MAKERERE UNIVERSITY

MAKERERE UNIVERSITY BUSINESS SCHOOL

PROJECT GOVERNANCE MECHANISMS, ORGANIZATIONAL RATIONALITY AND PROJECT SUCCESS: A CASE OF THE MINISTRY OF EDUCATION AND SPORTS UGANDA POST PRIMARY EDUCATION AND TRAINING EXPANSION AND IMPROVEMENT (UPPETEI) PROJECT

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DECLARATION

I, **Pearl Brenda Arinaitwe** declare that this dissertation is an original work resulting from my own research effort and has never been submitted to any other institutions for any award. Where ideas have been borrowed from other scholars, due acknowledgement has been made.

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APPROVAL

This dissertation has been written under our supervision and is now ready to be submitted to the University.

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DEDICATION

I dedicate this piece of work to my family and friends. To my beloved husband Tony Katwere thank you for your unwavering support and words of encouragement. A special gratitude towards my loving Mother Mrs. Lydia Bagyenyi and my sisters Sheila and Lynette who have never left my side. Thank you to my wonderful and understanding daughter Alma who at a tender age endured my absence while I pursued my masters. To my institution mentors especially Prof. Bagire Vincent, my supervisors Dr. Nuwagaba Denis and Ms. Julian Amanya, thank you for the constant guidance that enabled me to complete this thesis. You not only enlightened me with academic knowledge but also passed on valuable advice whenever I needed it the most. I send my gratefulness to Augustus Fuller, Driuni, Richard Mwesigye and my brother in law Job. May the Almighty God reign.

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ABSTRACT

The study sought to examine the relationship between project governance mechanisms, organizational rationality and project success with the MOES Uganda Post Primary Education and Training Expansion and Improvement (UPPETEI) project. The main objectives of the study were to analyze the relationship between project governance mechanisms and project success; organizational rationality and project success; and the relationship between project governance mechanisms, organizational rationality and project success of the MOES UPPET project. The study undertook a cross sectional survey design with a population of 64 schools. A structured questionnaire was used to collect data. Findings indicated that there were both positive and significant relationships between project governance mechanisms, organizational rationality and project success in the MOES Uganda Post Primary Education and Training Expansion and Improvement (UPPETEI) project. Results from regression analysis showed that project governance mechanisms and organizational rationality were significant predictors of project success of the MOES UPPETEI project. The study recommends that further studies should be carried out comprising of other factors which were not part of the model. The stakeholders in the education sector should develop strategies in line with the study variable relationships to enhance the MOES UPPETEI project success in Uganda.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The success of public projects can create positive impact on societies and affect lives positively according to Ekung, Agu1 and Ndidi (2017). For that reason, Pinto (2014) opines that project success has gained attention at global, national and organizational levels. According to Irfan and Mazlan (2017), project success measured against the overall objectives of the project and accomplished through the use of the project's output and project management success which is measured against internal efficiency, cost, time, and quality. Farhaj and Mirza (2017) assert that to be able to realize project success, attention should be put on project governance mechanisms which call for careful planning, attention to detail and effective communication.

According to Joslin and Müller (2016) through effective project governance frameworks, public organisations are able to efficiently implement planned project activities within projected budget and time, deliver desired outcomes and meet stakeholder expectations in a rational manner. Consequently, project governance mechanisms continue to be a major feature of management in an attempt to deal effectively with uncertainty and unexpected events and to achieve project success. Likewise, Ekung, Agu1 and Ndidi (2017) affirm that in order to achieve the required project success, this necessitates the availability of project governance mechanisms and organizational rationality.

Organizational rationality relates to how organizational members jointly relate to rationality and how that affects the way the organization approaches projects according to Kotlar and Sieger (2018). Kui-kui and Yi-de (2014) point out that public organisations still struggle to complete projects satisfactorily due to gaps in organizational rationality which is vital in

promoting project efficiency, predictability, calculability and control. Foss and Weber (2016) opine that people who work in formal rational systems are more effective and efficient because they know what they expect, can measure and quantify their expectations, and are directed towards the right course of action. This helps project managers control projects by carefully monitoring, measuring and managing success. According to Jaaza, Nangoli and Ngoma (2016), it also addresses the monitoring, measurement and management of the project's scope, quality, owner satisfaction, stakeholder satisfaction and the interdependent relationships.

In support, Foss and Weber (2016) stipulate that organizational rationality affects many management issues which may affect project success as it touches work perspectives right from the base organization where the project originates. This is because organizational rationality is the central theme in the planning and implementation of projects which makes it a driver of project success. Jaaza, et al. (2016) uphold the relevance of organizational rationality to maximize project success, while, Kui-kui and Yi-de (2014) are of the view that lapses in project governance and organizational rationality challenge the success of public projects. In line, Joslin and Müller (2016) assert that when robust project governance mechanisms and efficient organizational rationality are established, this will support the success of project management, project ownership and project investment. Therefore, effective project governance and organizational rationality allow projects to capitalize on new opportunities that promote their success.

In Uganda, projects such as the Universal Primary Education (UPE) and the Universal Post-Primary Education and Training (UPPET) have increased access to education (Ministry of Education & Sports (MOES), 2016). In a bid to support post-primary education and training expansion and improvement, the Uganda Post Primary Education and Training Expansion

and Improvement (UPPETEI) project was established with the aim of providing quality education for the increasing numbers of students completing primary education (World Bank Uganda Country Assistance Strategy FY2011-2015). However, beyond the numbers, significant challenges mostly corruption, which have left massive numbers in schools without facilities, teachers, and teaching/learning materials and this has compromised the quality of education (The Independent, 2012). According to a Comprehensive Report on the UPPET/USE and Universal Post Ordinary Level Education & Training (UPOLET) National Headcount Exercise (2015), there is a general lack of facilities, qualified teachers, textbooks and other learning materials and supporting management which undermined the number of pupils completing school.

The Ministry of Education and Sports (MOES) Education Sector Statistics (2015) showed that only 30% of the pupils who started primary 1 in 2003 were able to complete Primary Leaving Examinations in 2009. On the other hand, Ahimbisibwe (2016) attested that the UPPETEI driven enrollment expansion had resulted in shortage of classroom spaces revealing that 243 out of 791 schools participating in the project had class sizes of more than 80 students. The Public Procurement and Disposal Authority (PPDA) Report (2016) and the Auditor General's Report (2016), revealed that in the case of the USD$375 million loan from the International Development Agency of the World Bank meant to support the UPPETEI project, physical facilities including classrooms, libraries, multipurpose science rooms, administration blocks, teachers' houses, water and sanitation facilities were to be built.

The PPDA (2017) established irregularities in the procurement of textbooks under the UPPETEI project where M/s Pearson/Longman and M/s Fountain/Sterling Publishers failed to adhere to set procedures. The PPDA also cited conflict of interest, fictitious invoicing, bribery, usurping the roles of Procurement and Disposal Unit (PDU) and irregularities during

the bidding process. Owing to the practical gap highlighted above, it was suspected that inadequate project governance mechanisms and discrepancies in project rationality could be the cause of the soaring problems of project success in MOES' UPPETEI project.

1.2 Statement of the Problem

The Ministry of Education and Sports (MOES) has made efforts to improve education services in the country. In a bid to support post-primary education and training expansion and improvement, MOES with support from development partners launched the Uganda Post Primary Education and Training Expansion and Improvement (UPPETEI) project in 2007 (The Comprehensive Report on the UPPETEI/USE and Universal Post Ordinary Level Education & Training (UPOLET) National Headcount Exercise, 2015). This aimed at coming up with strategies in response to the increasing numbers of students completing primary education and joining secondary education (World Bank Uganda Country Assistance Strategy, FY2011-2015). However, beyond the rising numbers, significant challenges still remain. The Comprehensive Report on the UPPETEI/USE and UPOLET National Headcount Exercise (2015) showed that there were lapses in decision making structures, information asymmetry and inadequate information disclosure whereas, the procedure followed during monitoring of project activities remained inadequate which has encouraged appropriation of project resources. The report showed that there was insider dealing among project staff with contractors and beneficiaries. The failure to attain project success is partly attributed to increases in operational costs, delays in planned activities and over expenditure on non-core activities affecting the overall ability to project to deliver quality education services to beneficiaries. Project activities are also hampered by logistical challenges which undermine day to-day operations and increase project costs. Therefore, there examined the relationships between project governance mechanisms, organizational rationality and project success in the MOES UPPETEI project.

1.3 Purpose of the Study

The study examined the relationship between project governance mechanisms, organizational rationality and project success with the MOES Uganda Post Primary Education and Training (UPPETEI) Project.

1.4 Objectives of the Study

i) To examine the relationship between project governance mechanisms and project success of the MOES UPPETEI project.

ii) To examine the relationship between organizational rationality and project success of the MOES UPPETEI project.

iii) To examine the relationship between project governance mechanisms, organizational rationality and project success of the MOES UPPETEI project.

1.5 Research Questions

i) What is the relationship between project governance mechanisms and project success of the MOES UPPETEI project?

ii) What is the relationship between organizational rationality and project success of the MOES UPPETEI project?

iii) What is the relationship between project governance mechanisms, organizational rationality and project success of the MOES UPPETEI project?

1.6 Scope of the Study

1.6.1 Subject Scope

The study focused on the relationships between project governance mechanisms, organizational rationality and project success of the MOES UPPETEI project in Uganda. In study, project governance mechanisms and organizational rationality were the independent variables whereas, project success was dependent variable.

1.6.2 Geographical Scope

The study was carried out at MOES and government aided secondary schools in Luwero district. These included all secondary schools that have benefited from the UPPETEI project in the district. MOES and schools were chosen for the study because over the years the ministry has been characterized by a series of scandals relating to the UPPETEI project.

1.7 Significance of the Study

i) The results of the study may help the key players in education institutions in Uganda realize the effect of project governance mechanisms and organizational rationality on project success so as to develop the necessary strategies to strengthen project success at MOES.

ii) The findings of the study may be beneficial to policy makers such as MOES, Ministry of Finance, Planning and Economic Development and Parliament by informing policy changes regarding the gaps that exist in public projects.

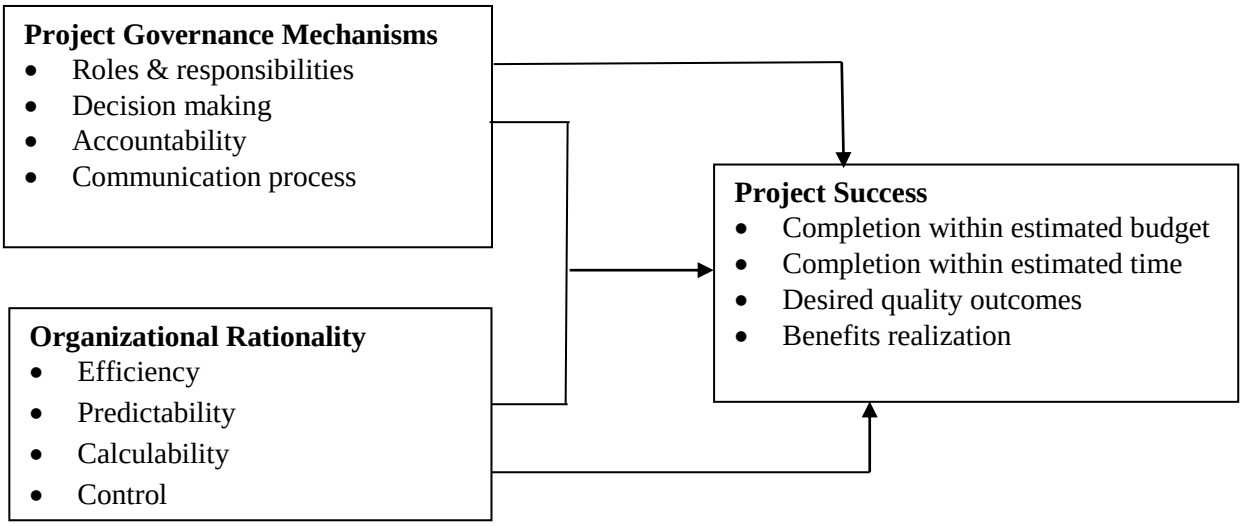
iii) For the donor community, the findings of the study may help strengthen their funding priorities as a result of enactment of effective policies and regulations to promote transparency and accountability in the different sectors.

iv) The findings may enlighten the stakeholders on the various project procedures, guidelines and consequences to offenders so as to eliminate fraud. Hence, promoting transparency and accountability during the project process.

1.8 Conceptual Framework

The framework shows the different determinants of project success. The model shown in the figure below reflects the relationship between project governance mechanisms, organizational rationality and project success. Project governance mechanisms and organizational rationality are paramount in determining the level of project success.

Fig 1: Conceptual Framework



Source: Developed from reviewed literature of Müller & Martinsuo 2015; Foss & Weber, 2016; Saif, Dongxiao, Changyong & Iqra 2019; Ekung, Agu1 & Ndidi, 2017

The conceptual framework is explained by project governance mechanisms, organizational rationality and project success. The dependent variable was project success, the independent variables was project governance mechanisms and organizational rationality. Project governance mechanisms was measured according to roles and responsibilities, decision making, accountability and communication process; organizational rationality was measured according to efficiency, predictability, calculability and control; whereas, project success was measured according to completion with in estimated budget, completion with in estimated time, desired quality outcomes and benefits realization. Project success was the variable of interest whose variance was to be explained by project governance mechanisms and organizational rationality.

CHAPTER TWO

LITERATURE REVIEW

2.0 Theoretical Review

This study was underpinned by the agency and stewardship theories which support the identification of governance paradigms to be analysed and the type of contractual relationships applied to projects. Agency theory which is based on Jensen and Meckling's (1976) work takes an economic view of the shareholder and manager relationship in organisations by assuming rational and self-interested actors. The agency theory posits that corporate managers (agents) may use their control over the allocation of corporate resources opportunistically in order to pursue objectives not in line with the interests of the shareholders (principals) (Jensen & Meckling, 1976). This is exemplified in the principal-agent problem which occurs when both principal and agent act in a self-interested, utility maximizing manner. Davis et al. (1997) relate this behavior to the lower levels of Maslow's (1970) hierarchy of needs.

Principal agent problems arise from information asymmetry, because one party (e.g. the project manager as agent) has typically more or better information than the other (e.g. the project sponsor as principal). This results in a moral hazard risk which unless mitigated is likely to increase the agency effect. Popular remedies to the problem include contracts and incentives that motivate agents to act in accordance with their principals, controlled through related control structures. Corporate and project governance when designed correctly within the context of the organization, should minimize the risks and issues associated with agency theory.

Agency theory based on Jensen and Meckling's (1976) view of principle agent models have been criticized because they neglect to consider that the principle-agent transitions are

socially embedded and therefore impacted by broader institutional contexts (Davis *et al.*, 1997). In this study the agency theory is used as a proxy to explain behavior in the shareholder oriented and behavior controlled governance structures. Stewardship theory arose in response to the criticism regarding the generalizability of agency theory. It takes a psychological perspective towards governance and states that the actors (managers) are stewards whose motives are aligned with the higher level objectives of their principles rather than their own, short term utility maximizing objectives. Davis *et al.* (1997) relate this behavior to the higher levels of Maslow's (1970) hierarchy of needs. The steward differs from the agent in that the steward is trustworthy and will make decisions in the best interests of the organization, whereas an agent needs to be incentivized and/or controlled to do this. (Davis *et al.*, 1997). Stewardship theory has been criticized, because it views the organization in a static way and does not account for stewards resorting back to an agent position when their positions are threatened. In the present study the stewardship theory will be used as a proxy to explain behavior in the stakeholder oriented and outcome controlled governance structures.

Neither agency theory nor stewardship theory is more valid than the other, as each may be valid for different types of phenomena. But one aspect stands out, both agency and stewardship theory define the relationship between actors, thus are task or project level theories. In summary, by focusing on the task or project, agency and stewardship theories deal with opportunism directly through the governance mechanism. Based on these theoretical underpinnings, the proposed model of the study will attempt to measure the effects of project governance in regard to decision making, accountability, controlling process and communication process, relative to organisational rationality and project success.

2.1 Project Governance Mechanisms

Project governance is frequently aligned to the organizational governance model, which in turn provides comprehensive and consistent methods to control the project. In the

organizational framework, project governance is executed through the project governance framework which provides project managers with the structure, processes, decision-making models and tools for managing a project (PMI, 2017). According to Asadullah, Waris, Ishak, Sajid, Ullah and Faisal (2019), it is important that governance covers all levels of the project starting with project governance flowing from the board level to the management level responsible for execution, and down to the project level of governance. Maude and Aubry (2016) defined project governance as involving a set of relationships between a company's management, its board, its shareholders and other stakeholders [...] and should provide proper incentives for the board and management to pursue objectives that are in the interests of the company and its shareholders and should facilitate effective monitoring. Project-related governance is based on and aligned with corporate governance but focuses on the governance of individual projects.

PMI (2017) defines project governance as an oversight function that is aligned with the organization's governance model and that encompasses the project lifecycle and provides a consistent method of controlling the project and ensuring its success by defining and documenting and communicating reliable, and repeatable project practices. Whereas, project governance looks at the governance of individual projects, the governance of projects looks at a group of projects, such as a program or portfolio of projects and therefore has a broader perspective (Saif, et. al., 2019). In the case of Uganda, efforts have been made by public institutions to manage project governance in ways such as decision making, accountability, controlling process and communication process so as to cause public service delivery improvement. However, given that delivery of public education services in Uganda is still in infancy stage, there are still lapses in project governance which have led to undermining of the governance of the UPPETEI project.

2.2 Organizational Rationality

While organizational rationality refers to a collection and concerted construction of roles, norms, work order legitimations and controlling mechanisms at the workplace into a common vision according to Kotlar and Sieger (2018). Organizational rationality relates to how organizational members jointly relate to rationality and how that affects the way the organization approaches projects. Kui-kui and Yi-de (2014) concur that the economic and political aspects of organizations to be the two key motivations sustaining instrumental rational action. According to Jaaza et al. (2016), managers and workers act rationally so as to extract their economic rights and also to maintain job status. Foss and Weber (2016) assert that there are four dominant types of rationality, a purpose or instrumental rationality of means and ends, and value or substantive rationality of economic ethics. Kotlar and Sieger (2018) argue that the constructs that make-up organizational rationality include efficiency, predictability, calculability and control.

Jaaza et al. (2016) show how organizational rationality plays a masked ideological role in the construction of organizational values to covertly align individual goals with the goals of the organization. Importantly, this new concept of broader rationality offers the conceptual space for workers, unions and stakeholders to articulate moral issues and act morally in and through their social relations at work. Indeed, it offers the opportunity to theorize social relations based on efficiency, predictability, calculability and control. Kui-kui and Yi-de (2014) have shown that efficiency, predictability, calculability and control are the general dimensions of organizational rationality. Kotlar and Sieger (2018) talk about the rationality of an organization where each individual is not left with the task of finding the optimal solution but in line with organizational rules, standards and procedures to ensure that the work and decision making of the organization are carried out in a particular and rational way.

Looking at the dimensions of organizational rationality which include efficiency, predictability, calculability and control, it is evident that people who work in formal rational systems are more effective and efficient because they know what they expect (predictability), they can measure and quantify their expectations (calculability), and employees are directed towards the right course (control) (Foss & Weber, 2016). In the case of Uganda's public sector which is tasked with delivery of public services, there is some level of focus on organizational rationality in regard to efficiency, predictability, calculability and control. However, there have also been major deterrents to organizational rationality in public projects. Given the current situation in public projects, it is hoped that the situation will change once a study is conducted to provide information on how project rationality can improve the delivery of public services.

2.3 Project Success

There is growing recognition among project management academics and practitioners that the conventional triple constraint or iron triangle of project success criteria which is made-up of cost, time and scope/quality is incomplete (PMI, 2017). The triple constraint/iron triangle is often referred to as the project management triangle with each side or point of the triangle representing the triple constraints of project management; scope, time and cost. As the focus of projects shifts from product creation to value creation, it is necessary to expand these criteria to include the full range of value delivered by the project, which covers not only project outputs and outcomes but also benefits (PMI, 2016). Additionally, the concept of project success may be more complex than a binary outcome between success and failure. Likewise, a project that delivers the required outputs within budget, schedule, and quality constraints may not necessarily be a successful investment if it does not produce the target benefits (Saif, et. al., 2019). Furthermore, the notions of success and failure of projects may

be contestable depending on the context, for example the cancellation of a project due to changing business conditions may not necessarily indicate a failure (Jenner, 2015).

Due to these factors, existing estimates of project success rates may not provide an accurate picture (Jenner, 2015). To address the complexity of project success, there is a need to conceptualize it as a multi-dimensional construct. Yamin and Sim (2016) differentiates between project management success and project product success. The former represents the traditional triple constraint criteria while the latter encompasses the satisfaction of the strategic objectives of the project owner and the needs of other stakeholder groups, including the project user/customer (Badewi, 2015). In the case of public projects, some level of project success has been realized regarding completion within estimated budget, completion within estimated time, desired quality outcomes, benefits realization and stakeholder expectations, however, there have also been major deterrents to project success which have undermined the success of UPPETEI in the delivery of education services. Given the current situation in MoES, it is hoped that the situation will change once a study is conducted to provide information on how the UPPETEI project success can be improved to deliver education services.

2.4 Project Governance Mechanisms and Project Success

Project governance provides the structure through which the objectives of the project are set and the means of attaining those objectives and monitoring performance are determined (Calabrò & Mussolino, 2013). Project governance provides hybrid structures comprising formal mechanism and informal mechanism (Chen & Manley, 2014). Governance mechanisms provide the economic actors' safeguards to protect their interests against opportunistic behaviour (Chen & Manley 2014). Those safeguards include formal written contracts, relational norms, specific investments and pledges (Khan, Ammar, Waris, Ishak & Ilyas, 2018). From the external point of view, formal mechanisms govern the project through

written contracts and performance monitoring systems. Contracts help to construct different governance structures for the stakeholders (Macheridis, 2017). Different contract types, as different governance structures, optimize governance costs in different types of organizations. From the internal point of view, formal mechanisms govern the project by the way of controlling the project objects which concerning the cost control, the schedule control and the scope control (Khan, et. al., 2018).

According to Macheridis (2017), contracting parties can manage and control the uncertainties through informal mechanisms, which cannot deal with the formal governance especially in the early stages of a project. Informal relationships are not governed by contracts, but by unwritten rules arising from cultures (Chen & Manley 2014). Project governance provides some mechanisms to explore the relations within the stakeholders from different fields or organizations (Luo & Peng 2014). Formal contracts comprise contractual incentives for clear and equitable risk allocation, including market transactions through formal contracts and depersonalized exchange. Informal mechanisms, as a component of the collective consciousness formed from national culture and an unwritten rule of the social game include non-contractual incentives to enhance mutual trust, enable cooperation, facilitate open communication and share knowledge (Müller, Li & Anyu, 2017). Informal mechanism has been identified as one of the major factors for project governance success. Governance help the managers manage the project by fostering better understanding and or communication among management team and other stakeholders.

Despite their importance, the impact of informal relationships in the governance mechanism on project success has received limited attention. In this research, we propose to study the effect of project governance mechanisms on the success of projects. More specifically, we focus on the project governance mechanisms in public projects such as UPPETEI project.

However, it should also be noted that the reviewed literature draws a lot of attention on project governance mechanisms and project success in the private and public sectors of developed economies leaving scanty literature on studies in developing economies such as Uganda. This provides a gap in literature which this study intends to bridge in order to provide information on the relationship between project governance mechanisms and project success in public sector projects in Uganda.

2.5 Project Governance Mechanisms and Organizational Rationality

The governance debate identifies the central problem of the separation of ownership and control in the large corporations and centres on the alignment of the agent's interests with those of the principal (Ekenberg, 2015). However, issues of bias in human cognition and perception, decision making under uncertainty, risk assessment, and the impact of emotion and effect on behaviour have received less attention in literature. Firms should pay great attention to their corporate governance mechanisms in order to avoid managerial irrationality especially those that derive from optimism and overconfidence biases (Kotlar & Sieger, 2018). They should design their corporate governance structure in a way that may reduce the negative effects of managerial optimism and overconfidence biases. Sundberg and Larsson (2017), however, indicate that judgement, decision making and behaviour are not exclusively based on logical reasoning but are also subject to numerous heuristics and cognitive biases, affect, visceral and pressures towards conformity with the group or authority.

The assumption of rationality underlies much of the view that independent and neutral monitors or gatekeepers should be motivated by reputational and legal concerns to withstand various pressures to comply with the self-motivated views and interpretations of management (Foss & Weber, 2016). This view of rationality of the individual has also been adopted by legal interpretations of behaviour with respect to corporate governance issues in different countries. Indeed, many conventional means for improving corporate governance depend on

the premise that actors are strongly rational agents with long-term horizons. Observed monitor/gatekeeper behaviour, however, often appears to be in odd contrast to these assumptions of self-interest and rationality. Logic, for example, would predict that a gatekeeper would not sacrifice reputational capital for a small amount of financial gain. Yet, gatekeepers have been observed to jeopardize their reputation for financial gains that were far smaller than the potential losses. Even though decision makers might strive for rationality, Müller, Li and Anyu (2017) observed that decision makers can only be rational up to a certain point. This is what they termed as bounded rationality. Kotlar and Sieger (2018) describe bounded rationality as, a situation where a decision maker does not possess all the information required about a problem and thus cannot see all of the available alternatives.

Ekenberg (2015) also differentiates between substantive rationality which refers to rational choices and procedural rationality which refers to well-structured decision processes. According to Foss and Weber (2016), the degree of rationality in decision-making depends on the environmental context, where factors such as competitiveness, uncertainty and high external control might reduce managerial discretion. Furthermore, Fang et al. (2016) revealed that managers who apply a high degree of procedural rationality in strategic decision-making generally make better decisions. Researchers have commented on the impact of rationality on decision-making in corporate governance settings. Goal setting may motivate unethical behaviour when individuals are just short of reaching specific targets (Nielsen & Pedersen, 2014). Reputational intermediaries including auditors and board directors can find it rational to acquiesce to wrongdoings in the firm, leading to a failure of their watchdog role (Kronsell & Bäckstrand, 2010).

Under certain conditions, a gatekeeper may deem it rational to reduce, rather than preserve, reputational capital. Under the influence of bias and self-serving rationalization it can, at

times appear to make perfect sense to a gatekeeper to collude with the client. Fraudulent or negligent behaviour cannot be ruled out simply because these are irrational (Kotlar & Sieger, 2018). Similarly, strong arguments have also been raised with regard to the independence of board directors. Literature on project governance and organizational rationality showed scanty studies in the public sector of developing countries, causing a literature gap especially on public projects. This literature deficiency was bridged by conducting a study on the effect of project governance on organizational rationality in public project especially the UPPETEI project.

2.6 Organizational Rationality and Project Success

A rational organization is one whose behaviour is basically shaped with formalization and goal orientation. According to Kui-kui and Yi-de (2014), formal organisational rationality largely means that organisations are not left to their own devices/solutions in search for the best means of attaining a given objective. When an organization is of concern, formal organisational rationality is about continuity and systematization in standardization of work attitudes, employee training and planning of operations and commitments for avoiding problems during the operation (Ekenberg, 2015). Jaaza et al. (2016) point out that formal rationality offers efficiency which is the optimum method for getting from one point to another. For project beneficiaries, formal rational organizations offer the best available way to satisfy their needs. Project beneficiaries obtain what they need more quickly and easily. Project employees in formal rational systems function more efficiently. This is because they are trained to work so by project managers who watch them closely to ensure that they do things in the right manner.

According to Jaaza et al. (2016), efficiency is widely about purifying each activity in a project and achieving cooperation, communication and coordination to optimize overall project success. It is crucial to note that efficiency is not only about economizing or

elimination of the unwanted, but at the core of efficiency lies the commitment to seek for project success. Secondly, formal rationality offers calculability which is an emphasis on the quantitative aspects of products and services offered (Ekenberg, 2015). Beneficiaries of formal rational projects like to calculate how much time it will take to be served and make their plans accordingly. Project workers in formal rational systems do things like emphasizing on how quickly tasks can be accomplished as well as on precise measurement to rationalize operation. Calculability rules in various spheres of life including public projects. Kui-kui and Yi-de (2014) suggest that calculability in the project context is about the continuing spread of quantification, measurement and calculation through a project. It shows itself in the quantification of products, processes and even of people in and around the project with the aim of attaining project success.

Thirdly, formal rationality offers predictability which is the assurance that the products and services will be the same over time and in all project locations (Sudhakar, 2016). Formal rationality offers no surprises and there is a great comfort in knowing this fact. Project beneficiaries know exactly what they will get from the project and project workers are aware of what they are expected to do. Interactions between workers and beneficiaries are highly predictable. As pointed out by Foss and Weber (2016), predictability is largely about minimizing the occurrence of the unwanted and unexpected. Predictability mostly pertains formalization in the project context. Standardization, planning and training all relate to increasing predictability in a project. A certain degree of routinization in activities including social relations is an end result of this kind of formalization in the form of formal equality of treatment with aim of promoting project success (Yamin & Sim, 2016). Control, the fourth component of formal rationality is exerted over the people who enter the world of formal rationality through the substitution of non-human for human technology (Sudhakar, 2016). Nonhuman technology controls people with the goal of minimizing uncertainty that may be

created by their unexpected behaviour. Control is generally about taking the initiative from people in a way to reduce unexpected behaviour in projects. Not only mechanization, but also preferring to have rules and standards instead of trusting people's initiatives or restricting the flexibility that is prone to unwanted performance is also about the control concept.

This helps project managers control projects by carefully monitoring, measuring, and managing performance (Sudhakar, 2016). This of course, goes beyond controlling performance in the fundamental areas of budget and schedule. It also addresses the monitoring, measurement and management of the project's scope, quality, owner satisfaction, stakeholder satisfaction and the interdependent relationships and such relationships will turn into behavioral and outcome performance. Kui-kui and Yi-de (2014) stipulate that organizational rationality affects many management issues including project success as it touches work perspectives right from the base organization where the project originates. Since projects are organizations within organization, their success can also be affected by the culture of the base organization which sets up the project. This reasoning is even more relevant considering that many projects are based on matrix organizational principle where people from the base organization work part-time on the projects. The reviewed literature puts a lot of emphasis on organizational rationality in developed economies and focuses less on organizational rationality in the public sector in developing countries. Similarly, there is much attention drawn by researchers to organizational rationality and project success in the private sector but provides inadequate literature on the association between organizational rationality and project success in public projects in developing countries such as Uganda. This has left a literature gap which the study endeavored to close by carrying out a study on the relationship between organizational rationality and project success in UPPETEI project in Uganda.

2.7 Project Governance Mechanisms, Organizational Rationality and Project Success

Clearly, project governance mechanisms have a role to play in organisational rationality in regard to efficiency, predictability, calculability and control. According to Joslin and Müller (2016), there is a direct relationship between project governance mechanisms and project success. The fundamental aim of project governance mechanisms is to align project goals with the funding organization's objectives and strategy (Sudhakar, 2016). Therefore, project governance mechanisms must ensure that projects generate the required outputs and outcomes that lead to the desired benefits identified in their respective business case. Hence, the ultimate aim of project governance mechanisms is to realize the expected project benefits. However, the mechanisms through which governance improves project success are underexplored in the literature. In the preceding literature review above, the role of project governance mechanisms in facilitating organisational rationality has been highlighted (Foss & Weber, 2016). Subsequently, the role of organisational rationality in improving project success was also discussed. Hence, it logically follows that enabling organisational rationality may be one of the mechanisms through which project governance improves project success. Accordingly, Ihab and Mahmoud (2017) posit that the effect of project governance mechanisms on project success should be due, at least in part to its enabling effect on organisational rationality.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides the description of how the study was conducted. It comprises of; the research design, target population, sampling design and size, data collection instruments, data analysis and interpretation tools and limitations of the study.

3.2 Research design

The study adopted a cross sectional research design. A cross sectional design was considered appropriate in this research study because the researcher intended to investigate project success at a given point in time.

3.3 Study population

According to a comprehensive report on the Universal Post Primary Education & Training (UPPETEI/USE) and Universal Post Ordinary Level Education & Training (UPOLET) National Headcount Exercise (2015), there are 17 UPOLET schools and 47 UPPETEI/USE schools. For the purposes of this study, the population of the study was 64 schools under the UPPETEI project from which responses were provided by either the school head teacher or deputy head teacher.

3.4 Sample size

The sample size of 56 schools was selected scientifically using the table for determining sample size developed by Krejcie and Morgan (1970). The unit of analysis was a school while the unit of inquiry included the head teacher or deputy head teacher of the school who provided the responses.

3.5 Sampling design

Simple random sampling was used to select the schools using the fishbowl draw/lottery method whereas, purposive sampling was used to select head teachers/deputy head teachers

of the schools. This simple random technique is recommended because it gives each element in the population an equal chance of being selected and the results are more generalizable while the purposive technique was used to select respondents known to possess the required information for the study.

3.6 Data sources and Data collection instrument

Primary data was the main source which was collected from the selected schools using the questionnaire survey method. The data was provided by the selected respondents from the different schools. These respondents were contacted at the schools. Data from the field was obtained through the use of self-administered questionnaires following systematic and established academic procedures as outlined under ethical considerations below. Responses to the questions were anchored on a 5 point Likert scale ranging from; (1) SD- Strongly Disagree, (2) D- Disagree, (3) Not Sure, (4) A-Agree and (5) SA-Strongly Agree.

3.7 Validity and reliability of research instruments

Validity was ensured by both content and face validity. Face validity was used when structuring the questionnaire in line with the study objectives by providing for different sections in the tool. These included the sample characteristics section and different sections for the items of each study variable. This gave participants greater confidence in the measurement procedure and the results. Content validity measured the extent to which the content of the instrument corresponded to the content of the theoretical frame work of the study (Amin, 2005). Here, the expert views were obtained by talking to experts both academicians and practitioners in the field of project management. These were required to comment on the relevance of the questions/items in the instrument. Content validity was assessed by using the questionnaire which measured the same concepts. If the measurements are consistent with the theoretical expectation, then the data had construct validity. Validity of the instrument was also obtained by using the Content Validity Index (CVI). In addition,

reliability of the scales was carried out by determining the Cronbach's alpha coefficient to check for the internal consistency of the scales. In order to meet the acceptable standards for research, all alpha reliabilities (α) for all scales are expected to be above 0.7 (Nunnally, 1987).

Table 3.1: Reliability and validity tests

Variable	Items	Cronbach Alpha Value	Content Validity Index
Project Governance Mechanism	12	0.912	0.870
Organizational Rationality	34	0.828	0.823
Project Success	24	0.874	0.780

Source: primary data, 2020

Table 3.1 above displays the reliability indices/coefficients for all constructs used in the study. All alpha reliabilities (α) for all scales were above 0.7, ranging from 0.828 to 0.912 therefore meeting acceptance standards for research (Nunnally, 1978).

3.8 Measurements of the research variables

Study Variables	Dimensions	Scale	Author(s)
Project governance mechanisms	• Roles & responsibilities • Decision making • Accountability • Communication process	5 point scale	Müller & Lecoeuvre (2014)
Organizational rationality	• Efficiency • Predictability • Calculability • Control	5 point scale	Ritzer (2008)
Project success	• Completion within estimated budget • Completion within estimated time • Desired quality outcomes • Benefits realization	5 point scale	Khan et al. (2013).

Source: Literature Review

Key: 5 point Likert scale ranging from (1) strongly disagree, 2-disgaree, 3-not sure, 4-agree and 5-strongly agree.

3.9 Data processing and analysis

The researcher collected, cleaned, coded and classified data into categories. The data was edited and entered into the data editor of Statistical Package for Social Scientists (SPSS V20) software for analysis. The researcher presented data using descriptive and inferential

statistics where frequency tabulations were used to present the data on demographic characteristics whereas, for the research objectives, the Pearson correlation matrix and regression analysis were used. The researcher used correlation analysis to test the relationships between project governance mechanisms, organizational rationality and project success whereas, regression analysis was used to study the combined effect of project governance mechanisms and organizational rationality on project success.

3.10 Ethical considerations

When carrying out research the following ethical considerations were observed by the researcher. Permission of the respondents who were under study was requested from the respondents to conduct the research involving them. The study avoided causing physical or emotional harm to the respondents who were part of the study. Objectivity during the research was emphasized so as to eliminate personal biases and opinions. This was done by using generalized questions in the research instruments and to avoid bias on the part of the researcher. Anonymity of the respondents was taken care of during the study, by omitting names of respondents on the questionnaires and using codes for individuals who were interviewed, so as to avoid victimization and this was informed to the respondents.

3.11 Conclusion

The chapter introduced and explained the methodological aspects that were followed when constituting the population, selecting the sample the sampling methods to be used, the data collection methods and instruments to be employed during the study, quality control of the instruments, and measurement of the variables, data analysis and ethical considerations. This set ground for chapter four which dealt with presentation, analysis and interpretation of the results of the study.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter presents the results of the study and interpretation of findings. The presentation in this chapter shows the results as tested according to the objectives of the study. The chapter comprises of three sections. Section one presents the demographic characteristics of the respondents and schools. The demographic characteristics for respondents included gender, age group, tenure of employment at the school and level of education; whereas, those for the schools were years of operation, number of students and funding organisation. The presentation begins with a description of the demographic characteristics using frequency tabulation. The second section of the chapter presents results on the relationship between the study variables using the Pearson correlation matrix and factor analysis. Section three presents the results of the impact of the independent variables on the dependent variable using the regression analysis.

4.2 Response Rate

During data collection, the researcher had to collect data from 56 schools where 56 questionnaires were distributed to each school bringing the total to 56 questionnaires. Out of the 56 questionnaires that were distributed, 47 were responded to by the respective head teachers/deputy head teachers from the different schools. Therefore, the response rate as per the unit of inquiry was 84%.

4.3 Sample Characteristics

To present sample characteristics, frequency tabulations were used to indicate variations of respondents based on gender, age group, tenure of employment at the school and level of education for the respondents whereas, for schools, years of operation, number of students

and funding organization were considered. The sample characteristics were presented basing on the responses from the respondents in tables 4.1 and 4.2.

4.4 Descriptive Characteristics for Respondents

Frequency tabulation was used by the researcher to present gender, age group, tenure of employment at the school and level of education for the respondent distribution as shown in table 4.1 below.

Table 4.1: Descriptive Characteristics for Respondents

Gender		**Frequency**	**Percentage**
	Male	30	63.8
	Female	17	36.2
	Total	47	100
Tenure of Employment		**Frequency**	**Percentage**
	Below 10 yrs	12	25.5
	11 – 20 yrs	17	36.2
	21 –30 yrs	11	23.4
	Above 30 yrs	7	14.9
	Total	47	100.0
Age Group		**Frequency**	**Percentage**
	31-35 yrs	7	14.9
	36-40 yrs	17	36.2
	41 – 45 yrs	13	27.7
	46+ yrs	10	21.3
	Total	47	100.0
Highest Level of Education		**Frequency**	**Percent**
	Bachelor's Degree	22	46.8
	Postgraduate diploma	7	14.9
	Master's degree	18	38.3
	Total	47	100.0

Source: Primary data

The results in the table 4.1 on gender distribution showed that 63.8% of the respondents were male whereas 36.2% were female as shown in the table above. From the results it is clear that the male respondents were more responsive compared to their female counterparts.

Regarding the tenure of employment, 36.2% of head teachers/deputy head teachers had been employed in the school for 11-20 years, 25.5% had been employed for less than 10 years, 23.4% had been employed in the sector for 21-30 years while 14.9% had been employed for over 30 years. This was a justification that the majority of the head teachers/deputy head teachers had enough experience and knowledge about the project's project governance mechanisms and how they influenced project success in the MOES UPPETEI project.

In respect of age group distribution as per Table 4.1, 36.2% of the respondents were in the age-group of 36-40 years, 27.7% fell under the 41-45 years age group, 21.3% were in the 46 years and above age group while 14.9% were in the 31-35 years age group. This is an implication that majority of the respondents were mature enough to be able to provide information on the effect of project governance mechanisms on project success of the MOES UPPETEI project.

From the results on the table 4.1, on respondents' level of education, the results showed that 46.8% were bachelor's degree graduates, (14.9%) had attained postgraduate diploma level of education and 38.3% were master's degree holders. The results provide confirmation that information was acquired from respondents who possessed the ability to read and process the contents of the questionnaire and thereafter provided the suitable answers. Therefore, data was collected from respondents who had the capability to provide the required information for the study.

4.4.1 Descriptive Characteristics for Schools

Frequency tabulation was used by the researcher to present years of operation, number of students and funding organization for the school distribution as shown in table 4.2 below.

Table 4.2: Descriptive Characteristics for Schools

Years of Operation		**Frequency**	**Percentage**
	2-5yrs	8	17.0
	6-10yrs	27	57.4
	10yrs & above	12	25.5
	Total	47	100.0
Number of Students		**Frequency**	**Percentage**
	50-250	10	21.3
	251-450	17	36.2
	451-650	12	25.5
	651 & above	8	17.0
	Total	47	100.0
Funding Organisation		**Frequency**	**Percent**
	Church founded	8	17.0
	Government aided	24	51.1
	NGO owned	4	8.5
	Private owned	11	23.4
	Total	47	100.0

Source: Primary data

The results in Table 4.2 on years of operation distribution showed that 57.4% of the schools had been in operation for 6-10 years, 25.5% had operated for over 10 years whereas, 17% had been in operation for 2-5 years. From the results, it is clear that since the project had been in existence for over a decade, it could be assessed depending on its success in the delivery of public education services.

Regarding the number of students in schools, 36.2% of the schools had student populations ranging between 251-450 students, 25.5% had student populations ranging from 451-650 students, 21.3% had student populations ranging between 50-250 students while 17% of the schools had student populations of over 651 students.

In respect of funding organisation distribution as per Table 4.2, 51.1% of the schools were government aided, 23.4% of the schools were private owned, 17% were church funded while 8.5% were NGO funded.

4.5 Factor Analysis for the Variables

In trying to understand the factors of project governance mechanisms, organisational rationality and project success, factor analysis was carried out. All primary data from the study variables underwent principal component analysis for factor loading using Varimax rotation with Kaiser Normalisation method for easy interpretation. All factors rotations were converged in two iterations. Only items with Eigen values (>5.0) were ideal for Pearson Correlation Analysis and Multiple Regression Analysis.

4.5.1 Factor Structure of Project Governance Mechanisms

Factor analysis was done to extract factors that measured project governance mechanisms using principal component analysis and varimax rotation methods. Factors with eigen values greater than 1 were extracted. Eigen values measured the amount of variation in the total sample accounted for by each factor. Three factors namely; roles & responsibilities, decision making, accountability and communication process with eigen values greater than 1 and factor loadings of items of not less than ±0.5 were extracted explaining 64.4% of project governance mechanisms as shown below in table 4.3.

Table 4.3: Factor Structure of Project Governance Mechanisms

Items	roles & responsibilities	decision making	accountability	communication process
The project management committee has overall responsibility for project activities	0.749			
Disciplined governance arrangements are applied throughout the project	0.732			
Roles and responsibilities for project governance are clearly defined	0.731			
Making authorization decisions is supported by relevant and realistic information		0.771		
There is clearly defined criteria for reporting project status and escalation of risks and issues to the relevant project levels		0.832		
Decisions made at authorization points are recorded and communicated to the relevant stakeholders		0.702		
There is accountability for project outcomes and benefits			0.761	
The project has a project team which is accountable to MOES for achieving project objectives and deliverables			0.688	
The project management team fosters a culture of frank internal disclosure of project information			0.740	
Exchange of project information among the parties takes place frequently.				0.611
Stakeholders are kept informed about events/changes that may affect involved parties				0.614
The project's overall plan and the implementation scheme were shared with stakeholders				0.690
Eigen value	7.132	1.985	1.196	1.176
Variance (%)	21.23	25.66	9.97	7.543
Cumulative variance (%)	21.23	46.89	56.86	64.403

Source: primary data

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 4 iterations.

According to the results in table 4.3 above, roles & responsibilities as a dimension of project governance mechanisms contributed 21.2% of the variance in project governance mechanisms with the respondents revealing that the project management committee had overall responsibility for project activities (0.749), disciplined governance arrangements were applied throughout the project (0.732) and roles and responsibilities for project governance were clearly defined (0.731).

Decision making as a factor component of project governance mechanisms contributed 25.6% of the variance of project governance mechanisms with the respondents revealing that making authorization decisions was supported by relevant and realistic information (0.771), there was a clearly defined criteria for reporting project status and escalation of risks and issues to the relevant project levels (0.832) and decisions made at authorization points were recorded and communicated to the relevant stakeholders (0.702).

Accountability as a dimension of project governance mechanisms contributed 10% of the variance in project governance mechanisms with the respondents revealing that there was accountability for project outcomes and benefits (0.761), the project had a team which was accountable to MOES for achieving project objectives and deliverables (0.688) and the project management team fostered a culture of frank internal disclosure of project information (0.740).

Communication process as a measure of project governance mechanisms contributed 7.5% of the variance in project governance mechanisms with the respondents revealing that exchange of project information among the parties took place frequently (0.611), stakeholders were kept informed about events/changes that might affect involved parties (0.614) and the project's overall plan and the implementation scheme were shared with stakeholders (0.690).

4.5.2 Factor structure of Organisational Rationality

Factor analysis was done to extract factors that measured organizational rationality using principal component analysis and varimax rotation methods. Factors with eigen values greater than 1 were extracted. Eigen values measured the amount of variation in the total sample accounted for by each factor component. Three factors namely efficiency, predictability, calculability and control with eigen values greater than 1 and factor loadings of

not less than ±0.5 were extracted and explaining 54.8% of organizational rationality as shown below.

Table 4.4: Factor structure of Organisational Rationality

Items	efficiency	predictability	calculability	control
I think that the tasks are carried out well enough in the project	0.508			
Task related inefficiencies are reduced to a minimum in the project.	0.643			
Tasks are handled harmoniously towards a common objective in the project	0.676			
Interdepartmental coordination is very well designed in the UPPETEI project.	0.745			
When different people come together to work on a task, they are performed well	0.563			
Problems are generally ignored in the UPPETEI project	0.732			
Initiatives to solve problems begin at the very instance that the problems are detected	0.618			
Officers seem to have learned how to live with the flawed operations in the project	0.643			
Job performance is documented in the project		0.615		
The way to perform project roles is documented almost for all jobs		0.684		
There is a manual of procedures available to everyone		0.746		
What is expected from project personnel is explicitly stated.		0.664		
Whoever is responsible to implement a particular activities is explicitly clear.		0.683		
When the planned activities will be finished can be predicted with a high accuracy		0.621		
A great deal of time is lost because of the errors made		0.812		
Whom you know is more important than how successful you are		0.609		
The extent to which processes run efficiently is always measured			0.611	
How satisfied the personnel are with their jobs is always measured			0.626	
How successful the superiors are at supervising the subordinates is always measured			0.628	
The extent to which project personnel fulfil their assignments is always measured			0.658	
Statistics about faults that occur during operations are consistently collected			0.544	
Measurable quantitative project goals are defined in the project			0.734	
Judgment and decision making is supported with numbers in the project			0.649	
Decision making is rather intuitive than scientific in the project.			0.580	
It is easy to do inappropriate things without your supervisors' consent				0.608
Personnel's success in performing their tasks is not left to chance				0.578
People determine how to perform their jobs by themselves				0.576
Success depends on initiatives of the project team which perform tasks				0.745
The way a task is handled is fixed regardless of who performs it				0.563

Operations depend more on established systems than on people				0.772
Eigen value	6.289	1.975	1.721	1.405
Variance (%)	23.994	14.124	9.236	7.443
Cumulative variance (%)	23.994	38.118	47.354	54.797

Source: primary data

Efficiency as a dimension of organizational rationality contributed 24% of the variance in organizational rationality with the respondents revealing that the tasks were carried out well enough in the project (0.508), task related inefficiencies were reduced to a minimum in the project (0.643), tasks were handled harmoniously towards a common objective in the project (0.676) and inter-departmental coordination was very well designed in the UPPETEI project (0.745). on the other hand, when different people came together to work on a task, they were performed well (0.563), problems were generally ignored in the UPPETEI project (0.732), initiatives to solve problems began at the very instance that the problems were detected (0.618) and oofficers seemed to have learned how to live with the flawed operations in the project (0.643).

According to the results in table 4.4 above, predictability as a component of organizational rationality contributed 14.1% of the variance in organizational rationality with the respondents showing that job performance was documented in the project (0.615), the way to perform project roles was documented almost for all jobs (0.684) and there was a manual of procedures available to everyone (0.746) and what was expected from project personnel was explicitly stated (0.664). likewise, they showed that whoever was responsible to implement a particular activities was explicitly clear (0.683), when the planned activities were finished could be predicted with high accuracy (0.621), a great deal of time was lost because of the errors made (0.812) and whom you know was more important than how successful you were (0.609).

On the other hand, calculability as a factor component of organizational rationality revealed that the dimension contributed 9.2% of the change in organizational rationality with the results showing that the extent to which processes run efficiently was always measured (0.611), how satisfied the personnel were with their jobs was always measured (0.626), how successful the superiors were at supervising the subordinates was always measured (0.628) and the extent to which project personnel fulfil their assignments was always measured (0.658). Similarly, they also showed that statistics about faults that occur during operations were consistently collected (0.544), measurable quantitative project goals were defined in the project (0.734), judgment and decision making was supported with numbers in the project (0.649) and decision making was rather intuitive than scientific in the project (0.580).

Control as a dimension of organizational rationality contributed 7.4% of the variance in organizational rationality with the respondents revealing that it was easy to do inappropriate things without your supervisors' consent (0.608), personnel's success in performing their tasks was not left to chance (0.578), people determined how to perform their jobs by themselves (0.576), success depends on initiatives of the project team which perform tasks (0.745), the way a task was handled was fixed regardless of who performs it (0.563) and operations depended more on established systems than on people (0.772).

4.5.3 Factor Structure of Project Success

Factor analysis was done to extract factors that measured project success using principal component analysis and varimax rotation methods. Factors with eigen values greater than 1 were extracted. Eigen values measured the amount of variation in the total sample accounted for by each factor component. To carry out a factor analysis of project success, four factors namely completion within estimated budget, completion within estimated time, desired quality outcomes and benefits realization with eigen values greater than 1 and factor loadings

of not less than ±0.3 were extracted and explained 51.5% of project success as shown in rotated component matrix below.

Table 4.5: Factor Structure Project Success

Items	completion within estimated budget	completion within estimated time	desired quality outcomes	benefits realization
The project was successfully completed within budget	0.745			
Project cost plans were reviewed periodically	0.518			
There is a well-set procedure for project funds commitment	0.793			
Mechanisms are put in place to control program costs	0.583			
A project charter was developed before implementing the project activities		0.744		
Project time plans are reviewed periodically		0.534		
Project communication plans are implemented		0.649		
The current structural arrangements are clearly defined		0.680		
Program activities are implemented based on information provided by technical teams		0.621		
The project has provided the expected services to beneficiaries			0.539	
The project's outcomes have supported the achievement of overall project objectives			0.612	
My school is responsive in the delivery of education services			0.709	
My school delivers quality education services to beneficiaries			0.758	
The project was successful in realizing its investment objectives				0.508
Undesired outcomes were managed and avoided				0.545
The project was successful in achieving the project plan				0.501
Eigen value	6.578	2.028	1.623	1.431
Variance (%)	21.132	12.676	9.004	8.234
Cumulative variance (%)	21.132	34.298	43.302	51.536

Source: Primary data

Completion within estimated budget explained 21.1% of the variance in project success with revelation that the project was successfully completed within budget (0.745), project cost plans were reviewed periodically (0.518), there was a well-set procedure for project funds commitment (0.793) and mechanisms were put in place to control program costs (0.583).

Completion within estimated time accounted for 12.7% of the variance in project success, the respondents revealed that a project charter was developed before implementing the project activities (0.744), project time plans were reviewed periodically (0.534), project

communication plans were implemented (0.649), the current structural arrangements were clearly defined (0.680) and program activities were implemented based on information provided by technical teams (0.621).

Desired quality outcomes explained 9% of the change in project success where respondents revealed that the project had provided the expected services to beneficiaries (0.539), the project's outcomes had supported the achievement of overall project objectives (0.612), schools were responsive in the delivery of education services (0.709) and schools delivered quality education services to beneficiaries (0.758).

Benefits realization explained 8.2% of the variance in project success with revelation that the project was successful in realizing its investment objectives (0.508), undesired outcomes were managed and avoided (0.545) and the project was successful in achieving the project plan (0.501).

4.6 The Relationship between the Study Variables

In this section, the results that address the research objectives are presented and Pearson's Correlation Test was used to answer the research questions of the study. To investigate the relationship among the constructs a Zero-order correlation table was generated. The Pearson correlation coefficient (r) was employed to establish the relationship between project governance mechanisms, organizational rationality and project success.

Table 4.6: Correlation Analysis

Variables	**1**	**2**	**3**
Project governance mechanisms (1)	1.00		
Organizational rationality (2)	.482**	1.00	
Project success (3)	.583**	.544**	1.00
**Correlation is significant at the 0.01 level (2-tailed)			

Source: Primary data

4.6.1 Project Governance Mechanisms and Project Success

The results in the Table 4.6 above indicated that project governance mechanisms and project success are positively and significantly related variables (r=.583**, p<.01). These results indicate that roles & responsibilities, decision making, accountability and communication process were the attributes required by the MOES UPPETEI project so as to enhance project success in public projects. Therefore, when there is clear role definition, effective decision making, accountability and effective communication in the project, there will be effective project governance mechanisms which will in turn support project success of the MOES UPPETEI project. These results support the idea that availability of effective project governance mechanisms in the MOES UPPETEI project contributes to the success of the project.

4.6.2 Project Governance Mechanisms and Organizational Rationality

From the results presented in table 4.6 above, project governance mechanisms were noted to be positively related to organizational rationality ($r=.482^{**}$, $p<0.01$). These results indicate that when the required governance structures are put in place and project staff conduct proper project governance, this would make it easy to promote efficiency, predictability, calculability and control in the MOES UPPETEI project. The results imply that availability of roles & responsibilities definition, decision making, accountability and effective communication in the project would have a positive effect on the project's effectiveness, expectedness and control which will eventually promote project rationality. Consequently, a positive change in roles & responsibilities definition, decision making, accountability and communication control will strengthen project governance mechanisms in the project and in turn enhance the level of organizational rationality in the MOES UPPETEI project.

4.6.3 Organizational Rationality and Project Success

According to the results in table 4.6 above, the correlation results indicated significant and positive relationships between organizational rationality and project success ($r=.544^{**}$, $p<.01$). This is indicative of the fact that efficiency, predictability, calculability and control in project planned activities were paramount in enhancing the project success of the MOES UPPETEI project in regard to completion within estimated budget, completion within estimated time, desired quality outcomes and benefits realization among other things. Therefore, a positive change in organizational rationality enhances the level of project success in the MOES UPPETEI project.

4.7 Regression Analysis

A regression analysis was carried out to examine the extent to which project governance mechanisms and organizational rationality predict project success. When carrying out regression analysis, the results from the respondents from each school who comprised the unit of inquiry were amalgamated to represent a single school. The overall potential of the project governance mechanisms and organizational rationality to explain project success, were presented using the regression model in the table below.

Table 4.7: Prediction Model for the Study Variables

Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	Std. Error	Beta		
(Constant)	1.269	.185		6.868	.000
Project governance mechanisms	.450	.045	.457	10.087	.000
Organizational rationality	.212	.044	.220	4.845	.006
Dependent Variable: **Project success**					
R = .627 R Square=.376 Adjusted R Square =.370		F Statistic = 135.328 F Change = 14.518 Sig. =.000			

Source: Primary data

The study variables which are project governance mechanisms and organizational rationality were significant predictors of project success accounting for 37% of the variance

in project success (Adjusted R^2=0.370). Furthermore, the results showed that project governance mechanisms were most influential at explaining project success (β=.457, Sig. <.01) and then organizational rationality (β=.220, Sig. <.01). The regression model was statistically significant (sig.<.01). In other words, for project success to be realized in the schools under the UPPETEI project, the schools need to put a lot of emphasis on project governance mechanisms and organizational rationality. The regression model was statistically significant (sig. <.01).

4.8 Summary

Chapter Four has presented findings on the study sample characteristics, variable factor analysis, relationships between the study variables (correlation analysis) and the extent to which the study's independent variables affect the dependent variable (regression analysis). This chapter has revealed that there were significant positive correlations between all the study variables. The findings indicate that project governance mechanisms and organizational rationality were strong predictors of project success in public projects in the education sector. This provided a basis for chapter five which considered the summary of the findings, discussion, conclusions and recommendations.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion, conclusions, and recommendations arising out of the research findings in chapter four and suggests areas for further study.

5.2 Summary of the Findings

The study sought to examine the relationship between project governance mechanism, organizational rationality and project success of the MOES UPPETEI project in Uganda. From the respondent sample characteristics, male respondents were more responsive, according to the tenure of employment, those in the category of 11-20 years were more responsive and the respondents under the 36-40 years age group were more responsive. The results showed that the respondents holding qualifications of bachelor's degree were more responsive. In regard to the organizational sample characteristics, the majority of the schools had been in operation for a period between 6-10 years, the student population in most schools was 251-450 students whereas, government was the main funder of the schools. According to the correlational findings of the study variables, the findings revealed positive and significant relationships between the study variables and project success. Similarly, the correlational results were in line with the regression analysis which revealed that project governance mechanism and organizational rationality predicted project success in the MOES UPPETEI project.

5.3 Discussion of the Findings

5.3.1 Project Governance Mechanisms and Project Success

The findings revealed that project governance mechanisms were significant and positively related to project success. The correlation results are supported by the regression results which revealed that project governance mechanisms were a determinant of the MOES

UPPETEI project's success in regard to completion within estimated budget, completion within estimated time, desired quality outcomes and benefits realization. This is justification that when the MOES was able to ensure roles & responsibilities definition, decision making, accountability and communication effectiveness, this would translate into an increase in project success. In line with the findings, Ihab and Mahmoud (2017) assert that from the internal point of view, formal mechanisms govern the project by the way of controlling the project objects which concerned with the cost control, the schedule control and the scope control. Therefore, project governance provides some mechanisms to explore the relations within the stakeholders from different fields or organizations or projects (Maude & Aubry, 2016). Governance help the managers manage the project by fostering better understanding and or communication among management team and other stakeholders which in turn enhances project success.

5.3.2 Project Governance Mechanisms and Organizational Rationality

From the findings it was revealed that there was a significant positive relationship between project governance mechanisms and organizational rationality. The findings of the study provide justification that when MOES ensures that there is role & responsibility definition, timely decision making, accountability and communication effectiveness, this will make it possible for the project to realize efficiency, predictability, calculability and control which provides support to organizational rationality. In line with the findings, projects should pay great attention to their corporate governance mechanisms in order to avoid managerial irrationality especially those that derive from optimism and overconfidence biases (Kotlar & Sieger, 2018). They should design their corporate governance structure in a way that may reduce the negative effects of managerial optimism and overconfidence biases.

Ekung, Agu1 and Ndidi (2017), however, indicate that judgement, decision making and behaviour are not exclusively based on logical reasoning but are also subject to numerous

heuristics and cognitive biases, affect, visceral and pressures towards conformity with the group or authority. According to Foss and Weber (2016), the degree of rationality in decision-making depends on the environmental context, where factors such as competitiveness, uncertainty and high external control might reduce managerial discretion. Furthermore, Fang et al. (2016) revealed that managers who apply a high degree of procedural rationality in strategic decision-making generally make better decisions. Therefore, developing effective project governance mechanisms to deal with specific challenges related to organizational rationality is one of the urgent needs of many public projects in the global competitive and rapid changing of delivery of public services.

5.3.3 Organisational Rationality and Project Success

The findings showed a significant and positive relationship between organisational rationality and project success. The findings provide justification that MOES' ability to ensure efficiency, predictability, calculability and control would enhance the project team's ability to promote completion within estimated budget, completion within estimated time, desired quality outcomes and benefits realization so as to attain the required levels of project success. These finding were supported by the regression results which revealed that organisational rationality influenced the project's success. This is in line with the results from the study by Jaaza et al. (2016) who explicitly posit organizational rationality and ethical culture as organizational factors that influence project success. Additionally, Kui-kui and Yi-de (2014) include it with significant others and professional codes of conduct as secondary influences on individual judgment hence influencing performance of activities they engage in. According to Foss and Weber (2016), for project beneficiaries, formal rational organizations offer the best available way to satisfy their needs. Project beneficiaries obtain what they need more quickly and easily. Project employees in formal rational systems function more efficiently. This is because they are trained to work so by project managers who watch them

closely to ensure that they do things in the right manner in the process resulting into project success.

5.3.4 Project Governance Mechanisms, Organizational Rationality and Project Success

The findings showed that project governance mechanisms and organizational rationality determined the change in project success with project governance mechanisms as the most predictor of project success and then organizational rationality. The findings provide justification that in order to attain the required levels of project success in regard to completion within estimated budget, completion within estimated time, desired quality outcomes and benefits realization so as to, project governance mechanisms and organizational rationality played a major role. This implies that improving project governance mechanisms and organizational rationality in public infrastructure projects would lead to an improvement in project success. In line with the findings, Joslin and Müller (2016) showed that there is a direct relationship between project governance mechanisms and project success. Therefore, project governance mechanisms must ensure that projects generate the required outputs and outcomes that lead to the desired benefits identified in their respective business case. Jaaza et al. (2016) opine that enabling organisational rationality may be one of the mechanisms through which project governance improves project success. In support, Ekung, Agu1 & Ndidi (2017) assert that the effect of project governance mechanisms on project success should be in part to its enabling effect on organisational rationality.

5.4 Conclusions

The conclusion of the study was made in accordance with the study objectives.

The findings validate that project governance mechanisms were an integral part of project success. This indicates that project governance mechanisms in regard to role & responsibility definition, timely decision making, accountability and communication

effectiveness positively affected the MOES UPPETEI project success. This is justification that project governance mechanisms were vital in promoting project success in the MOES UPPETEI project. Therefore, when MOES is able to ensure availability of proper project governance mechanisms, this would have a positive effect on the MOES UPPETEI project success.

The findings on the relationship between project governance mechanisms and organizational rationality indicated a positive and significant relationship. This is justification that for MOES to achieve the required rationality in project processes, there was need for MOES to ensure clear role and responsibility definition, timely decision making, accountability and communication effectiveness to promote organizational rationality.

The findings showed that organizational rationality had a positive influence on project success which is implication that for the MOES UPPETEI project to be successful MOES had to ensure that project activities are completed within estimated budget, estimated time, desired quality outcomes and there is benefits realization. This is indication that when the project is able to meet or even supersede efficiency, predictability, calculability and control of project planned activities, the much needed project success would be realized.

The findings revealed that project governance mechanisms and organizational rationality predicted the change in project success which is justification that for the MOES UPPETEI project to be successful, MOES had to ensure that all issues pertaining to governance mechanisms and project rationality were adequately and efficiently addressed. This is because when the project has efficient governance systems and project activities are implemented in a rational manner, this would result into project success.

5.5 Recommendations

In light of the research findings, the following recommendations are made:

i) According to the findings, project governance mechanisms were found to be the most significant predictor of project success. For this reason, MOES should launch in-house service workshops for all key stakeholders with a focus on project governance applications and practices. The training sessions should put emphasis on how to promote role and responsibility definition, timely decision making, accountability and communication effectiveness during project implementation as this enhance project success.

ii) Project managers influencing the design of project governance should be aware of the importance of role and responsibility definition, timely decision making, accountability and communication effectiveness for project success. This should be included in training programs for project team members and school administrators. Likewise, all project stakeholders should ensure well defined single point responsibility is clearly vested in a competent project manager for the success of the MOES UPPETEI project.

iii) Emphasis must also be placed on the effective implementation of project organisation strategy based on established principles and sector's standard. Such strategy must clearly identify and observe the basic pillars of effective project governance irrespective of the project organisation strategy adopted.

iv) The findings revealed that project governance mechanisms had a significant association with project success in the MOES UPPETEI project. Therefore, MOES should develop project governance mechanisms by ensuring that there is clear roles and responsibilities definition, decision making, accountability and communication effectiveness so as to be able to put in place the necessary strategies that promote completion of project planned activities within estimated

budget, estimated time, desired quality outcomes and benefits realization as this would in turn result into project success.

v) The management of the MOES UPPETEI project should pay special emphasis on the construction of roles, norms, and work order and control mechanisms at work places. These help in the development of ideologies and beliefs, skills and tools for individuals especially managers at different levels or positions of responsibility to handle difficult and problematic ethical situations, abide by set values and live up to them in pursuit of their careers and in line with the objectives and goals of the MOES UPPETEI project.

5.6 Limitations of the Study

i) Respondents withholding information due to fear of being victimized. This made data collection difficult because the respondents were hesitant to provide the required data for the study. Here the researcher sought permission from MOES and the School Management Committees of the schools to conduct a study about the schools by providing a letters from the university which stated that the data was to be used for academic purposes only.

ii) Bias from the respondents to simply fill the questionnaires to please the researcher. The researcher conducted a face to face interaction to clarify the purpose and objective of the study.

iii) The scales in the questionnaire were adopted from other studies conducted in different environments other than Uganda, which is likely to cause bias. The researcher involved experts in the field of project management to moderate the scales adapted to fit the local environment.

iv) Respondents fearing to provide information presumed confidential by their organizations. Here the researcher assured them of utmost good faith with supporting documents for undertaking the study.

5.7 Areas for further Study

i) This study concentrated on project governance mechanisms, organizational rationality and project success in UPPETEI project in Uganda. Future research should attempt to collect data from all public projects in Uganda to ascertain and compare the findings.

ii) The study adopted a cross sectional survey design which studied the state of affairs on the UPPETEI project at a point in time. To study the true nature and quality of project governance mechanisms, organizational rationality and project success, a longitudinal study is more appropriate.

iii) The model could only explain 45.7% of the variance in project success failing to account for 54.3% of the variance in project success. Future studies should try to consider other variables that were not part of the model to predict the variance in project success.

iv) A quantitative approach was adopted for this study, the researcher recommends that a qualitative study be conducted to examine project success in public projects in Uganda.

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APPENDIX I

QUESTIONNAIRE

Dear Respondent,

This questionnaire is aimed at collecting data to undertake a study on Project Governance Mechanisms, Organizational Rationality and Project Success: A Case of Ministry of Education and Sports Uganda Post Primary Education Training Expansion and Improvement (UPPETEI) Project. The research is in partial fulfillment of the requirements for the award of a Master of Business Administration of Makerere University. All information provided will be treated with utmost confidentiality and will be used for purely for academic purposes.

SECTION I (a): Personal Profile

Kindly tick (√) the appropriate answer option.

1. Gender

Male	Female
1	2

2. Age Range

20 yrs & below	20-25 yrs	26-30 yrs	31-35 yrs	36-40 yrs	41 – 45 yrs	46+ yrs
		1	2	3	4	5

3. How long have you been employed at the school?

Below 10 yrs	11 – 20 yrs	21 –30 yrs	Above 30 yrs
1	2	3	4

4. Your highest level of qualifications

Qualification	**Tick**
Diploma	1
Bachelor's Degree	2
Postgraduate diploma	3
Master's degree	4
Professional qualification	5
Postgraduate diploma & Master's degree	6
Postgraduate diploma & Professional qualification	7
Bachelor's Degree & Master's degree	8

Other, please specify……

Section I (b): School Characteristics:

Kindly tick (√) the appropriate answer option

5. Years of operation of the School

0-1yrs	2-5yrs	6-10yrs	10yrs & above

6. Number of students at the school

50-250	251-450	451-650	651 & above

7. Founding Organisation

Church founded	Government aided	NGO owned	Private owned

Section B: Project Governance Mechanisms

Please indicate the extent to which you agree or disagree with the statements below

Key: 1=SD-strongly disagree; 2=D-disagree; 3=NS- not sure; 4=A-agree and 5=SA-strongly agree

Items					
Roles & responsibilities	**SD**	**D**	**N**	**A**	**SA**
The project management committee has overall responsibility for project activities	1	2	3	4	5
Disciplined governance arrangements are applied throughout the project	1	2	3	4	5
Roles and responsibilities for project governance are clearly defined	1	2	3	4	5
Decision making	**SD**	**D**	**N**	**A**	**SA**
Making authorization decisions is supported by relevant and realistic information	1	2	3	4	5
There is clearly defined criteria for reporting project status and escalation of risks and issues to the relevant project levels	1	2	3	4	5
Decisions made at authorization points are recorded and communicated to the relevant stakeholders	1	2	3	4	5
Accountability	**SD**	**D**	**N**	**A**	**SA**
There is accountability for project outcomes and benefits	1	2	3	4	5
The project has a project team which is accountable to MOES for achieving project objectives and deliverables	1	2	3	4	5
The project management team fosters a culture of frank internal disclosure of project information	1	2	3	4	5
Communication process	**SD**	**D**	**N**	**A**	**SA**
Exchange of project information among the parties takes place frequently.	1	2	3	4	5
Stakeholders are kept informed about events/changes that may affect involved parties	1	2	3	4	5
The project's overall plan and the implementation scheme were shared with stakeholders	1	2	3	4	5

Section C: Organizational Rationality

Please indicate the extent to which you agree or disagree with the statements below

Key: 1=SD-strongly disagree; 2=D-disagree; 3=NS- not sure; 4=A-agree and 5=SA-strongly agree

Items					
Efficiency	**SD**	**D**	**N**	**A**	**SA**
I think that the tasks are carried out well enough in the project	1	2	3	4	5
Task related inefficiencies are reduced to a minimum in the project.	1	2	3	4	5
In the UPPETEI project, no resource is wasted.	1	2	3	4	5
Tasks are handled harmoniously towards a common objective in the project	1	2	3	4	5
Interdepartmental coordination is very well designed in the UPPETEI project.	1	2	3	4	5
When different people come together to work on a task, they are performed well	1	2	3	4	5
Problems are generally ignored in the UPPETEI project	1	2	3	4	5
Initiatives to solve problems begin at the very instance that the problems are detected	1	2	3	4	5
Officers seem to have learned how to live with the flawed operations in the project	1	2	3	4	5
Calculability	**SD**	**D**	**N**	**A**	**SA**
The extent to which processes run efficiently is always measured	1	2	3	4	5
How satisfied the personnel are with their jobs is always measured	1	2	3	4	5
How successful the superiors are at supervising the subordinates is always measured	1	2	3	4	5
The extent to which project personnel fulfil their assignments is always measured	1	2	3	4	5
Statistics about faults that occur during operations are consistently collected	1	2	3	4	5
Measurable quantitative project goals are defined in the project	1	2	3	4	5
Judgment and decision making is supported with numbers in the project	1	2	3	4	5
Decision making is rather intuitive than scientific in the project.	1	2	3	4	5
Predictability	**SD**	**D**	**N**	**A**	**SA**
Job performance is documented in the project	1	2	3	4	5
The way to perform project roles is documented almost for all jobs	1	2	3	4	5
There is a manual of procedures available to everyone	1	2	3	4	5
What is expected from project personnel is explicitly stated.	1	2	3	4	5
Whoever is responsible to implement a particular activities is explicitly clear.	1	2	3	4	5
When the planned activities will be finished can be predicted with a high accuracy	1	2	3	4	5
Unplanned delays and errors are not experienced frequently in the project	1	2	3	4	5
A great deal of time is lost because of the errors made	1	2	3	4	5
All selected schools benefit equally from the project	1	2	3	4	5
Whom you know is more important than how successful you are	1	2	3	4	5

Control	SD	D	N	A	SA
It is easy to do inappropriate things without your supervisors' consent	1	2	3	4	5
The ones who do not obey the rules are wedged with a very high probability	1	2	3	4	5
Personnel's success in performing their tasks is not left to chance	1	2	3	4	5
People determine how to perform their jobs by themselves	1	2	3	4	5
Success depends on initiatives of the project team which perform tasks	1	2	3	4	5
The way a task is handled is fixed regardless of who performs it	1	2	3	4	5
Operations depend more on established systems than on people	1	2	3	4	5

Section E: Project Success

Please indicate the extent to which you agree or disagree with the statements below

Key: 1=SD-strongly disagree; 2=D-disagree; 3=NS- not sure; 4=A-agree and 5=SA-strongly agree

Completion within estimated budget	SD	D	NS	A	SA
The project was successfully completed within budget	1	2	3	4	5
The project satisfactorily met the budget goals	1	2	3	4	5
Emphasis is put on attaining value for money for the disbursed funds	1	2	3	4	5
Project cost plans were reviewed periodically	1	2	3	4	5
There is a well-set procedure for project funds commitment	1	2	3	4	5
Mechanisms are put in place to control program costs	1	2	3	4	5
Completion within estimated time	**SD**	**D**	**NS**	**A**	**SA**
A project charter was developed before implementing the project activities	1	2	3	4	5
Project time plans are reviewed periodically	1	2	3	4	5
Project communication plans are implemented	1	2	3	4	5
The current structural arrangements are clearly defined	1	2	3	4	5
Program activities are implemented based on information provided by technical teams	1	2	3	4	5
Planned activities are done within set terms	1	2	3	4	5
The project satisfactorily met the schedule goals	1	2	3	4	5
Desired quality outcomes	**SD**	**D**	**NS**	**A**	**SA**
The project has provided the expected services to beneficiaries	1	2	3	4	5
The project's outcomes have supported the achievement of overall project objectives	1	2	3	4	5
The project is successful in realizing its investment objectives	1	2	3	4	5
My school is responsive in the delivery of education services	1	2	3	4	5
My school delivers quality education services to beneficiaries	1	2	3	4	5
Benefits realization	**SD**	**D**	**NS**	**A**	**SA**
The project's outcomes supported the achievement of overall project objectives	1	2	3	4	5
The project has provided the expected return on investment	1	2	3	4	5
The project was successful in realizing its investment objectives	1	2	3	4	5
The project satisfactorily delivered the required outputs	1	2	3	4	5
Undesired outcomes were managed and avoided	1	2	3	4	5
The project was successful in achieving the project plan	1	2	3	4	5

Thank you