



EFFECT OF RESOURCE PLANNING PRACTICES ON PROJECT PERFORMANCE CASE OF KIGALI INTERNATIONAL AIRPORT UPGRADE, RWANDA

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ABSTRACT

The purpose of this study was to investigate the effects of resource planning practices on performance of projects in Rwanda a case of the upgrade of Kigali international airport (UKIA) project of Rwanda civil aviation authority. The objective of this study was to assess the effects of resource planning practices on performance of projects in Rwanda with reference to the upgrade of Kigali international airport. The specific objective was to determine the importance of planning on the performance of projects in Rwanda, To determine the effects human resource planning practices on the performance of projects in Rwanda, To analyze the effects of financial planning practices on the performance of projects in Rwanda, To identify the effects of material and equipment planning practices on the performance of projects in Rwanda. The goal of the study was to ascertain how resource planning practices will affect the upgrade of the international airport in Kigali. Target population for the study was 82 project members within RCAA. There was no sampling since the number of respondents was small. The position and authority of members were considered for inclusion into the study because there were thought to have sufficient knowledge on the operations and management of the project. Such knowledge was necessary for correctly responding to the questionnaire. Questionnaires were used to collect primary data, which was later analysed using SPSS. The study revealed Correlation analysis between human resource planning practices and project performance indicated positive and yet significant relationship between teamwork, training of the project

team members and project performance. The study revealed that there existed teamwork in the project and that project members were trained. Financial resource planning practices were found to influence the project performance. Practices such as budgeting, forecasting, and having plans for money generation were found to exist in the project. Correlation analysis between financial resource planning practices and project performance indicated that there was a positive and significant relationship between budgeting, forecasting, plans for money generation and project performance. Order placement, monitoring of placed orders, and planned procurement practices were found to exist within the project. Correlation between material resource planning practices namely; order placement, monitoring of placed orders, planned procurement and project performance gave evidence that this practices had influence on the project performance. Procurement of required material was found to be done within the project budget. Project members were provided with the right quantity of material in the right time.

I. Introduction

1.1 Background of the Study

This chapter presents introduction and back ground to the study, problem statement, objectives both general and specific, hypothesis and the limitations of the study, the researcher also gives the study significance, scope and the organization of the study.

1.1 Background of the study

During the industrial revolution, the concept of project resources planning approach was initiated where most organizations shifted from the ancient approach and used scientific management to plan the project resources which will be allocated along within its performance. (Amponsah, 2012) The use of project resource planning approach in has become extremely popular. Project and project managers agree on the value that the success of many projects is due to availability of resources to run all the activities.

Project success implementation, in accordance with Galpin (2008), entails organizing the firm's resources and encouraging workers to attain goals. Successful performance is about working together and sharing information with each other Any strategy's worth and possible benefits include raising productivity, cutting expenses, increasing revenues, and enhancing the caliber of services or goods provided (Alavi, 2011).

According to Woolridge and Floyd (2010) lamented that it can be much easier to think of a good strategy than implementing it, However, much of the short comings in the strategy area is attributable to failures in the performance process rather than in the formulation of strategy

itself. (Mwangi & el, 2017) In Kenya, there are a number of obstacles to the implementation of Strategic Information Systems (SISs) in commercial banks. These obstacles include a lack of the necessary infrastructure, resources, and specialized skills, as well as a lack of commitment from the senior management team and apprehension about using the system by both bank employees and customers.

The performance and sustainability of the project is very closely tied to its planning process. Projects fail due to poor planning and many times because they do not define the problems well or take important factors into consideration such as the needs and views of everyone involved in and affected by the project. Effective resource planning practices provides details and structure to project work plan and establishes a way to continue the project after the grant funding ends, meaning it is sustainable (Andersen, 1996).

Implementing a project entails carrying out the tasks listed in the application form with the intention of achieving the project's goals and producing the intended outcomes. Numerous internal and external factors both have a role in its success. Among the more significant ones are really well-organized project with many resources (Kagendo, 2013).

The committee member's play an important role in keeping the project planning process on track while also ensuring everyone has the opportunity to participate. The committee can organize meetings, conduct surveys, gather and analyze information, and meet with other agencies and organizations (Cioffi, 2019).

In order to decide how to effectively prioritize goals, objectives, and activities, they also serve as a mechanism to get input on those topics. Planning effectively is excellent stewardship. performance in any endeavor requires careful preparation through planning. Without proper planning, and preparation, failure is almost guaranteed (Thomsett, 2016).

Rwanda civil aviation launched a construction project for the Upgrade of Kigali International Airport in September 2012, the Upgrade of Kigali International Airport project started. The three-phase construction on the terminal building aimed at meeting the Aviation's different objectives namely;

- 1) To attain the highest level of Aviation Safety and Security.
- 2) To develop a highly skilled and motivated Human Resource
- 3) .To provide at least a service level "B" at Rwanda's international airports
- 4) To be an autonomous authority with full financial and operational control
- 5) To provide World-Class Airport Navigation and comfortable space for aviation.

This is also aimed at making movement easy for People with Disabilities (PWDs). This study intends to find out whether the performance of pre-planning was a result of good planning practices of the project in contention. (Rwanda Civil Aviation records, 2012)

1.2. Research gap

- a) To evaluate the effect of Human resource planning practices used on the performance on upgrade of Kigali international Airport project.
- b) To analyze the financial resource planning practices on the performance on upgrade of Kigali international Airport project.
- c) To assess the effect of working capital management on the performance on upgrade of Kigali international Airport project.
- d) To establish the moderating effect of policy, regulations and economic conditions on the performance on upgrade of Kigali international Airport project.

1.3. Research objectives

- a) To determine the effect of human resource planning practices on the performance of Upgrade of Kigali international Airport project.

2. Theoretical review

2.1. Theory of Change (TOC)

Theory of Change is a comprehensive illustration as well as a description of how and why a change that is desired is anticipated to take place in a context (Andersen, 1996). It focuses on bridging the gap in the so commonly referred to as the “missing middle” between what a change or program initiative does (its interventions or activities) and how these bring about preferred goals being attained (Chizea, 2002). This theory is applicable to the study in that it supports construction firms to first identify the preferred long-term project/goals performance and then work back from these to make out all the conditions (outcomes) that ought to be in place (and how these casually related to one another) for the goals to take place (Mintzberg & Waters 1996). This may involve ensuring material, time, financial and human resources are used effectively and efficiently

2.2. Resource Based View Theory

The resource-based view (RBV) theory argues that firms possess resources, a subset of which enables them to achieve competitive advantage, and a subset of those that lead to superior

long-term performance. Rare and precious resources can help an organization gain a competitive edge. If the business can guard against resource imitation, transfer, or substitution, that advantage can be maintained for extended periods of time (Barney, 1991). The Theory of Change (Harris, 2005) outlines each component needed to achieve a certain long-term objective. On a map known as a road of change or change framework, which is a graphic representation of the change, this collection of interconnected building blocks—also referred to as outcomes, achievements, accomplishments, or preconditions—is shown.

A firm may enter the market space with high resources and if the resources are not well utilized then the performance is compromised. The resource based theory here acts like an economic tool that is used to determine the strategic resource available to a firm. Applications of the resources are at the firm's disposal, and require being part of the strategic formulation (Peteraf & Barney, 2003).

2.3. Empirical review

Empirical research is mainly about the measured and observed phenomena which derives knowledge from the actual existing experience rather than beliefs or theory.

2.3.1 Human Resource planning and project performance

Dr. Jameender Ritesh (2014) elaborates the importance and impact of Human Resource Planning in Effectiveness and Competitiveness of a project and felt that HRP is essential in order to Prevent shortage of human resource and skill Satisfy future staffing needs , Avoid industrial unrest Show the flow of information of individuals and increase productivity and concluded that Effective manpower planning must embrace the procurement, employment, development and maintenance of human resource of the organization.

The relationships between practices of human resource have been studied; quit rates of employee, and project performance within the service sector (Batt, 2002). The study was a descriptive study. The findings confirmed that firms' puts emphasize on high skills, participation of employee in decision making and in teams and incentives of human resource for instance employment security and high relative pay, have higher performance and lower quit rates, sales growth The four studies were limited to the service industry, where people are the major assets, and therefore may not be applicable to other industries.

Belout and Gauvreau (2004) conducted research on the factors influencing worker productivity in project success. Descriptive analysis was used and the study targeted employees of various projects. The study found a positive association between planning of HR and project performance. The study recommended that organizations should put in place worker

involvement program, which will enable workers with opportunities to reflect their own work experiences and attitudes, and their own hopes for the future. The study concentrated only on the human inputs but non-human inputs in a project such as finance and material planning were not factored in this study.

2.3.2. Financial Resource planning and Project Performance

Guoli (2010) studied budget-planning effects on project performance. The descriptive research design was used, and the study targeted the stalled projects. The study also discovered that a project's insufficient cash flow consequences are frequently linked to delays and significant additional expenditures because there is a significant risk that the project as a whole will temporarily be abandoned. The study did not investigate fully the contribution of budget planning on project performance.

Karlsson (2011) studied effects of financial planning on project performance. Descriptive survey design was used and the study targeted projects in Sweden. The study found that education, culture and financial status are the background factors affecting methods and approaches in the management of project. However, many middle level managers lack authority assigned. This is because managers have responsibility of a certain area within which they can make decisions over and this is a problem since it was not considered in this study. Many of the construction corporations are more flat, and middle management is given a lot more power. This is also related to the higher level of authority within the company and could have an impact on how money is used. PMBOK (2014) investigated the influence of cost planning on project performance. This study utilized a descriptive research design. The respondents of the study were project managers. The study found that project cost planning practices, which includes the cost budgeting as well as cost estimating process, affects project performance. According to the study, cost-planning practices are essential to complete a given project within the agreed budget. The project's budget is crucial, and it has an influence in all areas in both projects planning as well as performance.

2.3.3 Materials and Equipment planning and project Performance

Plenert and Best (2012) studied the influence of material level on project performance. The study was a survey of construction companies. Many of the construction corporations are more flat, and middle management is given a lot more power. This is also related to the higher level of authority within the company and could have an impact on how money is used. The study recommended that firms must be capable of only focusing our planning on materials needed, and when they are needed. The study failed to indicate clearly the relationship between material usage and project performance.

Kress (2014) studied the effects of material planning on project performance through a survey design of selected constructions firms. The study targeted construction projects not completed in time in London. The study found that the project management primary objective is to meet otherwise surpass the material usage sponsors anticipation of the project. According to the study these anticipations are usually expressed within 3 groupings; a given project generates preferred result with minimum defects. Cost: A given project generates preferred result for the expected cost Schedule: A given project generates the preferred result within the expected period. However, the study did not consider many forces intervening and attempting to push projects off target.

3. RESEARCH METHODOLOGY

3.1 Introduction

According to Tirhekar (2013), methodology is the systematic, theoretical analysis of the methods applied to a field of study, or the theoretical analysis of the body of methods and principles associated with a branch of knowledge. This research adopted a descriptive survey research design. Emphasis is given to the research design; source of data, instruments of the data collection, the population of the study, sampling technique, sample size, and data processing and that used for data analysis.

3.2 Research Design

According to Kumar (2011) the concern of research design is to explain how researcher will find the answer to his/her research questions. It requires choosing the individuals from whom the data will be studied and acquired in an open-minded manner.

A research design is the arrangement of conditions and analysis of data in a manner that aims at combining relevance to the research purpose with economy in procedure or a conceptual structure within which research is conducted (Kothari, 2011). This study used descriptive survey design based on quantitative data and correlation design.

Descriptive statistical analysis is used to describe the nature of responses in regard to the response items/statements in the questionnaire. This descriptive analysis is based on the frequency distribution and percentage tables to describe the nature of responses on each of the response items. When using a correlational study design, no variables are within the researcher's direct control or manipulation. The degree and/or direction of the association between two (or more) variables is reflected in a correlation. The direction of a correlation can be either positive or negative

3.3 Data Analysis

According to Dawson, (2002), the methods of analysing data depends on whether researcher has chosen to conduct research, and moreover the choice is influenced by personal and methodological preferences and educational background. Data analysis depends upon the way it was collected and the purpose use of findings.

The researcher used the Statistical Package for Social Sciences (SPSS) software to analyse data. The data was quantitative and therefore it was analysed using descriptive statistics (frequency distribution) and inferential statistics (multiple linear regression analysis).

3.4 Inferential Statistics

Using SPSS, the researcher conducted inferential statistical analysis. A multiple linear regression analysis was conducted to determine the statistical significance of the relationship between (Human resource planning practices, financial resource planning analysis, Material and equipment resource planning analysis and project performance during the Upgrade of Kigali international airport in 2012-2018. The regression model for this analysis is indicated below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = Dependent variable (Project performance)

β_0 = Constant

β_1, β_2 & β_3 = Regression coefficients for predictor variables (X_1, X_2 & X_3)

X_1 = Human resource planning practices

X_2 = financial planning practices

X_3 = Material and equipment planning practices

ε/u = Error term/other unobserved factors

3.5 Ethical considerations

The conduct of research requires not only expertise and diligence, but also honesty and dignity. The following ethical actions was essential to the research; protecting the right of the human subject, obtaining an informed consent and submitting an original research dissertation for institutional review. All these ethical factors was taken care of in this research study thus; the researcher was conduct the study with honesty and confidentiality.

The researcher made sure that the views given by respondents were kept with utmost confidence and typically used for academic purposes. The researcher was issued with a data

collection letter from University of Kigali, which authorized the researcher to go out and carry out a study on the topic; Effects of resource planning practices on performance of projects in Rwanda. Permission was granted from the Rwanda Civil Aviation Authority through a formal reply to the researcher.

4. DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

The data has been presented in form of tables for easy interpretation and comparison from the population of 82 respondents were asked to fill questionnaires. This chapter is focused on the analysis and interpretation of data collected from the field of the study. The data is compiled, categorized and then presented using statistical tables and other descriptive methods that are backed up by frequency and percentage presentation. Interpretation of findings is done based on percentage responses to each particular question and each objective has been addressed by the analysis to assess the effects of resource planning practices on the performance of project with particular emphasis on the Upgrade of Kigali International Airport of Rwanda Civil Aviation Authority.

4.2. Effective of human resource planning practices in project performance



Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Human resource planning practices influence the project performance on UKIA project	82	1	5	4.12	1.137
Teamwork influence the project performance on UKIA project	82	1	5	4.37	.746
Training of team members influenced the project performance on UKIA project.	82	1	5	4.30	.977
Valid N (listwise)	82				

The respondents were asked to provide opinions on the effectiveness human resource planning practices in project performance. The findings from the survey shows that human resource planning practices are well analysed as indicated by a mean of 4.12 at standard deviation of 1.137. This means that Majority of respondents agreed on effectiveness of Human resource planning practices. The results further show that Team work influences project performance as evidenced by a mean of 4.37 at a standard deviation of .746. Similarly, the respondents of UKIA agreed on the effectiveness team training as evidenced by mean of 4.30 and the standard deviation is .977. The high number of respondents in agreement suggests Human resource planning practices influenced the project performance of UKIA.

These findings are consistent with the findings of the study of Dr. Jameender Ritesh (2014) elaborates the importance and impact of Human Resource Planning in Effectiveness and Competitiveness of a project and felt that HRP is essential in order to Prevent shortage of human resource and skill Satisfy future staffing needs , Avoid industrial unrest Show the flow of information of individuals and increase productivity and concluded that Effective manpower

planning must embrace the procurement, employment, development and maintenance of human resource of the organization.

4.3. Effect of human resource planning on quality service delivery

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.798 ^a	.636	.622	1.455
a. Predictors: (Constant), Materials and Equipment resource planning practices, Human resource planning practices, financial resource planning practices				

Table 4.3 Indicates that the R- value is .798, which is indicative of a positive direction of the regression results. Basically, R is the range between the observed and predicted values that characterize the dependent variable and they range from -1 to +1 (Wong & Hiew, 2005). The coefficient of determination R² value was .636. This clearly indicated that (Project performance) was explained and predictable by independent variables (Human resource planning practices, Financial resource planning practices, and Material & Equipment resource planning practices).

4.4. ANOVA between human resource planning practices and project performance

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	288.844	3	96.281	45.485	.000 ^a
	Residual	165.107	78	2.117		
	Total	453.951	81			
a. Predictors: (Constant), Materials and Equipment resource planning practices, Human resource planning practices, financial resource planning practices						
b. Dependent Variable: Project Performance						

The results for the F-Statistics (F=45.485) was significant at 0.000 level, which consequently confirms the fitness of the model and hence, there is statistically significant influence of human resource planning practices, Financial resource planning practices, and Material & Equipment resource planning practices on the performance of the UKIA project.

Table 4.5 Correlation Matrix

Project Performance	Human resource	Financial resource	Materials and

			planning practices	planning practices	Equipment resource planning practices
Project Performance	Pearson Correlation	1	.665**	.669**	.592**
	Sig. (2-tailed)		.000	.000	.000
	N	82	82	82	82
Human resource planning practices	Pearson Correlation	.665**	1	.626**	.391**
	Sig. (2-tailed)	.000		.000	.000
	N	82	82	82	82
Financial resource planning practices	Pearson Correlation	.669**	.626**	1	.396**
	Sig. (2-tailed)	.000	.000		.000
	N	82	82	82	82
Materials and Equipment resource planning practices	Pearson Correlation	.592**	.391**	.396**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	82	82	82	82

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

As presented in table 4.8, it was observed that there was a direct relationship between the dependent variable and all the independent variables. Human resource planning practices was observed to significantly have the strongest correlation on projects performance ($r = 0.84$, < 0.0000).

There was also significant positive relationship between financial resource planning practices and project performance of UKIA ($r = 0.669$, $p = 0.000$ and

There was observed a strong relationship material and equipment resource planning practices and UKIA project performance ($r = 0.592$, $p = 0.000$)

5.2 Conclusion

The study revealed that most of the project team members were educated. Both youth (less than 25 years) and old people (Above 56 years) were beneficiaries of UKIA project. The project was a source of the employment for RCAA.

Human resource planning practices influenced the performance of UKIA project. Human resource planning practices such as teamwork and training of the project team members influenced the performance of the project. The positive relationship between teamwork, training of the project team members and project performance was significant. This implies that increasing teamwork of the project and training project team members would lead to an increase in project performance. The study revealed that there was the teamwork among project team members and they were trained about the necessary skills in the project.

Financial resource planning practices influenced the project performance. Practices such as budgeting, forecasting, and having plans for money generation existed in the project. A positive and significant relationship between financial resource planning practices including; budgeting, forecasting, and having plans for money generation can lead to improved project performance. The project had approved budget and there was tracking of the performance of resources allocated to various project activities.

Material and equipment resource planning practices has influence on UKIA project performance. Order placement, monitoring of placed orders, planned procurement and project implementation significantly correlated. This is evident that the practices had influence on the project performance. Procurement of required material was done within the project budget and project members were provided with the right quantity of material in the right time.

5.3 Recommendations

In relation to the outcome of this work, I would like to put forward some recommendations for resource planning practices on performance of projects in Rwanda

This study intended to analyse effect of resource planning practices on performance of projects in Rwanda a case of the upgrade of Kigali international Airport (UKIA) project of civil aviation authority. As the study did not overcome all aspects of planning on performance of projects in Rwanda the researcher carried out a research in Kigali international Airport (UKIA) and following areas are recommended:

- i) To improve different and proper human resource planning practices on performance of projects in Rwanda
- ii) To plan and forecast all financial resources accordingly before preparation and presentation of the project
- iii) To effectively plan procure material and equipment resources, monitor the placed orders, and effectively allocate resources to various project activities in the project.



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