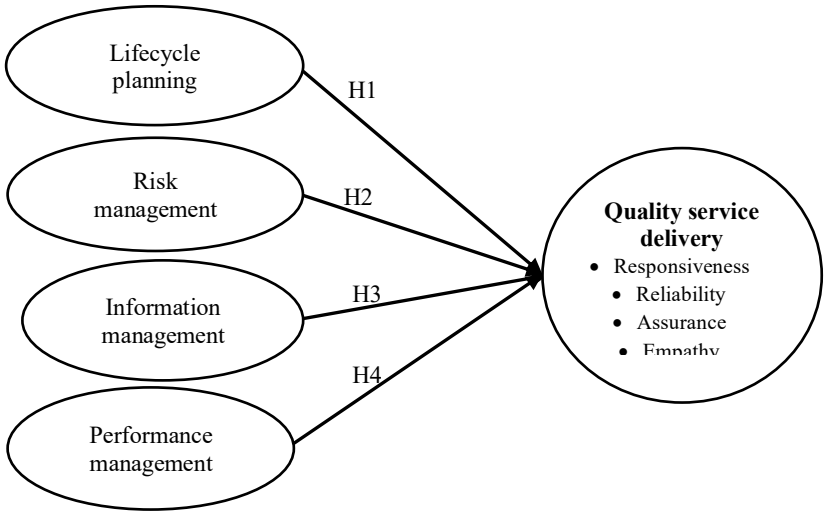

Figure 1: The proposed model

4. Results / Analysis

4.1 Response rate and characteristics of respondents

After examining the returned questionnaire out of 131 distributed, 110 sets were retrieved but only 107 were found useful for further analysis. The response rate was 84 per cent. This is a highly acceptable percentage in research of this nature. Table 1 presents the demographics of those who participated in the study.

Table 1: Summary of demographic data of the respondents

Biographic item	Categories	Frequency	Percentage
Sex	Male	60	56
	Female	47	44
	Total	107	100
Age	20-30 years	16	15
	31-41 years	49	46
	42-52 years	29	27
	53+ years	13	12
	Total	107	100
Education	Diploma	33	31
	Bachelor degree	46	43
	Post Graduate diploma	17	16
	Masters' degree	11	10
	Doctoral degree	0	0
	Total	107	100
Tenure	Less than 5 years	25	23
	5-15 years	60	56
	More than 15 years	22	21
	Total	107	100

Source: *Field Survey, 2019/SPSS (Version 23.0 for Windows) Output*

The obtained results show that 56% of the respondents are male, while the remaining 44 % are female. Fifteen % of the respondents are aged between 20 to 30 years, 46 % are aged between 31 to 41 years old, 27 %are aged between 42 to 52 years old, and 12 % are aged 53+ years old. The analysis revealed that the respondents possess different educational backgrounds. Specifically, 31 % have a diploma, 43 % have a bachelor's degree, 17 % have a postgraduate diploma, 11 % have a master's degree, and none have a doctoral degree. In terms of tenure of service in local governments, 23 % had worked for less than 5 years, 56 %had worked between 5 to 15 years, and 21 % had worked for more than 15 years.

4.2 Correlation and Regression Analysis

The study used correlation analysis to determine the relationship between the constructs and multiple regression analysis to determine the quantitative relationship between each of the independent constructs and the dependent construct. The study employed a multiple regression model given by $Y = \beta 1X1 + \beta 2X2 + \beta 3X3 + Ə$ to explain the relationship between the constructs. The results are presented in the tables below.

Table 2: Model summary

Model	R	R Square	Adjusted R Square	Std. error of the Estimate	Interpretation
1	.727[a]	.5270	.506	2.54054	Significantly predict

a. Predictors: (Constant), lifecycle planning, information, performance, and risk management.

Table 2 gives the model summary of the results. The results indicate that the adjacent R was 0.506. This implies that a combination of the practices of lifecycle planning, information, performance, and risk management accounted for 50.6 of the variations in quality service delivery. Despite this, the model summary cannot fully explain each of the variables. More clarifications of each variable is in ANOVA and coefficient results in the proceeding tables.

Table 3: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	5.9416E2	94	4.4634E2	32.165	.008[b]
Residual	6.110E4	5	3254.114		
Total	1.253E4				

a. Dependent construct: Quality service delivery
b. Predictors: (Constant), Lifecycle planning, Risk management, Information management, Performance management

Source: *Field Survey, 2019/SPSS (Version 23.0 for Windows) Output*

The above table 3 clarifies that the regression used 94 degrees of freedom and 5 residuals to come up with the multiple r figures in Table 3. The table also reveals 0.008 significantly lower than the required 0.05.

Table 4: Co-efficient

Model	Unstandardized Co-efficient		Standardized Co-efficient	t	Sig.
	B	Std. Error	Beta		
(Constant)	13.257	4.424		2.996	.004
LPP	.332	.132	.331	-.993	.044
RMP	.316	.063	.411	1.906	.043
IMP	.571	.147	.535	2.508	.014
PMP	.557	.156	.563	2.273	.025

a. Dependent Variable: Quality service delivery. ***Source:*** *Field Survey, 2019/SPSS (Version 23.0 for Windows) Output*

From Table 4 above, it can be seen that there is a higher effect of information management practice as well as performance management practice on quality service delivery than lifecycle planning and risk management practices which are weaker. Thus based on the regression model above, this translates into $Y=0.332X_1 +0.0316X_2 + 0.571X_3 +0.557X_4$.

4.3 Hypotheses testing

Hypotheses of the current study were tested using chi-square as presented in Table 5.

Table 5: Chi-square Test results

Test Statistics	Lifecycle planning	Risk management	Information management	Performance management
Chi-Square	37.195[a]	33.120[b]	39.137[a]	42.180[c]
Df	10	12	11	12
Asymp. Sig.	.000	.001	.000	.000

Source: *Field Survey, 2019/SPSS (Version 23.0 for Windows) Output*

The results of the four hypotheses disclosed that all the p-values (X2(10) = 37.195, p = .000, X2(12) = 33.120, p = .000, X2(11) = 39.137, p = .000, X2(12) = 42.180, p = .000) are less than the .05 level of significance. Table 4 indicates the beta value of each variable: lifecycle planning (0.332), risk management planning (0.316), information management (0.571), and performance management (0.557). Collectively, the sub-constructs predict quality service delivery. These findings align with Hanis et al. (2011).

5. Discussion

The main aim of the current study was to examine the effect of physical asset management practices on quality service delivery in the local governments of Gulu and Agago districts. This discussion section is based on the four objectives stated earlier.

Findings related to objective 1: The first objective of the study examined the effect of lifecycle planning on quality service delivery in the local governments of Gulu and Agago districts. Upon the study and testing of objective one, it was found that lifecycle planning has a positive effect on quality service delivery in the selected local governments. The null hypothesis was rejected in favour of the alternate hypothesis (H1), that is, H1: Lifecycle planning positively affects quality service delivery. The result is consistent with the studies by Maleti˘c et al. (2017) and Hanis et al. (2011).

Findings related to objective 2: The objective of examining the effect of risk management on quality service delivery was tested by a null hypothesis which was rejected. Given the results indicated risk management has a positive effect on quality service delivery, hence, the alternate hypothesis H2: Risk management positively affects quality service delivery was accepted.

Findings related to objective 3: The third objective examined the effect of information management on quality service delivery. The objective was studied and a test was conducted on hypothesis H3. Findings did show that quality service delivery in the local governments is positively affected by information management. The null hypothesis used for testing was rejected in place of the alternate hypothesis, thus, H3: Information management positively affects quality service delivery was accepted.

Findings related to objective 4: This objective sought to find out the effect of performance management on quality service delivery. This objective was studied through hypothesis 4. The findings of the study and the test of the hypothesis showed a significant and positive effect of performance management on quality service delivery in the local governments. Thus, H4 is accepted in preference to the null hypothesis..

6. Conclusion

Quality service delivery at inception, design, and implementation is critical to realizing the mission of any government. Proper practices in managing physical assets at the disposal of any government are the center-bolt of such an initiative. This study examined the effect of physical asset management practices on quality service delivery in the local governments of Gulu and Agago districts located in the mid-north region of Uganda. Based on the findings related to the four objectives, the study concluded that managers in local governments need to ensure that lifecycle planning, information management, performance management, and risk management are properly executed if local governments are to provide quality services to the beneficiaries.

7. Limitations and Future Recommendations

This study used quantitative data at the expense of qualitative ones, therefore, a qualitative study is recommended. Additionally, the study was of a cross-sectional nature which means a longitudinal one is advisable. This study covered only two local governments and a single region of Uganda. A similar study could be conducted in more local governments and perhaps regions to generalize the findings beyond the local governments of Gulu and Agago districts.

This study has opened a venture into studying quality service delivery in the ambit of excellent physical assets in local governments. It highlighted the strategic components of lifecycle planning, risk management, information management, and performance management, which greatly contribute to the delivery of quality services in local governments. Its outputs are very helpful in enhancing the knowledge universe of quality service delivery in the ambit of physical asset management practices. It reaffirmed the importance of contingency, resource-based, and stakeholder theories in physical assets. Scholars and researchers are potential beneficiaries of the study in their varied engagements, especially for theory validation.

Practically, the study provides local government actors with the tools they require to manage their physical assets well and also greatly improve the delivery of quality services in their local governments. Thus, the study could lead to improved quality of services, reduced wastage in physical assets, and better use of the potential of excellent physical assets. In essence, the current study serves as a pointer to the better enhancement of effective physical asset management practices for quality service delivery in the field of strategic management and public procurement in developing countries and elsewhere.

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