

Journal of Entrepreneurship & Project Management

ISSN Online: 2616-8464



Effect of Project Planning Practices on Performance of Improve Capacity for Supply of Quality in Reproductive Health Services Project in Nyamasheke District, Rwanda

Chantal Umulisa & Dr. Jean de Dieu Dushimimana

ISSN: 2616-8464

Effect of Project Planning Practices on Performance of Improve Capacity for Supply of Quality in Reproductive Health Services Project in Nyamasheke District, Rwanda

Chantal Umulisa¹ & Dr. Jean de Dieu Dushimimana²

¹ Master of Project Management, University of Kigali, Rwanda

² Senior Lecturer, University of Kigali, Rwanda

How to cite this article: Umulisa C., & Dushimimana J., D. (2023). Effect of Project Planning Practices on Performance of Improve Capacity for Supply of Quality in Reproductive Health Services Project in Nyamasheke District, Rwanda. *Journal of Entrepreneurship & Project Management*. Vol 7(15) pp. 163-172 <https://doi.org/10.53819/81018102t2294>

Abstract

The purpose of this study was to investigate the effect of project planning practices on project performance in Rwanda. Specifically the study determined the effect of budgeting plan on performance of Improve capacity for supply of quality in reproductive health services project in Nyamasheke District, examine the effect of communication plan on performance of Improve capacity for supply of quality in reproductive health services project in Nyamasheke District and investigate the effect of risk management plan on performance of Improve capacity for supply of quality in reproductive health services project in Nyamasheke District. This research adopted both qualitative and quantitative research design. In this study target population composed of 87 of Improve Capacity for supply of quality in reproductive health services project, SFH managerial staff, Health Centre representatives, District Health and Environmental nit Staff. The study applied the following tools of data collection; questionnaires, interview especially for the beneficiaries and documentation used to collect secondary data. Data analysis done using the Statistical Package for Social Sciences (SPSS). The results demonstrate statistically significant positive correlations between different planning practices and project performance. The model Summary presented provides an overview of the regression analysis conducted on risk management plan, budget plan, communication plan and performance of Improve Capacity for Supply of Quality in Reproductive Health Services Project in Nyamasheke District. The R-value of 0.916 indicates a moderately strong correlation between the predictors and the dependent variable. The R Square value of 0.839 indicates that approximately 83.9% of the variance in the project performance can be explained by the predictors in the model. This analysis reveals that the budget plan ($\beta=0.467$, $p=0.000<0.05$), communication plan ($\beta=0.361$, $p=0.004<0.05$), risk management plan ($\beta=0.189$, $p=0.003<0.05$) are statistically significant in enhancing the performance of the Improve Capacity for Supply of Quality in Reproductive Health Services Project. Project teams should consistently monitor identified risks, promptly address emerging issues, and implement the predefined mitigation measures to minimize negative impacts on project performance.

1. Introduction

The environment in which the projects are operating has been a challenge but not as the current time when the Project planning practices are being used by many projects and these can affect the performance of project as well (Patanakul *et al.*, 2016). This case is occurring globally where each and every project is striving for its performance by use of project planning practices (Kerzner 2018).

In Rwanda, some projects are performing poorly due to lack of better planning practices to be put in place. Some challenges of implementation of project planning practices in projects are: lack of accountability, lack of clear communication, scope creep, budgeting issues, inadequate skills of team members. It is long well-known by industry practitioners that how well designed project planning has significant impact on project outcome. Starting project to succeed in the eyes of the clients and stakeholders is an important role of project managers (Bimha, 2019).

Despite the fact that the Government and private actors are implementing a number of activities to encourage successful project execution, ineffective project planning practices may be ascribed to poor project management cycle performance. According to the findings of prior research, many initiatives in Rwanda fail for a variety of reasons, including miscommunication, a lack of supplies, and inadequate risk management (Mukeshimana, 2021).

Generally speaking, there are few studies conducted on project planning practices and project performance in the region, including Gahigana's (2019), which assessed the determinants of project success. Dufitumukiza (2022) conducted research about the project planning and sustainability of the Rwanda education assistance project in Rwamagana District; Eric (2021) analyzed the effect of project planning practices on improving project performance in Rwanda.

The studies did not focus on effect of project planning practices on the performance of projects implemented by Societal for Family Health (SFH). Hence, the need for this study to be carried out to specifically address the academic parity gap in understanding the critical effect of budgeting plan, communication plan and risk management plan on performance of Improve capacity for supply of quality in reproductive health services project implemented by Societal for Family Health (SFH) in Nyamasheke District, Rwanda.

1.2 Objectives of the Study

The purpose of this study was to investigate the effect of project planning practices on project performance.

Specific objectives:

1. To determine the effect of budgeting plan on performance of Improve capacity for supply of quality in reproductive health services project in Nyamasheke District.
2. To examine the effect of communication plan on performance of Improve capacity for supply of quality in reproductive health services project in Nyamasheke District.
3. To investigate the effect of risk management plan on performance of Improve capacity for supply of quality in reproductive health services project in Nyamasheke District.

1.3 Research hypotheses

1. Ho1: There is no significant effect budgeting plan on performance of Improve capacity for supply of quality in reproductive health services project in Nyamasheke District.

2. Ho2: There is no significant effect communication plan on performance of Improve capacity for supply of quality in reproductive health services project in Nyamasheke District.
3. Ho3: There is no significant effect risk management plan on performance of Improve capacity for supply of quality in reproductive health services project in Nyamasheke District.

2. Literature review

This chapter analyses what other researchers, authors, writers discussed on the topic which have a relationship with the study.

2.1. Theoretical framework

The theoretical perspective of this study on effect of project planning on project performance can be approached from the lens of the Traditional theory of project management, agile project management theory, theory of constraints.

2.1.1. Traditional Project Management theory

According to Reaiche and Papavasiliou (2022), this theory often associated with the Waterfall model, follows a linear and sequential approach to project planning. It involves a comprehensive upfront planning phase, where all project requirements and activities are defined before execution begins. Emphasis is placed on detailed documentation, adherence to schedules, and strict change control. The theory assumes that project requirements can be clearly defined at the beginning and that changes can be minimized or controlled during the project's lifecycle.

Traditional Project Management theory, also known as the Waterfall approach, is a widely used project management methodology that follows a sequential and linear process (PMI, 2017). It involves upfront planning and execution in a step-by-step manner, with each phase dependent on the completion of the previous one. The key characteristics of Traditional Project Management include a predefined project scope, detailed planning, a rigid structure, and a focus on upfront requirements gathering (Kerzner, 2017). The approach assumes that project requirements are stable and known at the beginning, allowing for the development of a comprehensive project plan with fixed timelines, budgets, and scope (PMI, 2017).

However, the Traditional Project Management theory has limitations in handling complex projects with evolving requirements, dynamic environments, and high levels of uncertainty (Cooke-Davies, 2019). Its rigid nature makes it less flexible to accommodate changes, and it may struggle to deliver value in fast-paced, innovative, or knowledge-driven projects (Kerzner, 2017). Despite these limitations, Traditional Project Management remains a valuable approach for projects with stable and predictable conditions, where a thorough upfront plan, detailed documentation, and a hierarchical communication structure are essential (PMI, 2017). It serves as a foundation for other project management methodologies and can be combined with adaptive approaches to strike a balance between predictability and flexibility in managing projects (Cooke-Davies, 2019).

It has a relationship with my research since it assisted in defining Improve capacity for supply of quality in reproductive health services project objectives, determining project scope, creating a detailed project schedule, estimating resource requirements, and developing a budget.

2.1.2. Agile Project Management theory

Agile theories, such as Scrum and Kanban (2017) promote adaptive and iterative planning approaches. They focus on delivering value incrementally and responding to change throughout the project. Agile methods prioritize collaboration, flexibility, and continuous improvement, allowing for quick adjustments based on feedback and evolving requirements. The Agile theory of project management is a modern approach that emphasizes flexibility, collaboration, and iterative development. It emerged as a response to the limitations of traditional, plan-driven methodologies, such as Waterfall, which struggled to adapt to rapidly changing project requirements and customer needs. Agile methodologies promote adaptive planning, continuous feedback, and incremental delivery to enhance project outcomes.

Agile Project Management theory is a project management approach that emphasizes flexibility, adaptability, and collaboration in response to changing project requirements and dynamic environments (PMI, 2017). It is characterized by iterative and incremental development, where work is divided into small, manageable increments called sprints (Schwaber & Sutherland, 2017). Agile Project Management promotes frequent customer collaboration, continuous delivery of valuable features, and the ability to respond quickly to feedback and changing priorities (PMI, 2017).

Agile Project Management theory is particularly suitable for projects with evolving requirements, complex and uncertain environments, and where innovation and creativity are essential. It encourages self-organizing teams, empowering them to make decisions and adapt to emerging challenges. However, Agile Project Management may face challenges in projects with strict regulatory compliance, fixed timelines, and large-scale teams (Cooke-Davies, 2019). Nevertheless, Agile Project Management has gained significant popularity in the software development industry and has shown promising results in increasing customer satisfaction, promoting collaboration, and enabling faster time-to-market (Schwaber & Sutherland, 2017).

This theory has relationship with my study since it helped in flexibility, adaptability, and collaboration in response to changing Improve capacity for supply of quality in reproductive health services project requirements and dynamic environments.

2.1.3. Theory of Constraints (TOC)

According to Parker *et al.* (2015) TOC identifies the critical constraints that limit a project's ability to achieve its goals. By focusing on these constraints, the theory aims to improve overall project performance. TOC emphasizes the concept of buffer management to handle uncertainties and manage project schedule adherence effectively. The Theory of Constraints (TOC) is a management philosophy and methodology that focuses on identifying and managing constraints or bottlenecks that limit the overall performance of a system. It was primarily applied in manufacturing and operations management; TOC principles can also be used in project planning to improve project performance (Şimşit *et al.*, 2014).

The Theory of Constraints (TOC) is a project management theory that focuses on identifying and managing the constraints that limit the overall performance of a project or system. It centers around the idea that every system has at least one constraint that impedes its ability to achieve its goals. The Theory of Constraints advocates for a systematic approach to identify, exploit, and elevate the constraints to improve the overall flow and performance of the project (Goldratt & Cox, 2014).

TOC emphasizes the importance of optimizing the flow of work through the identification and management of constraints. It encourages project managers to prioritize work based on the constraint and adopt measures to synchronize and balance the flow of resources and tasks. The Theory of Constraints also promotes the concept of buffer management to protect the project from disruptions and ensure that tasks flow smoothly through the system. By focusing on managing constraints, the Theory of Constraints aims to improve project performance, reduce bottlenecks, and enhance overall productivity. It provides a structured and systematic approach to project management that enables organizations to maximize their resources and achieve their project goals more effectively (Goldratt, 2010).

This theory is linked with my research of study since it assisted in identifying and managing the constraints that can intrude towards the performance of Improve capacity for supply of quality in reproductive health services project.

2.2 Conceptual framework

The study intended to find out the link between independent variable which is project planning practices and the dependent variable which is project performance as well as intermediate.

Independent variables Project Planning

Dependent variable Project Performance

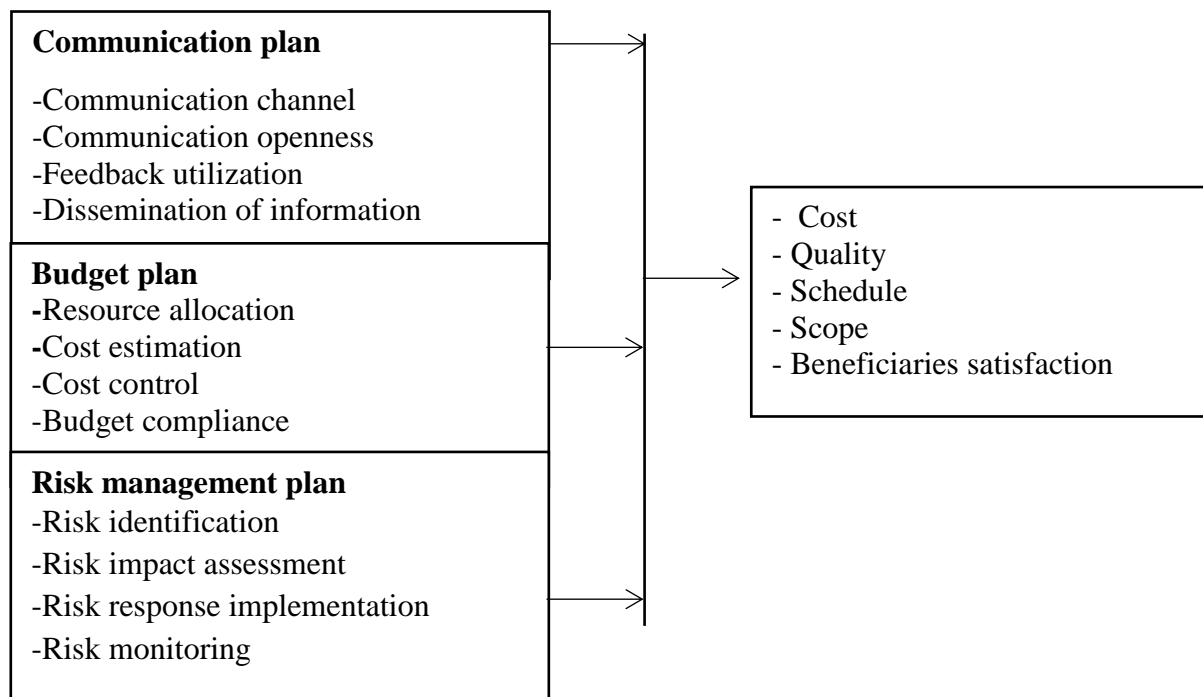


Figure 1: Conceptual framework

The conceptual framework is a visual representation that outlines the relationships between the independent variable (Project Planning) and the dependent variable (Project Performance),

Independent Variable (Project Planning): This variable represents the main focus of the study and encompasses three key components: Communication Plan, Budget Plan, and Risk Management Plan.

Communication Plan: It includes various sub-components, such as Communication Channel, Communication Openness, Feedback Utilization, and Dissemination of Information. The effectiveness of the Communication Plan can impact how well project stakeholders are informed, engaged, and able to provide valuable feedback.

Budget Plan: This comprises Resource Allocation, Cost Estimation, Cost Control, and Budget Compliance. A well-structured Budget Plan is essential for efficiently utilizing resources and keeping the project within financial constraints.

Risk Management Plan: It involves Risk Identification, Risk Impact Assessment, Risk Response Implementation, and Risk Monitoring. A strong Risk Management Plan helps identify potential threats to the project and implement strategies to mitigate or respond to these risks effectively.

Dependent Variable (Project Performance): This represents the outcome variable that is influenced by the independent variable (Project Planning). Project Performance is a measure of how well the Improve capacity for supply of quality in reproductive health services project, implemented by Societal for Family Health (SFH), achieves its goals and objectives.

3. Research methodology

Research design

The study used descriptive and correlational research in facilitating the analysis of data. Descriptive research involves identification of attributes of a particular phenomenon based on an observational basis, or the exploration of correlation between two or more phenomena. This research adopted both qualitative and quantitative research design. Which means that both questionnaire and interview put in place while seeking the information to be based on while analyzing and interpreting such data.

Target population

In this study target population composed of 87 of Improve capacity for supply of quality in reproductive health services project, SFH managerial staff, Health Centre representatives, District Health and Environmental nit Staff. No need of sampling since universal sampling or census inquiry sampling applied. This method means that when the total population is below 100, the whole population is taken and be used a sample size.

Data collection methods and instruments

In order for this study to be well accomplished, each objective of the study investigated using specific questions. The study applied the following tools of data collection; questionnaires, interview especially for the beneficiaries and documentation used to collect secondary data.

Data analysis

Descriptive statistics used for making the frequencies, percentages and making the tables for better analysis of the information. As descriptive statistics is more useful to analyze the data that need the use of table and charts so that the reader tried to understand the finding easily without any confusion. Data analysis done using the Statistical Package for Social Sciences (SPSS).

4. Research findings

In this section, the author explains how the research's findings and interpretations of the data serve to further the study's stated aims. Quantitative methods were used to supplement the findings. The section analyse the correlation and regression analysis results in order to test the research hypotheses.

Table 1: Correlations

		Budget plan	Communication plan	Risk management plan	Project performance plan
Budget plan	Pearson Correlation	1	.701**	.710**	.854**
	Sig. (2-tailed)		.000	.000	.000
	N	87	87	87	87
Communication plan	Pearson Correlation	.701**	1	.639**	.815**
	Sig. (2-tailed)	.000		.000	.000
	N	87	87	87	87
Risk management plan	Pearson Correlation	.710**	.639**	1	.757**
	Sig. (2-tailed)	.000	.000		.000
	N	87	87	87	87
Project performance	Pearson Correlation	.854**	.815**	.757**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	87	87	87	87

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

Source: Field data, September 2023

Table 1 presents the correlations between various project planning practices and project performance in the context of the Improve Capacity for Supply of Quality in Reproductive Health Services Project in Nyamasheke District, Rwanda. The results demonstrate statistically significant positive correlations between different planning practices and project performance. Specifically, budget planning, communication planning, and risk management planning show strong positive relationships with project performance, as indicated by Pearson correlation coefficients (budget plan: $r = 0.854$, $p < 0.05$; communication plan: $r = 0.815$, $p < 0.05$; risk management plan: $r = 0.757$, $p < 0.05$). These findings indicate the critical role of effective planning practices in influencing and enhancing the overall performance of the project, aligning with the study's focus on project planning practices and their impact on project performance. In a similar manner, the work by Potts and Ankrah (2014) indicates the importance of effective project planning practices. Their findings align with the study's results, which show strong positive correlations between budget, communication, risk management planning and performance of Improve Capacity for Supply of Quality in Reproductive Health Services Project in Nyamasheke District.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.916 ^a	.839	.833	.27096

a. Predictors: (Constant), Risk management plan, Communication plan, Budget plan

Source: Field data, September 2023

<https://doi.org/10.53819/81018102t2294>

The Model Summary presented in Table 2 provides an overview of the regression analysis conducted on risk management plan, budget plan, communication plan and Performance of Improve Capacity for Supply of Quality in Reproductive Health Services Project in Nyamasheke District. The R-value of 0.916 indicates a moderately strong correlation between the predictors (Risk management plan, Budget plan, Communication plan) and the dependent variable (Project performance). The R Square value of 0.839 indicates that approximately 83.9% of the variance in the project performance can be explained by the predictors in the model. According to Gray and Larson (2008) project managers around the globe recognize the essential nature of comprehensive project planning for the successful execution of projects. Experienced project managers understand the crucial role that well-structured project planning plays in achieving project objectives.

Table 3: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.744	3	10.581	144.125	.000 ^b
	Residual	6.094	83	.073		
	Total	37.838	86			

a. Dependent Variable: Project performance

b. Predictors: (Constant), Risk management plan, Communication plan, Budget plan

Source: Field data, September 2023

The findings from Table 3 present an analysis of variance (ANOVA) conducted to assess the relationship between the independent variables and the dependent variable. The calculated F-statistic of 144.125, with a p-value of 0.000 (significantly lower than the typical significance level of 0.05), indicates the presence of a highly significant regression. This outcome implies that Risk management plan, Budget plan and communication plan hold strong positive correlation over the project's performance. As a result, the alternative hypothesis is favored, leading to the rejection of the null hypothesis. Findings supported by Andersen (1996)' study, indicate a clear connection between thorough planning processes and project performance, highlighting how careful planning can guarantee the project's continuity even after the initial funding stage.

Table 4: Coefficients

Model		Unstandardized Coefficients		Standardize d Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.047	.170		.276	.783
	Budget plan	.467	.073	.452	6.432	.000
	Communication plan	.361	.063	.370	5.742	.000
	Risk management plan	.189	.061	.200	3.072	.003

a. Dependent Variable: Project performance

Source: Field data, September 2023

Table 4 on coefficient estimations indicates that the performance of the Improve Capacity for Supply of Quality in Reproductive Health Services Project is influenced by several factors. Notably, the constant factor has a value of 0.052, indicating a baseline impact regardless of other variables. The budget plan variable demonstrates a significant positive effect, with each unit increase associated with a performance increase of approximately 0.467. Similarly, the communication plan variable has a positive impact, where each unit increase is linked to a

performance improvement of about 0.361. The risk management plan variable also contributes positively, with a performance increase of approximately 0.189 for each unit rise. This analysis reveals that the budget plan ($\beta=0.467$, $p=0.000<0.05$), communication plan ($\beta=0.361$, $p=0.004<0.05$), risk management plan ($\beta=0.189$, $p=0.003<0.05$) are statistically significant in enhancing the performance of the Improve Capacity for Supply of Quality in Reproductive Health Services Project.

5. Conclusion

The general objective of this study was to investigate the effect of project planning practices on project performance. In pursuit of this goal, the study assessed the effect of various project planning practices on the performance of the Improve Capacity for Supply of Quality in Reproductive Health Services Project in Nyamasheke District, Rwanda. The analysis of the collected data and the application of statistical tests yielded insightful conclusions for each specific objective. Notably, the findings revealed that the project's performance is significantly influenced by budgeting plan, communication plan and risk management plan. These outcomes align closely with the respective hypotheses, thereby leading to the rejection of the null hypotheses. This study indicates the vital importance of employing effective project planning practices to enhance the overall success of projects within the realm of reproductive health services.

6. Recommendations

Project managers should ensure that the budgeting plan is flexible enough to accommodate unforeseen expenses, while also adhering to financial constraints to avoid resource shortages during project implementation.

Nyamasheke Health Service Providers are advised to implement a clear and structured communication plan that includes regular updates to stakeholders on project progress, challenges, and successes.

All staff members should actively participate in communication activities, fostering open dialogue and sharing vital information to ensure a coordinated and informed approach to project activities.

Acknowledgement

Firstly, I would like to thank God for his guidance and protection not only during this study but in my entire life. And without the direction, collaboration, and support of many people, scientific research is virtually impossible to complete. I greatly appreciate Dr. Dushimimana Jean de Dieu for his dedication in supervising my work. I am also grateful to my classmates for their support and encouragement throughout this study.

References

- Anderson, M., & Johnson, R. (2017). The impact of budget planning on construction project performance. *Construction Management and Economics*, 35(9), 511-525.
- Brown, J., & Johnson, S. (2020). Budget planning and research and development project performance. *R&D Management*, 50(3), 303-317.
- Chen, J., & Lee, S. (2019). The relationship between the PESTEL framework and project performance in international projects. *International Journal of Project Management*, 37(6), 831-845.
- Chen, J., & Liu, Y. (2020). Communication plans and project performance in international development projects. *International Journal of Project Management*, 38(5), 687-698.
- Cooke-Davies, T. (2019). Project management beyond Waterfall and Agile. *International Journal of Project Management*, 37(3), 489-498

- Dufitumukiza, W. E. & Eugenia N. I. (2022) Project planning and sustainability of rwanda education assistance project in Rwamagana District. *Global Scientific Journal*
- Eric, M. (2021). effect of project planning practices on improving project performance in Rwanda. a case of Huguka dukore akazi kanoze project in Nyabihu district. University of Kigali
- Gahigana, S. (2019) *Determinants of Project Management Success In Rwanda, Evidence From Sur'eau Project of Society For Family Health Rwanda*. University of Rwanda, College of Business and Economics
- Harris, F., McCaffer, R., Baldwin, A., & Edum-Fotwe, F. (2021). *Modern construction management*. John Wiley & Sons.
- Hartmann, S., & Briskorn, D. (2022). An updated survey of variants and extensions of the resource-constrained project scheduling problem. *European Journal of operational research*, 297(1), 1-14.
- Johnson, R., & Smith, A. (2017). The impact of the PESTEL framework on construction project performance. *Construction Management and Economics*, 35(8), 511-525.
- Johnson, R., & Smith, A. (2018). The impact of communication plans on construction project performance. *Construction Management and Economics*, 36(2), 93-105.
- Kayombo, C. (2017). *The Role of Parents Involvement Towards Students Academic Performance Among Public Primary Schools in Tanzania: A Case of Selected Primary Schools In Ilala Municipality* (Doctoral dissertation, The Open University of Tanzania).
- Kerzner, H. (2017). *Project management: a systems approach to planning, scheduling, and controlling*. John Wiley & Sons.
- Meidan, M. (2016). *The structure of China's oil industry: Past trends and future prospects* (No. 66). OIES Paper: WPM.
- Parker, D. W., Parsons, N., & Isharyanto, F. (2015). Inclusion of strategic management theories to project management. *International Journal of Managing Projects in Business*.
- Project Management Institute (PMI). (2017). *A guide to the project management body of knowledge (PMBOK® guide) (6th ed.)*. Project Management Institute.
- Purnomo, R. (2013). Resource-Based View dan Keunggulan Bersaing Berkelanjutan: Sebuah Telaah Kritis Terhadap Pemikiran Jay Barney (1991). *Sustainable Competitive Advantage (SCA)*, 1(1).
- Reaiche, C., & Papavasiliou, S. (2022). The traditional, sequential methodologies. *Management Methods for Complex Projects*.
- Serrador, P., & Turner, R. (2015). The relationship between project success and project efficiency. *Project management journal*, 46(1), 30-39.
- Thamhain, H. J. (2014). Assessing the effectiveness of quantitative and qualitative methods for R&D project proposal evaluations. *Engineering Management Journal*, 26(3), 3-12.
- Yakubu, G. A., Ogunsanmi, O. E., & Yakubu, A. O. (2019). Influences of communication problems on project performance in Nigeria. *African Journal of Engineering Research*, 7(3), 74-84.