

Impact of Managers' Soft Skills on Project Performance in Rwanda

Emmanuel Gatsinzi*, David Nyambane

Faculty of Business Administration, Mount Kenya University, Kigali Campus, Kigali, Rwanda

Abstract

The technological advances have strongly impacted on the work environment. However, this technology still requires oriented and disciplined soft skills among managers and their employees for effective organizational performance. The main objective of this study was to analyse the impact of manager's soft skills on project performance at Kivu Methane Gas Extraction Project in western Rwanda. The study adopted a descriptive and analytical research design with a sample size of 120 respondents. The authors utilized questionnaires and interviews to collect data which later were analyzed by using correlation techniques. The results indicated that manager's team building skills had a positive impact on the quality of the project outcome due to the obtained correlations ($r=0.279$, $p<0.01$). In addition, 56% scored the project outcome as highly significant due to managers' skills, and the analysis showed how the budget compliance and quality of project outcome had a positive relationship with customer service delivery $r = 0.721$, $p<0.001$; $r = 0.000$, $p < 0.001$; respectively at 0.05 level of significance. And, this positively impacts on the entire project performance. Finally, it is concluded that managers' soft skills adds customer outcome quality profitability and influences the project performance as well.

Keywords

Kivu Methane Gas Project, Project Performance, Public Sector, Soft Skills, Rwanda

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1. Introduction

From a historical point of view, technical skills, also known as hard skills, are the only skills required for a professional career. The technological advances strongly have impacted on the skills needed by entrepreneurs and/or managers from their employees. However, this technology still requires oriented and disciplined soft skills among managers and their employees [1-3]. This expresses that advance in technology without proper soft skills cannot lead to effective organizational performance. In addition, it is assumed that technical skills are not enough to keep an employee in an organization at a cutting-edge position [4, 5]. In this regards, soft skills are centrally important for human capital development and workforce success.

Soft skills refers to the abilities, attitudes and personal qualities abroad that allow people to navigate effectively in the environment, collaborate well, work well and achieve goals [1, 2]. The success of a project has been a topic of discussion for scientists and business partners for many years, and studies have been conducted to measure the success of the project in the past and even recently. For example, [6] argues that the project can be considered time and therefore does not incur overruns and meets expectations. Moreover, it is reported that lack of managers' visionary leadership, employees' motivation, communication, conflict management, trust building, decision making and organization leads to project failure [3, 7].

The Lake Kivu is one of the deepest lakes in the world, at a depth of 350 meters. Cubic gas meters CH_4 and 300 billion

* Corresponding author
E-mail address: egatsinzi@cloffik.rw (E. Gatsinzi)

cubic CO₂ Meters. The visible gas must be submerged in the lake for 50 or 200 years, threatening to raise more than two million people on the coast [8]. Kivu Methane Production is a project signed in the Memorandum of Understanding between the governments of Rwanda and the Democratic Republic of the Congo for more than two decades since 1990 [9, 10]. Despite the fact that soft skills are important for project performance, there is little documented evidence showing the relationship between skills and project success. Most project management studies material deals with this subject briefly. Also, majority of the studies tend to be in the hard skills handling rather than soft skills [11].

The Rwanda's Office of the Auditor General [12] has repeatedly pointed out serious deficiencies in the overall management of projects. On the researcher's best of knowledge, there is no current study which has been conducted at the Lake Kivu Methane Gas project to assess the impact of managers' soft skills on the project performance. Therefore, this study intended to evaluate the extent to which managers' soft skills can contribute to public project performance with the case of Lake Kivu Methane Gas Project in western Rwanda. The authors believe that the results of this study will be useful and/or guiding tool to several beneficiaries like the Lake Kivu Methane Gas project management, other companies, government of Rwanda and the general public in different ways.

2. Methodology

This study considered the Lake Kivu Methane Gas project located in western Rwanda and adopted the qualitative and quantitative methods. The design described the relationship between soft knowledge and project performance.

2.1. Study Population

The population of this study was 150 Kivu Methane Gas Extraction Project employees subdivided into four categories. These included 70 permanent employees on site office, 60 permanent Q-sourcing, 10 casual workers of the same project on the site and 10 employees were from the management of Energy Utility Company Limited (EUCL) which is the distributor of the energy produced by Kivu watt project.

2.2. Sample Design

2.2.1. Sample Size

The study used the Slovin's formula to calculate the sample size. The level of precision or sampling error was 5% and 95% confidence level, total population (N) was 150; sample size is selected using Yamane formula.

$$n = \frac{N}{1+N(e)^2} \quad (1)$$

Where n is the sample size, N is the total population form which a sample was calculated and e is the precision error. Therefore, the sample size became the following.

$$n = \frac{150}{1+100(0.05)^2} = 120 \quad (2)$$

Table 1. Target population and sample size under study.

| Population category | Target population | Sampling Size |
|--------------------------------|-------------------|---------------|
| Kivu watts full time employees | 70 | 56 |
| Q-sourcing employees | 60 | 48 |
| Kivu watts part time employees | 10 | 8 |
| EUCL management | 10 | 8 |
| Total | 150 | 120 |

2.2.2. Sampling Techniques

Given the characteristics of the target population, several sampling techniques were utilized by the authors to insure that different categories of the population are represented in the study. The purposive sampling technique [13] was used to select key respondents from the EUCL managers and Kivu Methane Gas Extraction Project part time employees. Also, the simple random sampling technique [14] was used to select participants from Kivu Methane Gas Extraction Project fulltime employees and Q-sourcing employees.

2.3. Data Collection Methods

To make this study successful, both primary and secondary data were collected by using several tools mainly questionnaires, interviews and documentary sources.

2.3.1. Questionnaires

The author used structured questionnaires, considered as the most appropriate method of adding information regarding thoughts, intentions and thoughts [15]. During the collection of data by using a questionnaire, the respondents marked the field within the response options to indicate their response choices and in some cases, multiple responses were allowed. For open questions, the respondents were given the chance to provide different answers based on their opinions.

2.3.2. Interviews

For this study, interviews were used in the collection of the data from EUCL managers and Kivu watt part time employees. This enabled participants to express their views; discuss their perception and interpretation in regards to the given situation. Specifically, semi-structured interviews were conducted to obtain relevant required data for this study.

2.3.3. Documentary Review

The authors also consulted several documented reports such

as text books, magazines, academic journals, archival records, other students' dissertations and internet in order to extend more knowledge about the study variables.

2.4. Data Analysis Procedures

The qualitative data obtained were analyzed by using thematic analysis technique where opinion, ideas, beliefs, attitudes, statements or arguments of the respondent were discussed. This was done within the context of interpretation of research finding whereby the collected data were presented using tables and figures. Data interpretation and analysis were done based on percentages, means and frequencies. The collected data were analyzed by using correlation techniques to indicate how independent variables affect dependent variable. And for easy data entry and analysis, the responses were given codes.

3. Results and Discussion

This section is subdivided into (1) demographic description respondents, (2) impact of Kivu Methane Gas Extraction Project managers' soft skills on the quality of project outcome, (3) role of Kivu Methane Gas Extraction Project managers' soft skills on the customer satisfaction and (4) the correlation between management soft skills and project performance at Kivu Methane Gas Extraction Project in Rwanda.

3.1. Demographic Characteristics of Respondents

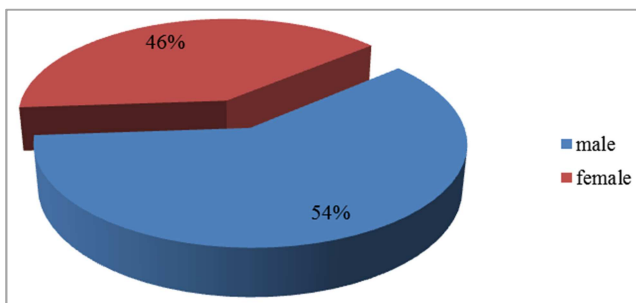


Figure 1. Gender of respondents.

The results in Figure 1 indicated that 54% of respondents were male while the minority of respondent were female

3.2. Impact of Managers' Soft Skills on the Quality of Project Outcome

Table 5. Influence of team building skills on the quality of project outcome.

| | 1 | 2 | 3 | 4 | 5 |
|---|----|----|-----|-----|-----|
| If leading a team, our project managers must act as a team leader in place of principal | 3% | 5% | 10% | 15% | 65% |
| Our project managers will ensure that all project participants can see the big picture | 5% | 6% | 15% | 24% | 49% |
| project managers allow team members to do their work voluntarily | 9% | 9% | 10% | 13% | 58% |
| Our project managers provide a place for team members to participate in decision making | 5% | 5% | 8% | 23% | 56% |

occupying 46%. This implies that both men and women had a greater impact of knowledge about customer service delivery at the project.

Table 2. Age of respondents.

| | Frequency | Percent | Valid Percent |
|-------------|-----------|---------|---------------|
| Valid 18-25 | 27 | 22.5 | 22.5 |
| 26-35 | 42 | 35.0 | 35.0 |
| 36-45 | 25 | 20.8 | 20.8 |
| 46-55 | 19 | 15.8 | 15.8 |
| 56+ | 7 | 5.8 | 5.8 |
| Total | 120 | 100.0 | 100.0 |

Source: Primary data, 2019.

The results of this research, as shown in Table 2, indicated that 35 percent of respondents were aged between 26 and 35 years old. In addition, 15% were aged between 46 and 55 years old while 5% of the respondents were aged between 56 years and above.

Table 3. Education level among respondents.

| | Frequency | Percent | Valid Percent |
|-----------------|-----------|---------|---------------|
| Valid Secondary | 16 | 13.3 | 13.3 |
| Bachelor | 56 | 46.7 | 46.7 |
| Masters | 48 | 40.0 | 40.0 |
| Total | 120 | 100.0 | 100.0 |

As shown in Table 3, most (46%) of respondents had acquired a Bachelor's degree, while 40% of them indicated that they had acquired masters' level. Other 13.3 percent of respondents attended secondary schools.

Table 4. Period of service in the project.

| | Frequency | Percent | Valid Percent |
|-----------------|-----------|---------|---------------|
| Valid 1-3 years | 32 | 26.7 | 26.7 |
| 4-6 years | 68 | 56.7 | 56.7 |
| 7-10 years | 18 | 15.0 | 15.0 |
| 10+ years | 2 | 1.7 | 1.7 |
| Total | 120 | 100.0 | 100.0 |

The results of the study in Table 4 revealed that most (56%) of respondents had served the project for 4-6 years, 26% of respondents had served in period ranging between 1 and 3 years. The same Table 4 also indicated that 15% of respondents had served the project for a duration of 7 – 10 years, while 1% of them indicated that they had served for more than 10 years.

The answers were provided from 1 to 5 where 1= Strongly disagree; 2 = disagree; 3 = I don't know; 4 = agree and 5 = strongly agree. The results in Table 5 indicated that out of 120 respondents, 58% of them strongly agreed that project

managers allow team members to do their work voluntarily while 56% of respondents strongly agreed that project managers provide a place for the team members to participate in decision making processes.

Table 6. Correlation analysis of team building and the quality of project outcome.

| | | If leading a team, our project managers must act as a team | Our project managers will ensure that all project participants |
|--|---------------------|---|---|
| If leading a team, our project managers must act as a team | Pearson Correlation | 1 | .279** |
| | Sig. (2-tailed) | | .002 |
| | N | 120 | 120 |
| Our project managers will ensure that all project participants | Pearson Correlation | .279** | 1 |
| | Sig. (2-tailed) | .002 | |
| | N | 120 | 120 |

The results in Table 6 indicated that team building skill is significantly correlated to the quality of outcome at the Kivu Methane Gas Extraction Project, the maximum coefficient between team building and quality of the outcome was 0.279. The findings indicated a positive correlation on all variables

and the correlation coefficient was significant at 0.05 level of significant level. These results provided preliminary evidence that all these variables were associated with the quality of the outcome.

3.3. Relationship Between Managers' Soft Skills and Customer Satisfaction

Table 7. Relationship between managers' interpersonal skills and customer satisfaction.

| | 1 | 2 | 3 | 4 | 5 |
|--|----------|----------|----------|----------|----------|
| Sociability is the most important skill in all phases of the project | 4% | 6% | 7% | 33% | 48% |
| Communication skill helps project managers | 2% | 3% | 5% | 33% | 55% |
| Communication skill supports project managers in certain activities | 5% | 4% | 11% | 26% | 51% |

Based on the results in Table 7, it was noted that 33% had agreed that sociability is the most important skill in all phases of the project. Regarding the statement that communication skill helps project managers, 55% of respondents strongly agreed on that communication skill helps project managers and 51% strongly agreed on the reason that communication skill supports project managers in certain activities.

Table 8. Correlation between managers' interpersonal skills and customer satisfaction.

| | | Communication skill helps project managers to achieve certain | The behavior of project managers in relation to the stakeholders |
|--|---------------------|--|---|
| Communication skill helps project managers to achieve certain | Pearson Correlation | 1 | .499** |
| | Sig. (2-tailed) | | .000 |
| | N | 120 | 120 |
| The behavior of project managers in relation to the stakeholders | Pearson Correlation | .499** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 120 | 120 |

From the Pearson's correlation matrix, the two interpersonal skills had a positive relationship with customer satisfaction of republic sectors ($r = .499$, $p < 0.001$; $r = .000$, $p < 0.001$; respectively at 0.05 level of significance (Table 8). The

analysis showed that interpersonal skills had the strongest relationship with the customer satisfaction since it had the highest positive coefficient of ($r=.499$).

3.4. Relationship Between Managers' Soft Skills and Project Performance Project

Table 9. Relation between managers' soft skills and project performance.

| | 1 | 2 | 3 | 4 |
|----------------------------|----------|----------|----------|----------|
| Budget compliance | 45% | 35% | 7% | 7% |
| Quality of project outcome | 56% | 27% | 10% | 3% |
| Customer satisfaction | 40% | 36% | 13% | 3% |

As shown in Table 9, 45% of respondents they admitted that the project compliance is highly significant due to manager's

soft skills and 56% scored the project outcome as highly significant due to managers' skills. Furthermore, 40%

mentioned a high significance of customer satisfaction as a result of managers' soft skills and 3 percent of them highlighted low significance for customer satisfaction

resulting from managers' soft skills at Kivu Methane Gas Extraction Project.

Table 10. Correlation between managers' soft skills and project performance.

| | | Budget compliance | Quality of project outcome |
|----------------------------|---------------------|-------------------|----------------------------|
| Budget compliance | Pearson Correlation | 1 | .721** |
| | Sig. (2-tailed) | | .000 |
| | N | 120 | 120 |
| Quality of project outcome | Pearson Correlation | .721** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 120 | 120 |

The findings in Table 10 indicated a positive correlation on all variables and the correlation coefficient was significant at the 0.05 level of significant level. These results provided preliminary evidence that all these variables were associated with the quality of project outcome significant relationship with the dependent variable (see Table 10) budget compliance, quality of project outcome, had a positive relationship customer service delivery ($r = 0.721$, $p < 0.001$; $r = 0.000$, $p < 0.001$; respectively at 0.05 level of significance, which positively impacts on the entire project performance.

4. Conclusion

This study aimed to analyse the impact of manager's soft skills on project performance with case of Kivu Methane Gas Extraction Project located in western Rwanda. The sample size of 120 respondents was estimated from 150 employees. Furthermore, questionnaires and interviews were used to collect the data which were analyzed by using the correlation techniques. The results showed that manager's team building skills had a positive impact on the quality of the project outcome due to the obtained correlations ($r=0.279$, $p<0.01$). In addition, 56 percent of respondents strongly indicated that to ensure customer satisfaction, project managers should minimize the use of soft skills, if they have a high authority for monitoring and implementation. Finally, 56% scored the project outcome as highly significant due to managers' skills, and the analysis showed how the budget compliance and quality of project outcome had a positive relationship customer service delivery ($r = 0.721$, $p < 0.001$; $r = 0.000$, $p < 0.001$; respectively at 0.05 level of significance, which positively impacts on the entire project performance. Thus, soft skills add customer outcome quality profitability and influence the performance. Therefore, on the influence of information technology factor on soft skills on project, the study concluded that the adequate institutional information skills, positive government policies and institutional management practice aid the performance of the managers and lead to the performance of their projects.

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