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Research Article

ASSESSING RISK MANAGEMENT STRATEGIES AND PROJECT PERFORMANCE IN RABBIT LTD, RWANDA

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Abstract

Every project, regardless of its size or sector, is exposed to various forms of risk that can significantly influence its success or failure. Risk is generally defined as the possibility of encountering danger or experiencing adverse outcomes that may negatively affect project objectives. In project management, risk represents any uncertain event that, if it occurs, can have a positive or negative impact on project performance, scope, cost, quality, or timeline. Therefore, failure to identify and manage risks effectively at the early stages of a project often leads to cost overruns, delays, or complete project failure.

Risk management is the systematic process of identifying, assessing, and responding to potential risks throughout the project lifecycle to ensure that project goals are achieved. It is a proactive approach that emphasizes planning and preparedness rather than reactive problem-solving. Effective risk management practices enable project managers to conduct SWOT analysis, anticipate uncertainties, and implement strategies that minimize threats while maximizing opportunities. Through proper risk planning, projects are better positioned to handle unexpected challenges and maintain alignment with strategic objectives.

The construction industry, recognized as one of the most vital sectors globally, plays a significant role in economic development and national GDP growth. However, it is also highly vulnerable to risks due to its complex, capital-intensive, and multi-stakeholder nature. In the engineering and construction sector, particularly in advanced economies such as the United States, firms are increasingly adopting structured risk management practices to enhance project success and competitiveness in smart and connected infrastructure development.

This paper emphasizes the importance of risk management practices in ensuring project success, particularly within high-risk sectors such as construction. It highlights how effective risk identification, assessment, and mitigation strategies contribute to improved project outcomes, reduced uncertainties, and enhanced organizational performance. The study concludes that structured risk management is essential for achieving project objectives and recommends its integration into all stages of project planning and execution.

Keywords: Risk Management; Project Success; Risk Identification; Construction Industry; Project Performance

INTRODUCTION

Any project that is started involves a number of hazards. The project will not succeed if these risks are not recognized early and adequately addressed.

"Possibility of encountering danger or experiencing injury" is how risk is defined. This concept gives us the impression that risks should be avoided, especially while managing projects. A risk is an event that could happen and have a substantial impact on the project. Project risk is the potential for a project to fail, or at the very least, fail to yield the expected results.

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The process of detecting, assessing, and dealing with risk concerns during the course of a project while ensuring that its goals are met is known as risk management. Effective risk management is proactive rather than reactive and indicates control over potential future occurrences.

Effective risk management tactics enable you to determine the SWOT analysis of your project (strengths, weaknesses, opportunities and threats). You can be ready to respond to unforeseen situations if you plan ahead of time. To guarantee the success of your project, specify how you will handle any risks so that you can recognize, mitigate, or prevent difficulties as needed. Successful project managers understand the need of risk management since accomplishing project goals is dependent on planning, preparation, outcomes, and assessment, all of which contribute to achieving strategic goals. The construction sector has become well-known as one of the most significant industries in the world. It is one of the sources of funding for a country's GDP growth (GDP). In the United States, the engineering and construction (E&C) sector required a strong year in which E&C businesses were positioned as active participants in the development of smart, linked commercial real estate (Michelle, 2018).

In Rwanda, the industry contributed 647 billion Rwandan Francs to the national GDP in 2019, growing by 4% due to steady growth in private building and state works.

The implementation of the Kigali City Master Plan, which includes a broad vision and guidelines for the entire city and serves as the foundation for more specific planning at the District and the Central Business District, is one of the notable opportunities in the real estate and construction sector. It demonstrates the most advanced sustainable practices in land use, infrastructure, the environment, society, and the economy. Rwanda has additionally designated six subsidiary cities for expansion and economic development (Rusizi, Rubavu, Musanze, Huye, Muhanga, and Nyagatare). Secondary cities, in particular, provide huge prospects in real estate and infrastructure development, industry, and agro-processing.

Construction managers remain the essential figure in building in European nations such as England, typically representing the contractors, and their contributions to the success of construction projects were evident, particularly throughout the construction period. Given that the building process requires a large number of resources (manpower, materials, money, and machinery), a professional construction manager is required to manage those resources and ensure that project objectives are met on time (Ibrahim, 2010). The timely completion of these projects reflects the success of the building process. A construction project is considered successful when it is completed on schedule, within budget, according to specifications, and to the satisfaction of stakeholders. The construction phase is frequently used as a yardstick to evaluate the overall success of the project. In general, a project is considered successful when it is finished within the time range specified before the project begins (Dvir and Shenhar, 2003). But, as all risk managers know, risk can never be eliminated, but it can be lessened, which is what management loves to hear. Unfortunately, hazards are frequently overlooked. Risk can be reduced to a tolerable level by eliminating limitations and decreasing ambiguity. Project hazards may be "accidentally" neglected by individuals who do not have time to investigate them or who want to prevent major delays. Others

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may be afraid to check into it because if hazards are discovered, the team may appear inadequate in project management. To manage the risk that has been disclosed, it is necessary to correct that risk, and fixing that risk will cost extra resources that a project often lacks. Risk management should be carried out throughout the project lifecycle, from project inception through project completion. Risk management may frequently help to project success by identifying and closing loopholes.

1.1 Statement of the Problem

Risk is frequently regarded in the construction industry as an incident that has an influence on the primary project objectives, namely cost, time, and quality. Many projects fail because organizations believe that all efforts will succeed and hence fail to identify, appraise, and provide mitigation or contingencies for the project's risk factors. In reality, successful project management is judged on three criteria: performance/quality, budget, and completion time.

1.2. Specific Objectives of the Study

i. To examine the effect of risk identification on Rabbit LTD projects success. ii. To analyze the effect of risk analysis on Rabbit LTD projects success. iii. To assess the effect of risk response on Rabbit LTD projects success.

iv. To find out the effect of risk review on Rabbit LTD projects success.

v. To analyze the effect of risk control on Rabbit LTD projects success.

2. LITERATURE REVIEW

Theoretical Foundation

Project Success Theory

The project's success is shared by all project stakeholders. Based on the project's triple limitations, the project's success may be judged after the deliverables are accomplished (Cost-time-scope). Traditionally, project success has been characterized as meeting deadlines, staying under budget, and adhering to specifications. (Grant, 2019) Despite the fact that this approach of evaluating project performance is currently under criticism, it is nevertheless widely used in project success reports. The success of a project is decided only by the vendor's or supplier's interests, not the clients. As a result, it is surprising that the traditional way of defining and quantifying project success is still commonly employed in project success and risk management reports. (Grant, 2019). Projects are defined as an assignment, work, or job that is to be completed to make unique modifications, services, or outcomes of a certain specification to fulfill the demands of the stakeholder or beneficiary, within the limits of resources, cost, and a timetable. (Boyd, 2011). Increasing project performance entails correctly managing all sorts and forms of risk that may be encountered. This argument pushes organizations to establish risk management programs, with management responsible for risk management through developing and executing risk management programs inside the organization and its activities (Rozenes, 2017). Miller (2001) developed an eight component theoretical framework for project risk management, which included internal environment risk, goal setting, event detection,

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risk assessment, risk response, control actions, information and communication, and follow-up. (David, 2019). Furthermore, the capacity to cope with hazards, as well as the accuracy of the information upon which decisions are based. To summarize, it is reasonable to associate risk management components with project success in terms of time, cost, quality, and stakeholder satisfaction.

Risk Management Theory

The risk-management approach is founded on three fundamental concepts: utility, regression, and diversification. Daniel Bernoulli created the utility method in 1738, resulting in a decision-making process in which individuals must pay greater attention to the extent of the impacts of alternative outcomes. It is described in M. Bulmer and F. Galton's writings. 2015 (Carvalho). Regression was first used around the close of the nineteenth century. Later, it was demonstrated that the regression method works in a range of contexts, beginning with the computation of risk probability and concluding with the prediction of business cycle variations. H. Markowitz provided mathematical explanation for the diversification strategy of an investment portfolio in 1952 [2]. He has demonstrated intelligent investment allocation to minimize variation from the predicted rate of return. Currently, professionals in numerous professions are being engaged in the organization of the risk management system in the realm of professional activity, as detailed by Hubbard Douglas [3], Mark Dorfman [4], Alexander Budzier and Flyvbjerg, B. [5] and others. The purpose of this essay is to demonstrate the advancement of risk management in many elements of environmental industry. The model of financial risk management in state program implementation is illustrated. (Zhang, 2010)

Risk Management

Risk management is the process of identifying, evaluating, and containing threats to an organization's resources and earnings. These dangers or hazards might be brought on by a number of things, including a lack of money, legal responsibilities, poor strategic planning, mishaps, or natural calamities. Effective risk management is acting proactively rather than reactively in an effort to influence future events as much as feasible. As a result, good risk management has the ability to lower both the likelihood of a risk happening and its possible effects. The four primary phases of the risk management process (RMP), identification, assessment, analysis, and reaction, should not be viewed as the sole variables to manage risks. Instead, they serve as the fundamental premise for understanding and managing risks in a project. Ropel (2012).

When dealing with risks, all RMP phases should be taken into consideration in order to apply the process in the project effectively. Although there are various RMP versions that may be found in the literature, the most often reported frameworks include those phases. The bulk of publications classify the additional phase that some models include as risk monitoring or review. The RMP model provided by Michaela (2011) serves as the basis for our primary criticisms in this report. As a result, it will be thoroughly detailed in the supplemental analysis and further explained in the part that follows.

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Risk Identification.

By Pejman (2012) identifying risk is the first step in the Risk Management Program (RMP) usually informal and can be performed in various ways depending on the organization of the project team. It means that the identification of risks relies mostly on past experience that should be used in upcoming projects.

The possible risks must be identified using an allocation process. This may be selected and planned by the organizational phase that identifies and documents the risk components that may negatively influence certain project objectives. There are several ways to categorize construction risks, including risk kinds (such as natures, magnitudes, etc.), sources and/or origins, or project phase. Some of the current investigations suggest a hierarchical structure of risks that divides the risks into categories based on where they originated and where they could have an impact on the project.

It can be difficult to completely eradicate risks and other hazards, but once they have been recognized, it is much simpler to take action and maintain control. Risk management will be more successful if the root causes of the risks have been determined and assigned before any issues arise (PMI, 2004). Risk management entails not just anticipating issues and finding solutions, but also being ready for unforeseen issues that can arise. In addition to reducing project losses, managing possible threats may turn risks into opportunities that result in economic success, environmental benefits, and other benefits (Ropel 2011).

Risk Assessment.

The analysis of the data gathered concerning possible danger occurs in the second stage, Assessment. By estimating their recurrence rates, hazards with the greatest impact on the project are identified and prioritized through risk analysis. Two kinds of methodologies (qualitative and quantitative) have been established for the examination of the indicated hazards. When hazards can be categorized on a descriptive scale from high to low, the qualitative approaches are most useful. The quantitative approaches are based on numerical estimate and are used to calculate the likelihood and effects of recognized risks (Nerija, 2012). When a project risk manager chooses a risk assessment method, several elements should be taken into account, including the cost of using the approach, the amount of external party permission, organizational structure, agreement, adoptability, complexity, validity, and credibility, as well as automation. Even if it is difficult to collect such high-quality data in relation to risk items in the construction sector, it is necessary for the risk manager to have high quality data in order to successfully use the quantitative methodologies. Addressing the subjectivities and uncertainties related to building operations is seen to be challenging. The uniqueness and non-repetitive character of building projects made utilizing probabilistic risk assessment methods difficult in addition to the lack of collectability. Pejman (2012) notes that businesses frequently choose a qualitative approach since it is more practical to convey hazards than to quantify them (Michaela, 2011). A semi-quantitative strategy is also available to permit some relative risk rating, but these methods are still unable to give in-depth evaluation of significant and complex projects or

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systems. The hazards are challenging to manage or minimize using only qualitative risk assessment. It is advantageous to use both qualitative and quantitative risk assessment in order to effectively identify the project's risks while keeping costs, schedules, and resources under control (tarkumar shah, 2004). Regardless of whether qualitative risk analysis will be performed, the qualitative technique is highly suggested as a starting point for the risk management process since it aids in understanding the process (Tarkumar shah, 2004).

Project Achievement.

For each project stakeholder, the project's success is the same. Depending on the three constraints of the project, the success of the project can be judged as soon as the project has generated its deliverables (Cost-time-scope). The criteria by which project success has traditionally been judged have been deemed to include delivering on schedule, under budget, and in accordance with specifications. (Grant, 2019) These criteria are still often employed in publications on project success even though this method of determining project success is presently the subject of intense criticism.

According to Agarwal and Rathod (2005:361), project success is uncommon. Their claim is supported by a divergent understanding of what success is among the stakeholders assessing the project's performance. According to Agarwal and Rathod, a project may be deemed successful if it achieves the technical performance criteria and/or objectives put out and generates a high degree of overall satisfaction with the project's results (2006:361).

According to Strang (2003), a combination of skills, including interpersonal aptitude, technical proficiency, cognitive aptitude, the capacity to comprehend the situation and people, and the capability to dynamically apply appropriate leadership behaviors are required in order to manage projects successfully.

According to Levine, a successful project manager is someone who can integrate all the skills from numerous disciplines, including fundamental requirements, business case, scoping and defining a project, scheduling tasks and project planning, effectively allocating and evaluating resources and personnel, and managing the workforce.

Cost

Cost is a unit of measurement for the resources needed to get an item or finish a task. The materials used to make an object may be represented by their monetary worth. Cost is typically indicated in monetary terms, such as in employee time. (2006) Donald and Schindler Cost typically belongs in the managerial accounting category and serves four key functions. Project cost refers to the planning, estimating, budgeting, and cost-controlling procedures used to ensure that the budget is fulfilled within the allocated budget. 2015 (Carvalho).

Project cost management involves holding individuals in charge of any component of the project's scope (managers, designers, contractors) accountable for operating within predetermined budgets and taking necessary management action. This ensures that the project fulfills financial performance targets. (2008) Olsson

Time

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In project management, the project schedule is a document that, when correctly created, may be used for planning, execution, monitoring and controlling, as well as notifying the stakeholders when the scope has been delivered. Project scheduling's primary goal is to represent. The strategy for completing the project's scope over time. In its most basic form, a project schedule might be a list of work items with dates assigned to them that show when milestones (often the delivery of deliverables) are expected to be reached. The project schedule is used to coordinate the work and inform all stakeholders of the estimated completion dates for various work components and project activities. The project schedule also serves as a tool for connecting the project's task components to the required resources.

Quality

Quality is sometimes described as "the entirety of an entity's attributes that influence its capacity to meet expressed or implied demands." The project requirements from the donor and the recipients are defined using the stated and implied quality needs as inputs.

The decisions and activities taken in relation to the quality of a product or service's design and compliance to that design result in the quality specifications of that product or service.

Design quality is a strategic choice for the company since it speaks to the product's intrinsic worth in the market.

Customer Satisfaction

Customer satisfaction is based on understanding, defining, assessing and managing customer needs so that their expectations are met. This concept implies compliance with the requirements to ensure that the project produces the output it should create.

Customer satisfaction is about more than just providing customer support to resolve technical issues. It's about creating a consistently positive experience with your brand. Satisfied customers are ones who observe a pattern of positive interactions, making them trust your brand.

Customer satisfaction information, including surveys and ratings, can help a company determine how to best improve or changes its products and services.

Nowadays when social media play such an important role in making decisions it‘s crucial to keep an eye on the quality of customer service you provide. If you don‘t care about customers‘ satisfaction, don‘t expect them to care about your services or products. (Dooley, 2016).

Independent Variable **Dependent Variable**

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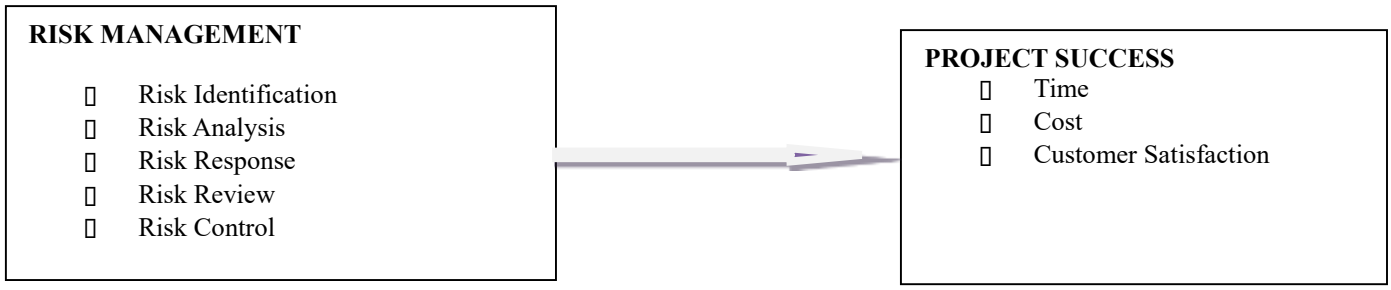

Source: Researcher (2021)

Figure 1: Conceptual framework

Research Gaps

Various studies have been conducted on construction projects. The study was focused on completed and delayed projects. The study focused on effect of risk management as a determinant of projects' success under Rabbit Enterprise. The study did not specifically focus on the completed and delayed projects only but also on identifying exhaustively the risks associated to a project, the methods of minimizing risks and evaluate the possible measures and to investigate the Effect of effective risk management processes on the success of projects.

3. RESEARCH METHODOLOGY

Research design

Research of study adopted a descriptive survey research design. The method was considered because it is more precise, accurate and involved description of events in carefully planned way (Babbie, 2004). This research designable soportrays the characteristics of a population fully (Creswell Creswell, 2017)

Target Population

The study population for this study had 80 staffs from Rabbit LTD who has been presented as a partner for community development and sustainable change to outstanding players in the architecture and construction field of Rwanda. **Table 1: Target population**

Categories of the target population	Target Population	Percentage
Contractors (project managers)	5	5
Consultants (civil engineers, architects, electrical engineers, Mechanical Engineers, structural engineers, surveyors)	60	60
Client engineers	15	35
Total	80	100

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Sample Design

Sample design is a definition plan for obtaining a sample from a given population. It refers to the techniques or the procedure the research would adopt in selecting items for the sample. Sample design may as well lay down the number of items that was included in the sample such as the size of the sample. (Mugenda.O. M. and Mugenda A. G., 2003)

Sample design is determined before data were collected. There are many sample designs from which research can choose. Some designs are relatively more precised and easier to apply than others. Researcher must select or prepare a sample design which should be reliable and appropriate for his research study.

In selecting the respondents, the researcher was used stratified sampling technique because it is an extremely productive method of sampling in situations where the researcher intends to focus only on specific strata from the available population data; it provides better coverage of the population since the researchers have control over the subgroups to ensure all of them are represented in the sampling.

4. SUMMARY OF MAJOR FINDINGS

In the first part of this section, the results of the study are discussed based on the research study hypothesis in the first chapter.

To examine the effect of risk identification on Rabbit LTD projects success.

As presented in the table 7 above an overall mean of (M= 4.50, SD= 0.44) Perceptions of respondents on Risk identification to a large extent.

To analyze the effect of risk analysis on Rabbit LTD projects success.

From the Table 8 above Perceptions of respondents on Risk Analysis presented an overall mean of (M= 4.64, SD= 0.30) indicating it was practiced to a Large Extent.

To assess the effect of risk response on Rabbit LTD projects success.

From the Table 9 above of Perceptions of respondents on Risk Response overall mean of (M= 4.04, SD= 0.39) effect of risk response on Rabbit LTD projects success to a large extent.

To find out the effect of risk review on Rabbit LTD projects success.

From the Table 10 above Perceptions of respondents on Risk Review on project success an overall mean of (M= 4.67, SD= 0.35) to a large extent.

To analyze the effect of risk control on Rabbit LTD projects success

From the Table 11 above Perceptions of respondents on Risk Control on project success with an overall mean of (M= 4.71, SD= 0.44) meaning is to a large extent.

5. CONCLUSION

The main purpose of this study was to analyze effect of risk management on Rabbit project success in Rwanda. After analyzing the data collected from the workers of Rabbit Ltd and basing on the findings, the researcher

concludes that there is a considerable contribution of Rabbit Project success of workers in Rwanda. The study sought to establish the effect of risk management on Rabbit ltd project success in Rabbit ltd in Rwanda. Research findings indicate that there is a strong relationship (R2= 0.84) between risk management and the project success of Rabbit project.

The result of the study also indicates that the value of adjusted R-squared is 0.79. This implies that 79.6% of the variance in Rabbit project ‟ project success can be accounted for by risk management.

6. RECOMMENDATIONS

There is need for Rabbit Ltd to strengthen and sensitize employees to put more focus on risk response for better project success. This is indicated in Table 9 of risk response questions asked to respondents (The statement that the firm It is necessary for a project manager to emphasize on risk response in order to achieve project objectives with a mean of (M=3.56, SD=0.39) indicating it was practiced to a Moderate Extent. The statement that the firm Action taken as methods of risk response to reduce risk that may arise, contribute on the project success with a mean of (M=3.98, SD=0.33) indicating it was practiced to a Moderate Extent.)

Rabbit Ltd should provide trainings to employees to improve their standard in terms of risk review although not on bad response as Table 10, The statement that the firm with a mean of (M=4.49, SD=0.34) suggesting it was applied to a great level, continuous monitoring and managing of project risks guarantee that the risk response strategy's impacts on project success are realized. There is need for Rabbit Ltd to keep boosting employees' risk identification skills for better performance and success of projects of the Rabbit Ltd.as Table 7 indicate. The statement that the firm Risk identifying minimizes or eliminates the Effect of risks on project success with a mean of (M=4.49, SD=0.43) indicating it was practiced to a large extent. The researcher hereby recommends to the government of Rwanda to keep on supporting the RABBIT LTD in order to increase their capacities to carry out bigger projects. Government also should technically assist the management of RABBIT LTD in order to avoid the waste of funds in to have a better project success. Government also has to provide the management of RABBIT LTD with professional trainings in risk management that will lead to the better Project success.

REFERENCES

Aldershot, UK: Gower Publishing Limited. 658p. HYVARJ, I. 2006. Success of Projects in Different Organizational Conditions. Project Management Journal Project Management Institute, 37 (4): 31-41

Didraga, Cagliano. (2015). Risk and crisis management in the public sector. London and New York: JOURNAL OF RISK RESEARCH, vol. 18 n. 2.

Donald and Schindler. (2006). Business Research Methods. UK: McGraw Hill Publishing Company.

NOKES, S., GREENWOOD, A., MAJOR, IL, GOODMAN, G. 2004. The Definitive Guide to Project Management. Financial Times, 13 January 2004, 8-9.

PMBOK. 2000. A Guide to Project Management Body of Knowledge. Pennsylvania: Project Management Institute.

Juneja, P. (2018, April 21). www.pm4dev.com. Retrieved from www.pm4dev.com: https://www.pm4dev.com/pm4dev-blog/entry/definition-of-project-success.html

Kenton, W. (2019, 13 June). Investopedia. Retrieved from investopedia web site: https://www.investopedia.com/terms/r/ratioanalysis.asp

Kerzner. (2013). Project Management: A Systems Approach to Planning, Scheduling and Controlling. 7ed. New York: John Wiley & Sons.

Kolade. (2015). An incentive-based theory of bank regulation. Journal of Financial intermediation, 2, 255-276.

PMBOK. 2003. A Guide to Project Management Body of Knowledge. Pennsylvania: Project Management Institute.

Arditi, D., Nayak, S., &Damci,A.(2017).Effect of organizational culture on delay in construction. International Journal of Project Management, 35(2), 136-147.

https://www.pmi.org/kasimage/d8185194-e271-418a-b64e-26a70bc148ed/p2_01.jpg

Cardoso, P., Dominguez, C., &Paiva,A.(2015).Hints to improve motivation in construction companies. Procedia Computer Science, 64, 1200-1207.

Ibrahim et al. (2010) Utilization of the multiple aspects of IMDP learning to improve upon delays in the implementation of capital projects in Obuasi Mine. IMDP Thesis, Graduate School of Business University of Cape Town.

Josephson and Lindstrom (2007) Measuring performance in construction projects, in proceedings of the CIB World Building Conference on Construction for Development, Cape Town, 14-18 May, 383-394.

Kikwasi (2008) causes and effects of delays and disruptions in construction projects in Tanzania. Australasian Journal of Construction Economics and Building Conference Series Review

Kolesnikov (2014) Developing an integrated curriculum model for construction management education. Journal for Workforce Education and Development, 1, Article 2, (2005).

Gorard, S. (2013). Research design: Creating robust approaches for the social sciences. Sage.

Kerzner, H., &Kerzner, H.R. (2017). Projectmanagement: a systems approach to planning, scheduling, and controlling. John Wiley & Sons.

Meyers, L.S., Gamst, G., &Guarino, A.J. (2016). Applied multi-variate research: Design and interpretation. Sage publications. [21] BURKE, R. 2007. Introduction to Project Management. Hampshire, UK: Burke Publishing. 283p.

[22] COOK-DAVIES, TJ. (2002). The "real" Success Factors on Projects. International Journal of Project Management ,20: 185-190.