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EFFECT OF PROJECT PLANNING ON PROJECT PERFORMANCE A CASE OF LEASING PROJECT IMPLEMENTED BY BDF IN KIGALI

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ABSTRACT

The study entitled effect of project planning on project performance; a case of leasing project implemented by BDF in Kigali City" The general objective of this research is to investigate the effect of project planning on performance of project. The study is guided by four specific objectives: To determine the effect of project scope planning on performance of leasing project implemented By BDF in Kigali; to find out the effect of project resource planning on performance of leasing project implemented By BDF in Kigali; to examine the effect of project time planning on performance of leasing project implemented By BDF in Kigali and to assess the effect of project communication plan on performance of leasing project implemented By BDF in Kigali. The study used descriptive and correlational research design. The population of the study was 305 stakeholders of lease project implemented by BDF Rwanda while the sample size is 185 stakeholders of project implemented by BDF composed by 33 employees of lease project, 131 Beneficiaries of lease project, 19 Project local implementers and 2 employees of Project funders organization. The study used questionnaire and interview guide as research instrument the study used descriptive statistics and inferential statistic such correlation analysis and multiple regression models to analyze quantitative data while and content analysis was used to analysis qualitative data. In regard to specific objective one, the results revealed that project scope planning has significance positive effect on performance of lease project implemented by BDF Rwanda as indicated by β1= 0.094, p=0.040<0.05, t=2.064 which means that an increase one unit in project scope planning would lead to an increase in performance of lease project implemented by BDF Rwanda by 0.094 units. In regard to the second specific objective, the findings revealed that project resource planning has significance positive effect on performance of lease project implemented by BDF Rwanda as indicated by β₂= 0.308, p-value=0.000<0.05, t=4.075 which implies that an increase one unit in project resource planning would lead to an increase in performance of lease project implemented by BDF Rwanda by 0.308 units. In regard to the third specific objective, the results revealed that project time planning has significance positive effect on performance of lease project implemented by BDF Rwanda

as indicated by β_3 = 0.175, p=0.003<0.05, t=3.051. The implication is that an increase one unit in project time planning would lead to an increase in performance of lease project implemented by BDF Rwanda by 0.175 units. In regard to the fourth specific objective, the findings revealed that project communication plan has significance positive effect on performance of lease project implemented by BDF Rwanda as indicated by β₄=0.243, pvalue=0.000<0.05, t=4.573 which means that an increase one unit in project communication plan would lead to an increase in performance of lease project implemented by BDF Rwanda by 0.243 units. The study concluded that project planning has been actively involved in the promoting lease project in Rwanda. Therefore, the four independent variables (project communication plan, project time planning, project scope planning and project resource planning) that were studied, explain 51.8% of the performance of lease project as represented by the adjusted R square. Based on the findings, the following recommendations are suggested: There is need for proper channel of resource mobilization for projects and a proper funding schedule to facilitate the completion of lease project implemented by BDF Rwanda. Moreover, it is utmost necessary to have a proper channel of resource mobilization for the projects, stakeholders need to be involved in the entire project resource planning as it helps in making key budget decision and emphasis should be put on Work Break Structure in order to develop a project schedule as it defines all the work that needs to be completed to achieve the goals and objectives of the project.

INTRODUCTION

Background and Research Gap

Worldwide, the achievement and manageability of the task is intently attached to its planning exercise (Paxton, 2011). Projects flop because of lack of deficient planning, ordinarily on the grounds, they don't spell out the issues well or think about significant factors, for example, the necessities and perspectives on everybody associated with and influenced by the task. Successful planning gives subtleties and structure to project work plan and sets up an approach to proceed with the task after the close of financing, which means it is feasible (Flyvbjerg, 2013).

According to Tesfaye, Lemma, Berhan, and Beshah (2016), projects are building blocks in the economy of a state since they create extra capital and ensure continuous flow of goods and services. Project success is determined by time of completion, is it within the planned budget and is the initial plan on planned performance met. Project planning is the most important phase of project success/ delivery. Bojnord and Afrazeh (2006) described project planning as a process of activities that starts by breaking the project work into activities the activities are then assigned to the project individuals/team responsible for its execution.

For a project to be successful, the planning process which entails "time, cost, risk, scope, quality, procurement, human resource, integration and communication is affected by the planning input factors such as human, technical, managerial and organizational factors. The project planning process is directly affected by the managerial factors and planning is influenced by the techniques used during the process. On the other hand, organizational factors are a valuable instrument in planning process and the human factor plays a significant role project planning stage (Tesfaye *et al.*, 2016).

Rwanda as a nation is investing its scarce resources with a view of improving the living standard and socio-economic condition of its citizens. These projects are designed with assumption of efficient management. Even though projects have such major contributions in the development of the economy of a given nation, most of them are failed to be

completed as planned. Like that of other African countries, Rwanda is also facing the problem of poor project planning. According (Tekalign, 2018) project success is highly determined by the performance of the project plan prepared. Although the country is trying to make its projects successful most of them are still are either failing or delaying from their date of completion due to the problem of poor planning (Tekalign 2018). This study aims to identify the key strategies which, in terms of planning can contribute to project performance in public institutions. For this purpose, study defines a research framework to assess the influence of planning on project performance in public institution in Rwanda with reference of Leasing project implemented BDF Rwanda.

Literature Review

Project scope planning

According to Le Blanc, *et al.*, (2020) scope planning involves developing a summary that provides the project team with all the needed information on how to proceed with the project. The project scope planning comes after the approval of the project in the initial phase of the project life cycle. It is a component feature of project planning and when effectively done can lead to high project performance.

Levitt (2013) effective project scope planning has a positive and significant effect on the overall project management processes. Further, project scope planning involves the definition of the scope as needed to accomplish the project. In the definition of the scope, various documentations are made to ensure there is detailed description of the project scope. In this regard the client's specific details are laid down in line with the inputs from architecture experts. It is with good scope management that project implements and success can be assured for all the concerned stakeholders (Abraham, 2014). For instance, RNUD Project carried out in different Districts in Rwanda can achieve their objective through scope definitions and effective scope planning management

The scope of work is defined very early in the project planning and estimation phases. Fageha and Aibinu, (2013) stated that an incomplete scope definition in early stages of a project's life cycle is a common source of difficulty in project implementation process. Karl

(2014) adds that a well-defined scope sets expectations among the project stakeholders. The scope definition helps the project manager assess the resources needed to implement the project and make realistic commitments. Controlling and managing scope change is critical to the success of any project, as scope changes can significantly impact the cost, schedule, risks and quality of the entire effort.

Project resource planning

Coles and Barritt (2014) project resource planning involves providing a summary of all the resource required to complete a project. Such resources include materials, finances, and people, among others. Resource planning in project management is very crucial in the success of the project. In fact, the successful kick off any project is pegged on the resource planning of the project. As stated by Ganesh et al. (2016) a project cannot effectively be implemented without first availing the required resources. Therefore, the implementation of a given project would require specification and effective planning of the necessary resources. Resource planning for a project will involve specifying the resource according to the project design, checking the availability of the resources, identifying key suppliers and coordinating the acquired resources.

According to Levitt (2013) resource planning should be in line with the different tasks that are to be performed in a project. For each task, the project management team should scrutinize the activities to be carried out, how and then be able to determine the resource requirement for the successful implementation of the task. Once the resources needed are acquired, the project management team should be wary about how to allocate such resources according to planned tasks. Therefore, resource planning goes further to involve resource coordination planning. This would ensure that a project implementation process is done more efficiently and smoothly. In resource allocation planning, the project manager decides which resource is to be assigned to what task. It also involves scheduling the available resources in the most efficient and economical way (Huemann, 2016).

Project time planning

Project timely is the process of planning and exercising mindful control on time consumed on precise activities particularly to increase effectiveness, efficiency or productivity (Lakein Alan, 2013). Project scheduling is also referred to time planning which is a vital part of project implementation process. According to PMI (2013) project time planning is the processes required to manage timely completion of the project. Indeed, time planning is a process that records and controls time spent to finish each activity (PMI, 2013). Wideman (2010) defined time planning in a project as the function required to maintain appropriate allocation of time to the overall conduct of the project through the successive stages of its natural life-cycle, (concept, development, execution, and finishing) by means of the processes of time planning, time estimating, time scheduling and schedule control. Succeeding in a project does not mean signing a contract and expect that the project finish on time, on cost and according to the scope. To succeed in a project, it requires accurate project time/scheduling planning in all aspects. According to Chan *et al.*, (2014) project time management is considered one of the major contributors to project success and as the first step under the responsibility of project managers.

Plan schedule process; refers to establishment of policies, procedures and documentation mandatory in management of project schedule from the beginning of the plan, Determine project scope statement Plan schedule management by WBS Define activities and break them to Tasks Estimate activity durations Estimate activity resources Sequence activities and dependences Develop and control schedule Establish project measuring flow chart, and milestones Build a project timeline management continuing development, execution and then control of schedule. The output of planning is production of a schedule management plan. Nevertheless, in actual life probably there is no detached plan to manage schedule. Much of work ends up in project management plan for effective sustainability of projects (LeBoeuf Michael, 2019).

Estimate activity durations process; this involves calculating duration of each task. Through this process respective activity timelines are identified, using identified

resources. Resource accessibility and holidays within the activity durations are similarly calculated. The total timelines is factored in all activities because of unforeseeable changes in the course of project implementation to guarantee sustainability of projects as directed by a fully diverse approach which argues against prioritizing altogether (Mark Forster, 2006).

Project communication plan

To ensure timely and meaningful exchange of information today's project communication management plans rely heavily on Internet or Web-based Communications in the form of email, blobs, tubes, websites, and other web-based services (Ollus *et al.*, 2009). Conventional project communications planning incorporates several key areas of consideration including: identifying stakeholders; planning communications with respect to who gets what information when; distributing information; managing expectations; and reporting performance (Nicholas &Steyn, 2008)

Project managers are witnessing an explosion of content that is being exchanged between team members and stakeholders, up and down both formal and informal channels of communications. Management of project communications begins with an understanding of who needs what information when and generally includes all aspects of generating, collecting, disseminating, and storing communications (Phillips, 2016). Communication in Project Management the importance of communication in the success of a project is immense. Careful communication planning and setting the right expectations with all the project stakeholders is extremely important. Face to face initial communication within the project team to establish the team dynamics and learning the customer's expectations are the keys to success when starting a project.

Project Communications planning as the process of determining project stakeholders, their information needs and then coming up with a communication approach (Project Management Institute, 2008). It is noted, project communication planning is of great importance: how project communication that takes place during project implementation is defined in a project communication plan (Kirinde, 2016); communication planning makes project communication effective (Project Management Institute, 2008); Project communication planning helps in ensuring project success (World Bank Group, 2008);

project communication planning ensures quality communication in a project (Cassidy & Ball, 2018). Besides, Improper project communication planning brings about challenges (Project Management Institute, 2008): delays in having information delivered; exposing sensitive information to the wrong audience or completely having zero-project communication with some or all of the required stakeholders. In addition, a project fails or gets damaged if communication planning is not integrated into each stage of project design and implementation (World Bank Group, 2008).

Project Performance

Project Performance is the Project completion within the scope of defined budgets, project task, and resource levels by time period based on the project calendar. After viewing financial metrics for tasks and resources drilled down to transaction information such as commitments, expenses, and events the performance is also concerned with cost, and earned value information at the project level. This enables managing risks for the project as a whole. Tasks to understand how each task is performing in terms of cost and schedule. Project performance is measured as the ability to complete the project according to desired specifications, and within the specified budget and the promised time schedule, while keeping the customer and stakeholders happy. For proper project completion both planning and execution need to be properly implemented. Control is used as the monitoring mechanism to ensure that each of the two phases is properly implemented, corrective actions being introduced where there are undesired discrepancies between the project's plan and its execution (Zwikael, 2008).

Review of Empirical Evidence

2.3.1. Project scope planning and project performance

Turatsinze (2019), carried out the research on the scope change management and project success in Rwanda, A case of Rwanda Social Marketing Project (RSMP). The goal of the research study entitled "Scope Change Management and Project Success" was to determine the connection between these two concepts. The results demonstrated

that SFH defined, controlled, and implemented scope changes while ensuring project success through on-time delivery, adherence to the budget, involvement of stakeholders, and accomplishment of project-specific goals. The SFH's scope change management procedures had a positive impact on R = 0.151, but they had no statistically significant impact on project success. In actuality, some scope change management techniques made projects less successful. It was advised that SFH improve their change definition and control such that procedures are put in place that help define scope change and how it was managed. Work breakdown structure is a crucial tool that is employed globally, but the findings show that SFH has not yet implemented it.

2.3.2. Project resource planning and project performance

A study was conducted by Umulisa, Mbabazize, and Shukla (2015), to ascertain the impact of project resource planning practices on the Agaseke Project in Kigali's project performance. According to the study, the performance of the Agaseke project was impacted by the approaches used in human resource planning, financial resource planning, and material and time resource planning.

2.3.3. Project time planning and project performance

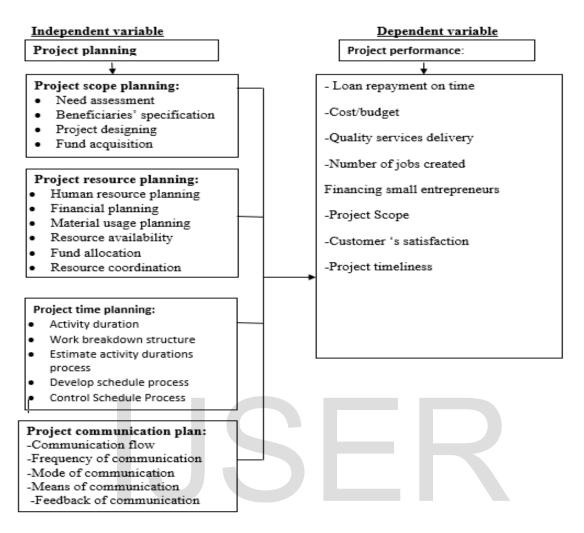
In the context of a road construction project in Rwanda's Kicukiro District, Ninsima (2017) conducted research on the impact of scheduling on project performance. The approach based on correlation coefficients was used to describe the relationship between the variables being studied. To find out where scheduling practices and performance of road construction projects differed, the analysis of variance method was used. According to the study, at a significance level of 0.01, all scheduling factors were found to have a favorable relationship with project performance. Results also show that time and budget scheduling had a very strong positive correlation with project success (sig: 0.000 to 0.001). The Kicukiro District, Donors/Partners were advised to place a high priority on maintaining the country's existing infrastructure, including its roads and other building types.

2.3.4. Project communication plan and project performance

Using Modcon Engineering PLC as a case study, Meron (2018) investigated how project communication management might improve project performance in building construction projects. The goal of this study was to explain how project communications management can enhance the performance of building projects for Modcon Engineering. The study noted that there is a widespread understanding of the value of project communication and its significance within the sector. The study also found that a lack of communication has led to project delays, cost overruns, and project abandonment. It has also been demonstrated that project communications have a significant impact on how well-trained personnel perform in the construction sector.

Theoretical Conceptual Model

The study was based on the following conceptual framework. A conceptual framework is defined as a hypothesized model identifying the concepts under study and their relationships. The study was guided by the conceptual framework as shown in Figure 2.1 relating the dependent and independent variables. The independent variables include is project planning such as project scope planning; project resource planning; project time planning and project communication plan as independent variable while the dependent variable is project performance such as - Loan repayment on time, cost/budget, quality services delivery to beneficiaries, number of jobs created, financing small entrepreneurs and project scope



MATERIALS AND METHODS

The study entitled "Effect of Project Planning on Project Performance a Case of Leasing Project Implemented By BDF In Kigali" was conducted for achieving or assessing three specific objectives: To determine the effect of project scope planning on performance of leasing project implemented By BDF in Kigali, To find out the effect of project resource planning on performance of leasing project implemented By BDF in Kigali, To examine the effect of project time planning on performance of leasing project implemented By BDF in Kigali; And to find out the effect of project communication plan on performance of leasing project implemented By BDF in Kigali. To assess the validity of study objectives and the researcher has used both primary and secondary data. Based on the nature of this study, the target population was 344 stakeholders of lease project implemented by

BDF composed by 62 employees of lease project, 243 beneficiaries of lease project; 36 project local implementers and 3 employees of project funders. To select or these respondents, the researcher has used purposive sampling and data were collected using questionnaire. Data were presented as descriptive and inferential statistics (Bivariate correlation analysis) as the outcomes of SPSS.

DISCUSSION OF RESULTS

Dimensions and Items	N	Mean	Std. Deviation
Project scope planning used by leasing project implemented By BDF in Kigali		4.42	1.01
The identification of all the activities required to deliver the outputs		4.10	1.25
The identification of the deliverable and milestone(s) of each task		4.52	.96
A detailed scope statement is availed to all the project stakeholders before the implementation of the project		4.38	1.16
The project stakeholders were well defined		4.85	.48
Essential information is gathered from different sources to define the project scope		4.45	1.01
Budget, schedule and quality of the project were defined in the project scope		4.28	1.22
A SWOT analysis is made to verify the deliverables of the change		4.50	.96
There is a committee that is assigned for scope change management		4.81	.60

Correlation Analysis

Test of correlation was made using Bivariate correlation analysis and linear regression model. Results of bivariate correlation analysis are measured by two parameters such as Pearson correlation (r) and P-value (Sig. (2-tailed). The researcher has used mean all items assessed as indicators for independent variable with a comparison to the mean of data obtained from indicators assessed for dependent variable. The structuring of the questionnaire in a five-point Likert scale enabled the responses to be computed into composite scores of their means for all the study variables. The composite mean scores for the independent variables were correlated with the composite mean scores for the dependent variable. Pearson correlation coefficient was utilized in examining the relationships.

Table 4.10: Correlations analysis

	<u> </u>					
		X_1	\mathbf{X}_2	X_3	X_4	Y
X1= Project scope planning	Pearson Correlation	1				
X2= Project resource planning	Pearson Correlation	.548**	1			
X3= Project time planning	Pearson Correlation	.441**	.610**	1		
X4= Project communication plan	Pearson Correlation	.425**	.525**	.386**	1	
Performance of lease project implemented by BDF Rwanda	Pearson Correlation	.503**	.642**	.549**	.571**	1
	Sig. (2-tailed)	.000	.000	.000	.000	

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

The results in Table 4.10 shows that a significantly moderate positive relationship exists between project scope planning and performance of lease project implemented by BDF Rwanda at (r =0.503**, p-value 0.000<0.01), which implies that an improvement of project scope planning leading to an increase of performance of lease project implemented by BDF Rwanda.

Multiple Linear Regression Model

Table 4.11: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.727a	.529	.518	.24864

a. Predictors: (Constant), X4= Project communication plan, X3= Project time planning, X1= Project scope planning, X2= Project resource planning

The adjusted R² also called the coefficient of multiple determinations, is the percent of the variance in the dependent explained uniquely or jointly by the independent variables. Therefore, the four independent variables (project communication plan, project time planning, project scope planning and project resource planning) that were studied, explain 51.8% of the performance of lease project as represented by the adjusted R square. This therefore means that other factors not studied in this research contribute 48.2% of the project performance.

Table 4.13: Regression coefficient

	Unstandardized Coefficients		Standardized Coefficients		
Model	В	Std. Error	Beta	t	Sig.
1 (Constant)	.730	.256		2.849	.005
X ₁ = Project scope planning	.094	.046	.130	2.064	.040
X ₂ = Project resource planning	.308	.076	.301	4.075	.000
X ₃ = Project time planning	.175	.057	.200	3.051	.003
X4= Project communication plan	.243	.053	.281	4.573	.000

a. Dependent Variable: Performance of lease project implemented by BDF Rwanda

As per the SPSS generated table 4.13, the equation $Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \epsilon$ becomes:

 $Y = 0.730 + 0.094X_1 + 0.308X_2 + 0.175X_3 + 0.243X_4$

Using the regression equation above and holding all factors constant (project communication plan, project time planning, project scope planning and project resource planning) project performance was 0.730 units.

The regression results revealed that project scope planning has significance positive effect on performance of lease project implemented by BDF Rwanda as indicated by β1= 0.094, p=0.040<0.05, t=2.064. The implication is that an increase one unit in project scope planning would lead to an increase in performance of lease project implemented by BDF Rwanda by 0.094 units. Therefore, the study rejected the null hypotheses that stated that there is no significant effect of project scope planning on performance of lease project implemented by BDF Rwanda. The result reveals that project performance is positively affected by project planning. The project scope is linear related to project performance mainly on environmental condition since objective and deliveries are planned before any construction activities take place. The result indicate again that work breakdown structure has significantly impact to time overrun and contractual relationship through listing all the project outputs; the identification of all the activities required to deliver the outputs, the subdivision of activities into tasks, the identification of the deliverable and milestone(s) of each task and the identification of the time usage of all the resources (personnel and material) required to complete each task in anticipation of the effect of globalization and the technological difference is the basis for identifying reasons of delay in order to reduce the impact of delay in any construction project.

4.3.3.1. Testing the first Hypothesis

Hypothesis one states that there is no significant effect of project scope planning on performance of leasing project implemented By BDF in Kigali. Ho₁: β_1 =0. Reject the null hypothesis if p-value (**Sig.** value) is less than 0.05. Based on the table 4.13, regression coefficients of project scope planning (β_1 = 0.094, p-value =0.040<0.05, t=2.064) which is less than 5% of level of significant. The null hypothesis was rejected and the alternative was accepted because regression results revealed that p-value calculate is equal to 0.040 which is less than 0.05(5%) level of significance. Hence, the study concluded that there

is significant effect of project scope planning on performance of leasing project implemented By BDF in Kigali

CONCLUSION & Recommendations

In regard to the second specific objective, the findings revealed that project resource planning has significance positive effect on performance of lease project implemented by BDF Rwanda as indicated by β_2 = 0.308, p-value=0.000<0.05, t=4.075 which implies that an increase one unit in project resource planning would lead to an increase in performance of lease project implemented by BDF Rwanda by 0.308 units.

From the findings indicated in chapter four, the study concluded that project planning has been actively involved in the promoting lease project in Rwanda. Therefore, the four independent variables (project communication plan, project time planning, project scope planning and project resource planning) that were studied, explain 51.8% of the performance of lease project as represented by the adjusted R square. The project planning factors had been positively affecting project performance since are linear correlated to the project performance indicators such as budget, timelines, and scope and quality delivery.

As a result of these study findings, the researcher put forward the following recommendations:

The management of BDF should therefore make it mandatory for scope management practices to be employed in the implementation of leasing project implemented By BDF in Kigali since success rates were recorded due to effective project scope planning. The study recommend that management of lease project should ensure that all stakeholder is involving in define scope of work by collecting their requirements.

The study recommends project managers to develop project resource plan that should contain every aspect that pertains to every resource necessary for project from beginning to end. In addition to helping the manager determine the resources needed at hand, planning for the project is arguably the most efficient way to organize for the appropriate and effective use of such resources.

The management of lease project should be a focus to ensure that projects are within time and budget. The study recommended development of time schedules based on the formerly developed WBS. Likewise, to develop accurate and attainable schedules,

Project managers of leasing project implemented By BDF should develop communication plan for their projects, as communications planning is recognized important and is inevitable for the project success.

REFERENCES

- Adedayo, O.O., Olufemi, A. S., Olaposi, T. O.(2018). Application of project scope management practices on project success among telecommunication organizations in Nigeria. *International Journal of Development and Sustainability,* 7(2), 518-532
- Amadi, J.O. (2017). The Role of planning on performance of community projects in Kenya. *Developing Country Studies, 7*(1), 1-7.
- Anthony, O. U & Nick, N. I. (2018). Project Planning and Implementation in Nigeria: Revisiting international best practices. *European Scientific Journal*, *14*(3), 1857 7881.
- Assaf, S., Hassanain, M., Islam, M.S.& Saiful, M., (2015, October 11-14). Causes of Delay in Construction Projects in Bangladesh. Proceedings of the 6th International Conference on Construction Engineering and Project Management (pp.82-86). Busan, Korea.

- Ayegun. O. A., Falemu, J.O. A. & Olawumi, T.O. (2018). Assessment of Clients' Perception and Satisfaction with Project. Journal of Sustainable Construction Engineering and Project Management. 1 (1) 27-45.
- Atkinson, R. (1999). Project management: cost, time and quality, two best guesses and a phenomenon, it is time to accept other success criteria. *International Journal of Project Management*, 17(6), 337–342.
- Bailey, M. N. (1978). Stock returns, real activity, inflation and money. American Economic Review, 71(4), 545-565.
- Besner, C. H. (2006). The perceived value and potential contribution of project management practices to project success. *Project Management Journal*, *37*(3), 37-48.
- Bwisa, H., Rugenyi, F., (2016). Effect of triple constraint on the management of project in Nairobi: The project manager's perceptive. *The strategic journal of Business and change management, 3*(2), 345-367.
- Chan, A. P. (2004). Factors affecting the success of a construction project. Journal of Construction Engineering and Management, 130(1), 153-155.
- Chen, H.L.(2021).Impact of Communication on Capital Project Performance: A Mediated Moderation Model. *International Journal of Operations & Production Management*, 3(5), 16-64.
- Clark, K. B. (2009). Project scope and project performance: The effect of parts strategy and supplier involvement on product development. Management science, 35(10), 1247-1263.
- Cooke-Davies, T. (2002). The real success factors on projects. International Journal of Project Management, 20 (3), 185-190.
- Crawford, P. (2013). Project monitoring and evaluation: a method for enhancing the efficiency and effectiveness of aid project implementation. *International Journal of Project Management*, *21*(5), 363-373
- . Dvir, D. S.P. (2006). Projects and project managers: The relationship between project managers' personality, project types, and project success. *Project Management Journal*, *37*(5), 36-48.
- Ejoko, E.O., Tanko, B.L., Jibrin, M., Ojoko, O. & Enegbuma, W.L. (2016, August 15-17). Project delay causes and effects in the construction industry. Proceedings of the 6th International Graduate Conference on Engineering, Science and Humanities (pp.221-223). Nigeria

- Faniran, O.O., Oluwoye, J.O., & Lenard, D.J. (1998). Interactions between constructions planning and influence factors. Journal of Construction Engineering & Management, 124(4), 245-256.
- Fečikova, I. (2004). An Index method for measurement of customer. *The TQM Magazine*, *16*(1), 57-66.
- Freeman, R. E., Harrison, J. S.& Wicks, A. C., (1984). Stakeholder theory: The state of the art. Cambridge University Press.
- Gashunga, H. &Masila, P. M. (2016). Factors affecting the implementation of electricity power expansion projects in Kenya. Acase study of Kenya power and lighting company. *The strategic journal of Business & Change Management, 3*(2), 690-710.
- Gideon, K. (2016). Cost performance in project management. Causes and Solutions to Poor Cost Performance in Project Management. *Project Planning and Management*, 4(7), 1-8.
- Gkritza, K., Labi, S., Mannerin, F.L., Sinha, K.C (2008). Influence of highway construction projects on economic development: An empirical assessment. *The Annals of Regional Science*, 42 (3), 545-563.
- Grant, C.& Osanloo, A. (2014). Understanding, Selecting, and Integrating a Theoretical Framework in Dissertation Research: Creating the Blueprint for House. *Administrative Issues Journal: Connecting Education, Practice and Research, 4* (2), 12-26.
- Guru, P. P. (2008). Projects and Their Management. *International Journal of Business and Management*, *3*(8), 1-13
- Haythem, A. (2015). The role of strategic planning in performance Management. Express, an International Journal of Multi-Disciplinary Research, 3(2), 2348-2052
- Heyvaert, M., Hannes, K., Onghena, P. (2017). *Using mixed methods research synthesis for literature reviews.* Thousand Oaks, CA: Sage.
- Hodgson, D. (2002). Disciplining the Professional: The Case of Project Management. Journal of Management Studies, 39(6), 803-821.
- Khanzada,B., Mubashir, T., Naeem, S.& Sohail, H.(2018), Impact of Project planning on Project success with Mediating Role of Risk Management and Moderating Role of Organization Culture. *International Journal of Business and Social Science*, 9(1),88-98

- Kadiho A., Nyabera,O. & Kituyi, A.(2021). Project planning and implementation in Rwanda National Union of Deaf Project Kicukiro District. *Journal of Advance Research in Business Management and Accounting, 7*(4),1-15
- Kerzner, H. (2003). *Project Management: A systems approach to planning, scheduling, and controlling* (8th ed.). New York: Wiley.
- Kerzner, H. (2009). *Project Management: A systems approach to planning, scheduling, and controlling,* (10th ed.). New York: Wiley.
- Kissi, E. T.K. (2016). Critical Barriers to the Practice of effective cost planning in the Ghanaian construction industry. *KICEM Journal of Construction Engineering and Project Management Online*, 6 (2), 5-8.
- Kothari, C. (2004). Research Methodology Methods and Techniques (2nd revised Ed.). India: New Age International Publishers.
- Lewis, P.J. (2000). The project manager's desk reference. A comprehensive guide to project planning scheduling, evaluation, control and systems, (2nd Ed.). New York: MC Graw-Hill.
- Lawrence, M. (2015). The effects of risk management at project planning phase on the performance of construction projects in Rwanda (Master dissertation, The Jomo Kenyatta University. Kenya. Retrieved from http://www.yourarticlelibrary.com/25639
- Lines, B. C. (2015). Planning in construction: longitudinal study of pre-contract planning model demonstrates reduction in project cost and schedule growth. *International Journal of Construction Education and Research*, 11(1), 21-39.
- Machange, S.W.(2020). The role of communication on performance of donor funded agricultural project: a case of research, community and organizational development associates. *Journal of Management in Engineering*, 30(3),401 407.
- Meredith, J.R. & Mantel, S.J. (2006), Project Management a Managerial Approach, (. (5e edition). Hoboken, John Wiley & Sons.
- Meron, A.(2018). The Role of Project Communication Management in improving project performance of building construction projects: A case study of Modcon Engineering PLC. *Journal of Management in Engineering*, 12(2), 25–33.
- Ministry of Finance and Economic Planning. (2014). Budget Framework Paper 2014/2015- 2016/2017. Retrieved from http://www.minecofin.gov.rw.
- Mintzberg, H. (1994). The Rise and Fall of Strategic Planning: reconceiving roles for planning, plans, planners. Englewood Cliffs, NJ: Prentice Hall.

- Mohamed, A., & Moronge, M. (2019). Influence of project planning on sustainability of public private partnership projects in Nairobi City County, Kenya. *The Strategic Journal of Business & Change Management*, 6 (4), 1006 1020
- Motari, D. (2017). Factors influencing performance of solar energy project, a case study of RembaHomabay Count (Master dissertation, The University of Nairobi, Kenya. Retrieved from erepository .uonbi.ac.ke
- Mugenda, O. & Mugenda, A. (2003). Research Methods: Quantitative and Qualitative Approaches. (1st ed.). Nairobi: African Centre for Technology Studies (ACTS).
- Munns, A. (1996). The role of project management in achieving project success. *International journal of Project Management, 14*(2), 81-87.
- Murinzi,J., Mulyungi,P.& Muchelule,Y. (2018). Effect of project team skills on performance of IFAD funded projects in Rwanda: A case of Rural Sector Support Project. *International Journal of Management and Commerce Innovation, 6*(1), 1347-1354.
- Mutugi, N.M.& Ndunge, K. D.(2020).Influence of Time Management on Implementation of Road Construction Projects in Kilifi County, Kenya. *Journal of Entrepreneurship and Project Management*, 5(2), 67 92.
- Ninsima, J.(2017). Scheduling and performance of road construction projects in Rwanda: a case study of Camp Kanombe –Busanza Road Construction Project. *International Journal of Human Resource Management*, 1(4), 17-43.
- Nufei, A. B. (2014). Critical success factors in project management: Critical review of secondary data. *International journal of scientific & Engineering Research*, *5*(6), 325-331.
- Nteziryayo,V.(2015). Project planning and project success in Rwanda: a case study of children education and community development project. *International Journal of Information and Communication Technology Research*, 3(4),134 140.
- Nzioka, C. (2018). Role of project planning on project success in Kenya: Acase study of Kenya Power infrastructure development project. *International Journal of Novel Research in Engineering and Science, 4*(1), 36-43
- Ocharo, R. N. (2018). Project management practices and implementation of power projects in Kenya. *International Academic Journal of Information Sciences and Project Management*, *3*(1), 28-46

- Ondiek ,F.B.(2018). Influence of project planning on road construction projects performance in Uasin Gishu County, Kenya. *Journal of Information Systems Research and Innovation*, 2(6), 69-77.
- Office of the Auditor General of State Finances. (2019).Report of the Auditor General of State Finances for the year ended 30th June 2013.Retrieved from www.oag.gov.rw
- Office of the Auditor General of State Finances. (2020). Report of the Auditor General of State Finances for the year ended 30th June 2014.Retrieved from www.oag.gov.rw
- Office of the Auditor General of State Finances. (2017). Report of the Auditor General of State Finances for the year ended 30 June 2017. Retrieved from www.oag.gov.rw.
- O'Donnell, K. A. (2019, May 9). *How to make management planning more effective*. Retrieved: http://www.yourarticlelibrary.com.
- Parasuraman, A. V. (1988). Service quality: A Multi-item scale for measuring consumer perceptions of quality. *Journal of retailing*, *64*(3), 13-40.
- Patanakul, P. K. (2016). What impacts the performance of large-scale government projects? International Journal of Project Management, 34(3), 452–466.
- Qasim, M., & Kotani, K. (2016). An empirical analysis of energy shortage in Pakistan. Asia-Pacific Development Journal, 21(1), 137–166.
- Radosavljevic, M. A. (2007). Process planning methodology: dynamic short-term planning for offsite construction in Slovenia. *Construction Management and Economics*, 25(2),143-156.
- Ravitch, S. M. (2016). Qualitative Research: Bridging the Conceptual, Theoretical and Methodological. Los Angeles, U.S.A: SAGE Publications, Inc.
- REG. (2018). Mission, vision, Subsidiaries. Retrieved from http://www.reg.rw
- Rehema, N. O. (2018). Project Management Practices and Implementation of power projects in Kenya. International *Academic Journal of Information Sciences and Project Management*, 3(1), 28-46.
- Rwanda Public Procurement Authority. (2007). *Law on Public Procurement no12/2007 of 27/03/2007*. Kigali Rwanda: Official Gazette of the Republic of Rwanda, Year 46, 8

APPENDICES

Table 4.11: Model summary

				Std. Error of the
Model	R	R Square	Adjusted R Square	Estimate
1	.727ª	.529	.518	.24864

a. Predictors: (Constant), X4= Project communication plan, X3= Project time planning, X1= Project scope planning, X2= Project resource planning

Table 4.12: Analysis of variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.490	4	3.123	50.510	.000b
	Residual	11.128	180	.062		
	Total	23.618	184			

Dependent Variable: Performance of lease project implemented by BDF Rwanda

Table 4.13: Regression coefficient

	Unstandardized Coefficients		Standardized Coefficients	1	
Model	В	Std. Error	Beta	t	Sig.
1 (Constant)	.730	.256		2.849	.005
X ₁ = Project scope planning	.094	.046	.130	2.064	.040
X ₂ = Project resource planning	.308	.076	.301	4.075	.000
X3= Project time planning	.175	.057	.200	3.051	.003
X4= Project communication plan	.243	.053	.281	4.573	.000

a. Dependent Variable: Performance of lease project implemented by BDF Rwanda

b. Predictors: (Constant), X4= Project communication plan, X3= Project time planning, X1=
 Project scope planning, X2= Project resource planning