

PROJECT PLANNING UNVEILED: DECODING ITS SIGNIFICANCE IN SHAPING PROJECT SUCCESS - A CASE OF THE SKILLS DEVELOPMENT FUND (SDF) IN KIGALI, RWANDA

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<https://doi.org/10.5281/zenodo.8184120>

Abstract: In the context of contemporary global development efforts, projects have emerged as pivotal tools for advancing societal and economic progress, particularly within developing countries. This surge in project engagement across diverse sectors and industries underscores their instrumental role in alleviating challenges such as poverty, inadequate healthcare, and unemployment prevalent in rural settings of many developing nations. As underscored by Maylor et al. (2006), the growth of project work has been remarkable, laying the foundation for enhanced social and economic well-being. Project management, as a discipline, orchestrates the seamless flow of requisite knowledge, skills, tools, and techniques into project activities to ensure the fulfillment of project objectives (Project Management Institute [PMI], 2004). The achievement of project success hinges on a spectrum of management practices, ranging from meticulous project planning to vigilant control and eventual closure. Effective project planning, in particular, emerges as a cornerstone of project success, fostering the creation of comprehensive project plans that serve as roadmaps during project execution (Gray & Larson, 2008). The evolution of project planning principles and methodologies traces back to the 1960s and 1970s, when governmental bodies, like the Department of Defense and NASA, along with major corporations, harnessed project planning practices to manage complex, budget-bound, time-sensitive endeavors. This momentum was carried forward in the 1980s as educational institutions adopted sophisticated project management practices, culminating in widespread acceptance across industries and organizations by the 1990s (Patric, 2007). However, it is crucial to acknowledge the potential pitfalls of overplanning, which were evidenced by the failures of projects such as the Australian submarine and Iridium satellite initiatives due to excessive early-stage detailing (Collyer et al., 2010). This calls for adaptable planning practices that can thrive in dynamic environments. Notably, in developing countries like Ghana, project planning is hailed as a strategic instrument for realizing developmental objectives and fueling economic growth (Othman et al., 2005). Examining the nexus between project management

practices and project outcomes, Nalianya's (2018) study on agricultural projects by community-based organizations in Kenya found a positive correlation between planning and project performance. Additionally, project monitoring, evaluation, and communication were revealed as factors influencing project success. The Skills Development Fund (SDF) established in Rwanda in 2012 serves as a case study of the transformative power of projects. Facilitated through a collaboration between the Rwandan government and the World Bank, the SDF focuses on bridging skills gaps, fostering employment, enhancing production and innovation, and combating poverty through training-backed educational initiatives. This venture has yielded substantial advancements in various business domains, catalyzing Rwanda's social and economic metamorphosis. In conclusion, projects stand as formidable instruments for driving development, particularly within developing countries. The multifaceted realm of project management, spanning planning, execution, and evaluation, plays a pivotal role in shaping project success and ushering in positive societal changes.

Keywords: Project management, developing countries, project planning, project success, economic development

Introduction

In recent years and especially in developing countries, projects have been identified as a vehicle towards social and economic development of the population whereby there has been an important growth in project work for different sectors and industries (Maylor et al., 2006). Projects are used as a means of reducing problems of poverty, poor health, and unemployment which are predominant in rural set up of many developing countries (Kim, Kevin, Beeche, Mukankurunziza & Kamatari, 2013). Project management considers the transmission of required knowledge and skills as well as the tools and techniques to the activities of the projects for the purpose of meeting the project requirements (Project Management Institute [PMI], 2004). It was also realized that the accomplishment of project success entails a number of project management practices ranging from project planning to project controlling and closing. Globally, before commencement of any project, the first thing that project managers need to do is project planning. Any reasonable project manager certainly understands the importance of planning a project well. Carefully planned project takes into account necessary aspects of a project and provides a plan which the project team can refer to during execution (Gray & Larson, 2008). In United States of America, during the 1960s and 1970s, Department of Defense, NASA, and large companies utilized project planning principles and tools to manage large budget, schedule-driven projects. In the 1980s, education development sectors started to adopt and implement sophisticated project management practices. By the 1990s, the project planning theories, tools and techniques were widely received by different industries and organizations (Patric, 2007).

In Australia, some projects including Australian submarine and the Iridium satellite projects failed due to poor planning in terms of excessive detail in earl. This becomes problematic and misleading in dynamic environment (Collyer, Warren, Hemsley and Stevens, 2010). In developing countries like Ghana, project planning has been perceived as a management instrument towards the achievements of developmental objectives. The project planning is also considered as a vehicle towards the economic development of different economies (Othman, Hassan & Pasquire, 2005).

In his study about project management practices and performance of agricultural projects by community-based organizations in Bungoma county, Kenya, Nalianya (2018) revealed that planning is found to be positively related

performance of agriculture projects. He also found that project monitoring and evaluation and project communication have influenced performance of agriculture projects by community-based organization in Bungoma county, Kenya.

In 2012, the Skills Development Fund (SDF) was established through financing agreement between The Government of Rwanda and The World Bank and aims to minimize the skills gap observed by private business operators. The main purpose of the fund was to reduce the rate of employment, enhancing production and innovation, fighting poverty, through access to training by financing different educational projects. Through this project, the government of Rwanda remarked a tremendous development in different areas of business leading to social and economic transformation of the beneficiaries in general and Rwanda in particular.

Statement of the problem

It is believed that projects are designed and initiated to achieve a predetermined set of goals and create an impact among project beneficiaries. The Government of Rwanda has a mission to transform the Rwandan citizen into skilled human capital for the socio-economic development of the country by ensuring equitable access to quality education (MINEDUC, 2022). Since its inception in 2012, Skills Development Fund (SDF) has been funding different projects mainly training projects in all 30 districts through giving funds and other facilities to the training institutions and has registered much success in the improvement of socio-economic welfare of the poor people. It created jobs, reduced skills gaps in industries, increased production, brought innovation, etc.

Despite these positive results, and SDF goals, the problems of poverty (38 %, lives below poverty line, NISR, 2020) and unemployment (23.8 %, in 2021), lack of enough production in the country, etc. persisted. In its implementation, SDF was claimed in terms of delay of budget distribution to the beneficiaries, non-financing of some innovative projects, lack of inclusive training where some aged trainees are not eligible, Limited training time span, etc. it was also accused of mismanaging some training materials and equipment destined to the funded training institutions (Auditor General Report, 2015). This could create doubt that the project may be subjected to poor planning that may lead to poor performance. This study therefore intends to explore whether SDF Funded project have been successful in achieving their goals and the role that planning might have had to the success of those projects taking Kigali City as a case study.

Objectives of the study

The general objective of this study is to investigate the effect of project planning practices on the success of Skills Development Fund (SDF) project, Phase I in Kigali City.

The Specific objectives include:

- a) To evaluate the effect of project scope planning on the success of SDF funded project Phase I in Kigali City.
- b) To assess the effect of schedule planning on the success of SDF funded project Phase I in Kigali City.
- c) To find out the effect of resource planning on the success of SDF funded project Phase I in Kigali City

Research hypotheses

This study adopted Null hypotheses as follows:

H₀₁: Project scope planning has no significant effect on the success of SDF funded project Phase I in Kigali City.

H₀₂: Schedule planning has no significant effect on the success of SDF funded project Phase I in Kigali City.

H₀₃: Resource planning has no significant effect on the success of SDF funded project Phase I in Kigali City.

Literature Review

Theoretical literature

The researchers elaborated on project planning practices including scope planning, schedule planning and resources planning and their relationship with project success.

Project Planning

Project planning is part of project management, which relates the use of schedules such as Gantt charts to plan and subsequently report progress within the project environment (Kerzner, 2003). It entails the process by which schedules and resources that are required in the execution of the project are clearly defined and estimated in terms of the time, cost, and other effort to achieve the project goals (Pierce, 2013). Shenhar, Dvir, Levy, and Maltz (2001) emphasize on success of the project as a result of project planning. They argue that project efficiency, impact of the project on the customer, the success of the business success, future orientation and the alike all depend on project planning. Baldwin and Bordoli (2014) state that project planning focuses on achieving a number of common factors that include the production of practical schedules and costs, the completion of a quality standards, the designed criteria, the different resources of the projects, health and safety standards and stakeholders' expectations.

According to Nalianya (2018), project planning is a process that specifies the responsible people to the action, the process, the times and the resources involved for a particular job in the mind and the author asserts that the project planning phase forms the basis for the next phase which is the execution or implementation phase. The author added that project planning is a path to the project success and is in the heart of project management. During the planning process, the functional departmental manager develops operational plans that are integrated to form the project plan which focuses on the activities that must be performed to produce the project results or deliverables. Project implementation entails the execution and actualization of all the activities given in the planning of projects.

Meredith and Montel (2006) said that project planning involves combining different techniques, procedures, people and systems which all focus on how the project should be completed successfully. Nalianya (2018) put forward other phases that are important in addition to project planning, and those are coordination, monitoring and controlling together with the application of all techniques of project management. It is in this phase that planning effort, change management, communication management, and motivation is also exercised as part of project management practices. Project implementation calls for hiring the right skills, training some of the people without necessary skills, assigning responsibilities, and establishing performance standards as well as the reporting process (Nalianya, 2018).

Project scope Planning

Turner (2009) declares that project scope is an initial, high-level description of the way in which the goal of a project will be reached. He added that the statement of scope should include the work required to solve the problem and achieve benefits, the work that falls outside the project and also interface with other projects. Project scope management concerns the performing processes that identify, plan, control the execution of the required amount of project work. In fact, the successful completion of the project calls for a clear definition of the scope of that project (Yana, 2018). Mazur, Shapiro, Ol'derogge, Polkovnikov (2009) put out that the project scope is considered as the content of works, for the effective management of which it is necessary to determine: the work to be performed; sequence of works; work duration; need for resources, and cost of work. The content of works

comprises of the actions, descriptions of works to be performed and resources to be secured (Moroz&Nemchenko, 2017).Therefore, project scope management determines the number and amount of project work necessary and sufficient for the successful implementation of project works.

Project Schedule Planning

Project scheduling is regarded as either an integral part of, or output from, project planning. A schedule is a representation of project activities identified by the work breakdown structure (WBS), as part of the definition of the project scope (Baldwin and Bordoli, 2014). In addition, the concept of project scheduling deals with the logical sequencing of activities and the addition of activity durations. It includes related concepts such as resource loading and tracking progress during project execution (Yang, 2007). Planning and scheduling therefore takes time, discipline and proper organization. Sometimes these two activities are separate especially for big organizations. They are undertaken by different people and complete each other.

Project Resources Planning

Project resource planning is the forecasting of the resources required to perform the scope of work within the time plan. Karlsen (2013) highlighted some of the resources used to generate project costs includes, but are not limited to, labor, equipment and facilities, materials and capital. A project budget is prepared to fix in advance the resources needed and represents the planned costs of a project at its start. It considers human resources planning, financial resource planning and time and material resource planning.

Human resource practices refer to a combination of individual skills and organizational routines, which are routinely used as a part of the organization. These consists of three components being Culture and management style of the organization; Organizational structure; People and human resources systems (Dvir, Raz &Shenhar, (2003).

Financial resources include allocation of costs to each of activities involved in the project. They correspond to the project budget (Gardiner, 2005; Oberlender, 2000 & Karlsen, 2013). They are used to finance the human and material resources of the project, generally covering the remuneration of the actors of the project, the purchase of material resources or their rental, other costs, such as travel expenses.

Material resources include raw materials and machines, tools, equipment, software, premises, etc. They can be goods that are temporarily made available for the project, which can be used again later, but also consumables that can be used in a given quantity and that have a unit cost. Time resources are the periods of time available and used for the completion of each task. The duration of a task will depend on the planned and available human resources. Example of time resources: project plan, project schedule and time invested. Resource planning is critical to the success of the project and it entails much details as these resources are the ones without which the project cannot even start.

Project Success

Zand (2010) asserts that success is the ultimate goal of every project and is at the same time the function of skilful leadership that brings about knowledge work. The traditional approach defines project success as when the project meets the technical performance specifications and brings satisfaction to all project stakeholders (Thomas & Fernández, 2008) being project objectives, stakeholders satisfied with the results, project scope, completion on time and within budget, customer satisfaction. Shenhar, Milosevic, Dvir and Thamhain (2007) put forward the new approach to project success and assert that it refers to business-related processes that are designed to deliver business results instead of collection of project activities that need to be completed on agreed time frame.

According to Khang and Moe (2008) overall project success is measured vis-a-vis the realization of intended objectives, perception and appreciation by its end users and key participants. Khang and Moe further argued that the modern approach to project success links the traditional project purpose to the final product and long-term goals.

Chukwuemeke (2011) highlighted the four main factors of project performance and these include project achievements with minimum resources, impact on the customer, business performance and future preparation. Project success has always a fruit of proper project planning, clear implementation of the project, coordinated monitoring and evaluation as well as project control. On the other hand, Shenhar, Dvir, Levy and Maltz (2001) define four levels of project success being Project efficiency, impact on the customer, business success and preparing for the future. Lock (2007) observed the project success is justified by its timely completion, according to its specifications and within the budget. Therefore, poor project management practices often lead to projects being completed late or over budget, do not perform in the way expected, involve severe strain on participating institutions and or are cancelled prior to the completion after the expenditure of considerable sums of money.

Empirical Review

Different researchers conducted different studies on the factors that influence the success of projects and all the project managers are required to prepare a solid project plan and follow this plan all the way to success (Idoro, 2012). An empirical study by economist intelligence unit (2013) presented that 80 per-cent of top world managers presented that project planning is vital in ensuring that there is a project success and effective implementation of projects. CookeDavies (2002) assert that there is a good impact of project planning on project success in terms of meeting wider business and enterprise goals instead of only meeting project efficiency, meeting cost, time and quality. Shenhar, Dvir, Levy and Maltz (2001) added that meeting project success as a results of project planning considers project efficiency, impact on the customer, business success and preparing for the future.

There is an evidence that planning is an antecedent to project success seems. Moreover, it can also be observed from the available literature that planning is not only one of the key factors for managing projects, but it is vital for the successful delivery of the project. Even if a good project plan does not guarantee project success, the poor project planning would surely cause projects to fail. This implies the role played by project planning for the project success and it suggest that project managers need to make proper inception planning to achieve project goals (Ika& Saint-Macary, 2012)

Dvir (2005) described the advantages that are associated with planning for a project. He realized that through maintaining the consistency between various stages of planning, projects are easily management and controlled. He added that it also helps in diminishing the project risks and vulnerabilities, and also improving the proficiency of the project manager.

Indicators of Project Success

Different researcher highlighted about the indicators of project success. Masudi (2015) mentioned that the project success is found in that ability of the project to its completion according to desired specifications, and within the specified budget and the promised time schedule, while keeping the customer and stakeholders satisfied. The emphasis is put on satisfying the beneficiaries which in turns creates a good relation and build solid contracts due to the trust and satisfaction acquired from the project. It also looks at the Project falling within budget. This means that, despite the challenges, when a project falls within the budget which was stipulated at the commencement of the project will be regarded as successful. It also include the achievement of objectives: Projects usually have an

aim and objectives that it seeks to achieve when it is completed. At the end of the project, these goals should have been met. When the purpose of the project is fulfilled and the objectives are fully addressed, the project is a success because it addressed the issues that it was supposed to solve.

Meeting the expected budget while minimizing cost, timely completion of the project and customer satisfaction have been highlighted by Bond, (1999) and The KPI Working Group (2000) as indicators of project success. Among meeting four-success dimensions being design goals, benefit to the customer, commercial success, and Future potential as per Shenhar, Dvir& Levy (1997), it was concluded that meeting design goals and benefit to the customer are the most important ones to all stakeholders in the projects (Lipovetsky, Tishler, Dvir&Shenhar, 1997). Relying on the above discussion, it is very much remarked that the execution and completion of identified tasks, timely project completion, on-budget project completion, positive impact on the future of project and beneficiaries satisfaction are the key indicators of the project success.

Project Scope Planning and project success

Turner & Müller (2005) stressed that the careful analysis of project scope in terms of setting up the project goals and objectives as early stage of Project Planning is one of the key factors for project success. In their views, Davies and Holiday (2006) project Managers should hold a Project Success Plan (PSP) meeting with all key team members to agree on these project's goals and to discuss the emotional success factors that should ensure the team deliver successfully the required outcomes.

Project Schedule Planning and project success

Effective project scheduling has been found to play a crucial role in ensuring project success. It helps in keeping projects on track, setting realistic time frames, assigning resources and managing quality to reduce costs and leads to customer satisfaction. Ssempebwa (2013) asserts that the schedule palling aids in project success in terms of process change over reduction,

Inventory reduction, leveling, improved production efficiency, Labor load leveling, accurate delivery date quotes and real time information. The same view is shared by Aladwani, (2002) who revealed that Project scheduling has a mediating effect on the link between projectuncertainty and of Information Technology Projects. Additionally, as cited by Abingeneye (2018) Nguyen (2003) revealed that poor scheduling and planning were the most common causes of project failure.

Project Resource Planning and project success

Resource planning practice considers the identification of resources requirements a project performance. These may include financial resources, staff, special resources, technology and equipment It maximizes efficiency by helping teams to manage their utilization rates, track capacity, and monitor progress, to keep projects on budget and work on track. In their study on effects of project resource planning practices on project performance of Agaseke Project in Kigali, Rwanda, Umulisa, Mbabazize and Shukla (2015) analyzed three elements of project resources planning: Human resource planning, financial planning and material and time resources planning practices. In the analysis, they used correlation analysis and found that human resource planning practices and project performance indicated positive and yet significant relationship between teamwork, training of the project members on handcraft making and project performance. Financial resource planning aspects have also found to be positively correlated and these include budgeting, forecasting and having plans for money generation and project performance. Guoli (2010) realized that budget planning looks at project costs and creates favorable cash-flow conditions by avoiding delays and large extra project costs. Budgeting, forecasting and having plans for

money generation can lead to improved project performance. they finally revealed that material resource planning practices being placement, monitoring, planned procurement and project performance significantly correlated and influenced on the project success. The finding of Ndavi& Rosemary (2019) on the effects project resources (human resource planning, financial resource planning, material usage planning and time management) on project success revealed that improved human resource planning, estimation of cost grounded on the scope of the project and effective material usage planning all increases the performance of project.

Theoretical framework

This part highlights the different theories and models pertaining the project performance including Theory of constraints, Theory of Management and Systems Theory.

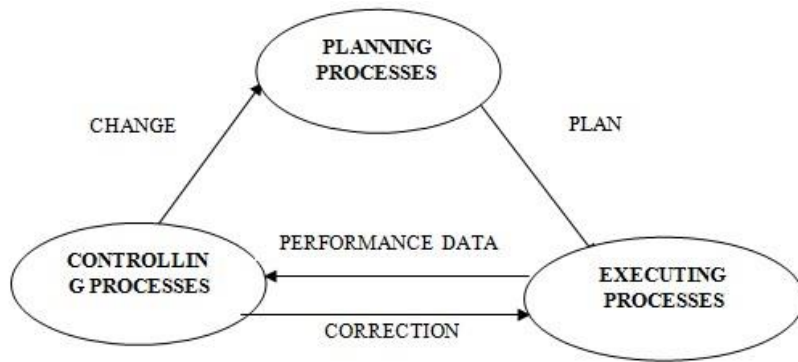
Theory of Constraints (TOC)

Goldratt (1984) proponed the Theory of Constraints which is a project management philosophy that is based on identifying constraints and eliminate them. It assists organizations in achieving their goals by providing a mechanism to gain better control of their initiatives. TOC is a systemic way to identify constraints that hinder system's success and to effect the changes to remove them. TOC consists of separate, but interrelated concepts such as performance measurement processes, logical thinking processes, and logistics. The logical thinking process of TOC gives us a series of steps that combine cause-effect, experience, and intuition to gain knowledge. The theory, in this case, addresses dependent variable, project performance. For any project to perform there is a need to minimize the constraints that can otherwise reduce the quality and quantity of the product and services delivered. These constraints may include poor management practices such as cost overruns caused by poor budgeting and corruption. The theory points out the need for project management to identify project constraints that can limit the performance of the project and tries to give direct approaches on how to solve the constraints. This study will augur its discussion on this theory since it checks on issues that create barrier to the project success.

Management Theory of project Management

Koskela and Howell (2002) came up with Management constisting of three main sections being planning theory, execution theory and Theory of control. The theory assumes that in project management, the operations focus on creation, revision, and implementation of project plans. The plans are translated into actions and there is a strong connection between actions and outcomes. This brings to the understanding that proper project planning will lead to desired level of outcomes. In this stage, cost, time and resources are well planned and these help in minimizing the risks of the project failure and enhance greater chances for project success. According to Koskela and Howell (2002) the theory of execution brings about dispatching tasks to the work stations. It is about proper allocation of resources, coordination and monitoring the progress to discover any deviation during the project implementation and this be addressed earlier. The key benefits at this stage is that tasks be executed as per plans and modifications be applied where necessary to facilitate the project success. Koskela and Howell (2002) refer control as performance reporting. The authors believe that control facilitates in illuminating and considering deviations in task execution and to learn about their causes. In short, project control involves assessing performance, finding out deviations and their causes, and devising the best strategies of fighting them.

Figure 1: Closed loop of the managerial process in project management



Source: Project Management Institute, (2004)

The three theories; planning Theory, Theory of execution and control Theory all address the independent variables in this study, project planning at the managerial level, controlling processes like M&E and implementation or execution of projects. The planning of educational projects should be approached at managerial level through the organization of resources including manpower, materials, money and time. The execution of the project is important and takes the major part of the educational project. This is addressed through execution theory. Finally, M&E is a control measure for the performance of any project since it controls all the operations which are geared towards performance. These variables are addressed in the theory of control in this study.

Systems theory

First proposed by Ludwig von Bertalanffy in 1945, systems theory has been used for decades as an analytical approach to understand the operation of complex systems. According to Mutong'Wa&Khaemba (2014), a system is a set of several independent and regularly interacting units or subsystems that work together to achieve a set of pre-determined objectives. Therefore, systems theory provides a framework for defining the subject entity, creating a formalized model of the entity, hence enabling the ability to understand the entity in terms of the elements and their properties, and thereby understanding results (Mutong'Wa&Khaemba, 2014). Systems theory considers the interaction between the systems and environments in which they operate. This feedback from training beneficiaries and local leaders is considered very important for SDF project to succeed. The systems theory provides leaders with a framework for building ideas that will ensure cohesion and cooperation among team members, the relevance of systems theory to this study cannot be overemphasized as it focuses on the importance of monitoring and evaluation as a way of providing regular feedback that is used to improve the performance of SDF success. Stakeholder participation in organizational decision-making has been increasingly improved and embedded into many organizations' policies (Reed, 2008). Stakeholder participation encourages the accommodation of diversity of knowledge and values (Reed, 2008). As a result, systems theory provides a framework in which stakeholders are engaged in decision-making to enhance the quality of decisions.

Conceptual framework

The conceptual framework about Project Planning Practices and the success of SDF Funded project is demonstrated as follows:

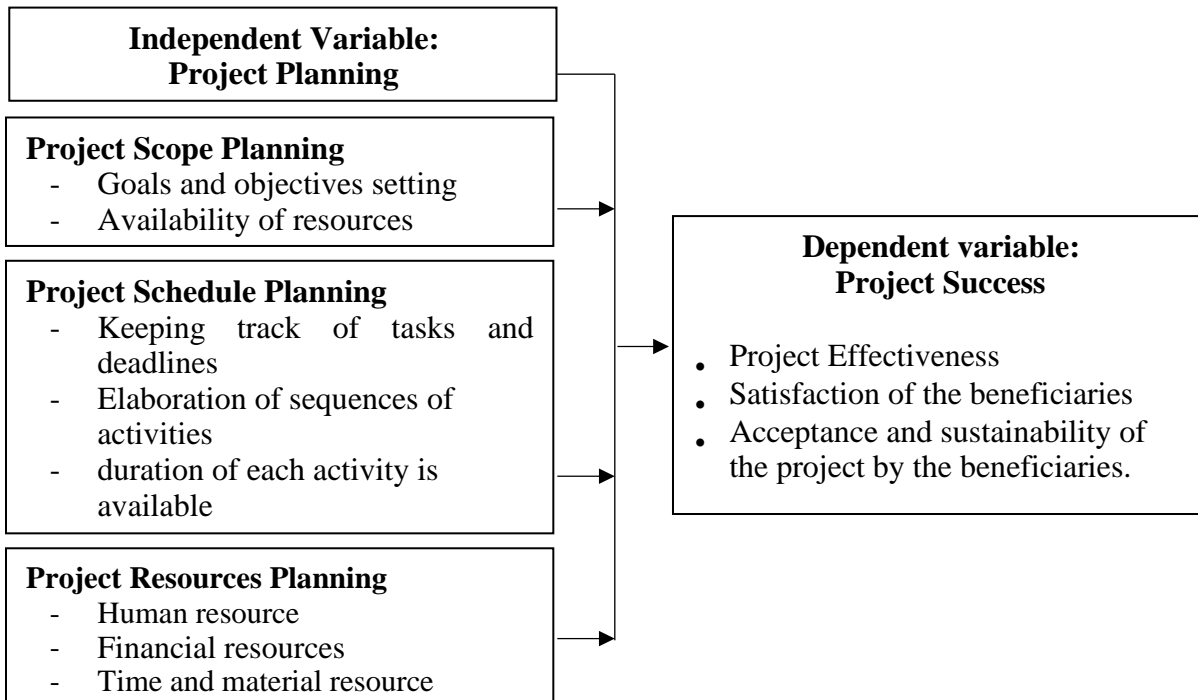


Figure2: Conceptual framework

Source: Adopted from PMI (2004)

The Figure 2 shows the interdependence between the independent variable and dependent variable. Independent variable include Project scope Planning, Project schedule planning and Project resources planning and dependent variable include Project goals attainment (Benefits to the beneficiaries), Beneficiaries satisfaction (Quality and Quantity of Products) and Project acceptance and use by beneficiaries. The project planning is believed to influence the project success in attaining the intended results in terms of project acceptance, effectiveness of desired benefits to beneficiaries and so on.

Research design and methodology

Bhattacharjee (2012) defined the research design as the specification of techniques and methodologies that are used to acquire the needed information. This study used descriptive and correlational research design. Creswell (2014) defines descriptive research as that which describes the responses to independent or mitigating or dependent variables. According to Creswell (2012) a correlational design is nonexperimental form of research in which investigators use the correlational statistic to describe and measure the degree or relationship between two or more variables or sets of scores. For the purpose of this study, the researcher described the responses for both project planning and project success and measured the association between the two and mixed methods in data collection and analysis for proper comprehensive interpretation of the findings.

The target population was 670 people including SDF project staff, SDF project implementing partner staff and SDF project beneficiaries/trainees. The sample size was 251 respondents selected using Slovin's formula. The sample size in each section was selected using both simple random sampling and census. Data were collected by use of questionnaire, documentary analysis and interview. Reliability of research instruments was ensured using test-retest method along with reliability coefficient (0.80) (Bless and Higson-Smith (2000). Validity was tested and confirmed using Content Validity Index (CVI)(0.70) (Amin, 2005) and piloting. Descriptive statistics,

specifically means and standard deviation was used to describe the definitive nature of the variables. Inferential analysis tests namely Pearson correlation and multiple linear regression analysis was used to show the inter relationship between variables.

The Multiple Linear regression model is derived as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \text{ Where:}$$

Y = Project success

β_0 = Constant/intercept

β_1 – β_2 = Regression coefficient of Project Planning Practices

X_1 = Project Scope Planning

X_2 = Project Schedule Planning

X_3 = Project Resources Planning

ϵ = Error term (Extraneous Variables)

Results and discussions

The purpose of this study was to analyse the effects of project planning on project success. This section indicates the findings of the study, provides the analysis and interprets the data which were collected in line with the research objectives.

Respondent rate

The sample size was 251 respondents out of whom 243 filled and returned the questionnaire. This brought the response rate to 96.8%. This is presented in the Table1. Below:

Table 1. Respondent rate

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Responded	243	96.8	96.8	96.8
Not Responded	8	3.2	3.2	100.0
Total	251	100.0	100.0	

Source: Primary data, 2022

As per the Table 1. the response rate turned to 96.8%. According to Mugenda and Mugenda (2003), when the response rate turns to 50%, the rate is satisfactory for reporting and analysis. They added that 60% rate is good and that of 70% and above is perceived as excellent. Considering this study, the rate of 96.8% was found to be excellent and was used for analysis and interpretation of the findings.

Demographic description of the respondents

The information about the respondents including gender, marital status, qualification and area of specialization of the respondents was gathered and is presented below:

Table 2. Background information of the respondents

Details	Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Gender of the respondents	Female	105	43.2	43.2	43.2
	Valid Male	138	56.8	56.8	100
	Total	243	100.0	100.0	

	Marital status	Frequency	Percent	Valid Percent	Cumulative Percent
Marital status of the respondents	Married	115	47.3 35.4	47.3 35.4	47.3
	Valid Single	86	17.3	17.3	82.7
	Widow/widower	42			100.0
	Total	243	100.0	100	
	Qualification	Frequency	Percent	Valid Percent	Cumulative Percent
Qualification of the respondents	Doctorate	-	-	-	-
	Masters	30	12.0 23.9	12.0 23.9	12.0 35.9
	Valid Bachelor	60	47.8	47.8	83.7
	Certificate	120			
	Others	41	16.3	16.3	100
	Total	251	100.0	100.0	
	Areas of specialization	Frequency	Percent	Valid Percent	Cumulative Percent
Areas of specialization of the respondents	Project Management	19	7.6	7.6	7.6
	Public	40	15.9	15.9	23.5
	Administration	29	11.6	11.6	35.1
	Valid Social works	43	17.1	17.1	52.2
	Accounting/Finance				
	Humanities	79	31.5	31.5	83.7
	Others	41	16.3	16.3	100
	Total	251	100.0	100.0	

Source: Primary data, 2022

The results in Table 2 detail the information on gender, marital status, qualification and area of specialization of the respondents. The table shows that the majority of the respondents are male as per 56.8% while 43.2% are female. The difference in women and men respondents is too small and this indicates that the study was balanced in terms of gender of the respondents. In addition, it can be confirmed that women make a good portion of project beneficiaries as one of the main target of social transformation and developmental projects.

The Table indicates the marital status of the respondents. It was realized that 47.3% of the respondents are married, 35.4% are single and 17.3% are widow/widowers. It was further found that this project could be run by mature people who understand the impact of the project to the beneficiaries. This led the researcher to understand that the data provided were reasonable and therefore contribute to the effectiveness of the purpose of the study. Considering the level of education of the respondents as per the Table 2, the results revealed that 12% completed Master's Degree programs, 23.9% got bachelor degree and 47.8% finished secondary education. It is seen that the majority of the respondents went beyond high school education as shown by 83.7 %, while 16% didn't complete high school and went for further training, none of them went up to Doctorate. Consequently, as many of the respondents have gone beyond secondary education, the information got from the respondents was accurate.

The study also investigated the areas of specialization of the respondents as shown in Table 2 so as to establish how much they were exposed and knowledgeable to the issues being examined. In this, the majority of the respondents, 35.1% were in project and socio-economic changes specialization including project management, public administration and Social Works. It was also found that 17.1 % did accounting and finance as skills needed for the project financial management. The study also shows that 31.5% did humanities while 16% did other courses including technical and professional courses. As a result, the respondents provided the good information for SDF project that helped the research produce the desired results.

Status of Project planning practices in SDF Fund project

Project planning is believed to influence the level of project success in a given organization or community. This study highlights the level at which project planning is being practices in SDF funded project. It elaborated on four project planning variables being project scope planning, project schedule planning and project resources planning.

Table 3: Status of Scope Planning in SDF Funded Project

	N	Mean	Std. Deviation
The project has a clear written goals and objectives and communicated to the beneficiaries	243	4.659	.6412
The project plan defines the beneficiaries and the role of every stakeholder in project implementation	243	4.352	.6439
The project identified all available resources	243	4.738	.5772
The project clarifies individual responsibilities and performance standards	243	4.420	.6560
The project defined the deliverables and boundaries	243	4.488	.6063
The project has prior identified the constraints	243	4.295	.6636
Valid N (Listwise)	243		

Source: Primary data (2022)

The Project scope highlights the major aspects including setting goals and objectives, defining the beneficiaries, individual and group responsibilities, etc. these are found necessary for the well-functioning and effectiveness of the project. The findings in Table 3 show that SDF project has a clear written goals and objectives and communicated to the beneficiaries as per 4.659 average and standard deviation of 0.6. regarding whether the project plan defines the beneficiaries and the role of every stakeholder in project implementation, it was confirmed with 4.352 mean and Standard deviation of 0.6. it was also found that The project identifies all available resources as part of planning as shown by 4.738 average and 0.57 standard deviation. The project was found to clarify individual responsibilities and performance standards as the road for project effectiveness (4.420 mean and 0.65 Standard deviation). The respondents agreed that the project defined the deliverables and boundaries and has prior identified the constraints as per 4.488 mean, 0.60 standard deviation and 4.295 average and 0.66 standard deviation respectively. Considering that, on average, all respondents agreed beyond 4 mean, it is a good indicator that project scope is well planned in SDF funded project. SDF was found to be proactive in defining its project scope with the aim to achieve its effectiveness and efficiency. This matches with the views of Collins and Baccarini(2004) who assert that a careful scope planning is necessary for meeting the owner's needs and thus achieving success.

Table 4: Status of Schedule Planning in SDF Funded Project

	N	Mean	Std. Deviation
Projects activities are well defined	243	4.556	.5844
Tasks and tasks dependencies are well set	243	4.409	.5409
The sequences of activities have been well elaborated	243	4.681	.6529
The project calendar/duration of each activity is available	243	4.590	.6184
There is a clear system of tracking tasks and deadlines	243	4.556	.6407
Valid N(Listwise)	243		

Source: Primary data (2022)

A schedule is a representation of project activities identified by the work breakdown structure (WBS). It is very important to schedule the activities, sequences and even duration so as to ensure that what is happening is in the right place at the right time. The opinions about schedule planning in SDF funded project have been expressed Table 4. The Table shows the results about Schedule planning practice in SDF Funded project. It reads that project activities are well defined as evidenced by 4.556 Mean and 0.58 standard deviation. It was also found that tasks and their dependencies are well set as per 4.4091 average and 0.54 standard deviation. The respondents revealed that in SDF Funded project, the sequences of activities are well elaborated and the duration of each activity is available as evidenced by 4.681 and 4.590 average respectively. The respondents were further asked whether there is a clear system of tracking tasks and deadlines and the findings showed that tasks and deadlines are monitored regularly to avoid any inconvenience in project cost, completion and duration as shown by 4.556 average and 0.64 standard deviation.

The results were in line with the statements of Bowen, Cattell, Hall, Edwards, & Pearl (2012) who said that project schedule planning is an important tool to ensure that the project is not overstaffed, cost are reduced and resources are properly allocated. It was also in the same spirit with the findings of Al-Hajj & Zraunig (2018) who concluded that schedule management is an important ingredient for achieving project success

Table 5: Status of Resource Planning in SDF Funded Project

	N	Mean	Std. Dev.
Human resource needed (Skills and quantities) has been identified	243	4.284	.95831
Human resource section is involved in the project's planning process	243	4.522	.92198
Training was done to project team members	243	4.659	.62305
Financial resources have been found	243	4.544	.56546
The spending control mechanism is put in place	243	4.488	.31919
Project financing plan has been shown & cost changes are provided	243	4.454	.60475
All equipment and materials needed have been identified	243	4.568	.63960
The required technology resources have been put in place	243	4.431	.58320
All project expenses have been forecasted appropriately	243	4.602	.61662
The fund has been channelled to beneficiaries as planned (Timely and full amount)	243	3.004	1.7000
Valid N(Listwise)	243		

Source: Primary data (2022)

Project resource planning is the forecasting of the resources required to perform the scope of work within the time plan. These include Human resources, financial resources and material resources. The researchers wanted to know

how these resources are considered in project planning in SDF funded project. This is because these resources are vital for the attained of the project goals. In the Table 5, the respondents were asked to express their views on Status of Resource Planning in SDF Funded project.

The results on whether the project identifies the Human resource needed (Skills and quantities) the results indicated that majority of respondents agreed that the skills and quantities needed for the project to run well are well identified prior to the project start as evidenced by mean score of 4.284 and a standard deviation of 0.95. On whether the SDF project involves human resource section in the project's planning process the findings show that the project respects that practice as shown by a mean 4.522. This means majority of the respondents agreed and low deviation from the mean as shown by a standard deviation of 0.92. The respondents were further asked whether Training were conducted to project team members. The results show that the project does so as evidenced by 4.659 average and 0.62 standard deviation.

Financial resources as important aspect for the project effectiveness is availed before the project start as evidenced by the respondents (4.544 average and 0.56 Standard deviation). The respondents were further asked whether the spending control mechanism is put in place and they agreed with high mean= 4.488 and a low standard deviation of 0.31. When asked whether the project financing plan has been shown and cost changes are provided, the respondents agreed with 4.454 average and 0.6 standard deviation.

The respondents were further asked on whether All equipment and materials needed have been identified and The required technology resources have been put in place and the strongly confirmed it with 4.568 average and 4.431 average, 0.63 and 0.58 standard deviations respectively. On the opinion of whether all project expenses are forecasted appropriately and the respondents agreed with 4.602 average and 0.6 standard deviation. On whether the fund are channeled to beneficiaries as planned (Timely and full amount) , the findings revealed that this is not well respected as shown by 3.004 average and 1.7 Standard deviation.

The overall findings shows that Resource Planning practice in SDF Funded project is well done and this is of the reasons that SDF fund has been achieving its goals of socio-economic transformation of lives of citizens. These results match with those of Umulisa, Mbabazize and Shukla (2015) who concluded that resource planning are strongly correlated with project performance and impacts on project success positively.

Effect of Project Planning Practices on the success of SDF funded project Phase I in Kigali City

Using inferential statistics, the researchers assessed the effects of project planning practice (with its constructs or variables) and on project success (with its constructs or variables). These include the assessment of effect of project scope planning on the success of SDF funded project Phase I in Kigali City, effect of schedule planning on the success of SDF funded project Phase I in Kigali City and the effect of resource planning on the success of SDF funded project Phase I in Kigali City.

• Scope Planning and its effect on the success of SDF funded project Phase I in Kigali City

To evaluate the effect of project scope planning on the success of SDF funded project Phase I in Kigali City and the first hypothesis that project scope planning has no significant effect on the success of SDF funded project Phase I in Kigali City. The independent variable which is project scope planning was measured using Goals and objectives setting and availability of resources as presented in the Table below:

Table 6: Regression Analysis Model Summary, ANOVA^a and Coefficients^a predictors of scope planning and project success

Regression Analysis Model Summary of Scope Planning and project success								
	Model		R	R Square	Adjusted R Square	Std. Error of the Estimate		
	1		.850 ^a	.723	.602	.47655		
a.Predictors: (Constant), Goals and objectives, Availability of resources.								
ANOVA ^a of Scope Planning and project success								
	Model		Sum of Squares	df	Mean Square	F	Sig.	
	1	Regression	2.697	6 237	1.349	5.937	.004 ^b	
		Residual	19.304		.228			
		Total	22.10	243				
a.Depended Variable Predictors: (Constant), Project Effectiveness								
b. Predictors: (Constant): Setting goals, availability of resources								
Coefficients ^a predictors of scope planning and project success								
	Model			Unstand. Coefficients		Stand. Coeff.	t	Sig.
				B	Std. error	Beta		
	1	(Constant)		4.673	.580		8.056	.000
		Setting goals		.180	.089	.207	2.032	.045
		Availability of resources		-.227	-.084	-.274	-2.698	.008
a. Dependent variable: Project Effectiveness								

Source: Primary data (2022)

The regression analysis tests the relationship between project scope planning and project success of SDF funded project Phase I in Kigali City. The results reveal a strong relationship between the two variables as shown by R-Square (0.72) and Adjusted R-Square (0.602). It shows that the project success at 72 % is caused by the clear scope planning and 28% is due to other factors that we have not tested in this research. It leads to the rejecting the first hypothesis that the scope planning has no significant effect on the success of SDF funded project Phase I in Kigali City

The ANOVA was conducted to show the fitness of the model to predict the relationship between the dependent and the independent variable. The findings show that the model is fit to predict the relationship between the study variable as evidenced by a P-value 0.004 which is less than 5% showing the model is significant.

The Coefficients predictors of scope planning and project success test the relationship of the study variables. The findings indicate that both setting clear goals and objectives and the availability of resources are statistically significant in explaining the relationship between the study variable as indicated by a P-value of 0.045 and 0.008

which are less than 5%. In the same angle, the findings shows a positive correlation between setting clear goals and objectives and project success and also a positive correlation between availability of resources and project success. The interview conducted with the respondents about their participation in SDF activities plan, the majority of them (87%) reported that they participated in initial stage and were satisfied that the clear goals and objectives they set, served as road map and motive to achieve the desired results. They said they are content to see the beneficiaries of SDF project having changed their lives positively after the training packages. The fact that SDF set clear goals and objectives, defined the beneficiaries, identified all the available resources in its scope has led to effectiveness and the satisfaction of the beneficiaries. The researchers consider that defining the role of every stakeholder at scope planning level is a key towards SDF sustainability and acceptance. All in all, the researcher realized that SDF scope planning was well elaborated and has led to its success. This matches with the finding of Mirza, Pourzolfaghar and Shahnazari (2013) who chalked that the proper project scope definition is much connected to the project success while its inadequacy negatively correlates to the project performance.

▪ **Schedule Planning Practice and its effect on the success of SDF funded project Phase I in Kigali City**

The second objective of the study was to assess the effect schedule planning on the success of SDF funded project Phase I in Kigali City. The dependent variable was measured using the satisfaction of the beneficiaries while the independent variable was measured using tasks, sequences, and duration. The findings are presented in the tables below:

Table 7: Regression Analysis Model Summary, ANOVA^a and Coefficients^a predictors of schedule planning and project success

Regression Analysis Model Summary of Schedule Planning and project success							
	Model		R	R Square	Adjusted R Square	Std. Error of the Estimate	
	1		.8150 ^a	.664	.456	.39498	
a.Predictors: (Constant), Tasks, dependencies, duration.							
ANOVA ^a of Schedule Planning and project success	Model		Sum of Squares	df	Mean Square	F	Sig.
	1	Regression	12.499	8 235	4.166	17.006	.000 ^b
		Residual	20.580		.245		
		Total		33.080	243		
	a.Dependent Variable Predictors: (Constant), satisfaction of the beneficiaries						
b. Predictors: (Constant): Tasks, dependencies, duration.							

Coefficients ^a predictors of schedule planning and project success	Model	Unstand. Coeff.		Stand.Coeff.	t	Sig.
		B	Std. error	Beta		
	(Constant) Tasks	1.676	.641		2.615	.011
	1	.136	.148	.134	.916	.362
	Dependencies	.192	.097	.191	1.978	.051
	Duration	.340	.108	.458	3.131	.002

a. Dependent variable: satisfaction of the beneficiaries

Source: Primary data (2022)

The Regression analysis tests the effect of schedule planning on the success of SDF funded project Phase I in Kigali City. Findings as evidenced by R-square and adjusted R-square, show that there is a strong relationship between the schedule planning and project success. The results shows that the variation in the project success 66.4% is caused by schedule planning practices and 33.6 % are caused by other variables which are not tested in the model. This lead to confirm that schedule planning has an effect on the success of SDF funded project Phase I in Kigali City and rejecting the hypothesis that the schedule planning has no significant effect on the success of SDF funded project Phase I in Kigali City.

The ANOVA was used to test the model fit to predict the relationship between the dependent and the independent variable. The findings show that the model is fit to predict the relationship between the study variable as shown by a P-value 0.000 and this means that the model is significant.

The Coefficients predictors of schedule planning test the relationship between schedule planning ordering and project success. The results show that tasks, dependence and duration are all statistically significant in explaining the relationship between the study variable as shown by a P-value of 0.051 and 0.002 which are less than 5%. The findings further revealed a positive correlation between tasks, dependence, duration and project success. The findings then revealed that the keeping track of tasks is not statistically significant at a level of 5% since its P-value is 0.362. The results on the link between schedule planning and project success in SDF funded project are not far from the theory of Management which assumes that the clear plans, tasks identification and actions of the projects are in a strong connection with outcomes. To that, the researcher has found that SDF Project activities are well defined, tasks well assigned and the calendar of each activity is well elaborated and regularly monitored. This is probably the reasons that SDF funded project insists more on consultative planning before the project starts. Undoubtedly, this is one of the reasons that the effort that SDF exerts on schedule planning has led to the satisfaction of its beneficiaries. The findings are in line with those of Al-Hajj and Zraunig, (2018) who examined the various methodologies related to project management along with their impact on the elements of project success and concluded that the proper schedule management is an important factor for achieving project success.

• Resource Planning Practice and its effect on the success of SDF funded Project Phase I in Kigali City

It is believed that human resource planning, financial resource planning, material usage planning and time management all increase the performance of project. This was the third objective of the study to find out the effect of resource planning on the success of SDF funded project Phase I in Kigali City. The findings are presented in the tables below.

Table 8: Regression Analysis Model Summary, ANOVA^a and Coefficients^a predictors of resource planning and project success

Regression Analysis Model Summary of Resource Planning and project success							
	Model		R	R Square	Adjusted R Square	Std. Error of the Estimate	
	1		.9180a	.842	.838	.24817	
	a.Predictors: (Constant), Human, Financial, material.						
ANOVA ^a of Resource Planning and project success							
	Model		Sum of Squares	df	Mean Square	F	Sig.
	1	Regression	27.906	7 236	9.302	151.037	.000 ^b
		Residual	5.173		.062		
		Total	33.080	243			
	a.Dependent Variable Predictors: (Constant), Acceptance and sustainability of the project						
	b. Predictors: (Constant): Human, Financial and Material						
Coefficients ^a predictors of resource planning and project success	Model		Unstand. Coeff.		Stand.Coeff.	t	Sig.
			B	Std. error	Beta		
	(Constant)		.813	.371		2.188	.031
	Human		.545	.092	.551	5.933	.000
	1		.100	.049	.092	2.025	.046
	Financial						
	Material		.513	.124	.378	4.148	.000
	a. Dependent variable: satisfaction of the beneficiaries						

Source: Primary data (2022)

The regression analysis tests the effect of resource planning on success of SDF funded project Phase I in Kigali City. Findings as evidenced by R-square and adjusted R-square, show that there is a strong relationship between the resource planning practice and project success. The results revealed that of the variation in the project success, 84.2% is caused by resource planning practice while only 15.8% are caused by other variables which are not tested in the model. This leads to reject the third hypothesis that there is no significant effect of resource planning on the success of SDF funded project Phase I in Kigali City.

The ANOVA was used tests the model fitness to predict the relationship between the dependent and the independent variable. The results indicate that the model is fit as indicated by a P-value 0.000 which means that the model is significant.

The Coefficients predictors of resource planning here show the the relationship between resource planning and project success. The findings show Human, Financial and Material are statistically significant to explain the relationship between the study variable as indicated by a P-value of 0.000, 0.046 and 0.000 which are less than

5%. The findings further revealed a positive correlation between Human, Financial, material resources project success. The results as per the Table 6,7 &8 justify the use of theory of constraints. The theory states that there is a strong relationship between management practices such as cost, time and resources, budgeting and project success. It assumes that when these are not given much attention, they might hinder the achievements of goals and objectives. The findings now indicated that SDF considers these variables in its process of planning and that is one of the reasons that the ways it plans its resources have contributed to the achievements of its mission including its acceptance by the beneficiaries and its sustainability. These findings match with those of Umulisa, Mbabazize and Shukla (2015) who studied the effects of Project Resource Planning Practices on Project Performance of Agaseke Project in Kigali, Rwanda and concluded that financial resources, human resources and materials resources are all strongly correlated with project performance and have had a big positive impact on project success.

General Overview/ General model

The general objective of this study is to investigate the effect of project planning practices on the success of Skills Development Fund (SDF) project, Phase I in Kigali City. The following table indicates the overall view about the effect of Project planning on SDF fund project success.

Table 9: Regression Analysis Model Summary, ANOVA^a and Coefficients^a predictors of Project planning Practices and project success

Regression analysis Model Summary on effect of project planning Practices on SDF project success							
	Model		R	R Square	Adjusted Square R	Std. Error of the Estimate	
	1		.911 ^a	.830	.825	.25816	
a.Predictors: (Constant), Scope Planning, Schedule Planning and Resource Planning.							
ANOVA ^a of Project planning practices and project success							
	Model		Sum of Squares	df	Mean Square	F	Sig.
	1	Regression	27.481	10	9.160	137.450	.000 ^b
		Residual	5.598	233	.067		
Total		33.080	243				
a.Dependent Variable Predictors: (Constant): Project success							
b. Predictors: (Constant), Scope Planning, Schedule Planning and Resource Planning.							
Coefficients ^a predictors of Project planning practices and project success							
	Model		Unstand. Coeff.		Stand.Coeff.	t	Sig.
			B	Std. error	Beta		
	(Constant)		.316	.045		7.022	.000
Scope planning		.172	.046	.190	3.705	.000	

1	.706	.041	.820	17.174	.000
Schedule planning					
Resource planning	.077	.040	.092	1.900	.041
a. Dependent variable: Project success					

Source: Primary data (2022)

The regression analysis tests the effect of project planning practice on the success of Skills Development Fund (SDF) project, Phase I in Kigali City. Findings as evidenced by R-square and adjusted R-square, show that there is a strong relationship between project planning and project success. The results revealed that the project success is 83% is caused by project planning practice while 17% are caused by other variables which are not tested in the model.

The ANOVA was also used to test the fitness of the model to predict the relationship between the depended and independent variable. The results indicate that model is fit to predict the relationship as evidenced by a P-value 0.000 which is less than 0.05 and this indicates that the model is significant

The Coefficients predictors of Project planning practice test the relationship between project planning practice and project success. The findings indicate that the scope planning, schedule planning and resource planning are statistically significant in explaining the relationship between the study variable as indicated by a P-value of 0.000, 0.000 and 0.041 which are less than 5%. The results further indicates a positive correlation between scope planning, schedule planning and resources planning and project success in terms of its effectiveness, satisfaction of the beneficiaries and acceptance and sustainability of the project. The findings match with the theories used in this study. The theory of constraints states that for any project to perform there is a need to minimize the constraints especially in terms of costs, tasks and resources. When asked, the majority of the respondents revealed that the constraints were identified and minimized through resource planning. The theory of management states that there is significant relationship between actions and outcomes. SDF project management put more emphasis on proper actions and tasks planning. The interview conducted on the benefits brought by SDF interventions, 89% of the respondents contended that SDF brought positive changes to its beneficiaries including capacity building, reducing the skills gap, contribution to Rwanda transition to middle income economy and many more other benefits.

Conclusion

The study concludes that the project scope planning has an effect on project success. In addition, the results reveal a strong relationship between the project scope planning and project success and this leads to reject the hypothesis that there is no significant relationship between project scope planning and project the success of SDF funded project Phase I in Kigali City. Relying on the the results about Schedule planning practice in SDF Funded project, there is a base to conclude that project schedule planning has an effect on project success. Considering that the project success is influenced at 66.4% by schedule planning practices, there is a base to conclude the effect of schedule planning on project success with regards to SDF funded project Phase I in Kigali City.

The resource (human, financial and material) has been found to have a strong relationship between with project success and that 84.2% of project success is due to resource planning practice. This leads to conclude that there is a positive effect of resource planning on project success and reject the hypothesis that there is no significant effect of resource planning on the success of SDF funded project Phase I in Kigali City.

Recommendations

The findings show that the funds are not timely and fully delivered to the beneficiaries. It is suggested to SDF Fund to plan the timely delivery of the package to the beneficiaries for the project efficiency and effectiveness. In interview with the respondents, it was found that SDF Fund exclude some section of the population for training. It is then suggested that SDF should consider all sections of the population for inclusive development and filling the skills gap as one of its main objectives.

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