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Influence of project team on the performance of construction projects in Rwanda.

#### 1 Author:

Uwimana Noel

Faculty of Business Administration and Management of University of Kigali.

#### 1.1 Author:

Dr. KWENA Ronald (Phd)

Faculty of Business Administration and Management of University of Kigali.

### **ABSTRACT**

The study focused on examining Influence of project team on the performance of construction projects in Rwanda. Case of Real Construction Ltd. The entire or target population comprises of 171 employees from Real Contractors Ltd. The study was intended to generate primary data. By using a quantitative method (surveys); the plausible data collection methods chosen therefore was self-administered questionnaires. The mean, variance and standard deviation was applied to determine if the respondents were within a close range to the average and by what magnitude. Pearson correlation analysis was performed since the assumptions for. In order to analyze the relationship correlation techniques were used as the real technique which display the numerical answer. The study used a cross-section survey design and the study focused on Spark microgrant, an international NGO. The study used quantitative research approaches for Data collection like questionnaire, interview, documentary, observation as well as SPSS for descriptive statistics

Keywords: Project, Project Performance, Team leadership, Recognition and reward.

### INTRODUCTION

Teamproject is the process of working together among a group of people in order to accomplish a goal or a set of goals. The external factors that affect teamwork are the political, economic, social and technological whiles the internal factors of teamwork constitute leadership style, diversity (culture, talent and personalities) communication, and cohesiveness among others. Which affects teamwork. Teamwork is as old as mankind, and a variety of organizations use the term teamwork in either many ways, such as in the production, marketing processes, and many others. Management team, production team or an entire organization can be referred as a team (Ooko, 2015). Meredith and Mantel Jr (2011) argued that inappropriate teams can lead a project towards failure. Therefore, the importance and impact of project teams on project success or failure cannot be ignored. Verburg, BoschSijtsema, and Vartiainen (2013) argued that good project teamwork is vital for project success and project leader will be effective only in case of proper, operative and competent project team members (Thamhain,

2004).

The researchers posed that project teamwork may have a positive and significant contribution towards success of any project. According to M. Afzalur Rahim (2001) that performance of the team is positively related to the outcomes of projects. However, there is no empirical study showing the association between project teamwork and project success in any particular industry (Yang et al., 2013). Similarly, Unger-Aviram, Zwikael, and Restubog (2013) indicated that project efficiency can be measured in terms of project team performance which refers to the extent that project team members have completed the project as predefined cost and schedule. They claimed that higher the team efficiency will result in lower the deviation in estimated time and cost of project. As the project teamwork, has been discussed through four layers of project efforts i.e. project team communication, collaboration, cohesiveness and their technical skill. Following literature hasbeen arranged to determine a relationship between project teamwork individual dimensions with project success. The researchers have described that better the team performance, higher the project success rates.

Team can be defined as a group of individuals who work collectively to achieve the same purposes and goals to provide an excellent quality of services. Teamwork has the ability to enable the members of the team to have a higher level of emotional security, self-confidence and the ability to plan and decide with others positively. Also, it helps in creating a healthy work environment with workable agendas, creative activities, positive strategies and values. On the other hand, the absence of teamwork's concepts and strategies can lead to occupational failure, disappointment, low morale and poor productivity which threatens the entity of the organization. The employees who work in an organization that does not have a strong concept of teamwork, usually fail to deliver the expected results and to achieve the goals and visions of that organization. The presence of teamwork concept is a necessary rule to help the employees in working together towards common aims and goals creatively. The work performance of the team is higher than individual performance when the work requires a broader scope of knowledge, judgement and opinion. The advantage of teamwork is significant productivity growth in the spheres that require creative solving of different tasks, a high degree of adaptability and operational management (Vašková, 2007).

There is no doubt that teams have a powerful impact on the performance of the employees and the future of the organization. The studies that have been conducted on the subject indicate that the concept of teams is valuable and helpful to facilitate the developmental process in the organization and to enhance employees" performance (Oseiboakye, 2015). Simply, the main purpose of teamwork is to apply an effective method in order to improve the occupational performance of employees and their personal skills and talents that serve the requirements of the job. Bacon and Blyton (2006) identified the two essential factors that promote the communication skills between team's members and enhance their performance regarding the concept of teamwork, which are: self-management team and interpersonal team skills. According to Tarricone & Luca (2002) in their case study on successful teamwork, the effective teams can be accurately defined as: "Successful teamwork relies upon synergism existing between all team members creating an environment where they are all willing to contribute and participate in order to promote and nurture a positive, effective team environment". Many studies have shown that employees

who work on teams can be more productive than others who work individually (Jones et al, 2007). The reason why an individual becomes more productive working on teams, is that he/she acquires or enhances the beneficial occupational skills through unlimited learning, cooperating, and exchanging thoughts and various experiences. Teamwork thus, is an essential element for the development and function of an organization or institution.

### LITERATURE REVIEW

# **Concept of variables**

## Project team

The project team is the group of people responsible for executing the tasks and producing deliverables outlined in the project plan and schedule, as directed by the project manager, at whatever level of effort or participation defined for them. Project team members may or may not be involved during the entire life cycle of the project and may or may not be full time to the project. Project teams are comprised of many different roles such as project manager, subject matter experts, business analysts, and other stakeholders. The project team is responsible for contributing to the overall project objectives and specific team deliverables, by contributing towards the planning of project activities and executing assigned tasks/work within the expected quality standards, to ensure the project is a success (Verburg, *et al.*, 2013).

Without right organization of teamwork, people who form the team will fail with performing a number of specific roles and carrying out a variety of group/individual responsibilities. Hence, when you plan for a new project, first you must take care of the best project team organization through team building activities (Smith *et al.*, 2011). Organizing a project team is a typical task of a project manager.

# 2.1.2.Project performance

Project performance is the process of creating, implementing, and managing projects that contribute to the performance of an organization and its strategy. Performance measurement during a project is to know how things are going so that we can have early warning of problems that might get in the way of achieving project objectives and so that we can manage expectations (Haponava, and Al-Jibouri, 2008).

The performance concept in the construction field is very broad, can occur within the project scope and building, suggesting effective ways to evaluate according to the activities involved. Project success in construction companies is usually measured based on predetermined criteria or by comparing with other projects (Jeon and Kim, 2020). This is because the construction industry is constantly criticized for reasons such as inefficiency, low productivity, material waste, client dissatisfaction and delivery delays, resulting in investment projects that often fail to meet owners' expectations, and consequently requiring that the companies rethink their processes under an increasing competitive pressure (Kärnä, and Junnonen, 2015). Construction project performance depends on effective methods to manage the different stages of the construction project lifecycle measured against the successful results of the said project, such as meeting the time, cost and quality objectives (Din, Abd-Hamid, and Bryde, 2018).

# 2.1.3. Concept of Team leadership

A team leader is a person who provides guidance, instruction, direction and leadership to a group of individuals (the team) for the purpose of achieving a key result or group of aligned results. Team leaders utilize their expertise, their peers, influence, and/or creativeness to formulate an effective team. Must be able to build cohesive and productive work and project teams in order to achieve the required outputs, either as a work unit or as a component within the organization, (Gelles, 2015). When a team leader motivates a team, group members can function in a goal-oriented manner. A "team leader" is also someone who has the capability to drive performance within a group of people. Team leaders utilize their expertise, their peers, influence, and/or creativeness to formulate an effective team. Team leadership represents a third characteristic of effective team performance. Most teams contain certain individuals who are primarily responsible for defining team goals and for developing and structuring the team to accomplish these missions. These roles exist even in self-managing teams, (Thompson, 2011).

#### RESEARCH METHODOLOGY

# Sample and DataCollection

This study used a multi-stage and stratified sampling method. Multi-stage and stratified sampling was convenient and efficient sampling strategy because the target population was divided into groups at different levels.

The study wasintended to generate primarydata. By using a quantitative method (surveys); the plausible data collection methods chosen therefore was self-administered questionnaires. A structured questionnaire wasused to collect data on the study variables and the questionnaire wasdesigned based on the guidelines stipulated by (Saunders et al., 2011). The primary data was collected through a self-administered questionnaire. The questionnaire comprised four main parts that are personal and family characteristics (e.g., age, gender, residence, income, and education), team project, team spirit, team leadership, recognition and rewards. Each respondent was asked to complete the questionnaire independently without interacting with each other. This enabled the development of a five point Likert scale established to establish the extent to which team project, team spirit, team leadership, recognition and rewards influence aproject performance. The five-point Likert scale were used because it ensures that respondents make a definite choice rather than an inclination to a neutral response. This is also mainly intended to allow the respondents to be more thoughtful, precise and reduce response bias. The survey was divided into 2 sections. First section was about demographic information which contains items including: age, sex, education, experience, qualification and so on. The second section was about team leadership, team trust, team spirit, recognition and reward and project performance. Out of 171 questionnaires, all questionnaires were received and used. For section two, each subsection was composed of 5 questions (variables).

#### Scale Used

Data for team leadership, team spirit, team trust, recognition and reward and project performance. was evaluated on 5 point likert scale (1= Strongly Disagree; 2= Disagree; 3= Neutral; 4= Agree; 5= Strongly Agree). English is mandatory for all the educations in Rwanda and some of the organizations use it. Thus, some of the questionnaires were translated to the participants into native language which is Kinyarwanda.

#### RESULTS AND DISCUSSIONS

# **Descriptive Statistics and Correlation**

Descriptive statistics of for team leadership, team spirit, team trust, recognition and reward and project performance were presented.

As per table no.8, the table indicated the summary on descriptive statistics for the team leadership. The table indicated the mean, skewness, and kurtosis test for this particular factor. Starting with the mean as the table project, the range in the mean was found to start from 4.96 up to 4.99. Overall, this range in mean is between 4.3 and 5 and it is interpreted as a strong range category between the mean. The researcher also tested for Skewness. It was found that the range in skewness start from -10.95 up to -7.34. As a rule of thumb, the negative skewness (less than +1) means that there is a substantially skewed distribution within the data sample. Regarding the test of kurtosis, the values ranged from 57.43 up to 120.00, and the positive range of kurtosis suggest that the distribution was too peaked.

the results from the table Interpreting the results, the table indicated the skewness and kurtosis descriptive statistics for the factors of team spirit. Interpreting the range in the mean, the range was found to start from 4.95 up to 4.99. In fact, this range in mean was between 4.3 and 5 and it is interpreted as a strong range category between the mean. The researcher also tested for Skewness. It was found that the range in skewness start from -10.95 up to -5.26. To conclude, the negative skewness (less than +1) means that there is a substantially skewed distribution within the data sample. For kurtosis, the values ranged from 26.16 up to 120.00, and the positive range of kurtosis suggest that the distribution was too peaked.

.As per table no.9, the table indicated the summary on descriptive statistics for the team trust. The table indicated the mean, skewness, and kurtosis test for this particular factor. Focusing on the mean, the range in the mean was found to start from 4.95 up to 4.98. Overall, this range in mean is between 4.3 and 5 and it is interpreted as a strong range category between the mean. Moving forward, the researcher included the tests for Skewness and kurtosis. The range in skewness start from -7.64 up to -5.62. As a rule of thumb, the negative skewness (less than +1) means that there is a substantially skewed distribution within the data sample. And again, the values of Kurtosis ranged from 34.32 up to 57.67, and the positive range in the values of kurtosis confirms that the distribution was too peaked.

Interpreting the results, the table indicated the skewness and kurtosis descriptive statistics for the factors of team spirit. Interpreting the range in the mean, the range was found to start from 4.95 up to 4.99. In fact, this range in mean was between 4.3 and 5 and it is interpreted as a strong range category between the mean. The researcher also tested for Skewness. It was found that the range in skewness start from -10.95 up to -5.26. To conclude, the negative skewness (less than +1) means that there is a substantially skewed distribution within the data sample. For kurtosis, the values ranged from 26.16 up to 120.00, and the positive range of kurtosis suggest that the

distribution was too peaked.

As per table, the table indicated the summary on descriptive statistics for the recognition and rewards. The table indicated the mean, skewness, and kurtosis test for this particular factor. Focusing on the mean, the range in the mean was found to range between 4.95 up to 4.98. Overall, this range in the mean is between 4.3 and 5 and it is interpreted as a strong range category between the mean. Next, the researcher included the tests for Skewness and kurtosis. The range in skewness start from -7.64 up to -6.35. As a rule of thumb, the negative skewness (less than +1) means that there is a substantially skewed distribution within the data sample. And again, the values of Kurtosis ranged from 43.69 up to 57.67, and the positive range in the values of kurtosis confirms that the distribution was too peaked.

As projected in the table, the summary on descriptive statistics for construction project was indicated. The table indicated the mean, skewness, and kurtosis test for this particular factor. Starting with the mean as the table project, the range in the mean was between 4.95 up to 4.99. This range is interpreted as a strong range category between the mean. In addition, the tested for Skewness was carried out and the range in skewness was found to start from -7.64 up to -6.35. As a rule of thumb, the negative range in skewness signifies that there is a substantially skewed distribution. Regarding the test of kurtosis, the values ranged from 43.69 up to 57.67, and the positive range of kurtosis suggest that the distribution was too peaked.

CORRELATION
Correlation matrix of team project on the performance of construction project

	Performance of construction project	Team leadership	Teamtru st	Teamspir it	Recognition and rewards
Performance of construction project	1				
Team leadership	.607**	1			
Team trust	.369**	.396**	1		
Team spirit	. 242**	.316**	. 268**	1	
Recognition and rewards	.459**	.290**	.492**	.370**	

<sup>\*</sup> Correlation is significant at 0.5 level (2-tailed)

Source: Field Data (2021)

As per table no.20, the correlation matrix is demonstrated for team project on the performance of construction projects. In the table, the correlating matrix revealed the effects between factors starting from performance of construction project, team leadership, team trust, team spirit and recognition and rewards. Team leadership collate with the performance of construction project at 0.607. This shows that Team leadership generally has Positive and high correlation with the performance of construction project. Team trust correlate with performance of construction project at the rate of 0.369 and correlated to team leadership at the Positive and low

<sup>\*\*</sup> Correlation is significant at 0.01 level (2-tailed)

correlation. Team Spirit, correlated with performance of construction project at 0.242 with Positive and low correlation with the performance of construction project; and lastly Recognition and rewards correlate performance of construction project at 0.459 with Positive and low correlation.

### **DISCUSSION**

Findings of the current study are in line with the previous literature made by Russell Tobin (2021) confirms that team cohesion is important in the workplace as it boost greater company success and improve employees' satisfaction and motivation. In fact, team cooperation can be learned and applied when trained on the organizational level although team must treat the process organically. The basic element that could help a team to develop trust faster basically could be communication. The roles within a specific team must be clearly defined and all team members need to have a clear understanding of their individual role, the team goal, and the trust that each person deserves. McHale (2019) stresses the importance of teamwork for project management success. In fact, he confirms that over one third of all projects fail because teams aren't cooperating enough but when we have a look on the other side of coin, collaboration and good teamwork can go a long way toward making everyone more satisfied. When there is a team spirit and courage, projects are completed on time and in full, individual team members feel more satisfied while doing their roles, and there is a healthy work environment. . Performance measurement during a project is to know how things are going so that we can have early warning of problems that might get in the way of achieving project objectives and so that we can manage expectations (Haponava, and Al-Jibouri, 2008). Must be able to build cohesive and productive work and project teams in order to achieve the required outputs, either as a work unit or as a component within the organization, (Gelles, 2015). The performance concept in the construction field is very broad, can occur within the project scope and building, suggesting effective ways to evaluate according to the activities involved. Project success in construction companies is usually measured based on predetermined criteria or by comparing with other projects (Jeon and Kim, 2020). This is because the construction industry is constantly criticized for reasons such as inefficiency, low productivity, material waste, client dissatisfaction and delivery delays, resulting in investment projects that often fail to meet owners' expectations, and consequently requiring that the companies rethink their processes under an increasing competitive pressure (Kärnä, and Junnonen, 2015). Construction project performance depends on effective methods to manage the different stages of the construction project lifecycle measured against the successful results of the said project, such as meeting the time, cost and quality objectives (Din, Abd-Hamid, and Bryde, 2018).

## **CONCLUSION**

Finally, Project can be successful when all the stakeholders work together to achieve its success. This implies that government, non-governmental organization and other stakeholders must have both project team criteria and work together in creating conducive environment that can lead to the triumph of such project.

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