



## EFFECT OF MOVABLE ASSET MANagements ON COST REDUCTION A CASE STUDY OF RWANDA ENERGY GROUP

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**ABSTRACT:** *Despite the advantages associated with movable assets management, many institutions in Rwanda specifically governments projects have not fully achieved their desired cost reduction levels due to assets mismanagements where most of institution do not do assets forecasting, assets physical verification before purchasing new assets which at the end of the day they find ghost assets on the assets register and unnecessary assets that decreases revenue of the company and increase cost of company. The purpose of the study is to examine influence of movable assets on the cost reduction practices in Rwanda with a focus on government institution. The study will be undertaken by the following objectives to examine affect of asset maintenance on cost reduction, to examine effect of assets recording on cost reduction, to examine effect of assets inventory on cost reduction and to examine effect of asset disposal on cost reduction in Rwanda Energy Group Kigali Branch. The study was to rely on the as theory contingency theory, general systems theory. The study was utilized document review, questionnaires, key informant interviews, and observations for data collection. Regression and correlation analysis were used to perform inferential data analysis. The relationships between the independent and dependent variables were established using the regression analysis and sample size was 91 respondents in this study. The study recommend REG Kigali Branch should strengthen and Sensitize employees through guidance programs the need for effective coordination to improve the asset management, should provide trainings to employees to improve their knowledge on movable asset management and should Exercise long-term financial planning for better asset management hence, a good financial plan in place, the REG can then assess which objectives are feasible thus leading to cost reduction.*

**Key words:** *Movable asset, the most valuable property of the company.*

## **CHAPTER ONE: INTRODUCTION**

### **1.0. Introduction**

The chapter includes the background of the study, problem statement and objectives of the study, research questions, scope of the study, significance of the study, conceptual framework and Institution of the study are presented clearly.

### **1.1. Background of the Study**

Since the release of the International Institution for Standardization (ISO) 55000 standard series in 2014, an increasing number of Institution have been interested in asset management. Assets are items or articles that have potential or actual value to an Institution and are generally physical or material since cost reduction are the main topics of asset management. Referring to the international standard ISO 55002 this research will presents a systematic approach to the management of physical assets from concept to disposal, building upon the previous editions and brought up-to-date with the new standard and ISO/TS50010. It introduces the general principles of physical asset management and covers all stages of the asset management process, including initial business appraisal, identification of physical asset needs, capability gap analysis, financial evaluation, logistic support analysis, life cycle costing, strategic asset management planning, maintenance strategy, outsourcing, cost-benefit analysis, disposal and renewal. Features include

The scope of asset management can vary, but according to the Institute of Asset Management IAM and ISO 55000, it includes strategic planning for asset management, asset management decisions, asset lifecycle management, and asset information system and operations

### **1.2. Statement of the problem**

The effective movable asset management is fundamental to the cost reduction. Most Institutions in developed countries have a strong discipline movable asset management culture where they consider each and every asset procedure which reduce the cost of the company in Rwanda despite the effort governments put in place regarding public assets managements so many institution still face issues in assets managements which may lead to the loss of the company for many still find it hard to manage the costs. Asset management allows the organization to keep track of all their assets. It can tell where the assets are located, how they are used, and when changes were made to them. The data from the asset management solution can ensure that asset recovery will lead to better returns however the absence of assets managements can have following consequence no Asset Information in the event that you don't even have the foggiest idea that how many assets are there in your organization and what's their status. Nobody takes note on what happens to those assets that you own .Your organization will likewise need to reinvest, in this manner bringing additional expenses.

#### 1.4. Specific Objectives of the Study

- i. To examine effect of asset maintenance on cost reduction in Rwanda Energy Group
- ii. To examine effect of assets recording on cost reduction in Rwanda Energy Group
- iii. To examine effect of assets inventory on cost reduction in Rwanda Energy Group
- iv. To examine effect of asset disposal on cost reduction in Rwanda Energy Group.

### REVIEW OF LITERATURE

#### 2.1 Introduction

This chapter contains a review of literature that is relevant to this study by other scholars or researchers. It will cover conceptual, theoretical as well as empirical literature.

#### 2.2 Conceptual review

This section will review conceptual issues about movable assets and cost reduction within the institution movable assets conceptual framework is an analytical tool with several variations and contexts. It can be applied in different categories of work where an overall picture is needed. It is used to make conceptual distinctions and organize ideas. Strong conceptual frameworks capture something real and do this in a way that is easy to remember and apply. Isaiah Berlin used the metaphor of a "fox" and a "hedgehog" to make conceptual distinctions in how important philosophers and authors view the world

#### 2.2.1 Movable Assets

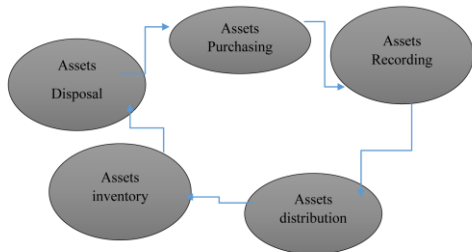
Movable assets include items that are not necessarily part of the building itself. Movable assets have an asset purchase cost of \$5,000 or greater per unit and depreciate monthly for the life of the assets. A metal tag with Duke University's logo is applied to movable assets. The tag displays a control number which was created at the time the asset was created in SAP. This tag is used for identification purposes. Even items that cannot physically carry a metal tag have an assigned number. Plant Accounting began taking digital pictures of capital equipment in 1997. If you would like a picture of an asset, e-mail your request to Plant Accounting.

Conducting capital equipment inventories is vital in monitoring and controlling Duke University and Duke University Health System's capital equipment. Physical inventories are conducted on a department-by-department basis for all assets with a unit cost of \$5,000 or greater. Equipment is inventoried in a perpetual cycle, with the oldest equipment inventory being the next one done. Equipment should be inventoried at least once every two years as per OMB Circular A-21 Section J, 12, e, which states, in part:

"Charges for use allowances or depreciation must be supported by adequate property records, and physical inventories must be

taken at least once every two years to ensure that the assets exist and are usable, used, and needed.”

### 2.2.2 Asset lifecycles managements



### 2.2.3 Assets Purchasing

As is an agreement between an assets supplier and company that finalizes terms and conditions related to the purchase and sale of a company's assets. It's important to note in an APA transaction, it is not necessary for the company to purchase all of the assets of the company. In fact, it's common for a company to exclude certain assets in an APA. Provisions of an APA may include payment of purchase price, monthly installments, liens and encumbrances on the assets, condition precedent for the closing, etc. An APA differs from a stock purchase agreement SPA under which company shares, title to assets, and title to liabilities are also sold. In an APA, the buyer must select specific assets and avoid redundant assets. This process enable company to quickly get new assets in company in case

are needed avoiding having stock which may increase the cost of the company.

### 2.2.4 Assets Recording

**an asset register** is a complete listing of a businesses or an entity's physical resources. Organizations, schools, or companies use this listing to track the date assets were purchased, calculate their value, and identify their physical locations.

With an asset register, staff in charge have an accessible reference when comparing the value of the assets against their ledgers or balance sheets. They can also optionally use this list to calculate depreciation as part of a depreciation schedule. As such, this is a vital decision-making tool that businesses can use for asset verification. Although asset registers involve tracking items, they are not the same as inventory management tools. Inventory management involves keeping a log of what you sell or consume.

### 2.2.5 Assets Identification

Asset identification, the use of attributes and methods to uniquely identify an asset, allows for correlation of data across multiple sources, reporting of asset information across different organizations and databases, targeted actions against specific assets, and usage of asset data in other business processes.

### **2.2.7 Asset Tagging**

Asset tagging is the process of affixing tags or labels to assets to identify each one individually and track data from real-time location to maintenance history. These tags are assigned to moveable assets that are spread across multiple sites and warehouses. Enabling businesses to achieve a holistic view of all their owned assets. Asset tagging opens up a wide range of data tracking possibilities for businesses, particularly when used alongside a computerized system. By attaching tags and labels to assets, businesses can gather a wide range of data and record it in a digitized asset register. Asset data can include:

### **2.2.8 Assets Distribution to the users**

is the process of distributing the assets acquired by the company requested by the user it might be IT Equipment, furniture, etc. they use them in their everyday work depending on user need, examples: chairs, laptop tablet, tables,

### **2.2.11 Repair and Maintenance:**

This refers to the various methods applied in controlling asset life on which company's staff in charge make sure that all assets in use are cleaned repaired if needed and maintained for targeting each asset to be zero depreciated which reduce the cost of

the company because the more company purchase new assets more company cost increase and this affect of cause company cost reduction

### **2.2.8 Assets Inventory**

Asset inventory is the way an organization lists and provides details of the assets it owns. This can cover a , from tangible fixed assets such as property and equipment, on this project we will focus on movable assets, inventory management the way organization monitors the assets it owns to track and analyze issues such as physical location, maintenance requirements, depreciation, performance, and eventual disposal of the asset one of the most significant advantages assets inventory is the ability to store all documents relating to each asset in one place. Such documents could be warranties, receipts, user manuals, etc., and keeping them together is a great way to improve organization and effectiveness in the asset inventory process.

### **2.2.9 Asset Disposal**

Asset disposal is the removal of a long-term asset from the company's accounting records. It is an important concept because capital assets are essential to successful business operations. Moreover, proper accounting of the disposal of an asset is critical to

maintaining updated and clean accounting records.

The asset disposal may be a result of several events:

- An asset is fully depreciated and must be disposed of.
- An asset is sold because it is no longer useful or needed.
- An asset must be removed from the books due to unforeseen circumstances (e.g., theft).

### 2.3 Cost Reduction indicators:

#### 2.2.13 Asset Insurance

Insurance protect business from financial losses due to property damage or the loss of physical assets such as business equipment, vehicles, tools and stock. Business insurance cover you against a range of business risks such as damage, theft, professional mistakes and legal fees if professional legal help is required to put things right. Business insurance help to continue to operate, at least in some capacity, if things go wrong. The company do not use their money purchasing new assets in case of assets theft, damage, etc. insurance cover assets damaged or theft which reduce company s cost the cost of

material constitutes a large proportion of the total product cost and as such there should be a proper system of material control to ensure economy in the cost of production.

Material control is a system which ensures the provision of the required quantity of material of the required quality at the required time with the minimum.

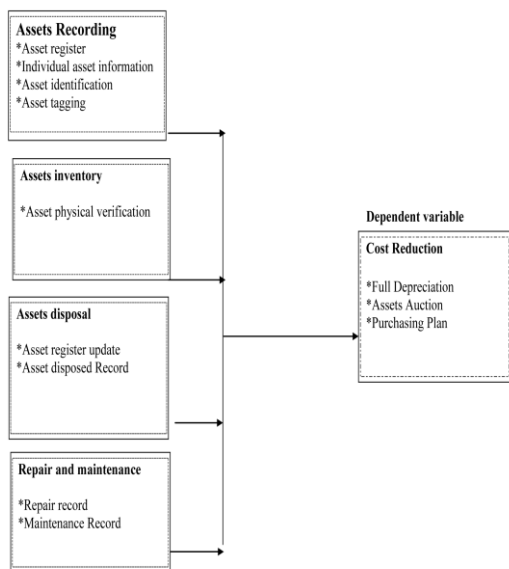
#### 2.2.14 Fully Depreciated Asset

If the assets is fully depreciated mean have been used all time company expected it to last which is profit for the company, because the less company invest in buying new assets the more company reduce the cost, asset can reach full depreciation when its useful life expires or if an impairment charge is incurred against the original cost, though this is less common. If a company takes a full impairment charge against the asset, the asset immediately becomes fully depreciated, leaving only its salvage value (also known as terminal value or residual value). The depreciation method can take the form of straight-line or accelerated (double-declining-balance or sum-of-year), and when accumulated depreciation matches the original cost

### 2.3 Conceptual Framework

According to Mugenda & Mugenda (2003) cited in Sawega (2014), a conceptual

framework is a diagrammatical representation of hypothesized relationship between independent and dependent variables of the study. The independent variable in this study is the various factors which are expected to influence the movable asset management of the subject project. This is depicted in



**Figure 2.1: Conceptual Framework**  
**2.4 Research Gap**

The various studies examined relate to the movable asset management of various projects particularly housing construction projects management. However, they do not clearly show how the factors studied influence the movable asset management and cost reduction mechanism among the construction housing projects. This is why this study seeks to analyze the factors

affecting the movable asset management among the construction housing projects on the cost reduction mechanisms of the construction housing projects in Rwanda.

## CHAPTER THREE: RESEARCH METHODOLOGY

### 3.1 Introduction

The methodology that was applied in this study is what is being explained in this very chapter. This chapter encompasses the research design, target population, sample size and sampling procedure, data collection instruments and procedure, validity and reliability as well as the data analysis methods.

### 3.2 Research design

Descriptive research design was used. This method of research is preferred because the researcher is able to collect data to answer questions concerning the status of the subject of study. Descriptive research determines and reports the way things are done and also helps a researcher to describe a phenomenon in terms of attitude, values and characteristics (Mugenda & Mugenda, 1999). A descriptive research design also allows for in-depth analysis of variables and elements of the population to be studied and as well as collection of large amounts of data in a highly

economical way. It enables generation of factual information about the study. This is so because the descriptive design relies much on secondary data which helps in developing the case basing on facts, sustained by statistics and descriptive interpretations from archival materials and data. The open-ended.

### **3.3. Study population**

The population is defined as the total collection of elements about which wish to make a sum (Donald and Schindler, 2006). Target population for this research was 91 employees at the REG of Kigali Headquarters. It is from this population that as ample for the purpose of this study was drawn.

### **3.4 Sample size and Sampling method**

The design used also cross-sectional because the study was undertaken at a given point in time; August, 2021. By applying the Kcejcic and Morgan (2019) table for sample size determination, a sample size of 91 respondents was used for this study. The technique of simple random sampling was applied to draw the sample form the population. Purposive sampling was also be applied to get key informants for the interviews.

### **3.5 Methods of data collection**

Several methods was relied upon for data collection.

#### **(i) Document review**

This was used to collect secondary data. Secondary data came in from different sources: Textbooks, websites belonging to asset management reports, newspapers, magazines, journal articles, asset management reports, reports, minutes among other sources. This information reviewed by visiting libraries and different construction housing Institution.

#### **(ii) Questionnaires**

In this study, the researcher was developed open-ended questions as well as close-ended questions. This study was applied questionnaire method because its administration is comparatively inexpensive.

## **CHAPTER FOUR: PRESENTATION OF FINDINGS, ANALYSIS AND INTERPRETATION**

### **4.0 Introduction**

The analysis of the primary data gathered from the administered surveys is presented in this chapter. In order to prepare the data for coding, it was edited and cleansed for accuracy and consistency. Data was coded before being entered for analysis into the Statistical Package for Social Sciences (SPSS). The data were analyzed using descriptive statistics like means and standard deviations. Inferential statistics were also utilized in the study to discuss the results. The



relationship between the variables under research and the study's goals was examined using regression analysis. The results of the regression analysis were also confirmed using an analysis of variance (ANOVA).

**Table 4: Position on Movable asset management at REG**

		Frequency	Percent
Valid	IT Staff	6	6.593
	Logistics	15	16.484
	Other	70	76.923
	Total	91	100.000

Source: Primary data 2022

The results presented in the table 4 are indicating that 6.593% of all questioned respondents were IT Staff, 16.484% of all questioned respondents were tellers, and 76.923% of all questioned respondents other. This indicates that the researchers obtained data from employees with knowledge in asset management

**Table 24: Coefficients of Determination Movable Asset Managements and Cost reduction**

Model	Unstandardized	Standardized	T	Sig.
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	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	1.64	.58		2.43	1.64
Asset record	.412	.114	.341	4.453	.008
Asset maintenance	.484	.124	.310	4.237	.018
Asset inventory	.435	.141	.364	4.032	.008
Asset disposal	.498	.154	.391	4.279	.053

a. Dependent Variable: Cost reduction

Primary data 2022

From the table 24 above it is evident that at 95% confidence level, all the predictors have positive relationship on the cost reduction and are statically significant. The predictors in the study also registered high values above the critical value of 3.180; this implies that the predictors have a positive and statistically significant relationship on the cost reduction. Positive effect was reported for all the independent variables with Asst record (t= 4.453, p= 0.08), Asset maintenance (t= 4.237, p= 0.018) Asset inventory (t= 4.032, p = 0.008) and Asset disposal (t = 4.279, p= 0.053) produced statistically significant values for this study of (high t-values,  $p \leq 0.05$ ). The constant value (1.64) shows that if the movable asset management identified were all rated zero, the cost reduction of REG Kigali in Rwanda

would be reduced by 1.64. In this study, stochastic error term was assumed to be zero since the study captured the key movable asset management.

The findings of the study were presented and interpreted in chapter four basing on the problem statement, objectives of the study and directed by research questions.

## **CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

### **5.0 Introduction**

The research carried out aimed at Effect of Movable Asset Managements on Cost Reduction in Rwanda Energy Group Kigali Branch. The study was built on a conceptual framework composed of Effect of Movable Asset Managements on Cost Reduction in Rwanda Energy Group's movable asset management as independent variable with sub-variables such as asset recording, asset inventory, asset disposal and asset maintenance. Cost reduction was considered dependent variable with sub-variables such as full depreciation, asset auction and acquisition forecasting. In chapter two both independent and dependent variables were discussed basing

The respondents questioned were (91) employees of Rwanda Energy Group Kigali Branch. All respondents attempted all questions which served as the basis for analysis. The analysis and interpretation were focused on the data collected from the concerned margin.

#### **i. To examine affect of asset maintenance on cost reduction in Rwanda Energy Group**

Regression analysis was conducted to empirically determine whether Asset Maintenance was a significant determinant of Cost reduction at REG Kigali. Regression results in Table 10 indicate the goodness of fit for the regression between Asset Maintenance and Cost reduction was satisfactory in the linear regression. An R squared of 0.223 indicates that 22.3% of the variances in cost reduction at REG Kigali are explained by the variances in asset maintenance in the linear model.

#### **ii. To examine affect of assets recording on cost reduction in Rwanda Energy Group**

### **5.1 Summary of the findings**

Regression analysis was conducted to empirically determine whether Asset Record management was a significant determinant of Cost reduction at REG Kigali. Regression results in Table 6 indicate the goodness of fit for the regression between Asset Record management and Cost reduction was satisfactory in the linear regression. An R squared of 0.186 indicates that 18.601% of the variances in Cost reduction at AB Bank Plc Kigali are explained by the variances in Asset Record management in the linear model.

### **iii. To examine affect of assets inventory on cost reduction in Rwanda Energy Group**

Regression analysis was conducted to empirically determine whether Asset inventory Management was a significant determinant of Cost reduction at REG Kigali. Regression results in Table 14 indicate the goodness of fit for the regression between Asset inventory Management and Cost reduction was satisfactory in the linear regression. An R squared of 0.354 indicates that 35.4.5% of the variances in Cost reduction at REG Kigali are explained by the variances in Asset inventory Management in the linear model.

### **iv. To examine affect of asset disposal on cost reduction in Rwanda Energy Group**

Regression analysis was conducted to empirically determine whether Asset Disposal was a significant determinant of Cost reduction at REG Kigali. Regression results in Table 18 indicate the goodness of fit for the regression between Asset Disposal Management and Cost reduction was satisfactory in the linear regression. An R squared of 0.235 indicates that 23.5% of the variances in Cost reduction at REG Kigali are explained by the variances in Asset Disposal in the linear model. As presented in the table 17 above an overall mean of (M=4.806, SD=0.357) Perceptions of respondents on Asset Disposal Management to a large extent. As presented in the table 21 above an overall mean of (M=4.978, SD=0.364) Perceptions of respondents on Cost Reduction to a large extent.

## **5.2 Conclusions**

The main purpose of this study was Effect of Movable Asset Managements on Cost Reduction in Rwanda Energy Group. After analyzing the data collected from the employees of Rwanda Energy Group Kigali Branch and basing on the findings, the researcher concludes that there is a

considerable contribution Movable Asset  
Managements on Cost Reduction in Rwanda.

### 5.3 Recommendations

#### 5.3.1 Recommendations to REG Kigali Branch

REG Kigali Branch should strengthen and  
Sensitize employees through guidance  
programs the need for effective coordination  
to improve the asset management.

REG Kigali Branch should provide trainings  
to employees to improve their knowledge on  
movable asset management.

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