

# Impact of risk management on agriculture projects' success in Rwanda: A case of farmer field school Project in Kamonyi district, Rwanda

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**Abstract:** The purpose of the research was to determine the impact of risk management towards agriculture projects' success in Rwanda. The study explored how to best analyze project risks, different strategies of risk mitigation such as risk control, risk retention, risk prevention, and risk transfer. The research also evaluated the impact of the risk mitigation strategies used towards project's success in the agriculture sector, especially in the Farmer Field Schools project in Kamonyi District, Rwanda. The explanatory design for qualitative and quantitative data was considered and this research used 345 respondents including 30 Farmer Field School Project trainers, 255 project beneficiaries, and 60 local leaders of different sectors of Kamonyi district whose responsibilities are related to agricultural activities. All the participants were selected by using sampling techniques where the researcher selected the Farmer Field School trainers randomly and project beneficiaries and local leaders were selected purposively, while the sample size of all population was calculated by using the Yamane formula to get the 78 participants. The results were summarized in the table 4.5, and show that there is big impact of the risk management factors on the project success, especially in the Farmer Field School in Kamonyi district, Rwanda. The third research objective of this research was to establish the relationship between risk management and success of project in the Farmer Field School Project in Kamonyi District, Rwanda. The researcher intended to know the correlation between the two variables: risk management strategies and projects success in the Farmer Field School of Kamonyi district. Therefore, the results revealed that risk management strategies need to be applied in order to achieve project success in the Farmer Field School Project of Kamonyi district, Rwanda. This was shown by the Pearson correlation coefficient ( $r$ ) of 0.903, manipulated with the P-value of 0.000 of a 2-tailed to indicate that risk management and project success are strongly positively and statistically significant. It suggests that the government should take measures to use technology in all governmental agriculture projects to enhance the risk management strategies. It proposes that all policy makers grow their sensitization to project managers to promote implementation strategies that are specific for delivery of agriculture projects.

**Key words:** Risk management, agriculture projects, farmers, farmer field school Project

## 1.0 Introduction

Overview of the study. It comprises the broad background and motivation of this research, statement of the problem, study objectives, research question that guided this study, the importance of the study in the whole community. It also presents the scope, limitations, and organization of the study. There are techniques used to control all project risks and the way of their prevention.

Farmer Field School is one of the best methods of learning made of observation and experimental activities towards agriculture enhancement. It was created and implemented in Asia by the Food and Agriculture Organization (FAO) in the 1980s. The main purpose of this school was to increase farmer skills needed for rice plantation on the small scale and to obtain the high productivity from implementation of integrated pest management practices in their paddy fields.

Integrated Soil Fertility Management (ISFM) is a set of soil fertility management practices that include the use of fertilizers, organic inputs, and improved germ plasm combined with the knowledge on how to adapt these practices to local conditions, aimed at optimizing agronomic use efficiency of the applied nutrients and improving crop productivity. It focuses on the soil fertility approaches such as soil health improvements, strategies to manage and control the soil erosion and leaching, livestock integration strategy and improving the crop management practices.

The Crop Intensification Program (CIP) was initiated in Rwanda in 2007 by Ministry of Agriculture and Animal Resources (MINAGRI) with a target of enhancing fields' productivity, providing enough food crops, ensuring food security and making households and other programs self-sustained. Land use consolidation was one of the solutions as land fragmentation was regarded as a farm management issue. The former exists when a household operates a number of owned or rented non-continuous plots at the same time (Okezie et al, 2012). Rwandan agricultural activity contributes 33% to the national GDP and 72% of the active population are engaged in agricultural activities. In addition, agriculture contributes 70% of the Rwandan national exports (Abbott, Sapsford, &Rwirahira, 2015). Coffee is one of the biggest contributors to Rwandan export. In 2018 alone, coffee accounted for USD 68.7 million worth of exports (U.S. Department of Commerce's International Trade Administration, 2019). However, farmers in Sub-Saharan countries face a lot of risks mainly affecting small-scale farmers who are dependent on their fields and farm activity (Khisa, Okoth, & O'Brien, 2014). MINAGRI's Strategic Plan for Agriculture Transformation (PSTA) 4 recognizes that research and innovation will be the center for agricultural transformation, and the strengthening of farmers' knowledge and skills. This will help in farmers' specialization, and in the agriculture intensification and diversification (World Bank, 2018). Rwandan agricultural activity contributes 33% to the national GDP and 72% of the active population are engaged in agricultural activities. In addition, agriculture contributes 70% of the Rwandan national exports (Abbott, Sapsford, &Rwirahira, 2015). Coffee is one of the biggest contributors to Rwandan export. In 2018 alone, coffee accounted for USD 68.7 million worth of exports (U.S. Department of Commerce's International Trade Administration, 2019). However, farmers in Sub-Saharan countries face a lot of risks affecting mainly small-scale on the dependent households for their fields and farm activity for their living (Khisa, Okoth, & O'Brien, 2014). The ministry of agriculture and animal resources implemented the strategic plan for agriculture plan (PSTA) 4 recognizes that research and innovation will be the center for agricultural transformation, and the strengthening of farmers' knowledge and skills. This will help in farmers' specialization, and in the agriculture intensification and diversification (World Bank, 2018).

Many development programs intervening in Rwandan agricultural sector are focused in the farmers' capacity building. The main goal of the farmers' field school is the introduction of active learning methods based on the creation of innovation, participatory and experimental learning to overcome challenges and master all problem-solving skills through innovation based learning and help all farmers to discover agriculture issues, suggest solution and create good agriculture practices toward their farming activities.

Many projects fail due to the lack of managerial skills and unavailability of resources. Failure of project managers in the identification, analysis and the provision of alleviation of all projects risk factors lead to the failure of projects. Hence, a project failure can be directly related to how much the manager has identified and managed the risks, and which methods they used to mitigate the risks. Risk analysis is a technique of risk management used to identify vulnerabilities in a project plan before the project implementation starts. It helps project managers to identify some possible challenges that would make the project to fail and plan for strategies that lead to the project's success. This is a very important step in project design to ensure the project success. Many studies were conducted to identify different factors that contribute to project success. Therefore many agriculture projects focused on food security and less examined how the risks are controlled and managed in the agriculture industry. This inspired there searcher to carryout are search on the impact of risks management strategies on the agriculture projects' success in Rwanda, specifically on

the Farmer Field School Project in Kamonyi District, Rwanda. The key purpose of this research was to evaluate the impact of risk management on the agriculture projects' success in Rwanda, a case study of the Farmer Field School Project in Kamonyi district, Rwanda. This research was based on the specific objectives that follow:

- i. To assess factors of risk management that affect the success of the Farmer Field School Project in Kamonyi District, Rwanda
- ii. To examine the impact of risks management on the success of the Farmer Field School Project in Kamonyi , district Rwanda
- iii. To establish the relationship between risk managements and success of the Farmer Field School Project in Kamonyi District, Rwanda

## **2. LITERATURE REVIEW**

### **2.1 Theoretical literature**

#### **2.1.1 Concepts of risk managements**

Risk is defined as the occasional facts that impact the projects' activities and delay or hinder the projects purpose or its potential exposure to more unfavorable opportunities that happen to affect the objectives of the project (John, 2003). It is important to understand how the risks could be controlled and managed in an effective manner to alleviate all diverse effects to the objectives of the projects in an organization, even if it is predictable in all projects activities. The risks in the project can happen due to the projects marginal fluctuations in an organization, competitive process, worksite output, right to the contract, issues of inflation, and political instability (Rezakhani,2012).

As agricultural projects meet with significant risks and uncertainty, it is crucial to assess their impacts on the project goals because risk analysis methods facilitate the projects owners and managers to decide which projects are having more risks, identify the main causes and sources of those risks in every project and suggest the way of managing each risk source in agricultural activities (Pejman,2012).

#### **2.1.2 Risk analysis**

Risk analysis is one of the strategies used to manage project resources and imagine that for example an organization have faced different issues and failed, and then act back to know what was potentially leading to the project failure. The main target of risk analysis is to determine all weaknesses in the project plan and to analyze the ongoing process to avoid the project's activities in a backward movement.

There are many reasons that can potentially lead projects to fail and most of them have more possibilities to overcome them. For instance, the project team could maintain the strong measures to manage all issues related to their projects. The risk analysis should be prepared on the middle and large scale which can promote the political, financial and cultural influence to the projects. Therefore, projects should have a determined scope, detailed improvement goals to be attained, a clear implementation process and its periods for better analysis in an organization.

#### **2.1.3 Project success criteria**

Muller (2007) stated that performance is considered as a factor that conducts and leads to the success of a project in an organization. Project performance requires more materials and factors to be considered for attaining its main purpose and goals. Westerveld (2003) stated that the role played by companies and their owners is considered as a key criteria of success to complement their works based on the time, quality of service and budget as a main indicator of projects success. Determining the applicable criteria for any kind of venture is idealistic (Mir,2014). Although many criteria are important to consider for project success, they could be on the same duration, projects size, and complexity and project stakeholders' engagement as needed materials for success. The surroundings determine dynamicity of how project are implemented and increase the complexity type where it is applicable. The

reviews of project management revealed that the factors for succeeding projects are determined with supplement items, and practical measures may be confused. The project team has the task to be performed with the implementation process towards the different well defined criteria for success (Davis, 2004). Based on the well detailed reviews on the success factors which should be kept and put into consideration by different stakeholders before the beginning of the projects, their pattern reviews speaks all through the projects process.

#### **2.1.4 Factors to be considered for projects' success**

There are many factors to consider in order to positively affect projects' performance, as those factors become the pillars of the projects success. They also help project leaders and stakeholders to ensure an effective preparation for success (Dvir, 1998). Determined criteria show more chances to project success or failure in an organizations, and project time is a big factor that should be considered (Westerved,2003).

The main purpose of project management is to determine or to identify the important factors that influence the project implementation and performance to achieve the desired outcomes. Different studies reflected on the real factors on which projects should depend on in order to achieve success (Savolainien, 2012). Many challenges are faced while identifying factors that contribute to projects' success, but many researches have dedicated more focus on the strategies to lead the projects' implementation in order to ensure successful projects in a dynamic global market. Hence, in order to maintain their adaptation to the business changes, project managers are required to be more innovative in using different strategies to make the projects more competitive (Borza, 2014). In his research, Popa (2004) found that management strategies and procedures should aim at achieving success in so as to attain the planned outcomes. His research also encourages stakeholders to keep in mind the project performance and keep the implementation in line with the project planning.

#### **2.1.5 Procurement project planning**

The procurement in the project activities play a big role for its successful implementation. Procurement processes facilitate the projects' team to think highly, to arrange the resources, tasking all projects operations with the respect of time frame (Frese, 2013). Where there is failure, the project team needs to use more efforts to redesign other project frameworks and take into consideration that planning process is highly appreciated in project's environment to always adapt to the changes that happen with respect of all available resources (Frese, 2013).

Project plan also looks forward to determine the cost of each item and the quantity needed with the well-structured state in an organization to reach the project performance (Hyer, 2010). Project planning tasking each project members with their responsibilities, the duties and responsibilities are tasked due to the targeted aim of an organization and ensure the location where the works will take place is fully occupied with the competitors in order to identify the favorable place for implementing projects for success. The suggestions forwarded to projects managers and all personnel to take into consideration the terrain and more characteristics of management and administration for project success.

#### **2.1.6 Contract monitoring and evaluation (M&E) in an organization**

Contract M&E system is set of rules and regulation, approaches and techniques to be respected with projects team such as sellers, projects implementers to perform their duties and responsibilities. To evaluate and monitor a process is to know the categories of agreements to fulfill and to complete a task, and to assess whether things went well or not in order to select various ways of improvement. It can also determine the way of overcoming all obstacles that appear in the moderation process used to make a follow up, and to make comparison of work done with the desired responsibilities (Chandra, 2008).

Project criteria also symbolize the quality of completed works, set of oriented tasks including processes, approaches and system to obtain the whole set of activity to reach the project objectives, even if the management, administration and information sharing become a problem due the more people located in different areas and tasked with complicated works, and their time and personalities in an organization. For better project performance, it requires different items like execution timeframe, pricing and detailed

framework in the situations, and setting up a well detailed governmental procurement plan model. Supervision and expectations in an organization are two main criteria for good administration as considered as very good channeled tasks which should be focused. Therefore, the process begins from identifying the project activities, motivating the human resources due to their responsibilities and their management (Meredith & Mantel, 2012).

### **2.1.7 Risk prevention**

Risks are defined as problems or negative results that projects faces and become obstacles to the project aims, due to their impact on the project, one of the good ways to prevent them is to deviate the projects scope or change it, or even eliminate it. There are many challenges that projects can face and affect it completely and it is in this regards that project risk management is required in order to ensure project success. The risk management process should be prepared before the beginning of the project instead of waiting for all problems to occur (PMI, 2004). Risk prevention means considering all risk that can happen in the project and establish the way of eliminating them in the project execution to prevent those issues. Ropel (2011) stated that project managers should make implication on the ways of risk prevention and well-designed measures to overcome the risks in the project before their beginning.

### **2.1.8 Risk control and evaluation**

Knowing all items of the project management and each activity within the project facilitates the personnel to mention all issues that can evocate the difficulties on the ongoing of the projects and it will make easier to prevent the risks from the projects or enhance risk preventions and reductions strategies. The process to minimize the difficulties in the ongoing of the projects requires the mitigation by the projects personnel (Michaela, 2011). The research revealed that the process to minimize risks in the project activities requires to invest more products that give long term profits and to recruit competent and qualified risk managers to control all risks in an organization. This is because those competent and qualified risks managers can have better suggestion or response than other projects personnel (Mikaela, 2011). All risks can be managed, eliminated or be distributed between two bodies that have experience and required skills and resources to manage that issues (Ropel, 2011).

## **2.2 Empirical review**

### **2.2.1 Agricultural services management and population size**

The developments of Rwanda depends highly on agriculture services where more than 80% of Rwandans benefit from agriculture using the 24,771 Km<sup>2</sup> of the land exploited. Even though at least 78% of land is used for farming with crop land occupying 12%, the other part is occupied by forests, valleys, marshlands, and marginal lands (USAID, 2010). Crop farming is not considered in the total land of 1,735,035 hectares that are used to reduce food shortage in the population and land for the pastures and bushes (MINAGRI, 2010).

Land for cultivation in Rwanda is highly limited, which is why agriculture in Rwanda should focus on the creation of more alternative resources to produce more food rather than limiting on the agricultural only. With the creation of different techniques of agriculture practice like land use consolidation which played a big role in decentralized agriculture system, it helped to ensure a good use of land despite the high density of the population, accounting to 408 people on one kilometers square. The land was fragmented where at least 35% of population depends on farming on individual farms of a range of 0.12 hectares per farmer. Agriculture was using 0.76 hectares that are separated in four to five small land portions in different regions. This require all Rwandans to diversify their farming practices in order to increase agriculture productivity and to protect their lands from natural hazards (Kathiresan, 2012).

According to Kathiresan (2012), the Rwandan economy, based on the main target of EDPRS, was focused on the agriculture transformation that requires to shift from traditional agriculture to modern agricultural practices for the purpose of poverty reduction. The vision 2023 was aiming at eradicating poverty in all population and zero hunger as main purpose of the MDG's through transforming agriculture for high productivity, and making it market oriented, especially for high value crops. Based on the main objectives of the Comprehensive African Agricultural Development Program (CAADP) and the New Partnership for Africa's

Development (NEPAD) which aimed at managing land through practicing modern agriculture, crop intensification was taken as one of the agriculture pillars to eradicate poverty in all its form and to enhance the economy (MINAGRI, 2010).

### **2.2.2 Agricultural land consolidation strategy**

Land use consolidation is considered as one of the strategies to increase agriculture productivity as farming land fragmentation is considered as a big issues in the agriculture transformation because it limits the agriculture mechanization, reduces the land farming net productivity, integrates big price to reduce its high effecting results (Bentley,1987). Land fragmentation is defined as land holding containing many spatial distinct plots of small dimension, undetermined shape, separated from one another with line boundaries (Dijk, 2003).

The government of Rwanda had created and suggested many solutions towards the land fragmentation and introduced the land use consolidation to ensure a proper land management (MINAGRI,2012). The Food and Agriculture Organization (FAO) and the European Union (EU) established the land use consolidation structure as a strategy to increase the rural socio-economic development where the fragmentation of farming land had impacted the farm productivity and farmers competitiveness. This is because it had been realized that land fragmentation had reduced the size of cultivable farms and made hard their management, especially soil and water management for enhancements of natural resources (Kirk et al.,1998).

Crop intensification program is also another program that was elaborated and implemented in 2007 to maximize agricultural transformation towards high farming productivity, to alleviate food insecurity and to ensure the country's self-sufficiency. This program targeted evaluating the correlation between economic growth, equality and equity, which could be measured from consolidated lands. In addition, it was linked to land use consolidation which facilitated agriculture mechanization, especially in low lands such as valleys (MINITERE,2001).

### **2.2.3 Crop Intensification Program**

According to Kathiresan (2012), the agriculture faced many challenges including land fragmentation, food shortage and high appearance of poverty. Therefore, the government of Rwanda introduced more policies as a way to overcome those issues such as agriculture transformation, crop intensification program and land use consolidation where the main focus was to raise the farm productivity of the maize, rice in valleys, Irish potatoes, wheat, cassava and beans in the most cultivable lands in Rwanda. This was to ensure foods security and poverty alleviation in the whole country. Consequently, the Rwandan government has approved the LUC as the model to be provisioned with organic land law where its main focus was to make crops a priority everywhere in the country based on the different agro-climatic zones. Hence, all farmers are encouraged to participate in land use consolidation while growing their crops (MINAGRI,2008).

## **2.3 Theoretical Framework**

This part highlights the relationship between research has with other conducted studies, and it focuses on different theories that support this research to achieve its objectives. Therefore, this research used different theories like Legitimacy Theory and Theory of Agency.

### **2.3.1 Theory of agency**

The agency theory related mainly on the correlation among activities in the institution (Meckling,1970). It considers organizations in which staff members of different grades, managers as well as subordinates, participate in all the organization's activities (Eisenhardt,2009). The agency theory is also referring to the benefits targeted by managers in an institution, and it is considering ways in which leaders contribute to the benefit of the organization (Xingxing,2012). This theory solved a managerial problem in when sometimes it may not be easily feasible to always supervise every worker in order to monitor whether all assigned responsibilities are completed in time. In regards of this study, it will mainly focus on the risk management for projects' success in

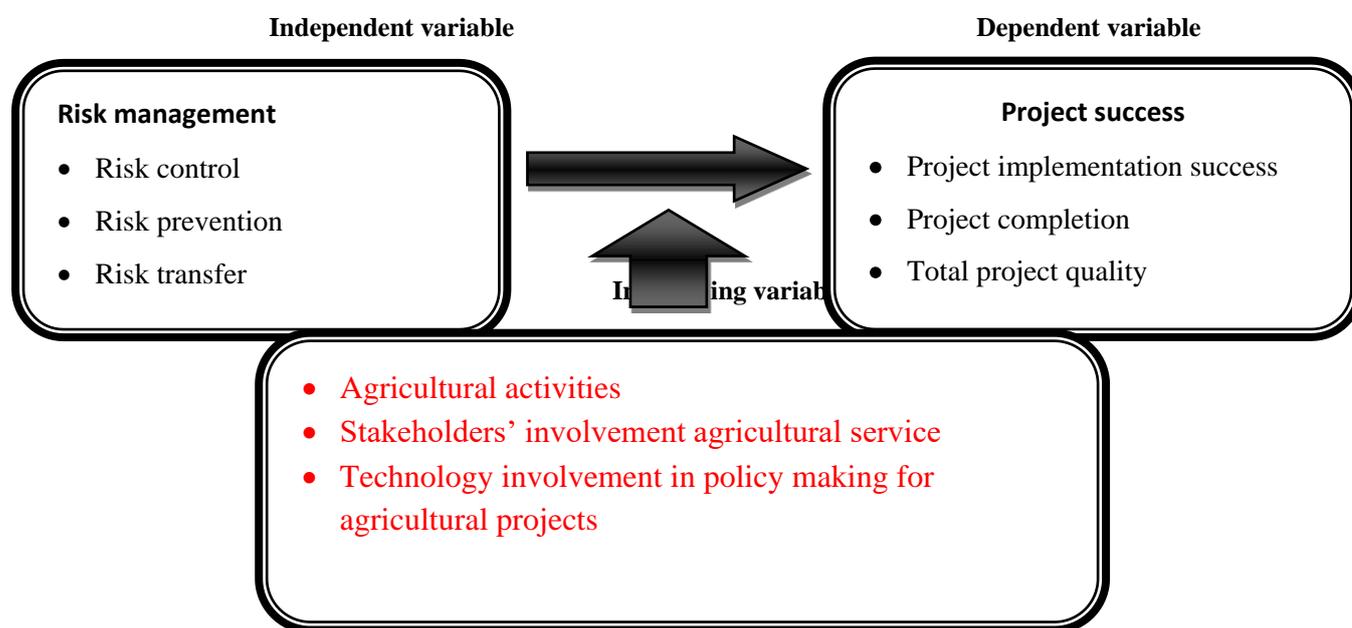
a company. Hence, this theory helps the authority, as a project management strategy, to distribute risks across different stakeholders based on their areas of expertise, in order to avoid that the risks lead to the failure of the project.

### 2.3.2 Legitimacy theory

This theory reference to a system in which authorities of public institutions allocate their activities to the key staff members in order to maximize the benefits of the community (Wilmshurts&frost,2000). The legitimacy theories define the limitations on different tasks that are right to be done and visible in policies and processes that lead to the community benefit, in regard to norms, rules, values and social (Suchman,2007). Due to the statement above and with regards of the main purpose of this study in the line with the success of the agricultural projects, public institutions may face different challenges such as corruption, mismanagement from unqualified workers, embezzlement, low technology use, as well as low motivation of staff towards the goals of the projects implemented. This has a relationship with projects where they face different issues such as cronyism and nepotism which impacts the management strategies, like in the Farmer Field School Project in Kamonyi district, Rwanda. This research used the legitimacy theory to assess if the project managers assessed all sources of risks ahead of time and used the right management measures, targeting a high performance of the project, maximizing community benefits

### 2.4 Conceptual Framework

Conceptual framework indicate the correlation scheme of two variable included in the study and take into consideration their relationship where the independent variable is risk management and the dependents variable is the project's success. The figure 2.1 shows the interrelation of those variables and their respective indicators and measured outcomes of the variables. Specifically, this study focused on the risk management on the project's success in Rwanda, especially in agricultural industry.



Source: Researcher, 2023

Figure 2.1 Conceptual framework

In this study, the researcher finds how risk management impacts project success especially in agricultural activities in Farmer Field School Project of Kamonyi district.

## 3. RESEARCH METHODOLOGY

### 3.1 Research design

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The research design refers to the identification of attitudes, ideas, constructive feedback and more opinions in regard to this research objectives (Poronsky,2009). In this research, the descriptive design was used in this research because this study seeks to collect the real observable facts, put many perceptions and opinions into the phenomena in order to provide basic information needed in the areas under investigation. This design is also based on how the situation ,or what the situation presents, relates to the previous factors that impacted the present conditions in the study area. Therefore, the research chose this survey because it based on progressive inquiry concerning the impact of the risk management on the success of agricultural projects in Rwanda, a case of the Farmer Field School Project in Kamonyi district, Rwanda.

### 3.2 Target population

The study investigation should have enough participants to provide information regarding the areas under investigation (Grove, 1993). The study targeted 345 participants including 30 Farmer Field School trainers, 255 project beneficiaries, and 60 local leaders whose responsibilities are related to agricultural activities from different sectors of Kamonyi district.

### 3.3 Sample Design

The sampling design of this study indicated the sample size and techniques of sampling to be used in this research. Sampling techniques are based on how the participants provide the real information based on the participants’ qualities, knowledge, opinions, and their experience in the study objectives (Bernard,2002). The framer field school trainers was selected by using the random sampling, while choosing the local leaders from different sectors of Kamonyi district was done using stratified sampling techniques, and purposive sampling technique for the selection of project beneficiaries.

Decombe (2008) suggested that the selected sample should merit considerate to represent the whole group and to offer the information that could systematically be tested. The Yamane formula was considered in order to define the sample size, and a sample were selected randomly (Yamane, 1970). The total population was 345 participants which gave a sample size of 78 participants.

$$n = \frac{N}{1+N(e)^2} = n = \frac{345}{1+345(0.1)^2} = 78$$

Source: Yamane, 1970

**N** indicates the whole targeted population, **e** the precision level (10%), and **n** the selected sample size

Table 3. 1 Targeted populations and its sample size

Participants	Population	%	Sample size
Farmer Field School trainers	30	8.69	7
Local leaders	60	17.39	13
Project beneficiaries	255	73.92	58
<b>Total</b>	<b>345</b>	<b>100</b>	<b>78</b>

Source: Researcher, 2023

### 3.4 Data Collection Methods

Burns & Grove (1993) stated that data collection is the organized system to gain information needed for a study. Different methods were used such as questionnaires and observation through a descriptive design. The descriptive design was applied due to the long periods needed to handle all issues related with the research objectives and dealing with the big number of participants related with the agricultural activities in Kamonyi district. The participants that were involved in the study are geographically dispersed in the whole district, which is why the researcher used descriptive survey .The financial means also influenced the researcher to use combined methods to reach each individual during data collection.

The prepared questionnaires were shared to all participants because the participants' opinions, views, and their values, attitudes are useful, which helped to evaluate how risk management impacts agriculture project success in Rwanda, especially in Kamonyi district. Questionnaires were also chosen because it was easy to reach many respondents at the same time.

The researcher conducted himself the process of data collection and he worked closely with the participants during the filling of questionnaires where the respondents were given enough time to fill the questionnaires and they agreed on the date of questionnaire submission for analysis. The questionnaires were evaluated by the researcher for judging their validity, visibility and to ensure the participants' identities are hidden.

### 3.5 Data analysis procedures

In this research, both qualitative and quantitative data were gathered and were analyzed using the statistical package for social sciences (SPSS), and retrieved in the form of descriptive statistics such as mean, graphics, and tables with the frequencies for the establishment of the relationship of variables in the study.

## 4. RESEARCH FINDINGS AND DISCUSSION

Chapter four of this study discusses the analysis, interpretation, presentation and discussion of the study results based on the main purpose of the study. The findings presentation is based on each specific objective and all feedback from the respondents based on the research questionnaire. The findings from the study were presented using tables, graphics and figures.

### 4.1 Demographics characteristics of participants

This part indicates different characteristics of respondents. The categories of respondent were highlighted in form of age, gender, education level, and working experience. The sampled populations were 78 participants, made of 7 Farmer Field School trainers, 58 projects beneficiaries and 13 local leaders. Data collection methods were based on the questionnaire manuscript completion for all respondents, questionnaires were distributed to be completed and were returned as indicated in the table 4.1. The return rate was 100% of respondents.

Table 4.1 Questionnaire return rate

	Statement	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Farmer Field School trainers	7	9.0	9.0	9.0
	Project beneficiaries	58	74.3	74.3	83.3
	Local leader	13	16.7	16.7	100.0
	<b>Total</b>	<b>78</b>	<b>100.0</b>	<b>100.0</b>	

Source: Field data, 2023

The results from the data collected shows that 100% of all respondents returned their questionnaires. In addition, 74.3% of respondents were projects beneficiaries participation, 16.7% of all respondents were local leaders, while 9.0% of all respondents were Farmer Field School trainers. Therefore all participated respondents were motivated and have very relevant information related to how the project risks can be managed for projects' performance or success.

#### 4.1.1 Gender of participants

The study was very inclusive and considered the gender of all participants. The researcher considered participants' gender to establish fairness of in the provided answers. The study findings are indicated in the Table 4.2

Table 4.2 Gender of participants

	Statement	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	43	55.1	55.1	55.1
	Male	35	44.9	44.9	100.0
	<b>Total</b>	<b>78</b>	<b>100.0</b>	<b>100.0</b>	

**Source: Field data, 2023**

The researcher was interested in knowing the gender of participants in order to ensure an inclusive research. The findings show that 55.1% of all participants were women, while 44.9% of all respondents were men. This means that the Farmer Field School trainers, projects beneficiaries and local leaders who participated in the research were equitably represented in terms of gender.

#### 4.1.2 Education level of respondents

The study highlighted the education level of all participants in order to ensure all participants have an educational level enough to provide the information related to the research objectives, especially those who are qualified in project management, risk management, projects performance, agriculture modernization, agribusiness and technology related to the agriculture projects implementation and their performance. The findings revealed that majority of respondents have information about project management, agriculture, and especially, more farmers are experienced in agriculture-based activities, risk management and agribusiness. This means that they are qualified in the issues related to the project performance and risk management, the results were mentioned in the Table 4.3.

*Table 4.3 Educational qualification of respondents*

	Statement	Frequency	Percent	Valid Percent	Cumulative Percent
	below high school education	6	7.7	7.7	7.7
	high school education	41	52.6	52.6	60.3
	diploma	13	16.7	16.7	76.9
	bachelor	8	10.3	10.3	87.2
	postgraduate	10	12.8	12.8	100.0
	<b>Total</b>	<b>78</b>	<b>100.0</b>	<b>100.0</b>	

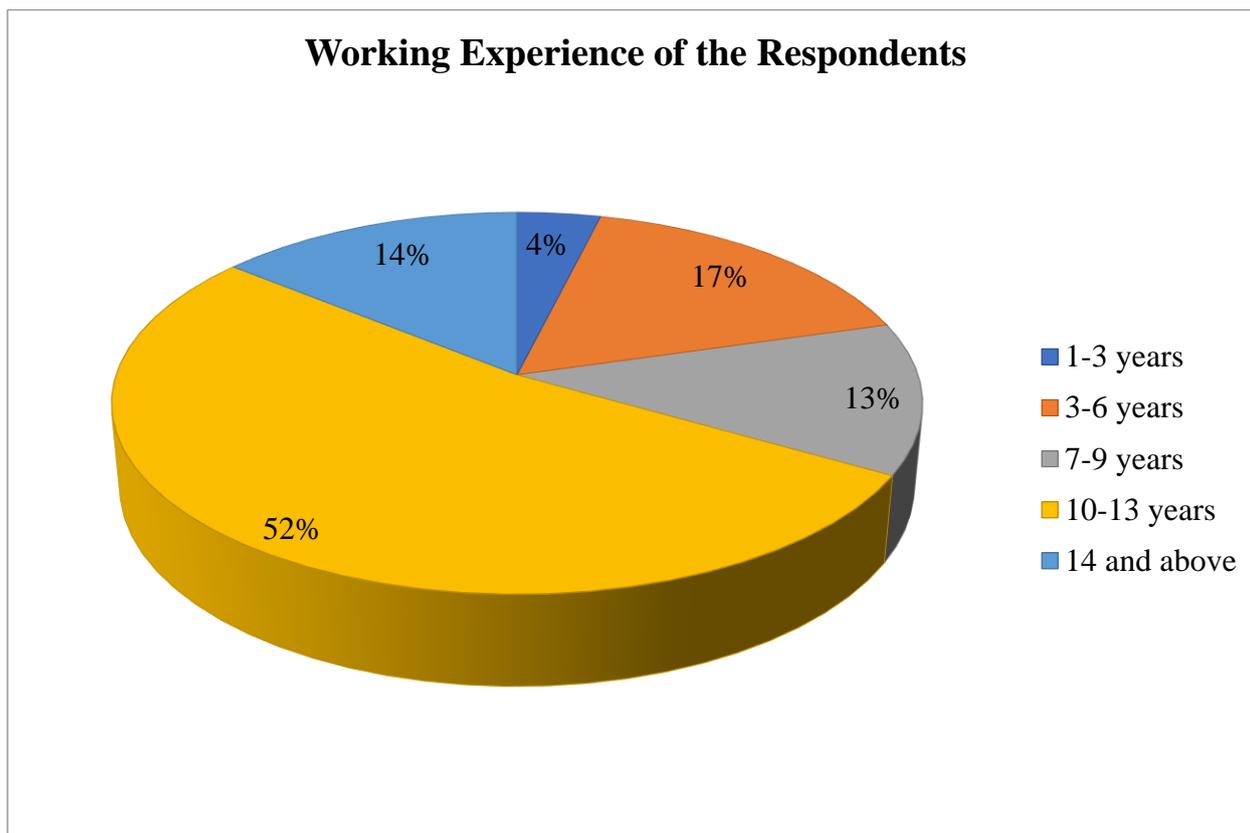
**Source: Field data,2023**

The findings revealed that most of the respondents attended some form of education which is indicated with their qualification: 7.7% of all participants had attended primary education only, 52.6% of all respondents attended at least the secondary education and are qualified in different areas including agriculture, 16.7% of all participants reached the diploma level, 10.8% of all participants attended school up to bachelor’s degree, while 12.8% of respondents raised that they are pursuing or have completed postgraduate degrees in different specialization including agriculture and project management. Therefore, based on the revealed qualification of participants, all participants were qualified to participate in the study.

#### 4.1.4 Working experience in agriculture service

The researcher intended to know the working experience of respondents in agriculture services and agriculture projects’ implementation, especially in Farmer Field School. The results were summarized in the Figure 4.1.

Figure 4.1 Working experience of respondent



Source: field data, 2023

The findings indicate that all participating population have experience in agricultural activities, whereas the majority (52%) of respondents have been engaging in Agriculture for a time between 10 and 13 years. In addition, 13% of respondents have experience between 7 and 9 years, 17% of all participants were in the range of 3 to 6 years of experience, 4% of all respondents have between 1 and 3 years of experience in agriculture, while 14% of all respondents had 14 and more years of experience in agriculture projects. In their experience, all the participants were engaged in the Farmer Field School Project in Kamonyi district, in different capacities. Therefore all respondents around 3 years of experienced in agriculture, which means that they are qualified to participate in the study, they have all qualities, knowledge, skills and attitude towards agriculture projects implementation and their performance, and they provided relevant information in the research.

#### 4.2 Presentation of findings

The general objective of this study was to evaluate the impact of risk management on the agriculture projects' success in Rwanda, a case study of the Farmer Field School Project in Kamonyi district, Rwanda. The study was guided by the following three selective specific research objectives: to assess the risks management factors that affect the project's success in the Farmer Field School Project in Kamonyi District in Rwanda, to examine the impact of risks management on projects' success in the Farmer Field School Project in Kamonyi district in Rwanda, and to establish the relationship between risk management and success of projects in Farmer Field School Project in Kamonyi District, Rwanda. The findings were arranged with the respect of each research specific objective.

##### 4.2.1 Risks management factors that affect the project's success

The first specific objective was to assess the risk management factors that affect the project's success in the Farmer Field School Project in Kamonyi District, Rwanda. The research participants were required to indicated their views of agreements with the statement about the risks management factors that impact the projects performance and their implementation. The results were rated on the scale from 1 up to 5, 1 being "strongly agree", 2 representing "agree", 3 representing "neutral", 4 representing "disagree",

and 5 being “strongly disagree”. The researcher calculated the mean and standard deviation of the findings, and presented the result from different participants, as indicated in Table 4.4.

Here the researcher wanted to know different factors that impact the project’s success especially in Farmer Field School in Kamonyi district. The following are the highlighted risk factors raised by the respondents: Project risk transfer factors, Project completion time factors, Client satisfaction factors, Project planning factors, Risk control strategy factors, Risk prevention measures factors, Risk retention factors, Time and schedule factors, project Cost factors, and Quality service factors as summarized in the table 4.4.

*Table4. 4 the risks management factors that affect the project’s success*

<b>Factors</b>	<b>SD</b>	<b>%</b>	<b>D</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>A</b>	<b>%</b>	<b>SA</b>	<b>%</b>	<b>Mean</b>	<b>Std.dev</b>
Project risk transfer factors	4	5.1	6	7.7	4	5.1	16	20.5	48	61.5	1.7436	1.17811
Project completion time factors	5	6.4	5	6.4	7	9.0	22	28.2	39	50.0	1.9103	1.19725
Client satisfaction factors	5	6.4	4	5.1	3	3.8	15	19.2	51	65.4	1.6795	1.17875
Project planning factor	5	6.4	7	9.0	2	2.6	25	32.1	39	50.0	1.8974	1.21238
Risk control strategy factors	5	6.4	3	3.8	1	1.3	40	51.3	29	37.2	1.9103	1.05911
Risk prevention measures factors	8	10.3	4	5.1	3	3.8	41	52.6	22	28.2	2.1667	1.19975
Risk retention factors	9	11.5	7	9.0	7	9.0	44	56.4	11	14.1	2.4744	1.19223
Time and schedule factors	3	3.8	5	6.4	6	7.7	22	28.2	42	53.8	1.7821	1.08887
Project Cost factors	10	12.8	18	23.1	9	11.5	19	24.4	22	28.2	2.6795	1.42786
Quality service factors	6	7.7	11	14.1	4	5.1	7	9.0	50	64.1	1.9231	1.40287

**Source:Field data, 2023**

The findings revealed that it required to have more risk management strategies and their monitoring factors for projects’ performance and implementation, as the majority (82.0%) of respondents indicated that the projects’ risk transfer factors were considered as the major factors to maintain the project’s success in agriculture project, with the 12.8% of respondents disagreed that there is no need of project risk transfer factors, while 5.1% of research participants proved to be neutral to the statement by indicating that they do not know about the stated factors (Project risk transfer factors), this factor stands with the mean of 1.7436 and its standard deviation were 1.17811. This is a very high mean, which indicates that this factor has a big influence on the success of the project. Other pointed factors were project completion time factors where the majority (78.2%) of participants accepted that project completion time factor is one of the major factors used in the risk management towards projects performance, 12.8% of respondents disagreeing that they do not need more time to complete the projects activities, while the 9.0% of the respondents did indicated their view about the project completion time factor. This factor stands with a mean of 1.9103 and its standard deviation of 1.19725. This means that time has an importance in the project’s performance and the risk management strategies. The third factor was the Client satisfaction factor, which respondents agreed that is a good factor that is taken into consideration in the implementation of agriculture projects in Rwanda. To this, 84.2% of all participants accepted that in the Farmer Field School Project, client satisfaction is taken into consideration in their projects. 11.5% of all respondents disagreed that there is no need of knowing the client satisfaction in the projects, while 3.8 % of all participants were neutral. Client satisfaction factor has a Mean of 1.9103 and its standard deviation is of 1.19725, which is very high. Therefore, client satisfaction factor cannot be forgotten in the project’s success with the risk management strategies.

The fourth factor was project planning factors, this factor should be obeyed due to its importance in the project's success and used in the different stages of projects implementation in agriculture. The 82.1% of respondents agreed that planning is a very big factor that govern risk management towards the project's success, and only 15.4% of all respondents disagreed with the statement by indicating that they are not sure about how planning contributes in risks management in the projects implementation. This statement stands with the Mean of 1.8974 which is very high to indicate that project planning is key to ensure projects' success.

In addition, 88.5% of all respondents highlighted that efficient Risk control strategies are useful in managing and ensuring project performance, while 10.2% of respondents indicated that they did not see the role of the risk control strategies in project implementation, especially in Farmer Field School in Kamonyi district, and 1.3% of respondents were not aware of the role of the factors in project success. Risk Control strategies factors were presented with a high mean of 1.9103 and its standard deviation of 1.05911. Therefore, this factor is used and appreciated in the Farmer Field School of Kamonyi district to impact the project's performance.

The sixth factor that was revealed was the Risk prevention measures, which is also a factor help the project to successfully perform projects activities. On this, the majority (80.8%) of respondents indicated that they are using different risk prevention measures to raise the projects yield, while only 15.1% of all participants disagreed that risk prevention measures taken in the Farmer Field School contribute to the project success, and 3.8% of them did not find a difference in the project success because of risk prevention measures. This factor had the mean of 2.1667 and its standard deviation is 1.19975, which means that the factor stated is very important and needed to the project management towards their performance. Hence, all projects need to adopt the right risks prevention measures in order to effectively perform projects' daily activities. The other factor that was mentioned was the Risk retention, which is raised in every projects. Respondents showed that they also considered this factor in their projects, with 70.5% of respondents highlighting that the project retained risks in order to ensure project success, while 20.5% of participants disagreed with the statement, and 9% not having enough information about risk retention. This statement has a means of 2.4744 and a standard deviation of 1.19223, which shows its importance to the projects' performance, as indicated in the results.

The eighth factor indicated was the time and schedule factors. On this factor, all respondents indicated that they plan projects with the respect to the time and the drafted schedule of activity in the Farmer field school in Kamonyi district. 82% of respondents appreciated the use of time and schedule in the project, 10.8% of all respondents disagreed with the importance of time and schedule because they did not follow the time and the schedule, but still achieve good results. This factor was presented with a mean of 1.7821 and its high standard deviation of 1.08887, which shows that well-dressed schedule of work and respecting time in the Farmer Field School are important to enhance project's success by managing project risks.

The findings also showed that the other factor that cannot be ignored was the project's cost factor. This one is very important to the projects ongoing activities, as the cost must be in line with the services and comparable to the service cost on labor market in order to ensure project success. 52.6% of respondents accepted that there is a need of a well detailed cost of services that is comparable with the client's needs, while 35.9% of respondents mentioned that they don't focus on the cost, and 11.5% of respondents did not find any difference in caring about the cost of service to risk management towards project performance of the Farmer Field School in Kamonyi district. This statement is presented with a mean of 2.6795, which is very low. Hence, many respondents indicated that they are not informed about the cost of service and its benefit to risk management for project performance. The last highlighted factor was the Quality of service delivered in the projects, where the majority (73.1%) of respondents indicated that the quality of services must be a factor to be highly considered in the projects activities, while 21.8% of respondents mentioned that the quality of service cannot be a major factor to enhance the risk management towards projects success, and 5.1% of all respondent were not aware of the importance of quality service to risk management. This statement was presented with a Mean of 1.9231 and its standard

deviation of 1.40287, which is very high. This means that there is a need of high consideration of quality service in Farmer Field School of Kamonyi district.

Many factors should be taken into consideration because they are maintained as key to project performance. They also help project managers and implementers because they serve as an opportunity to be more prepared for project success and reach its expected outcomes (Dvir, 1998). In addition, there were different challenges in the exercises of identifying those factors and their impact on project success, and many studies have put more efforts on the approaches to be used for implementation of successful projects in a dynamic global market. For the purpose of adapting to the business changes in the world, all project managers are required to be more creative and innovative, and come up with different new opportunities to attain project outcomes competitively (Borza, 2014).

#### 4.2.2 The impact of risks management on projects' success

The second objective of this research was to examine the impact of risk management on projects' success in the Farmer Field School Project in Kamonyi district, Rwanda, where the respondents were asked to give information about the effect of risk management factors on the project success. The results revealed were summarized in the table 4.5.

Table 4. 5. The impact of risk management on projects' success

Statement	Disagree		Neutral		Agree	
	n	%	n	%	n	%
<i>Risk retention affects the project success in agricultural industry</i>	9	11.5	8	10.3	61	78.2
<i>Time and schedule factors were well achieve due to risk prevention measures used</i>	22	28.2	5	6.4	51	65.4
<i>Project cost is a measure to reduce risks in agricultural success of projects</i>	19	24.4	7	9.0	52	66.6
<i>Quality service factors were achieved after risk prevention methods were implemented</i>	20	25.6	7	9.0	51	65.4
<i>Client satisfaction is taken into consideration for risk prevention</i>	31	39.8	1	1.3	46	59.0
<i>Risk measures control regulate project success in agricultural industry</i>	48	61.5	5	6.4	25	32.0
<i>risk prevention measures influence project success by complying with project plan</i>	13	16.7	2	2.6	63	80.7
<i>Clients wishes were chosen to transfer risks to ensure project success</i>	14	18.0	6	7.7	58	74.4
<i>Project planning is a factor to be considered for better project performance in agriculture industry</i>	14	18.0	4	5.1	55	70.5
<i>Skills of workers and management of site challenges is a factor that positively impacts the project performance in agriculture</i>	7	8.9	1	1.3	70	89.8

Source: Researcher, 2023

As stated, the second objective was to assess the impact of risk management factors on the success of Farmer Field School Project in Kamonyi district, as highlighted in Table 4.5.

The findings show that risk retention affects agricultural projects' outcomes, as the majority (78.2%) of respondents appreciated that there has been a positive impact of risk retention towards projects success, while only 11.5% of respondents did not attribute the success of the project on risk retention, and 10.3% of participants were neutral on the impact of the factor on project success. Hence, the risk retention factor has impacted positively the Farmer Field School Project in Kamonyi district. The other point of view was on how the time and schedule of activities affect the project activities, as time and schedule of activities must be taken into consideration to perform the projects works. Effective time management and following the schedule proved to have significant importance in ensuring successful project completion. Majority of respondents (65.4%) accepted that time and schedule of project activities have significant importance in successful completion of project activities, 28.2% of respondents mentioned that there is no need to considering time and schedule of activities in project risk management, and 6.4% of participants were not aware how the time and schedule factors influenced supported risk management measures used. Therefore, the respondents mentioned that time and schedule of activity must be considered and respected to perform all projects planned works for better performance.

The third point was looking at how project cost is a measure to be considered in reducing risks in agricultural projects, the majority (66.6%) of respondents indicated that each activity done in the project require specific costs and budget, which means that, if there is no costing and budgeting of project activities, there is a high risk imposed on projects. Therefore, the cost and budget planning is a key player in ensuring projects' success and in the risks management strategies, where the cost is required in the resource management, as all wages and project management activities require a specific cost. On this specific factor, 24.4% of research participants indicated that they did not see any impact of cost projection and budgeting on successful risk management, 9.0% of

respondents were neutral on the factor, regarding its impact on reducing risks on agricultural projects. Therefore, according to respondents, cost and budgeting in projects has a big impact on ensuring good project performance and risk minimization.

The fourth statement is about how Quality service factors contribute on risk prevention methods implemented. This factor was raised to know if the quality of service provided in the Farmer Field School Project and used in the risk prevention and control for better performance. The research participants were requested to share their views in regard to service delivery in the projects lifecycle, and the majority (65.4%) appreciated the quality service delivered, which means that they are happy with the service given. 25.6% of participants disagreed with the services provide, while 9.0% of them did not show their position on this statement. Therefore, the quality of the service delivery must be taken into consideration in risk minimization.

The fifth statement was based on how Client satisfaction is taken into consideration for risk prevention and their management, and 59.0% of respondents indicated that appreciation of clients helped the project managers to enhance project productivity, while 39.8% of participants have shown that focus on client satisfaction did not have an impact on risk minimization, and 1.3% of respondents did not share their views on this factor. As most of respondents indicated that the clients satisfaction facilitate the projects managers to know how their products, know areas of specialization and improvements. Therefore, client satisfaction factors were appreciated in the Farmer Field School Project in Kamonyi District.

Other points mentioned to be considered in the projects risk management were how the Risk measures control regulate project success in agricultural industry, which was targeting how the project managers and administration take different measures and how those measures regulate, promote and enhance the project's success in the Farmer Field School Project in Kamonyi district. On this, 32.0 % of respondents agreed that different measures taken by projects authority have an impact on regulation and minimization of risks, while the majority (61.5 %) of respondents indicated that the measures taken by the project managers and administration have no impact on the risk minimization towards projects performance, while 6.4% of all respondents indicated that they don't know about how Risk measures taken by projects managers and administrator control and regulate project success in agricultural industry.

The findings also revealed that risk prevention measures influence project success by complying with project plan, as the majority of (80.7%) of respondents indicated that the projects managers have main role to participate in the elaboration of more measures for risks prevention to influence projects success by complying with the projects action and strategic plans, while 16.7% of respondents disagreed with the statements, and 2.6% of respondents did not share their views. This means that participants appreciated the projects managers effort in elaborating risks prevention measures to enhance, promote and raise the projects productivity.

The study results indicated in table 4.5 revealed that project planning factor has to be considered for better project performance in agriculture industry. This means that any project activity must be planned and implemented, as majority of the respondents (70.5%) mentioned that projects activity must be planned before the project implementation process, while 18.0% of respondents disagreed with the statement, and 5.1% of them did not show their views on how project planning is a factor to be considered for better project performance in agriculture industry. Therefore, the results indicated that planning stage must be respected in order to ensure project success.

The last point of views of respondents on the impact of risks management factors on the project's success was the Skills of workers and management of site challenges and how they can be taken as the main factors to influence the risks reduction and increase of projects productivity in the Farmer Field Schools of Kamonyi district. The majority (89.8%) of participants agreed that the skills of workers had an impact on project success, while 8.9% of respondents disagreed with the role of the skills on the performance of the project, and 1.3% of them were neutral to the agreements of the statement. Therefore, the results indicated that the skilled, qualified and competent workers are needed for better performance of the projects, and risk management requires more skills, knowledge,

attitude and values for good project productivity. Risk prevention means considering all risk that can happen in the project and establish the way of eliminating them in the project execution to prevent those issues. Thus, project managers should make implication on the ways of risk prevention and well-designed measures to overcome the risks in the project before their beginning (Ropel,2011).

Knowing all items of project management and each activity within the project facilitates the personnel to mention all issues that can evocate the difficulties on the ongoing of the projects, and it will make it easier to prevent the risks from the projects or enhance risk preventions and reductions strategies. The process used to minimize the difficulties in the ongoing of the projects requires the mitigation by the projects personnel (Michaela, 2011) and researches revealed that the process to minimize risks in the project activities requires to invest more products that give long term profits and to recruit competent and qualified risk managers to control all risks in an organization. This is because those competent and qualified risks managers can have better suggestion or response than other projects personnel (Mikaela,2011). All risks can be managed, eliminated or be distributed between two bodies that have experience and required skills and resources to manage those issues (Ropel,2011).

#### 4.2.3 Relationship between risk management and success of projects

Objective number three of this research was to evaluate the relationship between risk management and success of the Farmer Field School Project in Kamonyi District, Rwanda. The researcher intended to identify the correlation between two variables: risk management strategies and projects success in the Farmer Field School of Kamonyi district. The findings were highlighted in table 4.6 where the answers were recorded and interpreted by their Means as follows: 1.0 – 1.9 represented “strong agreement”, 2.0 – 2.9 represented “agreement”, 3.0 – 3.9 represented “no agreement or disagreement”, 4.0 – 4.4 represented “disagreement”, and 4.5 – 5.0 represented “strong disagreement”.

Table 4. 6 Relationship between risk management and success of projects

<b>Statement</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
<i>Risk management strategies are enough to ensure better project performance</i>	78	1.0641	1.03622
<i>The lack of risk control strategies affected project success</i>	78	1.4744	1.59320
<i>Quality service delivered contributed in the increase of project productivity</i>	78	2.4615	1.38350
<i>Risk retention affects your project success in agricultural industry</i>	78	2.5000	1.20335
<i>risk prevention measures influence project success by complying with project plan</i>	78	1.2308	1.37627

**Source: Researcher, 2023**

The results indicated in table 4.6 show the link established between the risks management strategies and the project success at the Farmer Field School of Kamonyi district, Rwanda. The first views of the relationship were based on whether risk management strategies are enough to ensure good project performance, and respondents agreed with the means of 1.0641 which is very high to appreciate that risk management strategies enhance, promote and facilitate the project productivity. This means that risk management strategies are very important to ensure better project performance. The other point highlighted was based on how the lack of risk control strategies affected project success, and research participants strongly agreed with the statement that the lack of risk control strategies affects project success, (mean of 1.4744). Therefore, project managers and administrators should ensure there are good established risk control strategies for better project’s success. The third point here was based on the quality of services delivered in project and how it contributed to the increase of project productivity. With a mean of 2.4615, respondent agreed with

the statement that when the project has very clear and good quality service delivery, it can influence positively its performance and productivity. Therefore, the quality of service delivery plays a big role in the project's success and in the risk management of the projects. The forth statement was focused on whether the risk retention affects positively the project success in agricultural industry, and respondents accepted that risk retention is one of the strategies used to minimize the risks in projects management, and in its implementation. The mean of 2.5000 implies that risk retention is a good factor to be taken into consideration in order to reduce project risks for high project productivity. The last point examined was whether the risk prevention measures influence project success by complying with project plan. On a mean of 1.2308, respondent strongly agreed with the statement by stating that there is a need of good project planning to enhance risk preventions.

Furthermore, the researcher wanted to know clearly the correlation of risk management and project success to ensure if it necessary to have the established risks management strategies for projects performance. The findings are summarized in the table 4.7

Table 4. 7 Correlation of variables

	Statement	Risk management strategies	Projects success
Risk management strategies	Pearson Correlation	1	.903**
	Sig. (2-tailed)		.000
	N	78	78
Projects success	Pearson Correlation	.903**	1
	Sig. (2-tailed)	.000	
	N	78	78

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

The results shown in table 4.7 revealed that risk management strategies were needed to reach the success of the Farmer Field School Project of Kamonyi district, as shown by the Pearson correlation coefficient (r) of 0.903, manipulated with the P- value of 0.000 of a 2-tailed to indicate that risk management and project success are strongly positively and statistically significant. Therefore, all project administrators should establish clear and good risk management strategies in their respective projects or order to achieve project success, as it was in the Farmer Field School of Kamonyi district.

Table 4. 8 Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.903 <sup>a</sup>	.816	.814	.50900	1.090

a. Predictors: (Constant), Risk management

b. Dependent Variable: Project success

Table 4. 9 regression model ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	87.297	1	87.297	336.947	.000 <sup>a</sup>
	Residual	19.690	77	.259		
	Total	106.987	78			

a. Predictors: (Constant), Risk management strategies

b. Dependent Variable: Project success

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The results revealed in table 4.8 & table 4.9 showed that risk management strategies must be coherent with projects success, especially in the Farmer Field School. This is shown by the regression analysis in which R square ( $R^2$ ) is 0.816, indicating that risk management strategies are needed to enhance and promote projects success, and raise the effective agriculture service delivery in Kamonyi district. This was supported by Popa (2004) in his study, in which he stated that when risk management processes aim at achieving the success of a project with its planned outcomes by using different factors, it helps the stakeholders to always keep in mind indicators of their project's performance and implementation within project operation. This is because project planning, management support, project schedule, manpower and human resources, technical tasks to be operated, customer consideration, monitoring and evaluation, and other different factors guide the project activities, leading the achieving project desired outcomes (Davis,2014).

## **5. CONCLUSION AND RECOMMENDATIONS**

### **5.1 Conclusion**

The research presented full information about the risk management strategies towards project success, specifically in the Farmer Field School Project in Kamonyi District. This study concluded that effective risk management techniques must be put in place in all areas, functions and processes of a project. The goal therefore must be to identify risks, assess their level, avoid them or minimize them in a manageable way throughout the implementation of project in order to reduce their impact on the project outcomes. When there is a culture of risk control across all parties of the project, it was proven that there is a likelihood to connect brackets that can safeguard the effectiveness of the structures and organizational measures to achieve the intended project success.

Effective risk management requires a high commitment and a risk conscious behavior from all individuals involved in the project implementation. When there is a high motivation and collaboration among project stakeholders, it leads to quality work and outcomes, which leads to the project success. With effective risk management is instilled in the project since the conception along the implementation, it provides clarity of the goals, duties, responsibilities, activities, as well as the project feasibility. Risk management can therefore only be done and enforced effectively if communication channels in the team are created, which guarantees the direction of the information to the places concerned in each case. Through the risk management strategies used, the overall risk of the project is broken down into individual risks to ease their management and lead to the overall project success.

### **5.2 Recommendation of the study**

This study makes the following recommendations

The research recommends that the government creates policies on risk management strategies which will lead to final satisfaction of beneficiaries of agriculture projects. Such projects should be allotted sufficient period of time in order to avoid losses in case of sudden changes. It suggests that the government should take measures to use technology in all governmental agriculture projects to enhance the risk management strategies. It proposes that all policy makers grow their sensitization to project managers to promote implementation strategies that are specific for delivery of agriculture projects. Community awareness will increase the involvement of the population in the projects' implementation, which would lead to project success.

Budgeting and funds disbursement should be done on time and adequately in order to ensure that the proposed agriculture projects are effectively completed, maintaining the highest standards, and considering various risk management strategies to be used. This will also ensure that contractors are paid on a timely basis, which motivates them to deliver their agreed work effectively. This study advises the government to establish a risk management policy across public and private institution in order to create some standard risk management strategies, which would be adopted by all players in order to ensure that all projects achieve their expected outcomes. All agriculture projects must use risk management strategies and indicate how each strategy is used and respected to meet their targeted outcomes and impact. The ministry of agriculture should establish clear and proper measures to be used to enhance good service delivery in the agriculture sector. To respect the proposed risk management strategies and ensure proposed projects are completed with the highest standard, and by all stakeholders.

### **5.3 Suggestion of Further Study**

The study was conducted at Kamonyi district in agriculture Sector specifically in the Farmer Field School of Kamonyi district. It is suggested that similar research could be conducted in other areas of the country and in other fields, in order to better understand how risk management affects projects' success, overall. The research suggested that further studies could be conducted regarding the effectiveness of risk management strategies within public institutions.

The study also suggested that more research could be done, evaluating the effectiveness of risk management strategies adopted by agriculture projects in order to provide reliable recommendations to agriculture cooperatives. It is also suggested that further studies could evaluate the role of government institutions and their development partners in delivering agriculture projects in Rwanda, evaluating their effective risk evaluation and management.

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