

Determinants of Project Scope and Project Performance: A Case of Huguka Dukore Akazi Kanoze Project

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Abstract: The main objective of this study was to analyze the effect determinants of project scope on project performance. This study adopted survey research design using both quantitative and qualitative methods. The target population of this study was employees and beneficiaries of Huguka Dukore Akazi Kanoze project. This study used 75 respondents, for choosing 75 respondents simple purposive sampling technique was used. Finally, the data collection methods were included research questionnaires, and documentation. Therefore, the findings were shown that 60.0% of respondents and 40.0% of respondents strongly agreed and agreed respectively that the first kind of resources in Huguka Dukore Akazi kanoze is natural or physical resources, again 60.0% of respondents strongly agreed that the second kind of resources in Huguka Dukore Akazi kanoze is financial resources finally 60.0% of respondents agreed that other kind of resources in Huguka Dukore Akazi kanoze is human resources. The findings revealed that 80.0% of respondents agreed that in the performance of Huguka Dukore Akazi Kanoze project is indicated by High productivity or outcome of the project, 80.0% of respondents agreed that in Huguka Dukore Akazi Kanoze project is indicated by meeting the needs of stakeholders (stakeholders satisfaction), 66.7% of respondents agreed that in Huguka Dukore Akazi Kanoze project is indicated by cost performance and quality finally 77.3% of respondents agreed that in Huguka Dukore Akazi Kanoze project is indicated by Meeting deadline. In general, the research findings revealed out that there is significant relationship between determinants of project scope and project performance. Basing on the conclusion made, the researcher recommended that the project has to involve beneficiaries in the definition of project scope would help to understand more their expectation to avoid changing the scope based on this condition and beneficiaries have to ensure their participation to be able to know if the project is taking the right direction to satisfy their needs.

Key words: Determinants of project scope, project performance, Project, Project scope, Huguka Dukore Akazi Kanoze Project

1. Introduction

This chapter presents the background of the study, statement of the problem, objectives of the study, research questions, and scope of the study, significance and limitations that the researcher encountered during the research exercise. Scope describes the boundaries of the project in terms of what it was deliver. It defines all project work thus ensuring thus help project team set up control systems that could bring a better project outcome (PM4DEV, 2008). Further scope management are processes required to ensure the project includes all the work and only the work that is required to complete the project successfully, deliverables include: scope statement; work breakdown structure and formal acceptance (Horine, 2013).

Al Humaidan, (2011) attributed project failure to inadequate pre-project planning and poor project definition of project elements. 70% of poor time performance of Saudi Arabia construction projects is due to changes in project scope (Assaf and Al-Hejji, 2006). Further lengthy project delays Saudi Arabia are caused by a number of issues such as unqualified contractors, changes in scope of work, rework in inappropriate parties involved in procurement methods.

Like elsewhere in the world, Africa projects are often not completed in time and experience inadequate scope definition and cost overruns, their failure rate is in excess of 50%; World Bank private firm IFC (International Finance Corporation) has half of its

projects succeed while half fail (Associated Press, 2007). Rwelamila and Puurushottam, (2012) claimed that project management competency may be improved for better project outcome; they also attributed lack of quality training in project management as a major drawback to Africa development. The performance of a project depends on controlling and managing the scope. Changes in scope can impact the cost, schedule, risk and even the quality of the project. The beneficiaries, the project sponsor or other stakeholders can initiate scope changes. A scope change request is used to request an addition or subtraction to the agreed upon scope of work agreed upon for a project. Scope change requests may be managed as part of a pre-defined scope change process outlined as part of the project plan. This process would determine what changes may be approved by the project team and the procedure as well as authority for approving other changes. The key to successful scope management is defining, communicating and reconciling emerging requests throughout the project lifecycle. When a project's scope changes mid-course it will typically mean added costs, resources, time, extended duration and greater risks. Sometimes it is a number of small scope changes that impact the successful completion of a project rather than one large scope change. Without change control, the project scope becomes a moving target and the project at risk of missing one or more of project success factors. Project change is inevitable and you must be prepared to deal with it when it happens (Suchan, 2007). As business needs change, organizations developed in line with these changes especially in the present age of increased awareness and need. Organizations that maximize the use of new technologies found themselves dealing with schemes that are difficult and expensive to implement (Ojiako *et al.*, 2015).

Several organizations face challenges in implementing their plans to desire expectations and these challenges do stem from improper gathering, interpretation and documentation of requirements and defining the boundary (scope) needed to fulfill project objectives.

In Rwanda many projects among agriculture projects specifically, are failing to meet business expectations and user needs due to factors such as poorly defined scope, cost and time overruns, inadequate quality and meeting up with expected features and functions to satisfy project stakeholders. UNDP report 2016 revealed that 39% of all projects implemented in 2014 were successful (delivered to time on budget and with required features and functions), 43% were challenged (late, over budget with unsatisfactory required features and functions) and 18% failed (cancelled prior completion or delivered and never used). However, an increase in project quality was observed over the years and this was as a result of several factors such as methods, skills, costs, tools (Ojiako *et al.*, 2015). Decisions, internal and external influences, team bonding, technology and paramount amongst these are the increased awareness and introduction of project management especially in the various stages of project implementation including project scope management practices needed for projects performance. The general objective of this study is to analyze the impact of determinants of project scope on project performance at Huguka Dukore Akazi Kanoze project

The specific objectives of the study are:

- i. To find out how available resources affect productivity of Huguka Dukore Akazi Kanoze project;
- ii. To analyze the effect schedule on meeting the needs of stakeholders of Huguka Dukore Akazi Kanoze project.
- iii. To analyze the influence of budget on the performance in Huguka Dukore Akazi Kanoze project
- iv. To analyze the relationship between determinants of project scope and project performance in Huguka Dukore Akazi Kanoze project.

2. 1 LITERATURE REVIEW

The part concerns the explanations about existing theories in relations with the topic. Here, the researcher tried to explain theories related to determinants of project scope and project performance.

2.1.1 Concepts of project

Key concepts clarified in this work are: project, project scope, project performance. A project is an activity to meet the creation of a unique product or service and thus activities that are undertaken to accomplish routine activities cannot be considered projects. For instance, if your project is less than three months old and has fewer than 20 people working on it, you may not be working in what is called a project according to the definition of the term (Shannon, 2011).

According to Linda (2017), a project in any organization is collaboration across departments to achieve a single well defined objective. The process of planning, organizing and managing resources to achieve the organizational objective is called project management.

2.1.2 Project scope

According to Mesly (2017) Project scope is the part of project planning that involves determining and documenting a list of specific project goals, deliverables, features, functions, tasks, deadlines, and ultimately costs. In other words, it is what needs to be achieved and the work that must be done to deliver a project.

2.1.3 Project performance

Project performance can be measured before during and after project completion. In simple terms, project success can be defined as: achieving project objectives within schedule and within budget, to satisfy the stakeholder and learn from experience (Thomas, 2009).

2.1.4 The determinants of project scope

Scope describes the boundaries of the project in terms of what it will or will not deliver. It defines all project work thus ensuring thus help project team set up control systems that could bring a better project performance (Puurushottam, 2012).

Further project scope is process required to ensure the project includes all the work and only the work that is required to complete the project performance, determinants include: competitive advantage, organizational process assets, expert judgment, complex activity list, limited resources, fast-tracking, project delays, client's demand, technical skill required, dynamism of technology, returns on investment. For this study, project scope is determined by the following: Available resources, time/schedule, budget and cost

2.2 Empirical literature

The study done by Ahsan and Gunawan (2010) about analysis of cost and scope performance of international development projects focuses on cost and scope issues of international development projects. The study examines project cost and schedule performance and the main reasons for poor project outcome. Every project must have a picture of the product or service it will deliver to its beneficiaries. The findings of this research indicate that the project scope affects the project product positively. In this line, 43 % of respondents said that scope helps to achieve its desired outcome, 70% accredited the fact of meeting the need of beneficiaries and 72% talked about the satisfaction of quality expectations.

The study done by Pretorius (2012) was focused on direct relation between scope, time, cost and quality management and the project performance, the findings of this research revealed out that project success is functional to unique environments and contexts as indicated by competitive advantage (58.5%), complex project scope statement (85.8%), client's demand (60.9%) and return on investment (52.5%). Correlation analysis also revealed that these four factors had significant relationships with the choice of project scope management practices employed by the organizations.

A study done by Fagehaand Aibinu (2013) indicates that adequate front-end project planning with clear project scope definition can alleviate the potential for cost overrun, inadequate project planning and poor scope definition can lead to expensive changes, delays, rework, cost overruns, schedule overruns, and project failure. It adds that the purpose of project definition is to provide adequate information that is needed to identify the work to be performed in order to avoid major changes that may negatively affect project performance. The analysis further revealed that majority (60.9%) of the respondents agreed that client's demand is very significant to the choice of project scope management practices, dynamism of technology (64.6%)

and returns on the investment (52.5%) are also significant to the choice of project scope management practices employed by the firms. lastly, fast-tracking (65.6%), project delays (50.5%), client's demand, and technical skill required (69.2%) were factors that significantly affect choice of project scope management practices employed by the organizations.

2.2.1 Role of determinants of project scope

Hill (2010) argues that the purpose of the change management is to ensure that no inadvertent or otherwise unauthorized changes are made to the project scope (which inherently influences some change in planned cost, schedule, or resource utilization), and that any changes that are wanted or needed will undergo a somewhat formal examination and approval process including appropriate levels of internal and customer collaboration before any changes are implemented.

Scope must be documented and reviewed by the project sponsor and stakeholders for effects. Richman (2006) argues that project scope management includes the processes and activities required to ensure that the project includes all the work required and only the work required to complete the project successfully. He added the project scope management includes scope planning, scope definition, creation of a work break down structure, scope verification, and scope control. This point is related to this study because it shows how the determinants of project scope play a crucial role on the performance of Huguka Dukore Akazi Kanoze project by determining time, cost, resources, or other aspects of the project.

2.2.2 The important areas in project scope

If a project's scope during the initial phase, the effects of that will affect elements such as schedule, cost, and performance less than if the scope during the final phases. If a change request is approved, the project team must update schedules, budgets, and performance commitments (Harrington and McNellis, 2006).

Approved changes affect almost every part of a project plan. Approved changes must be incorporated into the schedule, budget, return-on-investment calculation, scope document, team charter, communications plan, deliverable list, and quality plan. All changes should be documented and analyzed for frequency modes, affected areas, organizations or departments that push change, and lessons learned. The changes should be allowed only if there's total agreement among the sponsor and stakeholders. Once the change is approved, timelines and budgets should be updated to reflect the change (Harrington and McNellis, 2006).

Project time management also included the processes and activities needed to ensure timely completion of the project. It consists of activity definition, activity sequencing, activity resource estimating, activity duration estimating, schedule development, and schedule control (Richman, 2006). When not controlled well, the project is likely to experience challenges which may affect the project success negatively. This point is related to my study because project time management is one of the determinants of project scope

Project cost management indicates that the project cost management knowledge area involves project costs and budgets. The activities in the project cost management area establish estimates for costs and resources and keep watch over those costs to ensure that the project stays within the approved budget. This process of project cost management involves resource planning, cost estimating, cost budgeting and cost control (Heldman, 2005).

This is done in process of project scope management with knowledge that scope change can affect work that has been already performed. This means rework costs for work that has already started or worse, been completed. When the project scope changes other components in the project cost management such as resources, budget among others will have to change also. Richman (2006) supports this idea by stating that project cost includes processes and activities that ensure the project is completed within the approved budget. It includes cost estimating, cost budgeting, and cost control. This indicates that if the scope is change, it will affect the budget. The initial budget has to be modified to the requirement of current project scope.

This point is related to my study because project cost management is one of the determinants of project scope

Project quality management concerned with the production quality service or product, it involves the interconnection of other factors such cost, proper usage of agreed time among others. Rose (2005), states that project quality management is linked to an overall project management in terms of processes and costs. Some project managers may be concerned that more time and cost will ship quality (Low and Ong, 2014).

The success of the project is measured from the scope aspect of a project which is inherited from quality management. Any change in project scope involves effort from the side of quality management. As hill (2010) states, any change to the project scope almost always necessitates a controlled adjustment to project to the associated plans such as quality management among others. This point is related to my study because project quality management is one of the determinants of project scope. This means that project scope always necessitates a controlled adjustment to project to the associated plans such as quality management.

2.2.3 Project scope change control features

The change control can also include the two features like the first one is Change control responsibilities such as Specification of each team member's responsibility to manage project scope change, including guidance for project team members to use reasonable judgment before adjusting work that could be considered "out of scope," and related guidance for managing stakeholders requests or directions for work adjustments that could present scope issues or otherwise be contrary to the established work assignment and the second one Control authority such as Specification of who is authorized to approve changes in project scope; usually the project manager, but sometimes the project executive (sponsor) or other senior manager (or control board) retains this responsibility (Hill 2010).

2.3 Theoretical framework

Mc Cleland and McBer developed competency theory in 1980s. These authors defined competency as the underlying characteristic an individual that is usually causally related to criterion referenced effective or superior performance in a job or situation. Since then a number of authors have developed a number of competency frameworks.

Owen (2008) propounded project knowledge theory by stating that knowledge created, captured and reused within a project will result in improving project management maturity and acquaint project staff with necessary competency. According to her, project teams create, transfer and reuse knowledge created from tasks supported by knowledge management system. The framework assumes that project team will be able to conceptualize tasks, reuse and apply past knowledge and experiences supported by knowledge management system. Owen framework illustrates how knowledge is developed at task level which is then disseminated into project methodology in project implementation thus reinforcing project achievement of its deliverables. She suggests that knowledge is expressed throughout project lifecycle in tacit and explicit knowledge levels. Tacit knowledge is captured reused in the project by experienced project staffs that pass it on through coaching and mentoring. Explicit knowledge is reused in terms of project documentation during the project life cycle. This theory uses the concept of reclusiveness and extending project to program level; program is a group of projects managed together allowing added benefit control (PMI, 2013). In conclusion the author emphasizes on the need for continuous learning in projects to improve project capability by integrating knowledge management with project/program management.

2.4 Conceptual framework

The conceptual framework figure below explains the relationship between the variables under the study, determinants of Project scope (Independent Variable) and Project performance (Dependent variable).

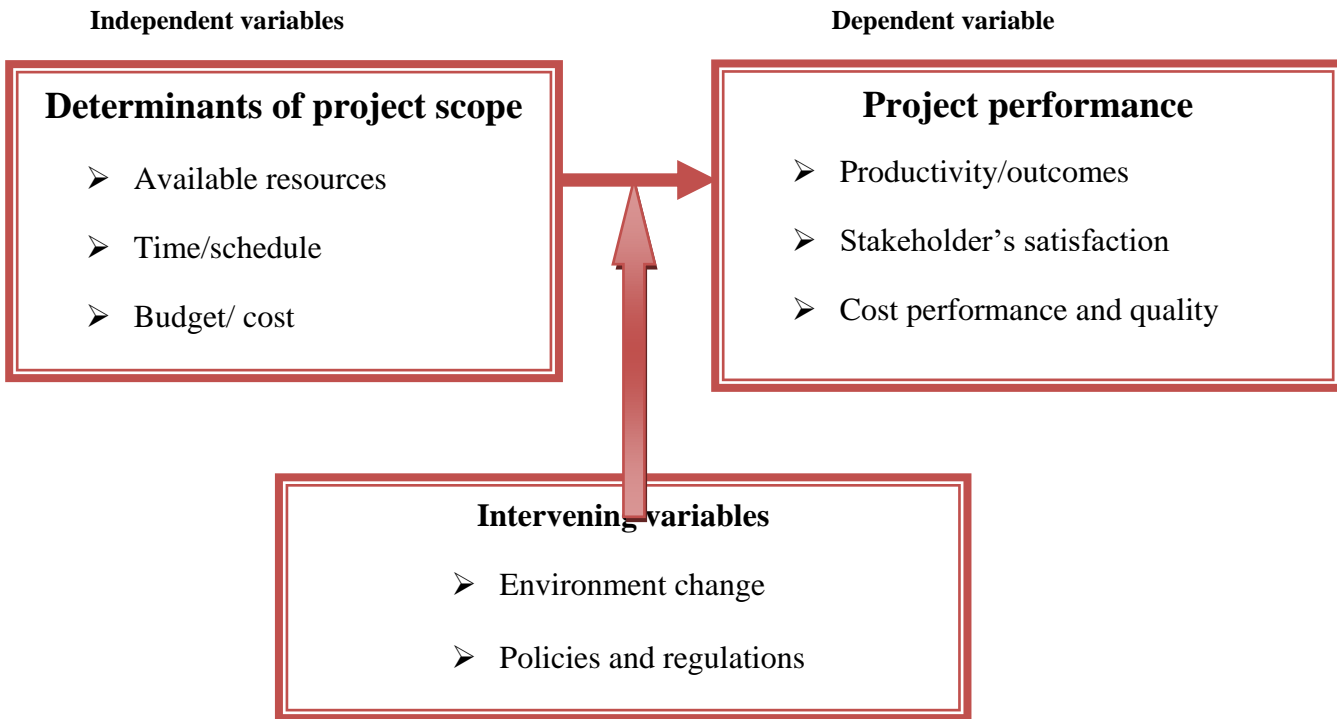


Figure1 Conceptual Framework

Source: Researcher, (2020)

The topic under investigation had two variables namely Determinants of Project scope (Independent Variable) and Project performance (Dependent variable). Adjusting project activities: this means if the factors of inclusion and/or exclusion are changed, there could be a need to change project activities to adjust them to new direction taken because of the scope. Managing project time means that the project has when to start and when to end; the project team has to do in way that the project activities were completed within the allocated time.

Managing project cost means that the project team has to do in way that the planned budget followed as it was agreed upon. Because the project is the temporary activities with limited budget, the team considers the project budget as it progresses. Meeting the time and budget of the project have value if the project that not produce the expected quality of outcome which satisfies the need of the beneficiaries. A project work to response to the identified need among the beneficiaries; if this does not happen, and then the project cannot be considered as a performance.

3. RESEARCH METHODOLOGY

3.1 Research Design and Population

According to Jarol and Richard (2013), research design is a master plan specifies the methods and procedures for collecting and analyzing the required information. It is also a science and an art of planning procedures for conducting studies so as to get most valid findings. The study adopted survey research design using both quantitative and qualitative approaches. Quantitative approach emphasizes measurement and data is analyzed in a numerical form to give precise description. That this mode of inquiry follows

several logical and distinct steps from identifying and stating research problem to making appropriate conclusions and inferences to the population.

Quantitative approach places emphasis on methodology, procedure and statistical measures to test hypothesis and make predictions. The research will use quantitative approach because the data that will be collected through questionnaires from respondents will be analyzable using the standard statistical tools. Quantitative research approach includes designs, techniques and measures that produce numerical or quantifiable data. It relies on the principles of verifiability, that is confirmation, prove, or substantiation, using appropriate measurement of study variables. Qualitative approach was also adopted by the in this study because qualitative data is more in depth and provides detailed answers. It provides information about the phenomenon being studied, and established patterns, trends and relationships from the information gathered. The qualitative research provides greater depth to response and understanding which forms a link with the respondents. Qualitative research is typically rich with detail and insights into participants 'experiences of the world and thus more meaningful and the coefficient of correlation(r) was calculated to measure the effect the size and more regression was used to evaluate the influences and relationship. The target population is explained as the elements, objects and subjects that respond to the sampled population (Burns & Grove, 2011). In this study, composed by 6 managers, 24 employees of Huguka Dukore Akazi Kanoze Project and 360 beneficiaries of Huguka Dukore Akazi Kanoze Project

3.2 Sample Design

Sample is defined as a set of individuals selected from a population, usually intended to represent the population in a research study (Gravetter and Wallnau, 2017). In this study census technique was used in getting data from different members of different sections which deal with all projects management work and project performance. Random sampling and stratified random sampling technique are defined as a complete enumeration of all items in the population (Kothari, 2016).

Table 1. Targeted population and sample size

Group of respondents	Target population	Sample size
Managers	6	6
employees	24	24
Beneficiaries	3600	45
Total	3624	75

Source: Field Data , 2020.

3.3 Data Collection and Analysis

the researcher paid an informal visit to the projects while he engaged in their day-to-day activities. The field visit during this investigation has a specific aim, which was to introduce the topic and obtain the project employees' consent. During the informal visit information on the current situation will be collected through situation analysis.

To improve the reliability of information and results, the data collection methods that were employed in the research process included research questionnaires, and interview.

An interview is a special case of social interaction between two persons or more, and as such is subject to the same rules and restrictions as other instances of social interactions. According to Kurnar (2015), interview is a common method of collecting information from individuals. It involves face-to-face interaction between the researcher and the informant (s) aims at understanding perspectives of respondents to a given issue. Interview was held with Huguka Dukore Akazi Kanoze Project staff.

In this research, questionnaires were distributed on 30 employees of Dukore Akazi Kanoze Project. The questionnaires were administered during face-to-face interviews in an attempt to avoid dominance of certain individuals in the project and to give an opportunity to the individuals to express themselves by providing the truthful responses without being intimidated by other employees.

These are the methods that the researcher used to collect both primary and secondary data from various sources and they include questionnaires and documentary review. Primary data were collected from respondents while secondary data were collected through the review of related literature from text books, journals, reports and internet. The researcher ensured that the research instruments used are reliable, consistent and free from any bias. Questionnaires and interview guide contained clear and accurate questions that intended to identify the effect of project change management on project success. These were only used for the intended purpose and the views were not be interfered with to ensure consistency. Qualitative and quantitative methods were used to analyze and interpret the data collected through questionnaires, and key-informant interviews. Both qualitative and quantitative data were subjected to standard analysis using the statistical package for social science (SPSS). Data analysis was included descriptive statistics (percentage and frequencies), cross-tabulations. Summarized data were used to determine the relationship between independent and dependent variables and to establish key comparisons by using the formula.

4. RESEARCH FINDINGS AND DISCUSSION

This chapter provides findings on the determinants of project scope and project performance. The researcher examined the empirical evidences and established the ground upon which the hypothesis was tested to be proved valid or not before the conclusion drawn. The data was analysed using the simple statistical methods, frequency tables showing responses to the particular questions were constructed and percentage despondences to the questions. The research had a simple size of 75 respondents. Therefore this research has three categories of respondents namely employees, managers and beneficiaries of Huguka Dukore Akazi Kanoze project.

4.1 Demographic characteristics of respondents

Demographically, any organized population may be characterized by the following: gender, age, educational level and experience of working in the project. The researcher to make a description of respondents in scientific research has used the demographic characteristics and this helped the researcher to categorise them , the researcher assess the demographic characteristics to known the quality of respondents if they are experienced to the projects performance , if they are quailed for projects implementation and their management , if the all gender were included in the huguka dukore akazi kanoze project.

4.1.1 Gender distribution of respondents

Gender is one of main factor of human resource productivity. Consequently, this research targeted to know the sex structure of respondents in order to assess the role played by the respondents accordingly. Then, the following table indicates gender distribution of respondents.

Table 2 Distribution of respondents according to their gender

Gender	Frequency	Percentage
Female	41	54.7
Male	34	45.3
Total	75	100

Source: Primary data, 2020

From the table 2, it is noted that 54.7% of respondents are females while males took the percentage of 45.3% of total respondents. These findings would be explained that political ideology of Rwanda priory's women to participate in all sectors of economy, this also observed in Huguka Dukore Akazi Kanoze project.

4.1.2 Age distribution of respondents

Age is one of main factor of human resource productivity. Consequently, this research targeted to know the age structure of respondents in order to assess the role played by the respondents accordingly. Then, the following table indicates age distribution of respondents. As shown the table 3 the largest number of respondents falls into age group of 31-40 years that makes up the percentage of 42.7% of respondents. This percentage shows that the majority of our respondents are energetic people to participate in productive activities within the community. It is followed by 29.3% of respondents lying in the age group of 20-30 years and the age group of 41-50 years that 26.7% of respondents finally 1.3% of total respondents are in range of age group of 51 years and above.

Table 3. Distribution of respondents according to their age

Age	Frequency	Percentage
20-30 years	22	29.3
31-40 years	32	42.7
41-50 years	20	26.7
51 years and Above	1	1.3
Total	75	100

Source: Primary data, 2020

4.1.3 Highest academic level

To comply with duties and responsibilities of any job description, educational level is one of major criteria. Then, the following table indicates the highest educational level of surveyed respondents.

Table 4 Educational level of respondents

Educational level	Frequency	Percentage
Secondary	15	20.0
Diploma	20	26.7
Bachelor's degree	20	26.7
Master's degree and above	20	26.7
Total	75	100

Source: primary data, 2020

As shown in the table 4, 20.0% of respondents said that they have secondary level, 26.7% of respondents said that they have diploma, again 26.7% of respondents have Bachelor's degree, finally 26.7% of respondents have Master's degree and above means that all respondent were qualified to participate in the projects to achieve its objectives .

4.1.4 The length of years that respondents working with HDAK project.

The following table illustrates the length of years that respondents work with this project.

Table 5 The length of years that respondents working with Huguka Dukore Akazi Kanoze project.

Number of years	Frequency	Percentage
Less than 1 year	30	40.0
Between 1- 3 years	20	26.7
Above 3 years	25	33.3
Total	75	100

Source: Primary data, 2020

The table 5 shows the responses of the length of years that respondents working with this project. Then 40.0% of respondents said that they working with Huguka Dukore Akazi Kanoze project in the period of less than one year, again 26.7% of respondents said that they working with Huguka Dukore Akazi Kanoze project in the period of between 1 and 3 years finally 33.3% of respondents said that they working with Huguka Dukore Akazi Kanoze project in the period of in the period of 3 years and above those percentages indicated that most of respondent were experienced to meet all requirement to achieve the purpose of the projects .

4.2 Presentation of findings

4.2.1. The Resources available which affect project productivity

During the research, the researcher wanted to know the kinds of resources available in HugukaDukore Akazi Kanoze project. And the details are shown in the table 6

Table 6 The kinds of resources available in Huguka Dukore Akazi Kanoze project

	Strongly agree		Agree		Disagree		Strongly disagree	
	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Natural or physical resources	45	60.0	30	40.0	0	0.0	0	0.0
Financial resources	45	60.0	30	40.0	0	0.0	0	0.0
Human resources	45	60.0	30	40.0	0	0.0	0	0.0

Source: Primary data, 2020.

The table 6 indicates that 60.0% of respondents and 40.0% of respondents strongly agreed and agreed respectively that the first kind of resources in Huguka Dukore Akazi kanoze is natural or physical resources means that the projects have potentials physical natural resources to perform the project activities, also research want to know the if the projects has resourced financially therefore the findings indicated that 60.0% of respondents strongly agreed that the second kind of resources in Huguka Dukore Akazi kanoze is financial resources and the 40% of respondent raised that they agreed that the projects have financial support finally 60.0% of respondents agreed that other kind of resources in Huguka Dukore Akazi kanoze is human resources. Richman (2006) supports this idea by stating that project cost includes processes and activities that ensure the project is completed within the approved budget. It includes cost estimating, cost budgeting, and cost control. This indicates that if the scope is change, it will affect the budget. The initial budget has to be modified to the requirement of current project scope. This point is related to my study because project cost management is one of the determinants of project scope

4.2.2 The effect of schedule on the needs of stakeholders of HDAK Project

the researcher wanted to know the affect of time/schedule on the needs of stakeholders of Huguka Dukore Akazi Kanoze Project. And the details are shown in the table 7

Table 7 The effect of schedule on the needs of stakeholders of Huguka Dukore Akazi Kanoze Project

	Strongly agree		Agree		Disagree		Strongly disagree	
	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Time helps in setting goals of the project	15	20.0	60	80.0	0	0.0	0	0.0
It identifies clear path of the project	15	20.0	60	80.0	0	0.0	0	0.0
Time helps in prioritizing for a better performance	15	0.0	60	80.0	0	0.0	0	0.0
It shows chronological order of project activities	15	0.0	60	80.0	0	0.0	0	0.0

Source: Primary data, 2020

The findings indicated in the table 7 of this study displays the responses about the effect of time/schedule on the needs of stakeholders of Huguka Dukore Akazi Kanoze Project, the results from respondents were shown that the majority 80.0% of respondents agreed that time helps in setting goals of the project and 20% of respondents were strongly appreciated the time facilitate in planning of projects goals means during planning process, any projects should consider mainly the time in goals setting in organization. The findings also were based on how schedule also participate in the identification of the clear path of performance within the projects therefore the results indicated that of the majority 80.0% of respondents agreed that time/schedule identifies clear path for performance in the project and 20% of participants shown that they need more time to identify good way toward projects performance

Other statement asked to the respondent to show their views were focused on how the time facilitate in the tasks prioritization for a better performance in the projects and the findings were shown in the table 7 where the majority 80.0% of respondents agreed that time/schedule helps in prioritizing for a better performance of Huguka Dukore Akazi Kanoze project and 20% of respondents were strongly accepted that time is needed to enhance projects performance . the last statement based on the time use were how It shows chronological order of project activities and the results were that 80.0% of respondents agreed that shows chronological order of Huguka Dukore Akazi Kanoze project activities and 20.0% of respondents were strongly indicated that time is needed in the provision of chronological order of the projects within an organization therefore time /schedule is considered as main determinant of projects scope to dress the projects performance. .

4.2.3 Budget on the performance and quality in HDAK project

Researcher wanted to know the influence of budget and cost on the performance and quality in Huguka Dukore Akazi Kanoze project and the details are shown in the table 8 The findings indicated in the table 8 of this study displays the responses about the influence of budget and cost on the performance and quality in Huguka Dukore Akazi Kanoze project therefore the results were summarized with the statement and the results shown that the majority 64.0% of respondents appreciated that budget and cost helps to achieve the desired outcomes of the project and the 36% of respondents were strongly agreed that the cost and budget are needed in the projects performance. The second statement was based on how budget and cost helps to meet the need of stakeholders of the project and the results were 69.3% of respondents agreed budget and cost facilitate to meet the need of stakeholders and the 30.7% of respondents were strongly agreed that cost and budget promote the stakeholders involvement in projects activities.

Table 8 the influence of budget and cost on the performance and quality in Huguka Dukore Akazi Kanoze project

	Strongly agree		Agree		Disagree		Strongly disagree	
	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Budget and cost help to achieve the desired outcomes of the project	27	36.0	48	64.0	0	0.0	0	0.0
Budget and cost helps to meet the need of stakeholders of the project	23	30.7	52	69.3	0	0.0	0	0.0
Budget and cost helps to achieve on the expected quality of the project	15	20.0	60	80.0	0	0.0	0	0.0
Budget help in estimation of material costs	30	40.0	45	60.0	0	0.0	0	0.0

Source: Primary data, 2020

The third statement were focused on how Budget and cost helps to achieve on the expected quality of the project and the majority 80.0% of respondents strongly agreed budget and cost help to achieve on the expected quality of the project while 20% of respondents were agreed that Budget and cost helps to achieve on the expected quality of the project means that the budget and cost are required to meet the projects performance in organization

Last statement on the budget were based on how budget help in estimation of material costs and the results were 60.0% of respondents agreed Budget help in estimation of material costs and the 40% of respondent were strongly agreed how the Budget help in estimation of material costs therefore the projects activities were based on the budget and cost in organization .

4.2.4 The relationship between of determinants of project scope and project performance

The relationship between brand strategies and consumer preferences was statistically tested using Pearson’s correlation matrix. This was used because both the brand strategies and consumer preferences were numerical. The results obtained are shown in table 9

Table 9 Statistical test using Pearson’s correlation matrix

		Productivity	Stakeholders satisfaction	Cost performance and quality
Available resources	Pearson Correlation		.932**	.680**
	Sig. (2-tailed)		.000	.001
	N		75	75
Time/schedule	Pearson Correlation		.684**	.789**
	Sig. (2-tailed)		.000	.000
	N		75	75

	N	75	75	75
Budget/ cost	Pearson Correlation	.845**	.874**	.751**
	Sig. (2-tailed)	.000	.000	.000
	N	75	75	75

Source: Primary data, 2020

The findings indicated in the table 9 shown that there is a correlation between the productivity with the use of available resources where the results revealed that they is a very high positive correlation with the Pearson correlation coefficient(r) of 0.932 which was produced with p-value of 000 of 2-tailed means that with available resources, the projects can make more productivity which shown strong positive and statistically significant for available resources and productivity

The findings also shown that there is a correlation between available resources and stakeholder stratification and it is indicated by the retrieved the Pearson correlation coefficient (r) of 0.680 which was produced with p-value of 000 of 2-tailed means that there is a need of available resources to attract the stakeholder satisfaction, this coefficients indicate a weak positive correlation means that to motivate different stakeholders satisfaction in a project require the available resources to meet project objectives.

Finding in table 9 indicated that Available resources and Cost performance and quality were correlative with the success of project. The correlation coefficients are shown in table 9, $r=0.707$ is accordingly and was produced with p-value of 000 of a 2-tailed. The findings show strong positive and statistically significant mean that cost performance and quality require the available resources.

Finding in table 9 indicated that Time/schedule and Productivity were correlative with the success of project. The correlation coefficients are shown in table 9 $r=0.684$ is accordingly and was produced with p-value of 000 of a 2-tailed. The findings show strong positive and statistically significant mean that Productivity requires the sufficient time and period performing projects objective.

Finding in table 9 indicated that Time/schedule and Stakeholders satisfaction were correlative with the success of project. The correlation coefficients are shown in table 9 $r=0.789$ is accordingly and was produced with p-value of 000 of a 2-tailed. The findings show strong positive and statistically significant mean those Stakeholders satisfaction requires the sufficient time and period to perform projects objective.

Finding in table 9 indicated that Time/schedule and Cost performance and quality were correlative with the success of project. The correlation coefficients are shown in table 9 $r=0.725$ is accordingly and was produced with p-value of 000 of a 2-tailed. The findings show strong positive and statistically significant mean Cost performance and quality requires the sufficient time and period to perform projects objective.

The findings indicated in the table 9 shown that there is a correlation between the productivity with the Budget/ cost where the results revealed that they is a very high positive correlation with the Pearson correlation coefficient(r) of 0.845 which was produced with p-value of 000 of 2-tailed means that with Budget/ cost, the projects can make more productivity which shown strong positive and statistically significant for Budget/ cost and productivity.

The findings indicated in the table 9 shown that there is a correlation between the Stakeholders satisfaction with the Budget/ cost where the results revealed that they is a very high positive correlation with the Pearson correlation coefficient(r) of 0.874 which was produced with p-value of 000 of 2-tailed means that with Budget/ cost, the projects can make more productivity which shown strong positive and statistically significant for Budget/ cost and Stakeholders satisfaction

The findings indicated in the table 9 shown that there is a correlation between the Cost performance and quality with the Budget/ cost where the results revealed that they is a very high positive correlation with the Pearson correlation coefficient(r) of 0.751 which was

produced with p-value of 000 of 2-tailed means that with Budget/ cost, the projects can make more Cost performance and quality which shown strong positive and statistically significant for Budget/ cost and Cost performance and quality

Table 9 indicates a correlation matrix between determinants of project scope(available resources, time/schedule, budget/cost) and project performance (Productivity, stakeholders satisfaction, cost performance and quality).

Furthermore, our findings show that there is the relationship between of determinants of project scope and project performance because determinants of project scope (available resources, time and need of stakeholders) helps to achieve the desired outcomes, help to meet the need of stakeholders, to achieve on the expected quality, help to deliver the expected project goals and they help estimate material costs of the project help to carry out the project tasks, help to carry out the project tasks used to announce the project location, used to announce to meet up the project beneficiaries, help to manage other resources of the project.

4.2.5 Regression between Determinants of project scope and project performance

This research carried out a regression analysis determinants of project scope and Project performance. The table 10 show a regression analysis, through a summary of model, analysis of variance and regression coefficients.

This Table 10 provides a model summary between the indicators of independent variable and productivity/outcomes

Table 10 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.925 ^a	.855	.854	.41684

- a. Independent variable: Constant (Available resources , Time/schedule, Budget/ cost)
- b. Dependent variable: Productivity/outcomes

From Table 10, the value of Adjusted R Square was 0.855. This means that there was a variation of 85.5% on productivity/out comes due to changes in the independent variable (Available resources , Time/schedule, Budget/ cost).

Table 11 Regression Coefficients

Model		Unstandardized Coefficients		Standardized	T	Sig.
		B	Std. Error	Coefficients		
1	(Constant)	.568	.052		11.006	.000
	Available resources	.067	.021	.091	3.124	.002
	Time/schedule	.139	.023	.192	6.163	.000
	Budget/cost	.240	.034	.365	7.118	.000

- a. Independent variables: Constant (Available resources , Time/schedule, Budget/ cost)
- b. Dependent variable: Productivity/outcomes

The finding revealed that holding independent variables (Available resources , Time/schedule, Budget/ cost) to a constant zero, Productivity/outcomes gained by Akazi Kanoze project would between 13.9 and 67%, a unit improves in Available resources to increase in Productivity/outcomes limited by a factor of .051, a unit increase in Time/schedule leads to increase in

Productivity/outcomes limited by a factor of .021, finally, a unit increase in Budget/ cost leads to increase in productivity/outcomes limited by a factor of .034.

5. CONCLUSION AND RECOMMENDATIONS

5.2 Conclusion

The study sought to establish the relationship between determinants and project performance by Huguka Dukore Akazi Kanoze project. On the basis of the findings, the researcher arrived at several conclusions. Regarding the first objective, the study found that find out available resources affect productivity or outcomes of Huguka Dukore AkaziKanoze project; Similarly, based on the second objective, the study revealed that time/schedule effect on meeting the needs of stakeholders of Huguka Dukore AkaziKanoze project; and based on the third objective, the study revealed out that budget and cost influence the performance and quality in Huguka Dukore AkaziKanoze project; The forth objective, which sought to analyze the relationship between determinants of project scope and project performance in Huguka Dukore AkaziKanoze project; the study revealed out that A strong positive relationship ($r=.806^*$) was established because .806 is close to 1, implying that a positive relationship that was significant at 0.01 level existed between the determinants of project scope and project performance Furthermore, our findings show that there is the relationship between of determinants of project scope and project performance because determinants of project scope (available resources, time and need of stakeholders) helps to achieve the desired outcomes, help to meet the need of stakeholders, to achieve on the expected quality, help to deliver the expected project goals and they help estimate material costs of the project help to carry out the project tasks, help to carry out the project tasks used to announce the project location, used to announce to meet up the project beneficiaries, help to manage other resources of the project.

5.2 Recommendations

Basing on the conclusion made above, the researcher has embarked himself on determinants of the project scope and project performance and the results revealed a number of areas aimed at improvement of both agriculture-based cooperatives and livelihood of farmers in Rwanda. It is recommended to the project to involve beneficiaries in the definition of project scope would help to understand more their expectation to avoid changing the scope based on this condition. Considering donor(s) requirements is another point to put in mind when carrying out the process of project change. To verify the initial scope before starting the implementation to find out if it is suitable for the environment. To communicate to the project team as soon as they find that the project activities are taking direction that will not help in solving the problem they have before intervention of the project. Beneficiaries have to ensure their participation to be able to know if the project is taking the right direction to satisfy their need. The study recommends that the government creates policies on project implementation which will flows to the final satisfaction of customers in regards to projects performance. The project should be allotted sufficient period of time in order to avoid losses during the sudden changes. It suggests that the Government should take measures to use online procurement in all governmental tendering processes to enhance the project implementation. It recommends that the policy makers enhance the awareness of contractors' implementation strategies for successful delivery of projects implementation; awareness of the community to involve in projects implementation for the success of the implementation; government to support projects implementation both during implementation and beyond.

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