

## EFFECT OF PROJECT TEAM MANAGEMENT PRACTICES ON PERFORMANCE OF DEVELOPMENT PROJECTS IN RWANDA: A CASE OF RWANDA SOCIAL SECURITY BOARD LOW COST HOUSING PROJECT.

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### ABSTRACT

*This study sought to assess the effect of project team management practices on project performance in Rwanda by taking a case study of Rwanda Social Security Board low cost housing projects. The objectives were; to examine the effect of project team organization on performance, to establish the effect of project team training and development on performance, and lastly, to assess the role of rewards and recognition on project performance. A case study research design was used to collect both quantitative and qualitative data. A sample size of 67 was used out of which 57 respondents completed and returned the questionnaires indicating a response rate of 85%. To test the reliability of the data collection instrument, a Cronbach's coefficient  $\alpha$  test was applied and produced a value of 0.6, which is a sufficient prove that the data collection instrument was consistent. The data was carefully organized, coded then analyzed using Statistical Package for Social Science (SPSS version 23) to generate descriptive statistics in form of report tables showing frequencies and percentages, mean and standard deviation where necessary. The statistics on each Table were analyzed linking them with the specific objectives and correlation Tables generated in order to establish the relationship between associated variables under this study. The findings established that the project team management practices consisting of project team organization, team development and, rewards and recognition have improved on the performance of RSSB low cost housing projects. As evidenced in Tables 5, 8 and 11, project team organization contributed to 93.4%, project team development 96.5%, while rewards and recognition contributed 95.8% improvement on RSSB low cost housing projects. In general, these results therefore revealed that the independent variables under the study have a strong positive correlation to the dependent variable hence further enhancing these variables would lead to nearly a 100% improvement on project performance.*

**Key words:** project team management practices, performance of development projects

## 1. Introduction

An examination of relevant recent literature has shown that development projects have been used world over by both developing and developed economies as a means of accelerating their economic growth and improving their per capita income (Nduko, et al. 2016). The globalization of market economies, for example, has brought in an intense competition for goods and services to states as well as individual companies. For the independent states, the scramble to make their countries global investment destinations has meant that a lot of development programs have to be initiated so as to stay ahead of the pack. Some of the case studies highlighting these development projects are: South Africa's project to establish a global Cyber Capital to provide broadband connectivity to the under-privileged in rural and urban cities, (Javan, 2016); Brazil's project to urbanize the Rio de Janeiro's slums, Avarado (2012); Kenya's Last Mile Electricity Connectivity Project for universal access by 2020 (African Development Bank Group, AfDB 2016); and not forgetting the low cost housing project in Rwanda.

During the last decade, a number of studies have investigated factors which lead to successful completions of projects. For instance, "institutional factors influencing timely completion of road projects in Rwanda", (Nduko, Mbabazi, Shukla and Wanderi, 2016)". "Critical Success Factors of Project Management for Brunei Construction Projects", (Salleh, 2009). "Factors affecting the timeliness of completion of donor-funded projects in Kenya", (Gaturu and Muturi, 2014). "Factors Affecting Timely Completion of Construction Projects", (Acharya, Kim and Lee, 2004, Munyoki, 2014). Effects of Human Resource Factors on Project Performance in Nairobi County in Kenya", (Wambua, 2009). Ironically, only a few of these studies have identified project team management practice as one of the key aspect of project performance.

Over the years, the concept of success in these development projects has been evaluated against time, scope and budget. In line with this argument, Belout (1998) observes that, in the past, projects have been managed as technical systems instead of behavioral systems with relatively little effort on establishing the relationship between project team management and project performance. As a result, Turner et al, (2007) noted that the management of human capital in project-oriented organizations is a relatively unexplored topic besides being an essential aspect to the success of the organization and its competitive advantage. This study picks from these arguments and attempts to address the low cost housing performance gap through examining the effects of project team management practices on the performance of development projects in Rwanda, taking a case study of Rwanda Social Security Board one of the partners in collaboration with the government for the provision of the low cost housing units.

## 2. Statement of the Problem

According to the National Institute of Statistics of Rwanda, Rwanda is the most densely populated and fastest growing country in Africa with a growth rate of 10.7% and a total population of 10.6 million (NISR, 2011), of which about 1 million live in Kigali City. The Vision 2020 Umurenge Program (VUP, 2008), expects the urban population to increase further from the current 1.7 million to 4.4 million by 2020. VUP (2008) has cited the growing economic opportunities in the urban centers, especially Kigali city, as the centre of attraction, with people moving from the rural areas to the City thereby creating a large demand for affordable housing.

In line with vision 2020, the Ministry of Infrastructure has estimated the demand for affordable housing in general at 560,000 units by the year 2020. This translates to the construction of 93,400 units annually (i.e. 7,780 units per month). However, the assessment of the annual supply in the formal markets in Kigali shows that only 800 to 1,000 units are brought onto the market per year; most of which target the high end market segment thereby creating a huge housing deficit (Byaruhanga, The New Times 2016). Although much of the existing empirical literature emphasizes on factors that contribute to the success of projects, much research focusing on project team management practices as a contributor to project success need to be done, if this projects are to realize their dreams. For instance, Munyoki (2014) studied the factors influencing completion of construction projects in Kenya. His findings revealed that the construction contract duration, project delivery method, project planning, project financing and inspection are the major contributors to project delays. It is evident that the researcher did not anticipate the project team management practices as one of the factors that could cause project delays.

A study by Nduko et al (2016), examining the institutional factors influencing timely completion of road projects in Rwanda did not identify or recommend the project team management practices as one of the critical areas for timely completion of projects. Therefore, this study attempts to address the effects of project team management practices on performance of development projects in Rwanda. It takes the case study of Rwanda Social Security Board, one of the organizations partnering with the government of Rwanda to provide affordable low cost housing units.

### **3. Research Objectives**

#### **3.1 General Objective**

The main objective of this research was to analyze the effect of the project team management processes on the performance of development projects in Rwanda, by identifying the contribution of each of the project team management process and to determine which of them is the most critical to performance of the development projects.

#### **3.2 Specific Objectives**

1. To examine the effect of the project team organization on the performance of RSSB Low Cost Housing (LCH) project,
2. To establish the effect of project team training and development on project performance in Rwanda,
3. To assess the role of rewards and recognition on the performance of development projects in Rwanda,

#### **4. Research questions**

1. How does the project team organization effect on the performance of development projects in Rwanda?
2. How does the project team training and development effect on the project performance in Rwanda?
3. How does rewards and recognition effect on the performance of development projects in Rwanda?

### **5. Research design**

A descriptive design was found to be suitable for this study. To collect the relevant data, this study utilized a survey research which is described as a method of collecting information by asking questions.

## 6. Target population

The research targeted the project team in charge of implementing the low cost housing projects by Rwanda Social Security Board (RSSB) located in Gasabo District, regardless of their age or gender.

**Table 1: Target Population**

Target Group	Target population
Rwanda Social Security Board	35
Ultimate Developers Ltd.	18
Century Real Estate	27
<b>Total</b>	<b>80</b>

Source: RSSB (2016)

## 7. Sample size

During this research, the sample size was 67 respondents. This was obtained by using the Slovin's formula which states that  $n = \frac{N}{1+Ne^2}$

## 8. Data collection

### 8.1 Data collection instruments

The researcher designed questionnaires as the main tools of data collection. This was informed by the fact that questionnaires are easy to design, reliable, easy to understand and also are cost effective. A set of questions were designed to gather the views and opinions of the respondents in relation to the research objective.

### 8.2 Data processing and analysis

After the process of data collection, the data was carefully organized, coded then analyzed using Statistical Package for Social Science (SPSS version 23) to generate descriptive statistics about the sample.

## 9. Research findings and discussion

### 9.1 Profile of respondents

**Table 2: Area of specialization of the respondent**

		Freq.	%
What is your educational specialization?	Management	20	39.2%
	ICT	17	33.3%
	Sales	3	5.9%
	Engineering	11	21.6%
<b>Total</b>		<b>51</b>	<b>100%</b>

Source: primary data (2016)

Table 2 reveals that the project staff comprises of management staff 39.2%, ICT 33.3%, sales 5.9% and engineering 21.6%. This is an indication that the collected data is free of bias since it represents several professional groups.

## 9.2 Presentation of findings

**Table 3: Respondents' Views on Project Team organization**

	Mean	Std. Deviation	Comments
RSSB low cost housing project choose their project team through seminars and workshops	4.1404	.76622	Strong Heterogeneity
RSSB low cost housing project choose their project team through Advertisement	3.9825	.83434	Strong Heterogeneity
RSSB low cost housing project choose their project team through referrals	4.1754	.75882	Strong Heterogeneity
RSSB low cost housing project choose their project team through networking	3.8772	.80335	Strong Heterogeneity
Valid N (listwise)	57		

**Source: primary data (2016)**

The respondents' views as shown in Table 3 above have revealed that seminars and workshops are a preferred method of project team selection supported by a mean value of 4.1404 and a standard deviation of .76622. It implies that a majority of the respondents were positive on the use of seminars and workshops as a method of project team organization in that project in spite of few divergent views.

**Table 4: Respondents' Views on Effect of Project Team Organization on Performance**

	Mean	Std. Deviation	Comments
Project team organization has contributed to timely completion of RSSB low cost housing project	4.2281	.62728	Strong Heterogeneity
Project team organization has contributed to quality products in RSSB low cost housing project	4.3333	.63621	Strong Heterogeneity
Project team organization has contributed to RSSB low cost housing project completion within the budget	4.2281	.65513	Strong Heterogeneity
Valid N (listwise)	57		

**Source: primary data (2016)**

Table 4 above, reveals that the project team organization methods practiced by RSSB have led to timely completion of their projects by a mean score of 4.2281 and with a standard deviation of .63621 representing the heterogeneity of the responses in that it is not the only factor that resulted to timely completion of projects. There is a positive consensus that the RSSB project team organization methods have contributed to quality products leading to customer satisfaction as the mean of 4.3333 can attest. On the other hand, a standard deviation of .63621 implies that this is a general consideration but not a whole sum confirmation by all the respondents. It can be concluded that it may not be the only factor contributing to quality or perhaps there are some challenges hindering it from fully leading to quality products and hence customer satisfaction.

**Table 5: Relationship between Project Team Organization and Performance**

		Project Team Organization	Performance
<b>Project Team Organization</b>	Pearson Correlation	1	.934**
	Sig. (2-tailed)		.000
	N	57	57
<b>Performance</b>	Pearson Correlation	.934**	1
	Sig. (2-tailed)	.000	
	N	57	57

**Source: primary data (2016)**

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

The findings as shown in table 5 reveal a positive significant correlation between the project team organization and the project performance. From a sample size of 57 respondents as represented by N and a significant level of 0.01, the results indicate that the independent variable has a positive strong correlation to the dependent variable equal to .934\*\* and with the p-value .000 which is less than significant level of 0.01, it can be concluded that the variables are correlated.

**Table 6: Respondents' Views on Project Team Development Methods**

	Mean	Std. Deviation	Comments
Project manager regularly convenes meetings to discuss individual project staff skills gap	4.4912	.60127	Strong Heterogeneity
Project manager conducts orientation for new project team members	4.3684	.64453	Strong Heterogeneity
Project manager organizes seminars/workshops to fill the skills gap of the project team	4.3509	.58221	Strong Heterogeneity
Project manager organizes long term trainings to fill the skills gap of the project team	3.579	1.0342	Strong Heterogeneity
Project manager organizes attachment of low skilled employees to senior employees to fill the skills gap of the project team	4.1404	.71810	Strong Heterogeneity
Valid N (listwise)	57		

**Source: primary data (2016)**

From the assessment of the various methods that RSSB project managers use to develop their project team, table 6 above revealed that regular meetings are convened to discuss the individual project staff skills gap with a mean score of 4.4912 and a standard deviation rating at .64453, confirming to some extent this is done. There is a positive consensus that project team orientation which is meant to familiarize the project team to the project itself is utilized to some extent as revealed by the mean of 4.3684 and a standard deviation of .64453. RSSB also organizes long term trainings to develop the project team as implied by the mean rating of 3.579. However, the standard deviation of 1.0342 on the other hand implies different views as to what comprises of long term trainings.

**Table 7: Respondents' views on Project Team Development and Project Performance**

	Mean	Std. Deviation	Comments
Project team Development has contributed to timely completion of RSSB low cost housing project	4.2982	.59656	Strong Heterogeneity
Project team Development has contributed to quality products in RSSB low cost housing project	4.3860	.70088	Strong Heterogeneity
Project team Development has contributed to RSSB low cost housing project completion within the budget	4.4386	.73235	Strong Heterogeneity
Valid N (listwise)	57		

Source: primary data (2016)

Table 7 revealed that the project team development has contributed positively to timely completion of RSSB projects as indicated by mean score of 4.2982 confirming this statement. The results also indicate that the views of the respondents were heterogeneous as the standard deviation of .59656 can ascertain. It also revealed that project team development has contributed positively to production of quality products hence customer satisfaction as shown by a mean of 4.3860, but with the standard deviation of .70088 which is a strong heterogeneity it's an implication that there was a strong divergence of the views on both sides from the mean. Project team development has also been viewed to positively contribute to low project costs as the mean of 4.4386 can attest. However, with the standard deviation of .73235, it shows a wide dispersion of the views from the mean an indication that the responses were quite divergent.

**Table 8: Relationship between Project Team Development and Performance**

		Project Team Development	Performance
<b>Project Team Development</b>	Pearson Correlation	1	.965**
	Sig. (2-tailed)		.000
	N	57	57
<b>Performance</b>	Pearson Correlation	.965**	1
	Sig. (2-tailed)	.000	
	N	57	57

Source: primary data (2016)

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

In Table 8 above, the study reveals presence of a positive relationship between project team development methods and performance of RSSB low cost housing project. From a sample size of 57 respondents represented by N in Table 4.12 above, and a significant level of 0.01, the results shows that the independent variable (project team development) has a positive strong correlation to the dependent variable (RSSB project performance) equal to .965\*\* an indication that the RSSB project team development methods has led to 96.5% improvement in performance of the low cost housing projects.

**Table 9: Assessment of RSSB Project Team Rewards and Recognition**

	Mean	Std. Deviation	Comments
RSSB Low Cost Housing project provides motivating salary for the project employees	3.9649	.86530	Strong Heterogeneity
RSSB Low Cost Housing project provides bonuses to motivate the project employees	4.1930	.66651	Strong Heterogeneity
RSSB Low Cost Housing project provides insurance to motivate the project employees	4.1404	.61058	Strong Heterogeneity
RSSB Low Cost Housing project provides holidays packages to motivate the project employees	4.2281	.56750	Strong Heterogeneity
Valid N (listwise)	57		

**Source: primary data (2016)**

Table 9 shows the methods used for rewards and recognition whereby the respondents with a mean rating of 3.9649 confirm that RSSB provides a motivating salary to its project team. The standard deviation of .86530 showing a strong heterogeneity of the respondent's opinions about this issue is an indication that besides salary the project staff could be motivated by other things. The respondents also confirm with a mean score of 4.1404 that motivation inform of insurance cover is awarded by RSSB to its project staff. The standard deviation of .61058 implies that a strong heterogeneity where the respondents do not unanimously see the insurance cover provided as a motivation factor.

**Table 10: Respondents' views on Project Team Rewards and Recognition on Performance**

	Mean	Std. Deviation	Comments
Project Team Rewards and Recognition has contributed to timely completion of RSSB low cost housing project	4.0877	.57572	Heterogeneity
Project Team Rewards and Recognition has contributed to quality products in RSSB low cost housing project	4.1404	.66651	Strong Heterogeneity
Project Team Rewards and Recognition has contributed to RSSB low cost housing project completion within the budget	4.1228	.56915	Heterogeneity
Valid N (listwise)			

**Source: primary data (2016)**

The findings as shown in Table 10 above, establishes that rewards and recognition have positively contributed to timely completion of RSSB projects whereby a mean of 4.0877 is a strong indicator confirming to this statement. The project team rewards and recognition results to quality products thus leading to increased customer satisfaction as shown in Table 10 whereby a mean rating of 4.1404 was recorded. However, the strong heterogeneity of the standard deviation of .66651 implies presence of divergent views. In addition, according to the respondents; rewards and recognition also contribute to low project costs as the mean score of 4.1228 shows. There was a heterogeneity for this response an indication of the respondents expressing different opinions as shown by the standard deviation of .56915.

**Table 11: Relationship between Rewards/Recognition and Performance**

		<b>Project Team Rewards/Recognition</b>	<b>Performance</b>
<b>Project Team Rewards/Recognition</b>	Pearson Correlation	1	.958**
	Sig. (2-tailed)		.000
	N	57	57
<b>Performance</b>	Pearson Correlation	.958**	1
	Sig. (2-tailed)	.000	
	N	57	57

**Source: primary data (2016)**

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

Table 11 establishes that there exists a strong positive correlation between project team rewards and recognition and the performance of RSSB low cost housing projects. From the study sample of 57 respondents represented by N and the significant level of 0.01 shown in Table 4.15 above, the results indicate that the independent variable has a positive strong correlation to the dependent variable equal to .958\*\* and with the p-value of .000 which is less than significant value of 0.01, the researcher can safely conclude that the variables under study are correlated.

## **10. Conclusion And Recommendations**

### **10.1 Conclusions**

Based on the study findings; it was established that project team management practices which consist of project team organization, team development and, rewards and recognition have improved on the performance of RSSB low cost housing projects. This was further evidenced in Table 4.9 which shows that project team organization contributes to 93.4% improvement on the performance of the RSSB low cost housing projects. Project team development on the other hand has led to 96.5% as discussed in Table 4.12, while Table 4.15 shows that the rewards and recognition contributes to about 95.8% improvement on RSSB low cost housing projects. In general, these results therefore show that the independent variables under the study (i.e. project team management practices) have a strong positive correlation to the dependent variable (project performance). Based on these findings, the researcher can safely conclude that further enhancing these variables would lead to nearly a 100% improvement on project performance.

### **10.2 Recommendations**

The study has established that the project team management practices utilized by RSSB in their low cost housing projects have a big impact on the performance of their projects leading to 95.2% improvement in timely completion, project quality and budget costs. It therefore recommends:

- i)** An enhancement of the project team management practices so that it can realize a 100% performance rate
- ii)** Adding more innovative ways in project team organization, project team development and
- iii)** Addressing the issue of rewards and recognition to increase motivation levels of the team.

### **10.3 Areas for further Studies**

This study suggests a research to develop a model for predicting the impact of project team management and project performance especially in construction projects. This model should envisage risks associated with project management practices. It will ensure certainties in a project performance and the ability to predict anticipated outcomes.

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