International Journal of Management and Commerce Innovations ISSN 2348-7585 (Online)
Vol. 11, Issue 1, pp: (371-380), Month: April 2023 - September 2023, Available at: www.researchpublish.com

CRITICAL SUCCESS FACTORS AND PERFORMANCE OF FIBRE OPTIC INFRASTUCTURE PROJECTS BY INFORMATION AND COMMUNICATION TECHNOLOGY AUTHORITY, KENYA

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DOI: https://doi.org/10.5281/zenodo.8255559

Published Date: 17-August-2023

Abstract: **Information Communication and Technology is crucial to Kenya's economy since it fosters growth and gives the country's economy a boost. The study focused on the effect of critical success factors and performance of fibre optic infrastructure projects in Information and Communication Technology Authority, Kenya. Project managers, the finance team, the stakeholders, and the management team on the various projects being carried out under Information Communication and Technology Authority, Kenya, are the study's target population. The study found that project financing, top management support, stakeholder's engagement and project monitoring had a significant positive influence on the project performance of fibre optic infrastructure projects in Information and Communication Technology Authority, Kenya. The study concluded that financing projects through the project finance route offers various benefits such as the opportunity for risk sharing, extending the debt capacity, the release of free cash flows, and maintaining a competitive advantage in a competitive market. The top management support relates to effective decision-making to manage risk and to authorize business process change. The stakeholder engagement is an ongoing process because the stakeholder landscape is forever shifting. The study recommended that the project managers should focus on a few critical financial metrics that are essential to specific business cases. The top management of the organization should communicate vision to the team members on the project being implemented so as to set clear expectations about the spirit of the project. Any effective stakeholder management approach requires you to first identify, assess and map stakeholders according to interest and influence so as to identify who key stakeholders are and how they are similar or different in terms of needs and opinions.**

Keywords: **Information Communication, fibre optic infrastructure projects, Technology Authority.**

1. INTRODUCTION

1.1 Background of the Study

Fibre Infrastructure for running Information Communication and Technology (ICT) applications is becoming a need for daily living in distribution of information from the global population. It is now a significant factor of development rather than the end consequence. Information and communication technology is used to support the vast majority of organizational activities in both private and public enterprises. This includes city links and interoffice connections for users worldwide. There are further businesses that operate exclusively online and make billions of dollars for the global economy. The lifetime of fiber optic projects involves numerous organizations in the United States. In Virginia State, one must adhere to the guidelines established by the Society of Cable Telecommunications Engineers (SCTE), Rural Utility

Services, and International Telecommunication Union (ITU). Although it is not always the case, city councils also typically offer pits for the cabling to be installed in various channels in exchange for a charge. The American National Standards Institute provides the policy guidelines. (Mauriello, 2012). Different strategies have been employed by European nations for performance of fiber optic cable. The final mile has been heavily controlled by the United Kingdom, Netherlands, and Sweden in an effort to provide consumers with superfast access. The major goal of this is to give new competitors incentives so they can serve customers well. Fiber optic service providers are required to link to building foundations and share investing in infrastructure in Spain and France (Kiminiza & Were, 2016).

African countries started working on a number of initiatives to improve connection and promote the spread and use of the Internet across this Africa. The prospect of delivering internet to the region led to the project of a number of fiber optic projects, some of which have already been built or are in the process of being built. Many countries have combined the rollout of broadband Internet with the advancement of their socioeconomic development, a claim that can only be supported by duration and the appropriate distribution strategy and Internet usage inside these countries. It's crucial to remember that, since 2009, Internet access and usage have increased dramatically across Africa. For instance, the prevalence of the internet has increased from 5.6% in 2009. Additionally, the percentage of people using the internet has climbed from 5.6% in 2009 to 8.6% in 2013. (internetworldstats.com). African nations are experiencing an ICT revolution, and as a result, the continent has advanced to become a paradise for venture capital (Musee, 2017).

The biggest obstacle to creating these networks in Southern Africa is obtaining permission from local authorities. Over 22,000 km of fiber networks have been installed by Liquid Telecom in nations like South Africa, Zimbabwe, Zambia, the DRC, and much of East Africa. In 2016, the business declared the opening of Liquid Sea, an undersea cable infrastructure that will link Europe to the Middle East and the eastern and southern regions of Africa. Every nation has its unique issues and eccentricities, claims Liquid Telecom Group Managing Executive Willem Marais. Obtaining the necessary permits to provide telecommunication products within a certain market is likely the most crucial factor. (2016) Sheldon Uganda, Rwanda, Zambia, Zimbabwe, Botswana, the Democratic Republic of the Congo, Lesotho, and South Africa are currently included in Liquid Telecom's largest single fiber network in Africa (Liquid Telecommunications, 2017).

The National Optic Fibre Backbone (NOFBI) project, started by the Kenyan government, was implemented in two stages with the goal of ensuring connectivity at all times. The project's first phase, which included the district offices and a few border towns, was finished in 2009. Most deliveries have fiber infrastructure with access points. The project, which is nearly finished, intends to improve government services in Kenya's 47 counties while also facilitating communication across counties. A National Optic Fibre Backbone has been built, and it spans 4,300 kilometers across 58 towns in 35 counties in Kenya. In order to connect the local government transmission network with the central government, this phase is already in place. Phase 2, which aimed to further expand coverage, only utilized 1,200 km of the 1,600 km of civil works, and was carried out by Telkom, Safaricom, Jamii Telecom, and KENET, utilizing more than 3,000 km of the cable (Lemlem & Moronge, 2017). Metropolitan fiber civil works have been used by the national government, and firms like these have finished and 900 km of fiber has been aided in the and safety protection of the current transmission to devolved unit of the 47 counties that commenced building works in September 2014; to date, it has also been finished in 35 of the 47 counties. The Chinese initiative is being fought by working with the implementing agency, Huawei as the building, and Telkom Kenya on this which provides supervisory role, ICT Authority as the contractor of the national fiber optic infrastructure. Tekom Kenya's responsibility is to run and ensure sustainability of the cable with financing from government and the Ministry of information and communications technology (ICT Authority, 2017).

1.2 Statement of the Problem

There are numerous ICT initiatives in Kenya that have failed to achieve their intended goals and objectives. Notably, the optic fibre infrastructure projects are aimed at improving government services across the country while also facilitating communication across counties, however, only 35 of the 47 counties have these projects built which spans 4,300 kilometers across 58 towns. Therefore, it is crucial to evaluate the performance of these projects while determining its success. This is mostly determined by how successfully projects accomplish their goals and remain sustainable afterward. The goal of ICTA has been to guide Kenya's transformation into an economic powerhouse for East Africa and a globally competitive country in the digital market. The National Optic Fibre Backbone (NOFBI) initiative, launched, the project's implementation, that consists of two phases, has been finished. Development of NOFBI Phase 2, that expand the coverage and ensure sustainability of the existing transmission network, began in September 2014. However only 1,200km out of the 1,600km of civil works are complete, and 900km of fiber has established under backbone section. This was done to

allow the district government units of the 47 counties to form an effective transmission network with the national government (ICT Authority, 2017). ICT authority is anticipated to assist Kenya's efforts to create a digital economy.

Even though these possibilities for sharing infrastructure exist, Kenya's implementation of optical fiber is vertically integrated, meaning that one operator deploys, owns, and manages all of its own fiber optic equipment. This concept requires the fabricator to incur $200 million for a 1000 km network connection, with a significant portion of the funds going toward civil works, or trenching, with reference to research based on recent operations in Kenya. For a 1000-kilometer link, the civil works alone might cost up to 80% of the total cost, or $160 million. The entire cost of civil works alone might reach $480 million if three operators trench along the same path (ICT Africa, 2017). This is because there is no framework or policy for infrastructure sharing. Also due to network outages, the need to replace broken cable, and the high cost of operations, Kenya's absence of fibre optic networks has resulted in a significant loss of investment. Inadequate policies guidelines on approval led to lost opportunity on delivery lead time making customers to withdraw from the undertaking before or in the middle of project performance, resulting in increased costs and delays. Inadequate preparations for the development and expansion of the nation's roads have also caused the destruction of cables that had already been established during road or sewer line extensions (LemLem & Moronge, 2017).

Kemei, Oboko and Kidombo (2018) looked into the connection amongst top management core skills and ERP systems performance of projects. With a focus on gated communities in Nairobi County, Kihoro and Waigango (2015) conducted a survey to determine the impact of stakeholders' engagement on the performance of construction projects in Kenya, nevertheless these studies were carried out on other sectors and area of the projects in Kenya which are not related to ICTA projects. Ahmed (2016) looks into the connection between a number of top management support factors and project performance in Pakistan, Mambwe, Mwanaumo, Nsefu and Sakala (2021) assess the impact of stakeholder participation on the execution of road construction projects in the Lusaka District in Zambia, In Poland, Demirkesen and Reinhardt (2021) investigated the impact of stakeholder involvement on project performance, which is all different from Kenya's economic and environmental setting. Also, with very limited studies carried out on Kenya and specifically ICTA projects, this study aims at closing these gaps. Therefore, the study aimed at examining the consequences of critical success factors on the performance of fibre optic infrastructure.

1.3 Research Objectives

1.3.1 General Objective

To examine the effect of critical success factors on performance of fibre optic infrastructure projects by Information and Communication Technology Authority, Kenya.

1.3.2 Specific Objectives

i. To determine the influence of project financing on the performance of fibre optic infrastructure projects by Information and Communication Technology Authority, Kenya.

ii. To determine the influence of top management support on the performance of fibre optic infrastructure projects by Information and Communication Technology Authority, Kenya.

iii. To determine the influence of stakeholder's engagement on the performance of fibre optic infrastructure projects by Information and Communication Technology Authority, Kenya.

iv. To determine the influence of project monitoring on the performance of fibre optic infrastructure projects by Information and Communication Technology Authority, Kenya.

2. LITERATURE REVIEW

2.1 Theoretical Literature Review

In 1976, Jensen and Meckling created Agency theory. Jensen and Meckling classified agency conflicts into two categories. In the first, the dispute between managers and shareholders is the main topic, whereas in the second, the conflict between equity and debt holders is the main topic. Conflicts between shareholders and managers develop as a result of the fact that managers do not have whole claims, making it impossible for them to profit fully from their value-maximizing actions. The second sort of conflict occurs between equity and debt holders when loan holders incentivize equity holders to make less-than-ideal investments (Mandell, 2008). According to the argument, asset managers who are left on their own are supposed to work in their employers' or electors' best interests. Thus, anticipates that project should

be completed in a manner that benefits the principals (Lan, 2010). In accordance with agency theory, project managers are the agents and the project beneficiaries are the principals. Therefore, the agents are required to execute management for the advantage of the principals by providing adequate returns as they have responsibility on the principal's behalf. As stated by (Bonazzi, 2007).

According to Burt, theory of change is a paradigm for describing how an intervention is supposed to end up working, with an emphasis on the change that it is supposed to bring about (Burt, 2012). Additionally, according to Jean *et al*. (2011), managers use the theory when making crucial choices throughout the duration of a project's life cycle. The theory should assist in the evaluation of the project's procedures, giving valuable feedback that will aid to get fantastic results that can guide best practices (Jean *et al*, 2011). It's possible that different organizations have different turnaround times for projects. While one might accomplish the desired change in the agreed-upon amount of time, another one might drag on. According to Woolcock (2011, 2011), this just indicates that the theory represents the project's natural trajectory rather than any irregularity. Burt also illustrates the significance of theory during implementation by including controls and stabilizes to differentiate between theory errors and technology problems (Burt, 2012).

The theory of financial liberalization developed by Mckinnon and Shaw is in the context of more savings is made and invested more effectively than if savings are made directly in the sector in which they occur, without financial intermediation (Mckinnon 1973; Shaw 1973). This is because as real interest rates rise and financial deepening increases, more savings will be made and invested. Financial saving, in McKinnon's view, is essential for investment, and by extension, for economic growth. In current markets, saving resources are available but stringent policies have not been established in their management. According to the hypothesis, businesses eliminate or lessen government limitations placed on the domestic financial market. The nature of the project will have an impact on the financing's structure and method. Main financial support for some projects arises from regional or national government sources; in other circumstances, the project will generate its own income, which will be used to pay back loans and cover maintenance and operation costs.

2.2 Empirical Literature Review

Using data from the Kenyan energy sector, Kemei, Oboko, and Kidombo (2018) looked into the connection amongst top management core skills and ERP systems performance of projects. This report is based on a sample of state parastatals in Kenya's energy sector that have adopted the SAP ERP system as of the end of 2016. For the aim of analysis, a questionnaire was utilized to get information from respondents in their individual organizations, and a structured interview guide was used to gather information from the heads of ICT in those organizations. To ascertain how closely the variables were related, correlational design and mixed approaches were also used. Given the size of the study sample, a census was employed in addition to both descriptive and inferential analysis methods. The study's findings, which are in line with those of other authors' inquiries, indicate that top management assistance has a beneficial impact on the relationship between project manager leadership competence and ERP system projects performance. The study focused on energy sector in Kenya, this study centre of attention is on ICTA in Kenya.

Ndavi (2019) looked on how financial resource planning techniques affected how well building projects performed in Nairobi City County, Kenya. One hundred twenty-five construction projects in Nairobi City County were the target population. Project managers who responded were among the targeted 125 respondents. The census method was used in this study since the population was manageable in size. Primary data were gathered via a semistructured questionnaire. The Statistical Package for the Social Sciences was used to code and enter the data for analysis (SPSS). The different study variables were correlated using Pearson correlation analysis. The study found that financial resource planning considerably and favorably influences how well building projects operate. The aforementioned study looked at project planning and performance as its main objective, this study looked at critical success factor and performance of fibre optic infrastructure projects in ICTA Kenya as the main objective of its study.

Nega (2020) examined how information network security agency projects were affected by project monitoring practices (INSA). The researcher used both primary and secondary data sources, quantitative and qualitative research methods, and descriptive and explanatory research designs to meet the study's aims. The 115 agency workers who participated in commercial software development projects were the study's target population. The commercial software creation project always consists, thus only projects completed in the previous five years were chosen using a purposeful sample strategy, and respondents were chosen from various functional teams using a stratified sampling technique. The qualitative data was analyzed, reported, and interpreted in the form of statements while the quantitative data was analyzed using

descriptive, correlation, and regression analysis using SPSS version 23.0. The study's key findings showed that while project change control procedures are generally weak, project monitoring is generally good. The study comes to the conclusion that a project's success is significantly influenced by its overall project monitoring practices. This implies that good project monitoring practices result in higher levels of project success. This study was carried out on INSA in Ethiopia, this study was carried out in ICTA in Kenya.

The effect of managerial engagement on program performance in several domains is evaluated by Orazaly, Assel, Aknur, and Sharbanu (2020), who also identify key processes that boost it. The study uses data from 261 managers in the Republic of Kazakhstan between 2018 and 2019 to deliver quantitative research findings. Business expansion programs, scholarly projects, social initiatives, and projects from the services sector make up the research sample. The study's findings demonstrate the various top management support quality levels and their strong relationship to project effectiveness. The study also identifies the distinct procedures for each type of project under investigation that strongly connect with project performance aspects. The most effective commercialized projects were those that heavily utilized managerial engage mechanisms, with the best cost overrun (15%) and second-best schedule overrun (17%) results. These results have theoretical and practical ramifications that might help project managers increase the effectiveness of their projects by selecting the essential, appropriate project management tools and practices. The study focused on business expansion, scholarly and social projects in Kazakhstan, this study focused on fibre optic projects in Kenya

With respect to the L400 roads project, Mambwe *et al*. (2021) assess the effect of stakeholder involvement on the execution of road construction projects in the Lusaka District. The goal of the study was accomplished by analyzing the connections between stakeholder participation and the three performance indicators, namely project cost, schedule, and specifications. A quantitative and descriptive research design was used as the study strategy. With a 98% response rate, a semi-structured questionnaire was used to gather both primary and secondary data. Results showed that stakeholder engagement and the project timeline and specifications had a strong and favorable association. The engagement of stakeholders with the project was also found to be highly but adversely connected with project cost. The study focused mainly on stakeholders' involvement in Lusaka projects in Zambia, this study focused on critical success factors on performance of fibre optic projects in Kenya.

Gilbert (2021) aimed to investigate the crucial elements in the execution of initiatives supported by donors. The study specifically looked into the impact of stakeholder participation on the execution of donor-supported projects. A descriptive research strategy was used in this study, which focused on 34 donor-funded projects taking place in the county. Since there are only a limited number of donor initiatives, the study choose to conduct a census. The primary responders for the study were the 102 project staff members in total. A semi-structured questionnaire was used to collect the information. Data analysis includes both qualitative and quantitative methodologies. Tables were used to present the data while descriptive statistics were generated using SPSS 20. Correlation and regression analysis were used to establish the relationship between the study variables. According to the study, stakeholder involvement has a positive impact on how donor-funded projects are implemented in Tharaka Nithi County. The analysis comes to the conclusion that there is little participation from major beneficiaries in crucial project operations. The study suggests that donors and supporting organizations should encourage stakeholder participation in project implementation. The study focused on donor funded project in Tharaka Nithi County, this study focused on ICTA projects in Kenya.

In Kisumu County, Kenya, Omolo (2021) looked into how stakeholder involvement affected the effectiveness of HIV/AIDS programmes among NGOs. An audience of 54 projects hosted by 26 NGOs was targeted using the descriptive research design. Through the use of questionnaires, respondents' qualitative and quantitative data was collected, and SPSS Version 25.0 was then used to evaluate it. 63% of respondents to the survey stated that performance was impacted by stakeholder involvement. The report advised involving stakeholders from the beginning of the initiative to encourage buy-in. The study although essential focused on HIV/AIDS project in Kisumu County, this study focused on ICTA fibre optic projects in Kenya.

In Poland, Demirkesen and Reinhardt (2021) explored the impact of stakeholder participation on project performance. The descriptive research design was used for the investigation. The type of design used in descriptive research involves information gathering based on participant opinions and viewpoints. 13 government initiatives were included in the target population. Project managers and other support workers inside the projects served as the observational unit. Questionnaires were utilized as the study instruments. The study's findings showed that a significant factor affecting how well initiative's function is stakeholder involvement. The study came to the conclusion that performance is favorably and

strongly correlated with stakeholder involvement. This study was carried out in Poland, this study was carried out in Kenya.

3. RESEARCH METHODOLOGY

3.1 Research Design

Descriptive research design was used in the investigation. A topic or problem might be explored in order to learn more about it using an exploratory research design. Descriptive research, on the other hand, paints a picture of the specifics of a circumstance, social context, or connection.

3.2 Target Population

Study target population includes 150 individuals consisting of the project managers, the finance team, the stakeholders, and the management team on the various projects being carried out under ICTA, Kenya, are the study's target population.

3.3 Sampling Technique

This study used a convenience sampling technique because all of the projects are government-funded and they can be managed. The choice of convenience sampling technique was attributed to its benefit of allowing the researcher to focus of the available members of the target population.

3.4 Data Analysis and Presentation

The data was examined using analytical techniques from the Statistical Package for Social Sciences version 23.

The following is the study's model:

$Y = \beta_0 + \beta_1 PF_1 + \beta_2 MS_2 + \beta_3 SE_3 + \beta_4 PM_4 + \varepsilon$

Where,

Y = Performance of Fibre Optic Infrastructure

B_0 = Constant

B_1, β_2, β_3 = Coefficients of determination

PF = Project Financing

MS = Top Management Support

SE = Stakeholders Engagement

PM = Project Monitoring

4. RESEARCH FINDINGS AND DISCUSSIONS

4.1 Response Rate

The questionnaires were administered to a sample of 150 respondents. The following Table 4.1 gives the distribution of study response rate.

Table 4.1: Response Rate

Category	**Frequency**	**Percentage**
Response	145	96.7
Non response	5	3.3
Total	**150**	**100**

Source: Research Data (2023)

From the results in Table 4.1, those who responded to the questionnaires accounted for 96.7% and those who did not accounted for 3.3%. Baruch and Holtom (2014) recommended 80 percent or more on response rate is enough data analysis. Therefore, having attained a response rate of 96.7% it was sufficient to carry on with the analysis of data.

4.2 Results of Regression Statistics

Regression analysis was done to determine the influence of independent variables on the dependent variables. The results of the combined regression analysis are displayed in Table 4.2 as follows:

Table 4.2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.806[a]	.715	.701	1.062

Source: Research Data (2023)

The results in Table 4.2 show that there was a best fit of study since the value of R^2 was 0.806. The value of Adjusted R square was 0.701 which shows that there was a variation of 70.1% of the performance of fibre optic infrastructure projects in Information and Communication Technology Authority, Kenya which was caused by the project financing, top management support, stakeholder engagement and project monitoring. Therefore, the remaining 29.9% is attributed to other variables that were not studied.

Table 4.3: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.964	4	3.741	44.422	.001
	Residual	11.790	140	.084		
	Total	26.754	144			

Source: Research Data (2023)

The significance value is 0.001 which is less than 0.05 thus the model is statistically significant in predicting how project financing, top management support, stakeholder engagement and project monitoring had an influence on the project performance of of fibre optic infrastructure projects in Information and Communication Technology Authority, Kenya. The statistical mean square value was 3.741. Since statistical F value was 44.422 greater than the statistical mean value, this shows that the overall model was significant.

Table 4.4: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.609	.117		5.205	.001
	Project financing	0.806	.156	4.208	5.167	.000
	Top management support	0.674	.274	1.134	2.459	.000
	Stakeholder engagement	0.837	.192	2.820	4.359	.000
	Project monitoring	0.649	.319	1.317	2.034	.001

Source: Research Data (2023)

The results as presented in Table 4.4, show that, taking all the independent variables into constant, the project performance of fibre optic infrastructure projects in Information and Communication Technology Authority, Kenya will be 60.9%. The study observed that a 0.806 represented the factor by which the project performance of fibre optic infrastructure projects in Information and Communication Technology Authority, Kenya would change when project financing would be changed by one unit. A unit increase in top management support would lead to an increase in the project performance of of fibre optic infrastructure projects in Information and Communication Technology Authority, Kenya by 67.4%. A unit increase in stakeholder engagement would lead to an increase in the project performance of of fibre optic infrastructure projects in Information and Communication Technology Authority, Kenya by 83.7% and a unit increase in project monitoring would lead to an increase in the project performance of of fibre optic infrastructure projects

in Information and Communication Technology Authority, Kenya by 64.9%. This therefore, led to the following regression equation output.

Project performance = 0.609 + 0.806(project financing) + 0.674(top management support) + 0.837(stakeholder engagement) + 0.649(project monitoring).

The results in Table 4.11 also show that project financing had a significant positive influence on the project performance of fibre optic infrastructure projects in Information and Communication Technology Authority, Kenya as indicated by t-value of 5.167 with a significance value of 0.000. The findings concur with Lemlem and Moronge (2017) study which examined the effects of the best funding for fiber optic projects in Kenya and it was noteworthy that there was a high, positive correlation between project financing and successful implementation.

The study found that top management support had a significant positive influence on the project performance of fibre optic infrastructure projects in Information and Communication Technology Authority, Kenya as indicated by t-value of 2.459 with a significance value of 0.000. The results are consistent with Kemei, Oboko, and Kidombo (2018) study which looked into the connection amongst top management core skills and ERP systems performance of projects and indicate that top management assistance has a beneficial impact on the relationship between project manager leadership competence and ERP system projects performance.

The study revealed that stakeholder engagement had a significant positive influence on the project performance of fibre optic infrastructure projects in Information and Communication Technology Authority, Kenya as indicated by t-value of 4.359 with a significance value of 0.000. The result agrees with Kihoro and Waigango (2015) who conducted a survey to evaluate the impact of stakeholders' engagement on the performance of construction projects in Kenya. The results show a significant positive correlation among stakeholder management and project performance.

The study established that project monitoring had a significant positive influence on the project performance of fibre optic infrastructure projects in Information and Communication Technology Authority, Kenya as indicated by t-value of 2.034 with a significance value of 0.001. The findings concur with Gilbert (2021) study which aimed to investigate the crucial elements in the execution of initiatives supported by donors. According to the study, stakeholder involvement has a positive impact on how donor-funded projects are implemented in Tharaka Nithi County.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions and Recommendations

5.1.1 Project Financing

The study concluded that financing projects through the project finance route offers various benefits such as the opportunity for risk sharing, extending the debt capacity, the release of free cash flows, and maintaining a competitive advantage in a competitive market. Project finance is a useful tool for companies that wish to avoid the issuance of a corporate repayment guarantee, thus preferring to finance the project in an off-balance sheet manner. The project finance route permits the sponsor to extend their debt capacity by enabling the sponsor to finance the project on someone's credit, which could be the purchaser of the project's outputs. Sponsors can raise funding for the project based simply on the contractual commitments.

The study recommended that the project managers should focus on a few critical financial metrics that are essential to specific business cases. Financial management for projects is only effective when leveraging the right project financial management tools. Project financial plans are effective only when updated and optimized regularly. With new project scope changes, dynamic trends, and technology practices, project financials need to adapt to meet industry requirements. Project managers can significantly streamline pre-planning, execution, and risk analysis, by incorporating best practices in project financial management.

5.1.2 Top Management Support

The study concluded that top management support relates to effective decision-making to manage risk and to authorize business process change. It appears that top management support is most dependent on the ability of the project client to work with other top managers to authorize business process changes and make decisions to mitigate or bear risk. The study also concluded that the top management support could be in the form of aligning the human and financial resource elements, such as an experienced team capable of meeting the project needs. It also plays a prime role in the success of a

project team by giving the required political backing and aligning the resource management systems (human, financial, and technological) with the needs of projects.

The study recommended that the top management of the organization should communicate vision to the team members on the project being implemented so as to set clear expectations about the spirit of the project. Inspire and motivate the project team members by letting them know what is expected of them, be given the tools necessary to succeed, and receive feedback relative to their performance as well as the project in general. The project leader needs to be creative and methodical about addressing risk without significantly impacting the project schedule or cost.

5.1.3 Stakeholder Engagement

The study concluded that the stakeholder engagement is an ongoing process because the stakeholder landscape is forever shifting. Engaging with stakeholders can ultimately save time and money. Stakeholder engagement may help the project managers to identify potential risks before they become threats to the project or organization. Engaging with groups and individuals is key to improving accountability within the organization as well as with external audiences. Listening to the project stakeholders may reinforce a decision already made concerning the projects.

The study recommended that any effective stakeholder management approach requires you to first identify, assess and map stakeholders according to interest and influence so as to identify who key stakeholders are and how they are similar or different in terms of needs and opinions. Running stakeholder analysis on a regular basis will help project managers to keep the stakeholder list up to date and monitor changing stakeholder relationships and positions over time. The relationships your stakeholders have with one another can also change. This, too, can potentially impact the project. Therefore, a stakeholder network chart is extremely useful for understanding these evolving dynamics.

5.1.4 Project Monitoring

The study concluded that the organization allows immediate monitoring of the project tasks upon onset and eventually carries out evaluation of these projects tasks to get clear and concise information on every achievement made. The information provided back to the stakeholders on what is happening creates a positive relationship and by conducting a feasibility study the project managers are able to create focus and efficiency in implementing the project tasks. Monitoring and evaluation has enabled the project managers to identify early risk that might have arisen and through control these risks are effectively managed leading to effective realization of project goals and objectives.

The study recommended that the project managers should create a plan for monitoring and evaluating the projects being undertaken by creating a platform or system to capture and organize the project's data in one place, track each team member's progress and allocate resources accordingly. Evaluate project reports to identify whether the project was delivered on time or whether there were any unexpected setbacks. Improve workflow processes and if the project did not meet the expectations decide on the way of resolving those flaws. Finally, focus on continuous learning and improvement to ensure that the work processes become even more productive.

5.2 Suggestions for Further Studies

The results from the regression model indicate that there is a remaining 29.9% described by factors not included in the model. Therefore, the study suggests that other variables not considered in the study can be studied to fill the gap. In addition, the study context was the Information technology projects. Therefore, other studies can be done that focus on the performance of other type of projects.

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