



INFLUENCE OF LEADERSHIP SKILLS ON PERFORMANCE OF CONSTRUCTION PROJECTS IN RWANDA: CASE OF HORIZON CONSTRUCTION COMPANY.

¹Fraterne Dusingizimana, ² Dr. Kalimba Peter

1: STUDENT AT UNIVERSITY OF KIGALI, 2: SENIOR LECTURER AT UNIVERSITY OF KIGALI

Abstract

This research study sought to examine how leadership skills influence performance of construction projects in Rwanda with reference to Horizon construction company. The research objectives were; to assess how leadership approaches influence performance of construction projects in Rwanda, to determine if leadership environment influence performance of construction projects in Rwanda, and to analyze how leadership risk assessment influence performance of construction projects in Rwanda. The survey design was used in this study and descriptive analysis was used to interpret data collected using questionnaire and analyze causal and relationship between performance of construction projects as dependent variable and independent variables; leadership approaches, leadership environment, and leadership risk assessment. The studied population include staff and management team of Horizon construction company, totaling 119 employees from different departments. The study employed census sampling techniques. Data were collected, coded, and entered into Statistical package for Social Science (SPSS) and analyzed using descriptive statistics. Data were analyzed based on the content matter of the responses, and descriptive analytical design was employed in order to interpret data and analyze causal and relationship between performance of construction projects. Inferential statistics using Karl Pearson's correlation factors and regression analysis was applied to find out the relationship between variables and their influence on performance of construction projects. The findings showed that both variables are significant and positively correlated with a positive relationship; leadership approaches have the lowest significance positive relationship with performance of construction projects at ($r:0.213, p<0.038$), while leadership environment, and leadership risk assessment have the highest significance positive relationship with performance of construction projects at ($r: 0.582, p<0.000$) and ($r:0.659, p<0.000$) respectively. One-unit increase in both leadership approaches, leadership environment, and leadership risk assessment, increase performance of construction projects in Rwanda by a factor of 0.124, 0.112, and 0.247 respectively. Conducive working environment in construction sector and construction companies is very

important towards projects performance. Construction companies are recommended to adopt democratic and autocratic leadership approaches to ensure construction project performance, promoting a leadership environment that influence a conducive working environment in construction sector and construction companies is also a paramount to performance of a project. Participation and continuous involvement of leadership in critical risk assessment. Finally, study recommends discouraging laissez fair leadership approach to not allow every project team member or leadership management to take his /her own decision which can lead to poor performance of construction projects.

Keywords: Performance of construction projects, Leadership approaches, Leadership environment, Leadership risk assessment

Introduction

According to Daniel G., (2015), leadership skills all over the world are considered as leader's style of providing direction, implementing plans, and staff motivation. There are many different leadership skills proposed by various authors that can be exhibited by leaders in business management or other fields. The leader's intellectual capacity helps to conceptualize solutions and acquire knowledge to do the job. A leader's conceptual abilities apply agility, judgment, innovation, interpersonal tact, and domain knowledge. Domain knowledge encompasses tactical and technical knowledge as well as cultural and geopolitical awareness.

As asserted by Jeffrey (2016), leadership skills offer the process that happens inside of organizations. The process that leaders follow to accomplish organizational vision, mission, strategies and goals, a specific body of knowledge that examines various methods used by leaders and organizations, and, the individuals in organizations who guide and direct the actions of others to accomplish organizational goals. Leadership skills can also be described as the process of accomplishing organizational mission, strategies, goals, and objectives through the use of employees (human resources), money (financial resources), things (physical resources), and data (informational resources).

As said by Ghillyer (2019), knowledge of the history of any subject is necessary to understand where the subject came from, where it is going. Leadership skills are exception towards construction projects performance and are a relatively modern concept. Leaders have authority/power, within organizations and use it in many ways. To best use their authority, Leadership skills takes on different roles in every organization, and these include interpersonal roles, informational decisional roles. Interpersonal roles mean the roles leaders assume to coordinate and interact with employees and provide direction to the organization. Informational roles are associated with the tasks needed to obtain and transmit information of leadership skills to the organization workforce, shareholders. Decisional roles cannot be the methods that leaders use to plan and utilize resources to achieve goals. Essentially, leadership is the process of deciding the best way to use an organization's resources to produce goods or provide services.

Leadership skills are the process which helps expand the capacity of individuals to perform in leadership roles within organizations. Leadership skills roles are those that facilitate execution of a company's strategy through building alignment, winning mindshare and developing the capabilities of others. Leadership skills roles may be formal, with the corresponding authority to make decisions and take responsibility, or they may be informal roles with little official authority;

e.g., a member of a team who influences team engagement, purpose and direction; a lateral peer who must listen and negotiate through influence (Rommin Adl, 2013).

Leadership is the ability of Horizon construction company's management to set and achieve challenging goals, take swift and decisive action, outperform the competition, and inspire others to perform well. It is tough to place a value on leadership skills or other qualitative aspects of a Horizon construction company, compared to quantitative metrics that are commonly tracked and much easier to compare between companies with same activities. Leadership skills provides direction where employees need to know the direction in which they are headed and who reach the destination towards construction projects performance (Horizon construction company, 2017).

In Horizon construction company, leadership skills involve showing workers how to effectively perform their responsibilities and regularly supervising the completion of their tasks. In Horizon construction company, leadership skills are also about setting a positive example for staff to follow by being excited about the work, being motivated to learn new things and helping out as needed in both individual and team activities. Effective leadership skills include strong character of employees' productivity, where leaders exhibit honesty, integrity, trustworthiness and ethics. Leaders act in line with how they speak and earn the right to be responsible for others' performance in Horizon construction company. Strong leadership skills involve clear communication skills. Leaders speak with and listen to staff members, respond to questions and concerns and are empathetic. Leaders use effective communication skills for moving the Horizon construction company forward and achieving new levels of projects success. True leadership skills see where the Horizon construction company is headed and plans the steps needed to get there. Productive leadership skills show optimism and provide positive energy for staff. Leaders are helpful by nature and truly concerned about others' well-being (Horizon construction company, 2019).

Research Problem

The construction companies use different leadership skills techniques, and then may not be responsive to their construction projects performance. Over the past many years in Rwanda, many construction companies including Horizon construction company have continuously accused of poor quality and delays in completion of many construction projects. This lead to poor performance of their construction projects. One of the reasons for this was that leadership and management kept changing in the company which contributed to poor operation of the company. Like other construction companies, some failures and losses are results of lack of leadership skills and experience, unclear and not well defined leadership structure. Decision making in construction sector can lead to company risk and losing control on them can lead to poor performance and even bankruptcy. Such issues have prompted the researcher to examine the influence of leadership skills on performance of construction projects in Rwanda. From literature review, there is no study done in Rwanda related to the leadership skills and construction projects performance, which motivated the researcher to review the influence of leadership skills on performance of construction projects with reference to Horizon construction company.

Objective of the study

The general objectives of this study was to assessing the influence of leadership skills on the performance of construction projects in Rwanda, the specific objectives were;

- I. To assess influence of leadership approaches on performance of construction projects in horizon construction company.
- II. To determine whether there is influence of leadership environment on performance of construction projects in horizon construction company.
- III. To find out if the leadership risk assessment influences the performance of construction projects in horizon construction company.

Significant of the study

This study will be of value to the existing body of knowledge and research in leadership skills. The study will make significant contributions to the area of leadership skills and construction projects performance. The study will also make significant contribution to the policies and strategies related to the organization leadership and staff management contributing to the construction projects performance in Rwanda. From corporate perspective, the findings of this study will inform decision makers and projects managers' issues related to the leadership, best-practices and all these affect performances within organizations. The study will be kept in the library and it could be served as reference by scholars of UoK and other universities in carrying out other researches. As scientific interest, the findings of this research could be used by other researchers who have to carry out the related research topics and having good understandings related to leadership skills. Also, students will take it as similar or related courses as reference.

Theoretical review

Theories that were reviewed to offers insights and explanations that are relevant to specific objectives of the study were theory of agent theory of leadership skills; leadership skills theory of change and theory of reasoned leadership skills action on project performance as well. One among theories related to leadership styles is the agent theory of leadership skills that is a specific type of methodology for organizational controlling, participation and evaluation that is used in the organizations in governance of budgets to promote social change. Agent theory of leadership skills defines long-term goals and then organizations' maps control backward to identify necessary preconditions. Agent Theory of leadership skills explains the process of change by outlining causal linkages in an initiative, i.e., its shorter-term, intermediate, and longer-term of organizations' outcomes. The identified changes are mapped as the "outcomes pathway" showing each outcome in logical leadership relationship to all the others, as well as chronological flow. The links between outcomes are explained by "rationales" or statements of why one outcome is thought to be a prerequisite for another (Egan, 2015).

The innovation of agent theory of leadership skills lies (1) in making the distinction between desired and actual outcomes and (2) in requiring stakeholders to model their desired outcomes before they decide on forms of intervention to achieve those outcomes. A common error in

describing agent theory of leadership skills is the belief that it is simply a methodology for planning and evaluation (Merchant, 2017).

Agent theory of leadership skills is instead a form of critical theory that ensures a transparent distribution of power dynamics. Further, the process is necessarily inclusive of many perspectives and participants in achieving solutions. Agent theory of leadership skills can begin at any stage of an initiative, depending on the intended use. A theory developed at the outset is best at informing the planning of an initiative. Having worked out a change model, practitioners can make more informed decisions about strategy and tactics. As monitoring and evaluation of data become available, stakeholders can periodically refine the agent theory of leadership skills as the evidence indicates. An agent theory of leadership skills can be developed by reading leadership documents, talking to stakeholders, and analyzing data (Merchant, 2017).

As the origins of agent theory of leadership skills lie in the field of control in organizations, developments over the years have ensured that agent theory of leadership skills continues to be an invaluable method to conduct evaluations of many different types of leadership skills projects and organizations (Otley, 2014). Posing theory-based evaluation questions helps to focus evaluation efforts on key concerns. As well, there may be a need to pick the right indicators from among the many available, and one can use “monitoring questions” to select the indicators that will be most helpful. The monitoring questions take the form of “What do we really need to know in order to manage grant-making directed to the achievement of this outcome? It is important to understand success beyond just knowing “what works”. Experience has shown that blindly copying or scaling an intervention hardly ever works. An important task for monitoring and evaluation is to gather enough knowledge and understanding so as to be able to predict with some degree of confidence how an initiative and set of activities might work in a different situation, or how it needs to be adjusted to get similar or better results.

Just as development agent theory of leadership skills is a participatory process, a theory of based monitoring and evaluation system can be designed in a participatory way of organizations. For example, grant managers can be involved in choosing the outcomes of greatest interest to them in their decision-making. Similarly, people on the ground can have input into which indicators to use and how to operationalize them, choices of instruments and methods of data collection, and which existing sources of data may be used in tracking indicators (Egan, 2015).

The leadership skills theory of change is part of the program theory that emerged in the 1990s as an improvement to the evaluation theory (Valters, 2018). The leadership skills theory of change is a tool used for developing solutions to complex financial problems. It provides a comprehensive picture of early and intermediate term changes that are needed to reach a long term set goal (Anderson, 2015). It therefore provides a model of how organization should work, which can be tested and refined through leadership skills. The leadership skills theory of change is also a specific and measurable description of change that forms the basis for financial planning, financial implementation and financial evaluation in institution. Most entities use the leadership skills theory of change although they are usually assumed. The leadership skills theory of changes helps in developing comprehensible frameworks for internal and external leadership. Therefore, it is based on the program theory advanced by Suchman in the 1960’s.

According to Burkman, (2015) the Theory of Reasoned Leadership Skills Action states that both attitude and subjective norms are important determinants of employees or people’s intention to adopt and use of leadership skills in organizations. Further the intention to adopt and to continue

using leadership skills in this case, the main factors of leadership skills are influenced by same attitude. The theory states that an individual behavior is influenced by his or her behavior's intention which is influenced by his or her attitude towards behavior of subjective norm. Behavioral intention measures a person's relative strength of intention to perform a behavior. Attitude consists of beliefs about the consequences of performing the behavior multiplied by his or her evaluation of these consequences.

Subjective norm is seen as a combination of perceived expectations from relevant individuals or groups along with intentions to comply with these expectations. In other words, the board leaders' perception that most people who are important to him or her think he/she should or should not perform the behavior in question. To put the definition into simple terms, a person's volitional (voluntary) behaviors predicted by his attitude toward that behavior and how he thinks other people would view them if they performed the behavior. A person's attitude, combined with subjective norms, forms his behavioral intention.

Fishbein (2016) suggests, however, that attitudes and norms are not weighted equally in predicting behavior. Indeed, depending on the individual and the situation, these factors might be very different effects on behavioral intention; thus a weight is associated with each of these factors in the predictive formula of the theory. For example, organizations might be the kind of person who cares little for what others think. If this is the case, the subjective norms would carry little weight in predicting board leaders' behavior. Therefore, the developed theories including agent theory of leadership skills; leadership skills theory of change and theory of reasoned leadership skills action are related to the research's subject. They show how the theories are put into practices in order to make an empirical analysis and final exercise.

Empirical review

Numerous evaluation researches (studies) and reports have shown the effectiveness and problems of leadership skills. It is therefore one of the key ideas behind most versions of the Logical Framework Approaches (LFA) including activities inputs, process, outputs, outcomes and impacts that the organizations should be involved as much as possible into planning, interactions and contextual factors. Furthermore, the organizations should address problems faced by beneficiaries and meet their needs and interests. It is important to identify any stakeholder, who may have a relation to the organizations; that is individuals, groups of people, institutions or organizations. This should be done very early in the identification and appraisal phase of the organizations (Anderson, 2015).

The stakeholders' analysis is a very important phase, where planners identify biases, expectations and concerns of the different interest groups, which helps to guarantee a more cohesive and sustainable organizations. Many organizations have not been a success because of inherent conflicts between the organizations, which all may have different views on the problems, the wanted results and technical concepts (Anderson, 2015). During the process of analyses there has to be made a decision on, which objectives to pursue in the organizations and which area to focus on, and thereby whose interests and views to give priority.

The research shows the problem analysis and identifies the negative aspects of the chosen focus area and establishes a cause and effect between the problems that exists within that area. A tool to illustrate the cause and effect between these problems is the problem tree. A problem tree is made by starting to define the framework and subject of the problem analysis. This would often be a

specific sector; sub sector, area etc., or the problem analysis could be conducted in connection with construction projects performance (Anderson, 2015).

The strength of the problem analysis lies in the process, because it is a learning experience, where the organizations get aware of the complexity of the situation through negotiation, discussion and argument. Organizations get to know, how other organizations see or experience the problems, and they get a sense of ownership to the organizations, because they have helped to shape it. There has been critique of this process. It is argued that it would be better to focus on lacks instead of problems, because focus on problems can lead to negativity and frustration among the participants (Anderson, 2015).

The counter argument is that the 'lack of something' implies that the solution is the provision of 'something', and that in many cases there can be several different ways of finding a solution to a particular problem, which means that focusing on problems encourage creativity. The focus of the objective analysis is to transform the problem tree into a tree of objectives that suggests future solutions to the problem. This means that the trees cause-effect relationship is changed into a means-end relationship. Now the roots on the tree are means that the group can achieve its objective through and hereby have positive changes on the branches.

Organizations should identify objectives that are not desirable, feasible or pursued by other organizations. Then each mean is looked at as a possible means of strategy for achieving the core objective of the organizations. The different strategies that are found should then be assessed to find the most feasible strategy. Depending on what the scope of the intervention is the selected strategy can result in either organizations-sized intervention or a programme that consists of several organizations (Anderson, 2015).

The relationship of leadership skills and construction projects performance is affected by several factors. The legal system and financial structure of a country may have significant impacts on this relationship. Anderson and Gupta (2009) performed a cross-country analysis to analyze whether financial structure and legal system matter. They used a sample 1736 organizations from 22 countries and concluded that financial structure and legal system of any given country have a joint effect on the relationship. This result is not surprising because stability and confidence in both legal and financial system affect positively performance and governance of organizations. Berthelot et al (2010) pointed out the attention of capital market participants to leadership skills, particularly their need to identify situations that may cause earnings management and opportunistic behavior.

Baxter (2014) investigated the relationship between the leadership skills ratings of Australian publicly organizations and their construction projects performance for the years 2006 to 2008. He used the horwath leadership skills report to measure the variable for leadership skills, which is the mostly known rating in Australia. The organizations were allocated a star rating out of a maximum of 5 depending on the extent to which they met the best practice standards and given a ranking relative to the other organizations. The results of the study showed that both stars and rankings are positively associated with construction projects performance. Ueng (2016) investigated the relationship between the quality of leadership skills policy and the construction projects

performance by using a sample of 3068 organizations from Corporate Library Database. The results of the study showed that organizations with a better leadership skills policy are more likely to have a better construction projects performance.

The leadership skills and construction projects performance relationship are a set of standards for an organization's operations that socially conscious investors use to screen potential investments. Environmental relationship considers how an organization performs as a steward of nature. Social relationship examines how it manages relationships with employees, suppliers, customers, and the communities where it operates. Governance deals with an organization's leadership, executive pay, audits, internal controls, and shareholder rights. The relationship can also be used in evaluating any environmental risks an organization might face and how the organization is managing those risks (Kenton, 2019).

Leadership skills cover the practices of how companies are managed and interact with shareholders. An overriding goal of leadership skills, according to the Organization for Economic Cooperation and Development (OECD), is to create an environment of market and business confidence in individual companies and their ability to put capital to use for long-term productive investments (Kenton, 2019). Leadership skills address issues ranging from concentrated ownership and executive compensation to workplace diversity and independence of an organization's board of directors. Market-based leadership skills are one of several approaches to ensuring proper protections to shareholders and organization adherence to existing regulations. The global trend in governance is toward a "comply or explain" system where companies are required to adhere to state or market exchange-developed governance (Naughton, 2017).

The economic success of an organization is not only dependent on efficiency, innovation and quality management but also on compliance of leadership skills principles. Implementation of leadership skills standards improves construction projects performance of the organization as well as positively impacts internal efficiency of the organizations (Tadesse, 2014). Leadership skills aim at facilitating effective monitoring and efficient control of business. Its essence lies in fairness and transparency in operations and enhanced disclosures for protecting interest of different stakeholders (Arora and Bodhanwala, 2018). Leadership skills structures are expected to help the organization perform better through quality decision making (Shivani et al. 2017). Good leadership skills "ensures that corporations take into account the interests of a wide range of constituencies, as well as of the communities within which they operate, and that their boards are accountable to the organization and the shareholders. Leadership skills was originally developed to protect shareholder's interest but gradually it has gained importance for other stakeholders and society (Startling, 2014).

Leadership skills identify the role of directors and leaders towards shareholders and other stakeholders. Leadership skills are significant for shareholders as it increases confidence in the organization for better return on investment. For other stakeholders like employees, customers, suppliers, community and environment, leadership skills assure that organization behave in a responsible manner towards society and environment. Thus, leadership skills are also presenting the relationship among board accountability and environment responsibility (Kolk and Pinkse, 2010). Numerous evaluation researches (studies) and reports have shown the effectiveness and problems of leadership skills. It is therefore one of the key ideas behind most versions of the Logical Framework Approaches (LFA) including activities inputs, process, outputs, outcomes and

impacts that the companies should be involved as much as possible into planning, interactions and contextual factors.

Furthermore, the companies should address problems faced by beneficiaries and meet their needs and interests. It is important to identify any stakeholder, who may have a relation to the companies; that is individuals, groups of people, institutions or firms. This should be done very early in the identification and appraisal phase of the companies (Anderson, 2015).

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The research shows the problem analysis and identifies the negative aspects of the chosen focus area and establishes a cause and effect between the problems that exists within that area. A tool to illustrate the cause and effect between these problems is the problem tree. A problem tree is made by starting to define the framework and subject of the problem analysis. This would often be a specific sector; sub sector, area etc., or the problem analysis could be conducted in connection with organizational companies (Anderson, 2015).

Then all key companies (who were identified in the stakeholder analysis) are invited to a workshop to give their view on the problems, they experience in the chosen area. The strength of the problem analysis lies in the process, because it is a learning experience, where the companies get aware of the complexity of the situation through negotiation, discussion and argument. Companies get to know, how other companies see or experience the problems, and they get a sense of ownership to the companies, because they have helped to shape it. There has been critique of this process. It is argued that it would be better to focus on lacks instead of problems, because focus on problems can lead to negativity and frustration among the participants in general (Anderson, 2015).

The counter argument is that the 'lack of something' implies that the solution is the provision of 'something', and that in many cases there can be several different ways of finding a solution to a particular problem, which means that focusing on problems encourage creativity. The focus of the objective analysis is to transform the problem tree into a tree of objectives that suggests future solutions to the problem. This means that the trees cause-effect relationship is changed into a means-end relationship. Now the roots on the tree are means that the group can achieve its objective through and hereby have positive changes on the branches (Newton, 2017).

First the companies should identify objectives that are not desirable, feasible or pursued by other companies. Then each mean is looked at as a possible means of strategy for achieving the core objective of the companies. The different strategies that are found should then be assessed to find the most feasible strategy. Depending on what the scope of the intervention is the selected strategy can result in either companies-sized intervention or a programme that consists of several companies (Maier, 2015).

Berthelot et.al (2010) pointed out the attention of capital market participants to leadership skills, particularly their need to identify situations that may cause earnings management and opportunistic behavior.

Ueng (2016) investigated the relationship between the quality of leadership skills policy and the construction projects performance by using a sample of 3068 firms from Corporate Library database. The results of the study showed that firms with a better leadership skills policy are more likely to have a better construction projects performance.

Research Methodology

Survey and descriptive research design were adopted to this study. The population size was 119 people and were all included in the research respondents hence census-sampling technics. Data were collected through questionnaire in relation with objectives of research to get primary data from Horizon construction company staff. Qualitative data were coded and entered into SPSS. Descriptive and inferential analysis were employed in order to analyze cause and relationship between performance of construction projects, which is dependent variable and independent variables which; leadership approaches, leadership environment, and leadership risk assessment.

Regression analysis was used to provide the relationship between performance of construction projects, which is dependent variable and independent variables which are leadership approaches, leadership environment, and leadership risk assessment.

The regression model is presented here below:

$$Y = \beta_0 + \beta_1 LA + \beta_2 LE + \beta_3 LRA + \epsilon$$

Where: **Y** is the dependent variable (Performance of construction projects), β_0 is the regression coefficient at Y intercept, while both β_1 , β_2 , and β_3 are parameters of the regression equation, **LA** is the Leadership Approaches, **LE** is the Leadership Environment, and **LRA** is the Leadership Risk Assessment respectively.

Research findings

Company's Leadership approaches on construction projects performance

The study sought to know if Horizon construction company's leadership approaches influence performance of construction projects.

a) Democratic Leadership approach

The study investigated the influence of democratic leadership approach on the performance of construction projects in Horizon construction company. The findings are presented in the table

below;

Respondent feedback	Frequency	Percentage (%)
Strongly Agree	66	69
Agree	30	31
Unaware	0	0
Disagree	0	0
Strongly Disagree	0	0
Total	96	100

From the study, it was observed that 69% of respondents strongly agreed that democratic leadership approach influence project performance, while 31% agreed.

b) Autocratic Leadership approach

The study investigated the influence of autocratic leadership approach on the performance of construction projects in Horizon construction company. The findings are presented in the table below;

Respondent feedback	Frequency	Percentage (%)
Strongly Agree	67	70
Agree	29	30
Unaware	0	0
Disagree	0	0
Strongly Disagree	0	0
Total	96	100

From the study, it was observed that 70% of respondents strongly agreed that autocratic leadership approach influence project performance, while 30% agreed with the statement.

c) Laissez fair Leadership approach

The study investigated the influence of laissez fair leadership approach on the performance of construction projects in Horizon construction company. The findings are presented in the table below;

Respondent feedback	Frequency	Percentage (%)
Strongly Agree	79	82
Agree	9	9
Unware	8	10
Disagree	0	0
Strongly Disagree	0	0
Total	96	100

According to the study, 82% of respondents strongly agreed that laissez fair leadership approach influence project performance. 9% supported the statement, while 10% were unaware.

Company's Leadership environment on construction projects performance

The study sought to know if Horizon construction company's leadership environment influence performance of construction projects.

a) Leadership styles

The study investigated the influence of leadership styles on the performance of construction projects in Horizon construction company. The findings are presented in the table below;

Respondent feedback	Frequency	Percentage (%)
Strongly Agree	58	61
Agree	32	33
Unware	6	6
Disagree	0	0
Strongly Disagree	0	0
Total	96	100

According to the study, 61% of respondents strongly agreed that leadership style influence project performance. 33% agreed, while 6% said they are unware.

b) Organizational structure

The study investigated the influence of organization structure on performance of construction projects in Horizon construction company. The findings are presented in the table below;

Respondent feedback	Frequency	Percentage (%)
Strongly Agree	61	64
Agree	35	36
Unware	0	0
Disagree	0	0
Strongly Disagree	0	0
Total	96	100

From the study, it was observed that 64% of respondents strongly agreed that organization structure influence projects performance, while 36% agreed.

c) Compliance with Policies and Internal regulations

The study investigated the influence of compliance with Policies and internal regulations on the performance of construction projects in Horizon construction company. The findings are presented in the table below;

Respondent feedback	Frequency	Percentage (%)
Strongly Agree	49	52
Agree	32	33
Unware	5	5
Disagree	3	3

Strongly Disagree	7	7
Total	96	100

According to the study, 52% of respondents strongly agreed that compliance with policies and internal regulations influence projects performance. 33% agreed, 5% said they are unaware, while 3% and 7% disagreed and strongly disagreed respectively.

Company's Leadership risk assessment on construction projects performance

The study sought to know if Horizon construction company's leadership risk assessment influence performance of construction projects.

a) Analytical risk assessment

The study investigated the influence of analytical risk assessment on the performance of construction projects in Horizon construction company. The findings are presented in the table below;

Respondent feedback	Frequency	Percentage (%)
Strongly Agree	49	51
Agree	47	49
Unaware	0	0
Disagree	0	0
Strongly Disagree	0	0
Total	96	100

The study showed that 51% of respondents strongly agreed that leadership analytical risk assessment influence projects performance, while 49% also agreed that leadership analytical risk assessment influence projects performance.

b) Reliability of reporting

The study investigated the influence of reliability of reporting on the performance of construction projects in Horizon construction company. The findings are presented in the table below;

Respondent feedback	Frequency	Percentage (%)
Strongly Agree	47	49
Agree	49	51
Unaware	0	0

Disagree	0	0
Strongly Disagree	0	0
Total	96	100

According to the table above, 49% of respondents strongly agreed that reliability of reporting influence projects performance, while 51% also agreed that the extend at which report is reliable influence projects performance.

c) Compliance with standards and regulations

The study investigated the influence of compliance with standards and regulations on the performance of construction projects in Horizon construction company. The findings are presented in the table below;

Respondent feedback	Frequency	Percentage (%)
Strongly Agree	56	58
Agree	19	20
Unware	15	16
Disagree	6	6
Strongly Disagree	0	0
Total	96	100

The findings showed that, 58% of respondents strongly agreed that compliance with standards and regulations influence projects performance, 20% agreed that compliance with standards and regulations influence projects performance, 16% were unware, while 6% disagreed with the statement.

Correlation analysis

The researcher ran a correlation analysis to examine the relationship of independent variables on the dependent variable and answer research objectives. Table below presents the correlations analysis to show the influence of leadership approaches, leadership environment, and leadership risk assessment on performance of construction projects in Rwanda.

Correlations					
		Leadership Approaches	Leadership Environment	Leadership Risk Assessment	Performance of construction Projects
Leadership Approaches	Pearson Correlation	1	.086	.020	.213*
	Sig. (2-tailed)		.406	.845	.038
Leadership Environment	Pearson Correlation	.086	1	.520**	.582**
	Sig. (2-tailed)	.406		.000	.000

Leadership Risk Assessment	Pearson Correlation	.020	.520**	1	.659**
	Sig. (2-tailed)	.845	.000		.000
Performance of construction Projects	Pearson Correlation	.213*	.582**	.659**	1
	Sig. (2-tailed)	.038	.000	.000	
*. Correlation is significant at the 0.05 level (2-tailed).					
**. Correlation is significant at the 0.01 level (2-tailed).					

From the inferential analysis as shown in the table above, it was observed that there are positive correlations between leadership approaches, leadership environment, and leadership risk assessment and performance of construction projects. The findings showed that leadership approaches have the lowest significance positive relationship with performance of construction projects at (r:0.213, p<0.038), while leadership environment, and leadership risk assessment have the highest significance positive relationship with performance of construction projects at ((r: 0.582, p<0.000) and (r:0.659, p<0.000)) respectively.

Coefficient of determination

The adjusted R square was computed to demonstrate the variation in the dependent variables as result of change in independent variables. The table below present the results.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.742a	.551	.536	.14752
a. Predictors: (Constant), Leadership Risk Assessment, Leadership Approaches, Leadership Environment				

The results from analysis showed that the value for adjusted R square is 0.536 as an indication that there is a variation of 53.6% changes in leadership approaches, leadership environment and leadership risk assessment at 95% confidence interval. In other way, this means that 53.6% changes in performance of construction projects in Rwanda could be influenced by leadership approaches, leadership environment and leadership risk assessment. This shows that all three independent variables are not very critical to performance of construction projects in Rwanda.

Multiple regression Result

The multiple regression analysis was done to find out if all three independent variables influence performance of construction projects in Rwanda. It was used to test influence of predicting variables. The result from analysis presented in the table below.

Coefficients ^a				
Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	.488	.081		6.046	.000
	Leadership Approaches	.124	.044	.197	2.799	.006
	Leadership Environment	.112	.030	.303	3.674	.000
	Leadership Risk Assessment	.247	.040	.505	6.158	.000
a. Dependent Variable: Performance of construction Projects						

The regression model can therefore be presented as below,

$$Y = 0.488 + 0.124 LA + 0.112 LE + 0.247 LRA$$

Where; **Y**: Performance of construction projects, **LA**: Leadership Approaches, **LE**: Leadership Environment, and **LRA**: Leadership Risk Assessment.

From the established equation, it was revealed that by holding leadership approaches, leadership environment, and leadership risk assessment constant at zero, the performance of construction projects in Rwanda stands a 0.488. Findings also showed that one-unit increase in leadership approaches would contribute to an increase in performance of construction projects in Rwanda by a factor of 0.124, one-unit increase in leadership environment would contribute to an increase in performance of construction projects in Rwanda by a factor of 0.112, while one-unit increase in leadership risk assessment would contribute to an increase in performance of construction projects in Rwanda by a factor of 0.247. The all three variables were significant as their values were less than P-value ($P < 0.05$).

Variance analysis

The variance analysis was conducted and the Results is presented in table below;

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.456	3	.819	37.227	.000a
	Residual	2.002	92	.022		
	Total	4.458	95			
a. Predictors: (Constant), Leadership Risk Assessment, Leadership Approaches, Leadership Environment						
b. Dependent Variable: Performance of construction Projects						

From the F distribution table, at value equal to 2.55546, the p-value was less than 0.001. the computed value was also greater than the critical value ($37.227 > 2.55546$) which is a good indication that all the variables; leadership approaches, leadership environment, and leadership risk assessment influence performance of construction projects in Rwanda.

Multicollinearity analysis

Multicollinearity analysis was conducted to examine the Variance Inflation Factor (VIF) of each independent variable. Results presented in table below.

Coefficients ^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Leadership Approaches	.987	1.013
	Leadership Environment	.720	1.389
	Leadership Risk Assessment	.725	1.379

a. Dependent Variable: Performance of construction Projects

The cut off value for tolerance is 0.10 whereas a value of 10 or more is for variance inflation factor (Pallant, 2010). Meaning that the tolerance should be 0.1 or greater and VIF should not be greater than 10.0. The results showed that both tolerance and VIF are within the acceptable range. That imply that data is not having any collinearity issues.

Discussion of findings

The study investigated the influencing of leadership skills on performance of construction projects in Rwanda. The findings from the study indicated that 53.6% performance of construction projects is due to leadership approaches, leadership environment and leadership risk assessment at 95% of confidence interval. This explains that 53.6% changes in performance of construction projects in Rwanda could be influenced by leadership approaches, leadership environment and leadership risk assessment.

The study investigated the influencing of leadership approaches, leadership environment and leadership risk assessment on performance of construction projects in Rwanda.

On leadership approaches, findings showed that 64% of respondents agreed that company's leadership skills influence construction projects performance, 23% said no, while 13 were unaware. It was observed that the choice of leadership approach has an influence to project performance. laissez fair leadership approach was rated highly as the best approach towards construction projects performance with rating of 82%, while democratic and autocratic leadership approaches have been rated with rating of 69% and 70% respectively.

On leadership environment, findings showed that 61% of respondents strongly agreed that leadership style influence project performance, 33% agreed while 6% said they are unaware. 64% of respondents strongly agreed that organization structure influence projects performance, while 36% agreed. The finding also showed that 52% of respondents strongly agreed that compliance with policies and internal regulations influence projects performance, 33% agreed, 5% said they are unaware, while 3% and 7% disagreed and strongly disagreed respectively.

On leadership risk assessment, the findings showed that 51% of respondents strongly agreed that leadership analytical risk assessment influence projects performance, while 49% agreed that leadership analytical risk assessment influence projects performance. 49% of respondents strongly

agreed that reliability of reporting influence projects performance, while 51% also agreed that the extend at which report is reliable influence projects performance. The findings also showed that 58% of respondents strongly agreed that compliance with standards and regulations influence projects performance, while 20% also agreed that compliance with standards and regulations influence projects performance. 16% were unaware, while 6% disagreed.

The study also revealed that there is positive correlation between independent variables and dependent variable. The findings showed that leadership approaches have the lowest significance positive relationship with performance of construction projects at ($r:0.213$, $p<0.038$), while leadership environment, and leadership risk assessment have the highest significance positive relationship with performance of construction projects at ($r: 0.582$, $p<0.000$) and ($r:0.659$, $p<0.000$) respectively. From the regression model equation, it was shown that one-unit increase in leadership approaches, leadership environment, and leadership risk assessment increase the performance of construction projects in Rwanda by a factor of 0.124, 0.112, and 0.247 respectively.

Conclusion

Leadership approaches, leadership environment and leadership risk assessment are critical aspect towards the performance of construction projects in Rwanda. The choice of leadership approach is very important because one approach of your choice may influence positively or negatively your project or your company performance. Democratic and autocratic leadership are the most preferred approaches in Horizon construction projects, followed by laissez fair leadership approach. A well-structured construction company, and compliance with policies and internal regulations are very import and can influence performance of construction projects. Also leadership analytical risk assessment is very important. Reliable reports are useful to company leadership to take decision ahead of time and hence increase the performance of construction projects.

Recommendation

The leadership skills are very important to project performance. From previous experience, the most performed projects are that managed by skilled people who have experiences and skill in project implementation. Based on study findings, construction companies are recommended to adopt democratic and autocratic leadership approaches to ensure performance of construction projects. Secondly, promoting a leadership environment that contribute to a conducive working environment in construction sector and construction companies should be emphasized towards the performance of construction companies, and government institutions. Thirdly, the participation and continuous involvement of leadership in critical risk assessment contribute to construction projects performance.

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