



ASSESSING THE INFLUENCE OF PROJECT RESOURCE PLANNING ON PROJECT PERFORMANCE: A CASE OF 100 WEEKS PROJECT IMPLEMENTED BY CARITAS IN MUSANZE DISTRICT

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Abstract

The effectiveness of project resource planning can be measured in terms of the extent to which it influences the implementation of the project and its performance as well. This study aimed at assessing the influence of project resource planning on performance of 100weeks project implemented by Caritas in Musanze district. The data were collected using a linked scale questionnaire where 1=Strongly Agree, 2= Agree, 3= Neutral, 4= Disagree, and 5= Strongly Disagree. The study employed 150 respondents sampled from 240 workers of Caritas. Among them, 44equivalent to 29.3% were males, while 105equivalent to 70.0% were females. The specific objectives were, to evaluate the influence of human resource planning, financial resource planning, and material and time resource planning on performance of 100weeks project. The demographic variables were reported by using frequencies and percentages, while the perception of respondents about the influence of project resource planning and performance of 100 weeks project was reported by mean and standard deviation. The relationship between variables was studied by using Pearson correlation tool of SPSS software. The results showed a very high perception of respondents about the influence of human resource planning on performance of 100 weeks project ($\bar{x} = 1.39$, $\delta = 0.52$). The results also showed a positive correlation between project resource planning and performance of 100 weeks project. In the same context, the results showed a strong positive correlation between human resource planning and performance of 100 weeks project ($r = 0.521$, $p = .000$, $N = 149$), a strong positive correlation between financial resource planning and performance of 100 weeks project ($r = 0.562$, $p = .000$, $N = 149$), and a medium positive correlation between material and time resource planning, and performance of 100 weeks project ($r = 0.348$, $p = .000$, $N = 149$). From these findings of the study, the researcher recommended public and private sectors to reinforce the resource planning process, project managers to develop project resource plan, and to employ work breakdown structure for all the staff so as to identify their area of competence and specialization. The researcher also recommended further researchers to investigate other factors that can influence project performance than resources.

Key Terms: Project planning, Project resources, project resource planning, project performance, 100 weeks project, Caritas, Rwanda

General Introduction and Background of the Study

Worldwide, many organizations have been adopted Enterprise Resource Planning (ERP) implementation and has become a key business driver in today's world (Mohmed,2015). According to Mukeshimana et al., (2020), worldwide, before starting any project first thing project managers have to perform is project planning. Well planned project considers essential parts of an undertaking of a project and give a plan to which project team can refer during project execution. In their study Mulyungi & Ndayisaba, (2018), stated that during the industrial revolution, the concept of project resource planning approach was initiated where most organizations shifted from the ancient approach and used scientific management to plan the project resources which will be allocated along within its implementation. The use of project resource planning approach in organizations has become extremely popular, and business leaders and project managers alike agree on the value that the success of many projects is due to availability of resources (Amponsah, 2012). Project success implementation involves organization of the firm's resources and motivation of the staff to achieve goals.

According to (Mwiringi & Njihia, (2014) in the recent years, enterprise resource planning(ERP) software have become widely used in almost all sectors such as production, services, finance, transportation, and public utilities. In their study, (Mwiringi & Njihia, (2014) continued by saying that human resource is a vital dimension of success. According to Mukeshimana et al., (2022) the task of project manager is based on the assumption that the performance or end product goals are always perfect and well defined in advance. The entire project management has to do this to prepare a concrete project plan and follow this plan all the way to success even if planning does not guarantee project success, and lack of planning will probably guarantee failure. The general performance of the global nature of business and project depends largely on overall performance of the team assigned to the project (Mulyungi &Ndayisaba, 2018).

In Africa, specifically in Zimbabwe and South-Africa; ERP systems are seen to be the solution to many problems such as the failure of Small and Medium sized Enterprises (SMEs). These ERP systems are able to provide SMEs with the opportunity to align and integrate all business processes and units into one information system(Mukwasi & Seymour, 2014). In Kenya, there exists that various challenges to the implementation of Strategic Information Systems (SISs) in commercial banks which include, lack of required infrastructure, resources and specialized skills, commitment from the senior management team and fear of adopting the system by both the bank employees and customers were some of the major challenge that were identified while training of bank employees and customers. Employing specialized technology and staff and lowering electronic banking charges were some of the popular responses that banks have been using (Mwangi et al; 2017).

In Rwanda, there is a frustration more than six miniature hydropower plants that work beneath limit or flopped through and through (Mulyungi & Ndayisaba, 2018). None of these projects has produced power at its optimal capacity, and as continued to be reported the common factor under failure was that several projects fail mainly due to poor resource planning (Musoni ,2014).

Statement of the problem

Most of project managers use most of their time in sorting out some way to accomplish the goal of the projects they are carrying out, some of these projects in Rwanda had been failed. The main causes experienced in this failure are the poor project planning especially in resource planning (Zohar, 2010).

In Rwanda, most projects have enough resources; however, they experience challenges that affect project performance, 50% of the businesses that are started in Rwanda do not exceed five years' life, even those which exceed five years only a fraction remains in operation in the next decade (Mukeshimana et al.;2020). In Rwanda, many projects experience problems of resource management, cost variation, completion delay, and lack of skills which result in project failure.

According to the office of Auditor General report for the financial year(2014-2017), main challenges in different institutions include: unreliable of internal controls failures through financial statements, failed projects and persistent weaknesses in contract management, lack of proper planning and coordination in implementation of government programmers, potential loss of funds, an increasing number of cases of fraudulent activities in entities, wasteful expenditure of funds, weak financial problem leads to failure of project. For all projects surveyed, 45.2% had poor time performance while 35.7% of those projects had poor cost performance(Gitau,2015) According to Transparency International Rwanda(TIR) reports 2020, in its Rwanda Bribery Index (RBI); there are potential risks about corruption in the public finance management systems, human resource management where employees are hired by different kinds of bribe. According to Baez- Camargo et al; (2017), there are public funds embezzlements especially in public sector, which affect the performance of government projects.

Specific objectives

- To analyze the perception of respondents about the influence of project resource planning and performance of 100 weeks project
- To evaluate the influence of human resource planning on performance of 100 weeks project
- To determine the influence of financial resource planning on performance of 100 weeks project
- To find out the influence of material and time resource planning on performance of 100 weeks project

Research hypotheses

H0: There is no significant relationship between project resource planning and performance of 100 weeks project

Literature Review and Related Studies

Human resource planning

Human Resource Planning (HRP) is the process of forecasting an organization's future demand for, and supply of the right type of people in the right number. According to Omoankhanlen (2013), in his journal of Emerging Trends in Economics and Management Sciences, he said that human resource planning is seen as one of the most crucial factors for an organization to achieve its goals, and without which the goals are as good as dead. According to Samar (2013), in his journal of Human Resource in Hospitality and Tourism, human resource planning is crucial to the success of tourism and hospitality organizations and yet is not widely applied. Such limited uses of human resource planning are due to the suspension of its results.

Human resource planning is one of the processes that facilitate the development of employees and the integration of their individual goals with the business plans. The innovative human resource planning programs limit the broken parts of employees dealing with through legitimate evaluation of their abilities and capacities (Biswa, 2020). The same previous author continued by saying that during the planning stage of a project, the project manager strives to have the right number and right kind of people at the right places and at the right time, doing things which result in both the organization and individual receiving maximum long run benefit. Human resource planning is also known as "Manpower planning, Employment planning, Labor planning, and Personnel Planning". As indicated by Pamella et al.,(2017), insufficient human resource cannot accomplish elite execution since human resources are the primary resources of labor to stay away from undesirable circumstances. Having the right number of human resource at explicit opportunity to do authoritative administrations, it will assist the organization with expanding in their presentation and efficiency which in returns assists with accomplishing the essential targets and objectives of the organization without any problem. Human resource planning is one of the cycles that work with the advancement of representatives and the combination of their singular objectives with the strategies (Chakraborty & Biswa,;2020). Human resource planning adds to the accomplishment of the scope of advantages for an organization. Human resource planning additionally helps in designating human resource to authoritative exercises, controlling expenses and building the foundation of other human resource plans and systems, like determination, enrollment, preparing, execution evaluation, and compensation(Al-Qudah et al,;2020).

Financial resource planning

According to (Mwiringi&Njihia,2014), the financial resource availability affects the implementation of enterprise resource planning (ERP) which in return influences the firm's performance to be tested. In their study, Mwiringi and Njihia (2014) continued by stating that there is a moderate positive correlation between financial resource availability and implementation (Mwiringi & Njihia,2014) and this in return leads to the performance of enterprise or project.

Material and time resource planning

Poor project planning, poor project management, inadequate supervisory of the manager, equipment availability, poor communication were the most important causes of project failure. Inaccuracy of material take off, increase in material costs due to environmental restriction, are also the main causes of bad project performance (Amandin, 2016). Appropriate material management in Rwanda is one of the pertinent elements to the success of the project, and therefore, a great number of studies elucidate that appropriate material management could lead to a higher level of production of the project and stimulates its success (Kayiranga et al; 2020).

According to Lawrence(2015), success in construction projects is demonstrated by its presentation in the accomplishment of undertaking time, cost, quality, wellbeing and natural manageability goals. In Rwanda, construction projects and for the most part in the region as well as around the world, they run a high gamble of being above and beyond financial plan and essentially late.

Project resource planning and project performance

Resource identification, sharing of resources, resource budgeting and resource control contributes enormously to the success of the projects. competent project team, adequate staffing, training and development and adequate remuneration are significant in explaining changes in project implementation, (Abdi & Sang(2020).

Theoretical and Conceptual Framework

This study has been underpinned by the resource based theory developed by Barney (1991). The theory expresses the ownership of vital resource gives an organization a once in a lifetime chance to foster an upper hand over its opponents. This competitive advantage can help the organization to enjoy strong profits compared to similar rival groups. Project managers have a role to utilize all the available resources through the project cycle stages as follows; identify and classify the firm's resources, appraise strengths and weaknesses related to competitors. Distinguish open doors for better usage of assets recognize the company's capacities, evaluate the lease creating potential for supportability, select a technique which best endeavors the organization's assets and capacities comparative with outers, and identify resource gaps which should be filled (Jonstone & Brenman, 1996).

This theory explores the need for proper planning and implementation based on available resources. Along these lines, the administration takes advantages of accessible assets and uses them to augment execution. The theory thus tends to the free factor since it underlines legitimate preparation, execution, and checking of venture assets.

This study intended to assess the influence of project resource planning on project performance. The project resources are measured by human resource planning, financial resource planning, and material and time resource planning while the project performance is measured by quality service delivery, project schedule, goal attainment, and beneficiary satisfaction. The demographic variables presented in the figure below have been taken as external variables of the study. Those variables are mainly gender, position, educational attainment, and working experience of respondents.

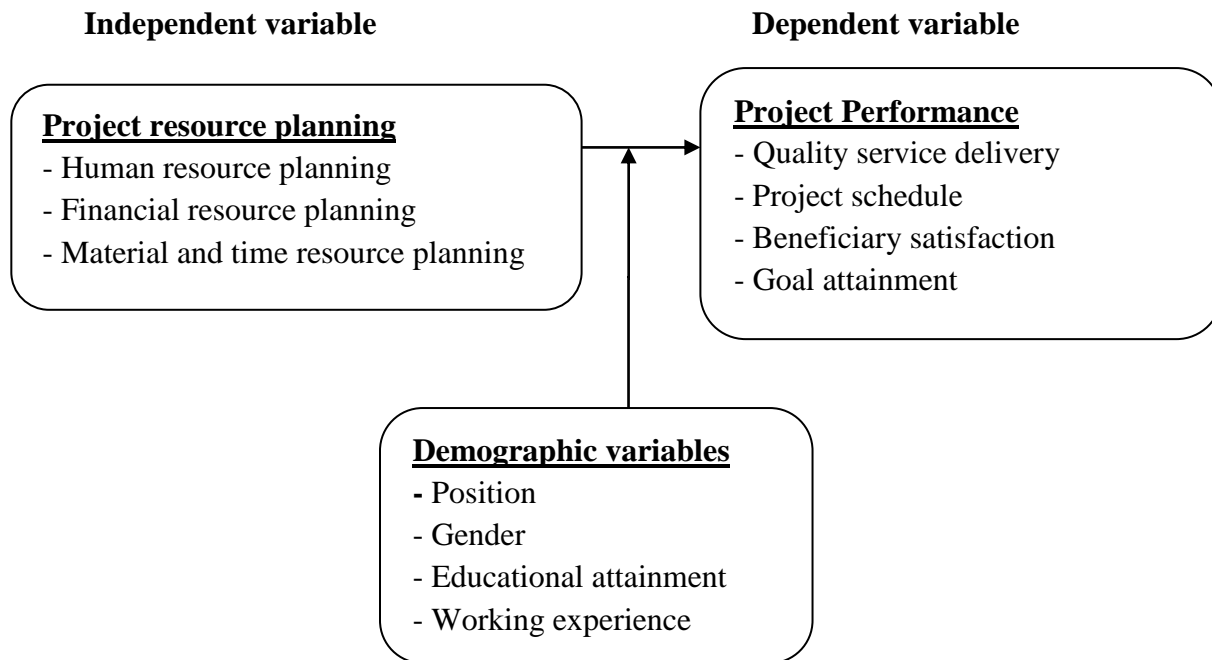


Figure1. Conceptual framework

Source: Researcher conceptualization,2022

Research methodology

In this study, the researcher used quantitative approach by using correlation design. In addition, descriptive statistics are used to evaluate the level of perception of respondents about influence of project resource planning on performance of 100 weeks project. The inferential statistics are used to evaluate the relationship between project resource planning and performance of 100 weeks project. The random sampling technique has been used to select 150 respondents from 240 employees of Caritas that will provide the information needed. The researcher collected data using a self-constructed questionnaire distributed to 150 respondents.

In this research, the researcher used descriptive statistics by reporting the mean and standard deviation for the five linked scales questionnaire. To examine the relationship between project resource planning and performance of 100 weeks project, the researcher used inferential statistics by using Pearson correlation. All those quantitative data were analyzed through statistical package for social sciences (SPSS) version 21.

Ethical considerations

This study did not contradict with ethical principles including the obligation to avoid hurting or embarrassing the respondents as well as respecting their privacy. The researcher asked herself the ethical relevance of the study with references to the values and actions to undertake in order to complete it. For this purpose, the researcher observed a set of measures to comply with ethical standards during the whole process of research. This included but not limited to seek the permission from Caritas. The respondents signed the consent form, researcher respected the anonymity of respondents and the respondents have been granted confidentiality regarding any given information.

Results and Discussions of Findings

		Human resource planning	Financial resource planning	Material and time resource planning	Project performance
Human resource planning	Pearson Correlation	1	.207*	.098	.521**
	Sig. (2-tailed)		.011	.232	.000
	N	149	149	149	149
Financial resource planning	Pearson Correlation	.207*	1	.154	.562**
	Sig. (2-tailed)	.011		.060	.000
	N	149	149	149	149
Material and time resource planning	Pearson Correlation	.098	.154	1	.348**
	Sig. (2-tailed)	.232	.060		.000
	N	149	149	149	149
Project performance	Pearson Correlation	.521**	.562**	.348**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	149	149	149	149

The first specific objective was to analyze the perception of respondents about the influence of project resource planning and performance of 100 weeks project. Descriptive statistics results showed that respondents strongly agree that human resource planning influences the performance of 100 weeks project as indicated by the overall mean and standard deviation ($\bar{x}=1.39$, $\delta=0.52$) which is very high. The findings also indicated that respondents strongly agree with the statement that financial resource planning influences the performance of 100 weeks project as indicated by the overall mean and standard deviation ($\bar{x}=1.43$, $\delta=0.56$) which is very high. And the respondents agree with the statement that material and time resource planning influences the performance of 100 weeks project as indicated by the overall mean and standard deviation ($\bar{x}=2.43$, $\delta=0.62$) which is high.

The second specific objective of this study was to determine the influence of human resource planning on the performance 100 weeks project implemented by Caritas in Musanze district. From the partial correlation coefficient (two-tailed) table1, the results showed a strong positive correlation between human resource planning and performance of 100 weeks project as indicated by ($r=.521$, $p=.000$, $N=149$) which is significant. This is supported by Omoankhanlen (2013), in his journal of Emerging Trends in Economics and Management Sciences, he said that human resource planning is seen as one of the most crucial factors for an organization to achieve its goals, and without which the goals are as good as dead. According to Pamella et al;(2017), insufficient human resource cannot accomplish elite execution since human resources are the primary resources of labor to stay away from undesirable circumstances. Having the right

number of human resource at explicit opportunity to do authoritative administrations, it will assist the organization with expanding in their presentation and efficiency which in returns assists with accomplishing the essential targets and objectives of the organization without any problem. As per (Zwikael, & Unger-Aviram, 2010), human resource practices such as team development have been found to be moderate predictors of project performance.

The third specific objective of this study was to find out the influence of financial resource planning on the performance of 100 weeks project. The findings showed a strong positive correlation between financial resource planning and performance of 100 weeks project as indicated in the table above by ($r=.562$, $p=.000$, $N=149$). This is supported by Mwirungi & Njihia (2014), who stated that there is a positive correlation between financial resource availability and implementation, and this in return leads to the performance of the project. The fourth specific objective was to determine the influence of material and time resource planning on the performance of 100 weeks project implemented by Caritas in Musanze district. In the same context, the results showed a positive medium correlation between material and time resource planning, and performance of 100 weeks project as presented in the table above and indicated by ($r=.348$, $p=.000$, $N=149$). This is supported by Kayiranga et al; 2020, who stated that appropriate material management in Rwanda is one of the pertinent elements to the success of the project. Lawrence, 2015, also stated that success in construction projects is indicated by its performance in the achievement of project time. This meant that financial resource planning, and material and time resource planning were essential to ensure the performance of 100 weeks project. This is underpinned by the resource based theory which states that the management has to utilize all the available resources to maximize the performance.

Conclusion and Recommendations

As per the findings of this study, it was concluded that resource planning influences the performance of 100 weeks project as indicated by the perception of respondents measured by the overall means and standard deviations. Descriptive statistics results revealed that respondents strongly agree with the statement that human resource planning influences the performance of 100 weeks project with the overall mean and standard deviation ($\bar{x}=1.39$, $\delta=0.52$) which is very high. The respondents agree with the statement that financial resource planning influences the performance of 100 weeks project with the overall mean and standard deviation ($\bar{x}=1.43$, $\delta=0.54$) which is very high. The respondents also agree with the statement that material and time resource planning influences the performance of 100 weeks project with the overall mean and standard deviation ($\bar{x}=2.43$, $\delta=0.62$) which is high. The inferential statistics results revealed that there is correlation between project resource planning and the performance of 100 weeks project. This meant that the better project resources are well planned, the higher 100 weeks project performs. From these results, the null hypothesis which said that there is no significant relationship between project resource planning and performance of 100 weeks project is *rejected*. This is supported by Dwivedula (2019) who revealed that human resource management (HRM) is a critical success factor for projects. Project human resources are taken as vehicle for organizational competitiveness, and project HRM as engine of innovation. Managing people in projects is essential for project success and is of strategic importance to the organization. Project human resource practices are a determinant of a project manager's satisfaction with one's job and this has implication for the project's overall performance.

The project resources issues like project manager's competence, top management support, cost of materials, payments of completed work, low speed of decision making, management commitment, and skilled workforce influence the performance of the project(Lindhard et al.;2016).

Recommendations

Based on the findings of this study and conclusions, the following recommendations are presented to public and private sector, project managers, and further researchers in order to improve the performance of the projects.

Public and private sectors

The findings of this study revealed that the better project resources are well planned, the higher the project performs. So, the public and private sectors are recommended to reinforce the resource planning process so that the Rwandan projects should improve their performance.

Project managers

Project managers are recommended to develop project resource plan that should contain every aspect that pertains to every resource necessary for project from beginning to end. In addition, this can help the manager to determine the resources needed at hand. Planning for the project is arguably the most efficient way to organize for the appropriate and effective use of such resources. These will essentially transform the project from a vision to a time-based plan. To improve the level of resource allocation, project managers are recommended to employ work breakdown structure for all the staff so as to identify their area of competence and specialization. This is to ensure that the resources are allocated to the right task, at the right place and in the right time that may lead to improve project performance.

Further researchers

Since this study focused on the influence of project resource planning on the performance of 100 weeks project, further researchers are recommended to investigate other factors that can influence the performance of the projects. As this study has been conducted in 100 weeks project implemented by Caritas in Musanze district, the same studies should be conducted in other projects and other districts of Rwanda, and this will help to get the image of influence of project resource planning on the performance of Rwandan projects.

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