

**CHALLENGES FACING PUBLIC SECTOR STANDARDIZED
SYSTEMIZED APPROACH TO PROJECT CYCLE MANAGEMENT IN
TANZANIA, CASE OF TANZANIA CIVIL AVIATION AUTHORITY**

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EVALUATION OF THE OPEN UNIVERSITY OF TANZANIA**

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for the acceptance by the Open University of Tanzania a dissertation titled; “Challenges facing Public Sector Standardized Systemized Approach to Project Cycle Management in Tanzania, Case of Tanzania Civil Aviation Authority” in partial fulfilment for the requirements for the requirements for the award of Masters of Arts, Monitoring and Evaluation of the Open University of Tanzania

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DECLARATION

I, Bernard Boniface Kavishe, do hereby declare that this dissertation is my own original work and that to the best of my knowledge; it has not been presented and will not be presented to any other University either in whole or in part for similar or any other degree award.



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Bernard Kavishe

.....
Date

DEDICATION

This work is dedicated to my lovely wife Mrs. Adelfina Pantaleo Kimario and My Mentor and colleague Eng. Mohamed Besta for their Love, endurance, patience and above all encouragement for the whole period of my study. Their efforts and encouragements have lead to the success of this work.

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ABSTRACT

Project Management tools and techniques in public sector is gradually becoming an important concern in developing economies. This dissertation was basically looking in Challenges facing Public Sector Standardized Systemized Approach to Project Cycle Management in Tanzania, case of Tanzania Civil Aviation Authority. The objective of the study was to identify deficiencies in public sector project cycle management, to assess the level of maturity in project cycle management and recommend measures to improve project cycle management in the public sector. Respondents were purposively selected from the case study. The study employed descriptive, explanatory and case study design approaches, collected data was analysed by statistical package for social sciences version 20. The study revealed poor performance of project delivery in public sector. The root of the poor performance may be traced in deficiencies in project cycle management, initiation, planning, implementation, commissioning, monitoring and evaluation., The study also revealed project management maturity is still at it initial stage. The study has concluded a lack of clear framework for project life cycle management, the absence of documented rules and regulations. The study has showed that projects cycle management does not follow systemized approach. The study recommends establishment of documented framework preferably at National level that will include the elements required for an effective project management system which are, Legislation, operating regulations, establishment of organizations with adequate sufficiently trained personnel, to manage the Legislation empowered to carry out oversight activities including issuance of guidance, carrying out audits and empowered to correct deviations by taking corrective and enforcement actions

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ABBREVIATIONS AND ACRONYMS

BOQ	Bills of Quantities
CAP	Chapter
GDP	Gross Domestic Product
GN	Government Notice
IFRC	International Federation of Red Cross and Red Crescent Societies
KRA	Key Result Area
MTEF	Medium Term Expenditure Framework
PMBOK	Project Management Body of Knowledge
PMU	Procurement Management Unit
PPRA	Public Procurement Regulatory Authority
TANROADS	Tanzania Roads Agency
TBA	Tanzania Buildings Agency
TCAA	Tanzania Civil Aviation Authority
ToC	Theory of Change
TQM	Total Quality Management
WBS	Work Breakdown Structure

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The Tanzania Civil Aviation Authority (the Authority) was established on 1 November 2003 as a corporate body, pursuant to the Civil Aviation Act, Cap. 80 . The Act mandates the Authority to provide safety, security and economic oversight of the civil aviation industry in Tanzania. The regulated services fall in three categories: air transport services, aeronautical airport services (airside airport operations, ground handling, in-flight catering and aviation fuelling) and air navigation services. During the planning period, it is envisaged that the Authority will separate its services from the service provider (Air Navigation Services).

Subsequent to its establishment, the Authority prepared its first Five-year Strategic Plan that covered the 2004/05 to 2008/09 financial years. The first Plan guided the Authority to put into place the organizational infrastructure and basic tools for carrying out the Authority's mandate. The tools included the regulations, policies and procedures both for the oversight and administrative functions. This third Plan covers the five financial years - from 2014/15 to 2018/2019. This Plan builds on the experience which has been gained during the implementation of the second Plan by consolidating the achievements from it and improving on the areas of that Plan which were less successful. This Plan sets out the Authority's Mission and Vision statements, Core Values and Key Result Areas (KRAs).

For each KRA, strategic objectives and service delivery targets are stipulated. The Plan assigns responsibilities to key staff to oversee its implementation. In addition,

the performance of each individual employee is derived from the Plan. Therefore, the Plan provides a basis for the periodic evaluation of the performance of the Authority based on measurable key performance indicators. In developing this Plan, due consideration has been taken to ensure it fits in well with the objectives of the National Development Vision 2025 and the National Transport Policy of 2003 which is under review.

Project Management is an innovative management practice that tends to achieve stated or specified objectives within a specific time and budget limits through optimum use of resources (Stuckenbruck & Zomorrodian, 1987). It helps organizations in investing their limited resources in the best way possible in order to achieve recurring success and meeting the expectations of stakeholders. Government and organizations usually embark on different projects with the aim of creating new service or improving the functional efficiency of the existing ones. All these projects require appropriate skills and techniques that go beyond technical expertise only, but encompass good and sound skills to manage limited budgets, and monitor shrinking schedules and unpredicted outcomes, while at the same time dealing with people and organizational issues (Abbasi & Al-Mharmah, 2000).

The application of project management practice in public sector has been identified as an efficient approach which would help in upgrading management capabilities and enable public sector to efficiently complete projects and attain developmental objectives (Arnaboldi *et al.* 2004). It is also recognized as a key enabler with whom public sector organizations adopting business improvement methodologies such as Lean Management and Total Quality Management (TQM), improve their efficiency

and competitiveness. (Olateju, *et. al*, 2012).

Public sector of each country represent a major share of GDP, states carry out many activities as a means to provide for its citizenry, most of such activities are initiated or implemented through projects. Projects are physical foundations on which development efforts and improved living standards are established (Abbaasi and Al-Mharamah, 2000). In Tanzania, projects play an important role in carrying out government function; projects are usually aligned to government development goals. The PMBOK has classified organizations in their ability to manage projects there are two types of organizations.

Project based organizations: organizations that perform work through projects e.g. Contractors and Architects, a good examples of such public organizations in Tanzania is Tanzania Roads Agency (TANROADS), Tanzania Building Agency (TBA) and the like. These are organizations which deliver their revenue primarily from performing projects or are organizations which have adopted management by projects.

Non project based organizations – These are organizations which lack management systems designed to support project needs efficiently and effectively eg. Government departments.

Organizations that have adopted management by projects tend to have management systems in place to facilitate project management eg financial systems are specifically designed for accounting, tracking and reporting multiple simultaneous

projects on the other hand, Non-project based organizations often lacks management systems designed to support project needs efficiently and effectively. The absence of project oriented systems usually makes project management more difficulty. Most government departments are Non-project based organizations and therefore, except for the procurement phase, lacks management systems for other phases of the project life cycle and this is manifested by project failures, i.e. wrongly initiated and therefore are not aligned to the organizational goals, projects poorly managed and miss cost, time and quality targets or projects commissioned and the end user fail to operate.

Management of the project cycle has not been consistent in Tanzania public sector, there is little documented guidance defining the project phases and guide on what need to be accomplished in each phase before the next one is embarked. The European commission for example has a manual for Project Cycle Management (PCM) and has defined PCM as

“A term used to describe the management activities and decision-making procedures used during the life-cycle of a project, including key tasks, roles and responsibilities, key documents and decision options”.

The cycle of operations for managing EC's external assistance has five phases namely; Programming, Identification, Formulation, Implementation, Valuation and Audit. In Tanzania public sector project cycle management varies from one entity to another, it also varies even within the entity depending on efforts and capabilities of persons involved in managing the projects, many projects are initiated by allocating budget in the Medium Term Expenditure Framework (MTEF) even before

feasibility studies are conducted, and on many occasions projects will take off without conducting a feasibility study.

On the other hand large engineering projects, where consultants are employed tend to follow a more defined life cycle which includes, project initiation which is the conceptualization stage which specifies what the project should accomplish, feasibility studies which also include Environmental and Social Impact Assessments (ESIAs), preliminary design, detailed design, detailed cost Estimate, development and production of tendering documents, procurement of contractors and service providers, project implementation, project Monitoring and Evaluation which is accomplished by daily supervision activities, progress meetings, monthly valuation of the project and monthly reporting and finally project Commissioning.

Public projects are typically initiated and implemented in accordance to the terms set by the project sponsor or financier. A substantial portion of development projects are funded by development partners, or donors, mostly foreign governments or agencies, each donor has his regulations and procedures. So, the recipient adapts with these procedures to implement its projects. (Janem, 2011). In Tanzania this is guided by the procurement act, Section 4 of the public procurement act 2011, as amended, provides

4.-(1) To the extent that this Act conflicts with an obligation of the United Republic under or arising out of - (a) any treaty or other form of agreement to which the Government is a party with one or more other states or political sub-divisions of such states; or (b) any grant agreement entered into by the Government with an inter-governmental or international financing institution in which the Government is the beneficiary, the requirement of such treaty or agreement shall prevail...

Public projects that are funded directly by the government through budget or any other internal funding procedures have a varying degree of success which is mainly based on the organizations or individual's project management capability and maturity levels. Roberts, 2007 have developed a capability maturity model that provides a simple measure of an organizations state of development in five levels of maturity, Initial, Repeatable, Defined, Managed and optimized. It is important to study and establish organizations level of maturity in project management in order to initiate and guide an initiative in a standardized systemized project management that will directly contribute to the public sector to better execute project cycle management.

1.2 Statement of the Research Problem

Many studies have indicated poor performance of project delivery in public sector, the root cause of the poor performance may be traced in project initiation, Planning, implementation, commissioning or monitoring and evaluation. There are problems in a standardized systemized approach to project cycle management in public sector projects which has led in poor project delivery.

In Nigeria for example, the implementation of modern project management, methods, strategies, techniques and tools is still not well established in public sector. These results into failure of public institutions and their contractors in performing their duties concerning the budget, specifications and deadlines of the projects awarded. Studies have recognized social and political systems, cultural blocks and lack of financial support as barriers to successful project planning and execution in Nigerian public sector (Idoro & Patunola-Ajayi, 2009).

Performance during implementation is not up to expectations, this is due to absence of clear internal coordination mechanism and regulations within public institutions... to obtain high level of efficiency of implementation of the public projects, a clear and well defined system should be institutionalized (Janem, 2011). The study intended to establish the extent and factors contributing to the problem and has suggested ways to reduce the problem; using a case study of one typical government organization, Tanzania Civil Aviation Authority.

1.3 Research Objectives

1.3.1 General Research Objective

The general objective of this study was to establish challenges facing Public Sector Standardized Systemized Approach to Project Cycle Management in Tanzania, using experience of Tanzania Civil Aviation Authority as a case study.

1.3.2 Specific Research Objectives

- i. To identify deficiencies in public sector project cycle management, case of Tanzania Civil Aviation Authority.
- ii. To assess the level of maturity in public sector project cycle management, case of Tanzania Civil Aviation Authority.
- iii. To recommend measures to be undertaken to establish a standardized systemized approach to project cycle management in the public sector

1.4 Research Questions

1.4.1 General Research Question

What challenges are in Tanzania Public Sector Standardized Systemized Approach

to Project Cycle Management using recent experience of Tanzania Civil Aviation Authority as a case study?

1.4.2 Specific Research Questions

- i. What are the main deficiencies in project cycle management in Tanzania Civil Aviation Authority?
- ii. What is the level of maturity in project cycle management in Tanzania Civil Aviation Authority?
- iii. What are recommend measures to be undertaken to establish a standardized systemized approach to project cycle management in the public sector?

1.5 Relevance of the Research

Project design, implementation and commissioning are managed in the public sector from the procurement point of view and often the procurement office is tasked with the project life cycle management in many cases without the tools needed for pre-procurement phases and post-procurement phases resulting in failures in terms of aligning the projects to institutional goals, failures in project design in terms of technical and financial standards and forecasts and missed targets in terms of cost, time and quality and at implementation and commissioning stage.

The study aim at identifying deficiencies and strengths in management of key elements of project phases and establish the level of maturity of the standardized systemized approach to project cycle management in the public sector. The study will add to the knowledge base and enrich literature on management of project life cycle in the public sector in Tanzania.

1.6 Scope of the Study

The study was conducted in Tanzania Civil Aviation Authority. The research studied main deficiencies in project cycle management and established the maturity level in project cycle management. Respondents were purposively selected from the employees who have participated in managing project between 2011 and 2018.

1.7 Organization of the Study

This research is organized in five chapters, chapter one is on the background to the study, statement of the research problem, study objectives, and research questions, chapter two deals with literature review, chapter three is to identify methods on research design, chapter four present research results and findings and chapter five is all conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter covers theoretical and empirical literature review of work done by other scholars to identify a research gap and findings which this study is attempting to contribute to its resolution.

2.2 Conceptual Definitions

This section define the key concepts and terms used in the study, the concepts and terms used vary in their specific meaning from one organization to the other and from one scholar to the other, definitions provided here provide a precise meaning relevant to this study.

2.2.1 Project

Project “is a temporary management environment, created to deliver a specified outcome according to a defined business justification” (Robert, 2007). The Project Management institute (2000), provides the following definition

Project “is a temporary endeavour undertaken to create a unique product or service”, Temporary means every project has a definite beginning and a definite end, unique means the product or service is different in some distinguishing way from all other products or services. For many organizations projects are a means to respond to those requests that cannot be addressed within the organizations normal operational limits. (PMI, 2000). The IFRC defines a **Project** “as a set of coordinated activities

implemented to meet specific objectives within defined time, cost and performance parameters.” (IFCR, 2011).

There are three key dimensions to a project, Cost, Time and Quality which have to be balanced to manage a project successfully. A successfully completed project would finish in time, within the estimated budget and to specifications. These three dimensions of cost, time and quality are often regarded as the aspects of a project that must be kept in an appropriate balance if the project is to achieve a successful outcome (Hamilton, 2004).

2.2.2 Project Life Cycle

Collectively project phases are known as project life cycle” (PMI,2000).

This cycle highlights three main principles:

- i. Decision making criteria and procedures are defined at each phase (including key information requirements and quality assessment criteria);
- ii. The phases in the cycle are progressive – each phase should be completed for the next to be tackled with success; and
- iii. New programming and project identification draws on the results of monitoring and evaluation as part of a structured process of feedback and institutional learning.

2.2.3 Project Cycle Management

Project management, according to Abbasi and Al-Mharmah (2000) “is the art and science of planning, designing and managing work throughout all the phases of the project life cycle”.

Project Cycle Management (PCM) is a term used to describe the management activities and decision-making procedures used during the life-cycle of a project including key tasks, roles and responsibilities, key documents and decision options (Barbera, 2004).

A **systemized approach** is defined by Robers, 2007, as a clearly articulated approach to project management. Sometimes it is called a methodology and is often a document that describes the processes, responsibilities and deliverables involved in the approach.

2.2.4 Public Sector

Public Sector is the part of an economy that is controlled by the state.

2.2.5 Project Management Phases

Project management phases otherwise known as project lifecycle refers to the stages in a project's development. Project lifecycle is important because it demonstrates the logic that governs a project. It also helps in developing plans for carrying out the project. Pinto (2007) identified four distinct project life cycle phases which are: Conceptualization, Planning, Execution, and Termination.

Conceptualization according to Pinto (2007) refers to the development of the initial goal and technical specification for a project. The scope of work is determined, necessary resources (people, money, material & machine) identified, and important organizational contributions or stakeholders signed on. Also, feasibility study is conducted at this stage to investigate whether the project can be continued or not.

Planning is the stage in which detailed specifications, schematic, schedules and other plans are developed. It is also a stage where the project solution is further developed in as much detail as possible and steps necessary to meet the project's objectives are put in place. At this stage the individual pieces of the project called work packages are broken down, individual assignments made, and the process for completion clearly delineated. Project schedule, the actual work and the estimated cost of completion are also identified. Anything that might pose a threat to the successful completion of the project is also identified at this stage. Finally all the project stakeholders must be identified at this stage of the project so as to establish a communication plan that describes information needed and the delivery method to be used to keep stakeholders informed (Patel, 2008).

Execution phase deals with actual performance of the work of the project. Progress is continuously monitored and appropriate adjustments are made and variances recorded so as to maintain the original project plan. During project execution, project tasks are carried out and progress information is reported through regular team meetings. The project manager uses this information to maintain control over the direction of the project by measuring the performance of the project activities comparing the results with the project plan and takes corrective actions as needed (Westland, 2006).

Termination occurs when the completed project is transferred to the customer, project documentation is handed over to the business, and suppliers' contracts terminated, project resources released and the project closure communicated to all stakeholders. The final step is to conduct lesson learned studies; to examine what

went well and what didn't. Through this type of analysis, the wisdom of experience is transferred back to the project organization which will help future management teams.

Janem (2011) come up with four phases along similar lines, project initiation, project planning, project execution and project closure with activities in each stage listed as follows

Project Initiation, activities include, development of a business case, conduct feasibility study, establishment of a project charter, obtaining project authorization from sponsors, appointment of a project manager, mapping of key stakeholders, establishment of project goals, establishment of project priorities, constraints, boundaries, and initial project risks, drawing a list of deliverables, estimation of cost of the project, drawing a project schedule, appointment of the project team and setting up of a project office, at the end a phase review should be conducted.

Project planning or Detailed planning, activities include, creation of project plan or a work breakdown structure (WBS), resource plan, financial plan (budget), human resource plan, risk plan, acceptance plan, communication plan and procurement plan, Contract suppliers and other service providers. At the end a phase review is performed.

Project Execution or Implementation of plans; activities include, building deliverables which is physical construction of deliverables, monitoring and control, which includes, time management, quality management, change management, risk

management, issue management, acceptance management and communication management. At the end a phase review is conducted.

Project closure; activities at this phase include, commissioning and closure of the project followed by phase review.

2.2.6 Project Failures or Success

Project success or failure has different meanings to different stakeholders

At its most basic level, project success is seen as finishing project deliverables on time, on budget and to a quality grade (Greer, 1999).

2.3 Tanzania Experience

In Tanzania public sector projects can be put in two categories; Projects that involve the procurement process, normally implemented by external contractors and service providers and Projects that do not involve procurement process, normally implemented internally.

2.3.1 Projects that Involve the Procurement Process

Projects in this category can be grouped in at least six procurement groups, each with a procurement and management method adapted to its specific nature. The procurement groups are; Goods, Works, Supply and installation, Consultancy services, Non consultancy Services and Disposal of public assets by tender

2.3.3 Projects that do not Involve Procurement Process

The public sector performs projects, “soft projects” mainly relying on its internal departments and staff to carry out the bulk of activities, examples of such projects are “working groups” whose output is a document to carry out a specific task like

preparing a policy paper, a bill, draft regulations, guidelines, etc., other projects may involve trainings, commemorations etc. projects in this category will normally have a greater chance of success than projects which outputs are services or products that goes through a procurement process.

2.3.4 Project Phases at Tanzania Civil Aviation Authority

Typically projects go through the initiation process which ensures that the project is planned in terms of scope, tangible outcomes and financial arrangements, this stage is done to ensure the minimum procurement requirements are fulfilled, the project will then move to procurement stage after which it will be handed over to the project implementation team which will supervise and monitor implementation of the project to ensure outputs are realized followed by commissioning which is handing over the project to a department or institution that will operate it. The project cycle at TCAA can be illustrated as below.

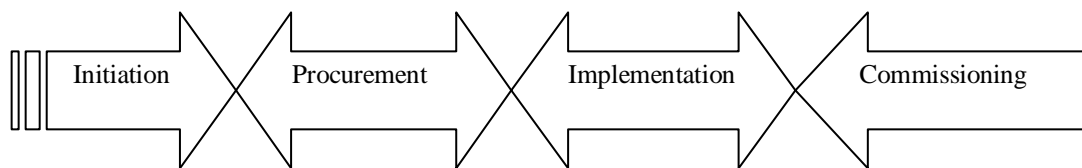


Figure 1.1: A Simplified TCAA Project Cycle

2.4 Review of Supporting Theories or Theoretical Analysis

This study is guided by the theory of change. Theory of Change emerged in the 1990s at the Aspen Institute Roundtable on Community Change as a means to model and evaluates comprehensive community initiatives. The Roundtable's early work focused on working through the challenges of evaluating complex community initiatives. This work culminated in a 1995 publication, 'New Approaches to

Evaluating Comprehensive Community Initiatives’. In that book, Carol Weiss, a member of the Roundtable’s steering committee on evaluation, hypothesized that a key reason complex programs are so difficult to evaluate is that the assumptions that inspire them are poorly articulated. She argued that stakeholders of complex community initiatives typically are unclear about how the change process will unfold and therefore place little attention on the early and mid-term changes needed to reach a longer term goal. Theory of Change (ToC) is a specific type of methodology for planning, participation, and evaluation that is used in the philanthropy, not-for-profit and government sectors to promote social change.

Theory of Change defines long-term goals and then maps backward to identify necessary preconditions; Theory of Change explains the process of change by outlining causal linkages in an initiative, i.e., its shorter-term, intermediate, and longer-term outcomes. The identified changes are mapped – as the “outcomes pathway” – showing each outcome in logical relationship to all the others, as well as chronological flow. The links between outcomes are explained by “rationales” or statements of why one outcome is thought to be a prerequisite for another.

Roberts, 2007 argues a systemized approach for using projects to deliver lasting business change may represent a change in itself for many people in an organization. To succeed, any approach to designing, implementing and embedding a new way of working must take account of the fact that it must be a culture – changing exercise. If project management behaviours are not modified at both the individual and organizational levels, the desired transformation will not take place.

2.5 Empirical Literature Review

2.5.1 Deficiencies in Project Cycle Management

Janem, 2011 conducted a study on Analysis of Project Management Practices in Public Sector in West Bank "Ministry of Public Works & Housing" the study assessed different project management practices and tools used in the public sector in Palestine, West Bank, descriptive data was collected and was analyzed and concluded among other things; that, the major cause of project failure is the lack of adoption of a formal project methodology. Without adopting a clear methodology or framework for delivery, most project teams start building deliverables before their scope and objectives are clearly thought through. They have no structured processes for undertaking project tasks, and so they fail to effectively manage time, cost, quality, risks, issues and changes within the project. To avoid project failure: a repeatable project methodology should be used with structured project processes for initiating, planning, executing and closing projects effectively.

2.5.2 Level of Maturity in Project Cycle Management

Zurga, 2018, undertook a study on Project management in Public administration. The study explored how project management is incorporated in the functioning of Public Administration in order to contribute to the achievement of government of Slovenia developmental goals. The objective and specific objectives were found to relate to the level of maturity of how Project Management is integrated in the Public Administration system.

The term maturity in project management means, the level of implementation of a standard methodology and accompanying processes so that a high probability of

repeated results can be guaranteed. The maturity is based on a life-cycle concept, and on a concept of continual improvement as a higher maturity level implies a better definition and usage of Project Management tools, techniques and rules. The study used five stages Total Project Management Maturity Model which are: (1) ad hoc, (2) initiated, (3) implemented, (4) managed, and (5) improved. The maturity levels were assessed as having some aspects in level 2 and others in level 1. The Total Project Maturity model was a methodological tool to assess the maturity of Project Management in Slovene Public Administration which was used as a tool to identify the gap between current and 'ideal' situation. The gap was used to recommend improvements to the system.

Roberts, 2007 in his book, Guide to Project Management, has suggested a project management improvement initiative, Roberts suggest a capability maturity level of expertise in project management and put it in five levels

- i. **Initial:** where a chaotic, unstructured approach is self evident. Success depends on a combination of chance and personal energy of those driving change
- ii. **Repeatable:** Where there is evidence of prior success being repeated
- iii. **Defined:** where a systemized approach to project management is documented
- iv. **Managed** – Where the approach is integrated with wider business of management and measurement of performance is possible
- v. **Optimized** – where feedback from practice and innovation is incorporated into the organization's documented and cultural approach to project management so that it becomes self-improving and self sustaining.

The questionnaire developed for this study have been adopted the capability maturity approach suggested by Roberts to assess project management maturity level.

2.6 Policy Review

The government has not enacted primary legislations to manage project life cycle in its entirety, however, there are several resources in terms of standardized systemized guidance to procurement management. These resources include, Principal legislation passed by the Parliament, supplemented by operating regulations drawn by the Minister. The principal legislations have also formed Organizations to manage the Act and enforce regulations.

The principal legislation is the Public Procurement Act CAP 410 of 2004 which was repelled and replaced by the Public Procurement Act No.7 of 2011 as amended by public procurement (amendment) act 2016. The act is supplemented by several regulations including, The Public procurement regulations 2013 (GN 446) as amended by Public procurement (amendment) regulations 2016 (GN 333), The Local Government Regulation (Establishment & Proceeding of Tender Boards) 2007. In addition to the legislations there are institutions to manage the procurement act, the Public Procurement Regulatory Authority (PPRA) and the Public Procurement Appeals Authority (PPAA).

Both institutions have developed and published guidance materials and templates to ensure smooth, thorough, accurate and uniform implementation of the law and its

regulations. These organizations reach out to public entities through the websites, bulletins, media campaigns, trainings, review of reports and carry out audits. Although procurement legislations are used as principal guide in project cycle management most of the guidance and structures are concentrated on the procurement phase of the project cycle, such standard and systemized approach is lacking in phases before and after procurement phase.

The principal legislation has more than 108 sections, of which only about two have dealt with pre and post procurement phases, likewise the public procurement regulations 2013 as amended have more than 380 regulations, of which only 10 are dealing with project management. Examples of sections and regulations dealing with pre and post procurement phases are: Section 9(1)(i) of public procurement act, as amended, empower the Authority (PPRA) to institute audits during the tendering process, Section 9(1)(ii) carry out audits in the course of execution of an awarded tender, Section 9(1)(iii) institute performance audit after the completion of the contract. The authority is further entitled by Section 9(2) to have access to any premises or location where work on a public contract has been or is being or is to be carried out.

The principal legislation section 39(1) has assigned most pre and post procurement functions to the user department as follows

- i. Liaise with and assist the procurement management unit through procurement to the point of contract placement
- ii. Initiate procurement by tender requirement and forward them to the PMM

- iii. Prepare technical inputs and or Terms of Reference
- iv. Propose technical specifications
- v. Participate in tender evaluation
- vi. Certify payment
- vii. Report any departure from terms and conditions of an awarded contract to the procurement management unit
- viii. Forward details of contract amendments to the procurement management unit
- ix. maintain and archive records of contracts management;
- x. prepare any reports required for submission to the Procurement Management Unit, the tender board or the accounting officer;
- xi. Oversee contract implementation
- xii. Liaise with the Procurement Management Unit during budgeting.

(2) The user department shall prepare a schedule of requirements for procurement as part of the budget process, which shall be submitted to the Procurement Management Unit for compilation of annual procurement plan. Part VIII of the public procurement regulation 2011, as amended, gives guidelines on project management in general terms only which does not include key tasks, roles and responsibilities, key documents and decision options

The PMU is a well established unit in public offices; it is staffed and guided by PPRA and its set of legislations, regulations and other guidelines. The unit project cycle pattern will reflect the public sector project cycle albeit purely from the procurement perspective

- i. Budget process, but this is purely for compilation of annual procurement plan.
- ii. Preparation of tender documents (Prepare technical inputs and or Terms of Reference, Propose technical specifications, BOQ etc.)
- iii. Tendering process
- iv. Project Implementation reports
- v. Commissioning

2.7 Research Gap

There is an extensive study on the handling of public projects, mostly in the former Eastern Europe, Middle East, Asia and Africa leading to the same conclusion that more need to be done. More efforts in training, planning, recourse leveraging, cost estimating, corrective plans and standardization (Abbasi and Al-Mharamah, 2000). Hindrance of project goals due to miscommunication among project team, absence of thorough planning and non adoption of clear methodologies are the challenges facing TCAA. However much of the topic has been written in other areas but not enough on the projects in the public sector in Tanzania.

2.8 Conceptual Framework

Conceptual framework is a grid, or a plane, of interwoven concepts that together provide a comprehensive understanding of a phenomenon or phenomena (Jabareen, 2009) a conceptual framework provides an outline of the research is planned it also position the work within the larger field of research.

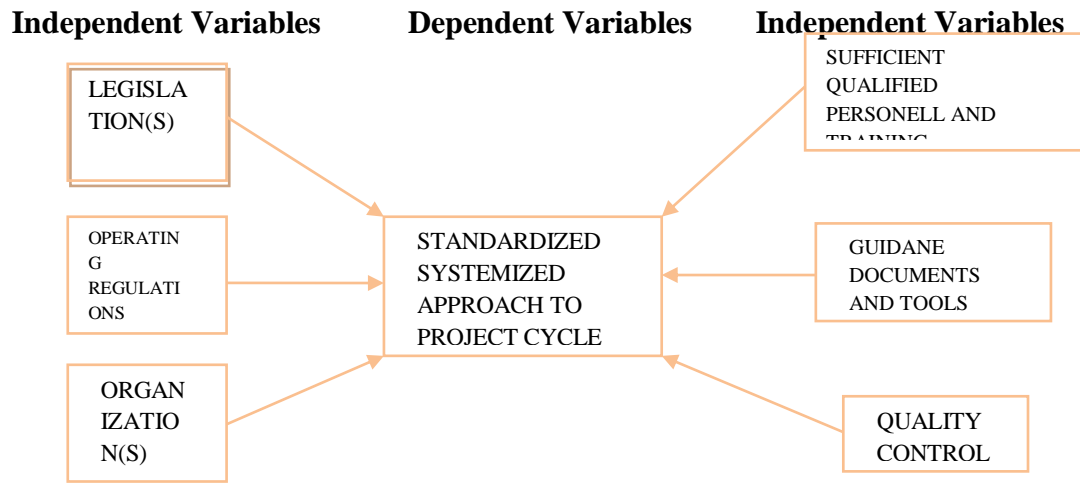


Figure 2.1: Conceptual Framework

Source: Adopted from ICAO Annex 19 and modified

2.9 Summary

Project management is the application of knowledge, skills, tools and techniques to project activities to meet project requirements. Project management is accomplished through the application and integration of the project management processes of initiating, planning, executing, monitoring and controlling, and closing. Managing of infrastructure projects is one of the main challenges that face the governmental institutions and ministries. Successful application of project management in their projects leads to build strong foundations for the national economic growth which will be realized by instituting a systemized approach to project cycle management.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

This chapter covers the research methodology employed, the design of the research, target population, sample size, sampling techniques, data collection and analysis techniques as well as ethical considerations.

3.2 Research Design

This is a Descriptive research design, Kothari and Garg (2014), describe descriptive research as the one that includes surveys and fact finding enquiries of different kinds, the major purpose of descriptive research is description of the state of affairs as it exist at present. This is a fundamental research which is mainly concerned with generalizations and formulation of theory. The research employed qualitative methods in collection of primary data; quantitative methods were applied in data analysis.

3.3 Area of the Study

The place of study was Tanzania Civil Aviation Authority (TCAA), a body incorporated by the Civil Aviation Act Cap 80. TCAA was established in its present form in 2006, it took over from predecessor organizations and it has existed as a public institution dating back to the pre independence era when aviation activities were managed by east African regional institutions. Civil Aviation started under the East African High commission (1945 – 1963). Between 1960 and 1963 East African states gained independence and the East African High Commission was replaced by the East African Common Services Organization (1963 – 1967).

Following formation of the first East African Community, Civil Aviation was taken over by the East African Directorate of Civil Aviation (1967 -1977). Following the collapse of the first East African community each state managed civil aviation separately, in Tanzania; a Directorate of Civil Aviation was formed in the Ministry of Communication and Transport. During the era of economic reforms which took root in the late 90's. The Civil Aviation Act no. 10 of 2003 was enacted which mandated the Authority to regulate economic, safety and security aspect of aviation industry as well as providing air navigations services in Tanzania.

The Civil Aviation act 2006 was enacted which further transformed TCAA from an executive agency of the government to an autonomous Authority. TCAA has a work force of around 500 employees; it has its head office in Dar es Salaam where most oversight activities are carried out. There are 14 regional offices mostly in manned airports dealing with provision of Air Navigation Services. The Authority is also running the Civil Aviation Training Centre, a college for training aviation practitioners. TCAA carries out different types of projects in order to carry out its functions in pursuit of it's mission. It is subjected to all opportunities and limitations of management of public sector projects similar to other public entities and it is therefore expected to provide a good case study.

3.4 Study Population

The survey population was the public sector projects financed and implemented internally including where the public procurement act 2011, as amended is applicable. It also involved non infrastructure projects implemented internally by public sector using their own recourses; such projects are like trainings, working

groups, seminars, workshops etc. In this research a case study, Tanzania civil aviation authority was selected as it was a typical institution in the same environment as most other institutions in the public sector.

3.5 Sampling Technique and Sample Size

3.5.1 Sample Size

A case study method is a form of qualitative analysis that involves a careful and complete observation of a social unit, (in this case an institution). It is a method of study in depth rather than breadth, a case study is essentially an intensive investigation of the particular unit under consideration (Kothari and Garg 2014). This research used Tanzania Civil Aviation Authority as a case study. Most projects are managed from the Head office in Dar Es Salaam, the head office has a total work force of about 150 persons including support staff and other experts not directly involved in managing of projects. The research targeted only those who have taken part in managing projects from 2011 to 2018. The size of the population was manageable as such a non probability sampling method , also known as a purposive or judgment sampling was employed, According to Kothari and Garg (2014), in this type of sampling, items for the sample were selected deliberately by the researcher. The researched managed to reach most respondents from the target population.

These methods has limitations, according to Kothari and Garg (2014), personal elements has a great chance of entering into the selection of the sample. The investigator may select a sample which shall yield results favourable to his point of

view, there is the danger of bias entering into this type of sampling technique, but if the investigators are impartial the results obtained may be tolerably reliable. To avoid bias considering the population was manageable, the researcher selected as many respondents as possible from projects implemented between 2011 and 2018 when the public procurement act 2011 and its operating regulations became applicable.

3.6 Variables and Measurement Procedures

Data were collected for the study in the following manner.

3.6.1 Independent variable

Demographic characteristics: of participants such as age, sex, duration of employment, education level, working position

Independent variables include: Legislation, operating regulations, Organizations, sufficient qualified personnel and training, guidance documents and tools and quality control

3.6.2 Dependent Variable

Main dependent variable was standardized systemized approach to project cycle management.

3.7 Data Collection Methods

Both primary and secondary data were collected in this research.

3.7.1 Primary Data

The primary data are those which are collected afresh and for the first time, and thus happen to be original in character (Kothari and Garg, 2014). In collecting primary

data the researcher collected data mainly through questionnaire.

Questionnaire: A questionnaire consists of a number of questions set to respondents to write down the replies. In this study the questionnaire had three parts, part one extracted respondents personal information; this part was used to judge integrity of the information collected based on the respondents background. The second part was aimed at identifying deficiencies in the management of Project Cycle Management. And Part 3, adopted from Roberts (2007) aimed at establishing the maturity level of the management in public sector project management.

3.7.2 Secondary Data

Secondary data are data which have already been collected by others and which have already passed through the statistical process. Secondary data was collected by document review. Secondary published data were available in various publications of governments, associations connected with business and industry banks, stock exchanges, journals, books etc.

3.8 Data Processing and Analysis

Data analysis refers to the process of collecting, modelling and converting data in order to give out useful information which will lead into proposing inferences and supporting decision making (Wanjiru, 2013). Data preparation process will involve data preparation and analysis, which include, questionnaire checking, editing, coding, classification, tabulations, graphical representation, data cleaning and data adjusting.

The analysis of data from collected data will be assisted by statistical package for social sciences (SPSS) version 20.

3.9 Data Validity and Reliability

Validity refers to the extent to which data collection and method accurately measures what they were intended to measure (Saunders *et al.* 2009). The quality that procedures or an instrument (tool) used in the research has to be tested. In this study the validity was made through pre-testing the questionnaires by a small number of respondents, this was done and the pilot group was encouraged to share their understanding of the questionnaire as well as asking for clarification where the question was not clear to them, the questionnaire was debugged and improved in order to ensure consistency in the data extracted.

Reliability refers to the extent to which the data collection techniques or analysis procedures yield consistent findings. This was done by giving questionnaires to different respondents at different occasions whereby as per the expectation of researcher, the same and similar results were obtained. Reliability was also assured since all data were obtained from reliable sources part 1 of the questionnaire extracted demographic data and which was used to assure reliability of the data.

3.10 Chapter Summary

3.10.1 Research Methodology

The research design and methodology enabled collection and analysis of data and produced information that contributed to knowledge on the following

- i. deficiencies in public sector project cycle management, case of Tanzania Civil Aviation Authority.
- ii. the level of maturity in project cycle management in Tanzania Civil Aviation Authority.

- iii. measures to be undertaken to establish a standardized systemized approach to project cycle management in the public sector

3.10.2 Research Ethical Considerations

The research is conducted observing all ethical considerations, the researcher obtained permission to collect data, all respondents were willing participants, they were informed on the purpose of the study and that their information will be used for academic purposes only observing privacy and confidentiality, personal identity of respondents is not included in the questionnaire.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Overview

This chapter presents the detailed analysis, interpretation and discussion of the research data on the Challenges in Tanzania Public Sector Standardized Systemized Approach to Project Cycle Management Case of Tanzania Civil Aviation Authority, taking into account the research questions presented earlier,. Tables, graphs and figures are used in the presentation of data; both qualitative and quantitative data methods were employed. The presentation is preceded by analysis of demographic and social characteristics of respondents.

4.2 Demographic and Social Characteristics of Respondents

The main variables which were inquired by the study included, gender, age, level of education, and experience in terms of number of years employed in the public sector and number of projects participated,

4.2.1 Response Rate

In this study a total of 40 respondents were targeted and questionnaires were distributed to them, 34 returned completed questionnaire which is equivalent to 85% rate of response. A response rate above 50% is considered by most scholars to be adequate; the response rate for this research is suitable for analysis.

4.2.2 Gender of Respondents

In this study respondents were asked to indicate their gender, out of 34, 12 were female and 22 were male, 35% and 65% respectively, representing similar

proportions in TCAA where the gender is about 32% to 68%. Both genders are sufficiently represented.

Table 4.1: Gender of Respondents

Gender of respondents	Frequency	Percentage
Male	22	64.7
Female	12	35.3
Total	34	100

Source: research data, 2019

4.2.3 Age of Respondents

Majority of respondents are in the age bracket 46-55 years, (50%), followed by 36-45 years (29.4%), 25-35 years (14.7%) and 5.9% above 55%. There were no respondents below 25 years of age. Most respondents 79.4% were between the age of 36 and 55 years, indicating maturity and experience in civil service.

Table 4.2: Ages of Respondents

Age of Respondents	Frequency	Percentage
Below 25 years	0	0
25 - 35 years	5	14.7
36-45 years	10	29.4
46-55 years	17	50.0
Above 55 years	2	5.9
Total	34	100.0

Source: research data, 2019

4.2.4 Education Level of Respondents

Most responders 52.9% have master's degrees in various areas of specialization, 42.2% have bachelor degrees, this makes 95.1% of respondents have a higher university level (tertiary) education. 5.9% have diploma and none had only Certificate or secondary education. This means the respondents are well educated and have a sound academic base to participate in the study.

Table 4.3: Level of Education of Respondents

Level of Education	Frequency	Percentage
Masters	18	52.9
Bachelor Degree	14	41.2
Diploma	2	5.9
Certificate	0	0
A-Level/O-Level	0	0
Total	34	100.0

Source: research data, 2019

4.2.5 Working Experience of Respondents

Most respondents 55.9% have worked in the public sector for over 10 years, followed by 29.4% who have worked between 6 and 10 years. Only 14.7% have worked between 1 and 5 years. The finding indicates the respondents are conversant with the functioning of the public sector.

Table 4.4: Working Experience of Respondents

Number of Years	Frequency	Percentage
1 - 5 Years	5	14.7
6 - 10 Years	10	29.4
Over 10 Years	19	55.9
Total	34	100.0

Source: research data, 2019

4.2.6 Experience in Project Management

The respondents were requested to give an estimate of number of public projects; they have participated either in planning, managing or both, and where they had a good understanding of the projects. 38.2% have participated in over 10 projects, while 32.4 have participated in between 6 and 10 projects while 29.4% have participated in less than five projects. Generally 70.6% have experience and knowledge on more than 6 projects. This further reinforce that most respondents are mature, experienced and have a rich knowledge of what they are reporting on.

Table 4.3: Experience in Project Management

Number of Projects Participated	Frequency	Percentage
Less than 5	10	29.4
6 - 10 projects	11	32.4
Over 10 Projects	13	38.2
Total	34	100.0

Source: research data, 2019

4.3 Deficiencies in public sector project cycle management in TCAA

The study was interest to identify deficiencies in project cycle management, respondents were asked specific question on each phase of a project cycle from initiation phase to project closure.

4.3.1 Initiation Phase

In the initiation phase results are presented in Table 4.1. The questionnaire tested if projects were aligned to National policies and organizational strategic goals, most respondents 73.5% responded that projects are checked for alignment and therefore contributing to National and organizational strategic goals, 97.1% observed that project teams were appointed at the beginning of the project, however most responders 73.5% observed that feasibility studies are not conducted, 85.3% said project charters which describes scope, objectives, time, budget, and risks are not prepared and 61.8% said job description for project teams are not prepared and 35.3% said they are prepared, this indicated that job descriptions are prepared for some projects only.

Overall the initiation phase is well done in terms of project alignment and appointment of project teams, however, feasibility studies are rarely conducted for projects, project charter are rarely prepared and there are not job description for the project teams for all projects.

Table 4.4: Initiation Phase

Item	Response (%)				
	Not Sure	Strongly Agree	Agree	Disagree	Strongly Disagree
Projects are checked for alignment to state policies and organizational strategic goals	0	8.8	64.7	23.5	2.9
Feasibility Studies are normally conducted for projects	2.9	8.8	14.7	58.8	14.7
Projects are tested for sustainability	8.8	2.9	8.8	73.5	5.9
Project Teams are appointed at the Beginning	0	8.8	67.6	23.5	0
"Project Charter" which describes scope, objectives, time, budget, and risks are always prepared	0	0	14.7	52.9	32.4
There are "Job Description" for project team	2.9	11.8	23.5	50.0	11.8

Source: research data, 2019

4.3.2 Planning Phase

The study indicates that 71% of respondents disagreed and strongly disagreed that, detail plans describing how to implement the project are always prepared, 79.4 % disagreed and strongly disagreed that quality plants were prepared, 94.2% disagreed and strongly disagreed that risk plans were prepared and 79.4% again disagreed and strongly disagreed that communication plans were prepared. The study establish that detailed plans describing how to implement the project are rarely prepared, quality plans, risk plans and communication plans are rarely prepared. The study establishes that planning phase is not well executed in the case study.

Table 4.5: Planning Phase

Item	Response (%)				
	Not Sure	Strongly Agree	Agree	Disagree	Strongly Disagree
Detailed plans describing how to implement the project are always prepared	0	2.9	26.5	55.9	14.7
Quality plans to monitor the quality of the outputs and to identify actions that will be used to achieve the required quality are always prepared	0	2.9	17.6	55.9	23.5
Risk plan for the project are always prepared	2.9	0	2.9	82.4	11.8
Communication plan for all related parties are always prepared	2.9	0	17.6	67.6	11.8

Source: research data, 2019

4.3.3 Execution Phase

In the execution phase, 47% said that cost is managed effectively while 53% disagreed or strongly disagreed, this indicates that cost is moderately managed, 85.3% disagreed that time is managed effectively, 64.7% disagreed and strongly disagreed that standards for the delivery of project outputs are always set and 97.1% disagreed and strongly disagreed that risk is effectively managed. In the execution phase, cost is moderately managed, time is rarely managed effectively, standards for delivery of project outputs are rarely set and risk is not effectively managed. The study establishes that the execution phase is overall not well managed.

Table 4.6: Execution Phase

Item	Response (%)				
	Not Sure	Strongly Agree	Agree	Disagree	Strongly Disagree
Costs is managed so it does not exceed the allocated budget for the project	0	5.9	41.2	47.1	5.9
Time is Managed effectively	0	0	14.7	85.3	0
Standards for the delivery of project outputs are always set	0	2.9	32.4	58.8	5.9
Risk is effectively managed	2.9	0	0	64.7	32.4

Source: research data, 2019

4.3.4 Project Closure

In project closure phase, 79.4% of respondents disagreed or strongly disagreed that evaluation of the project after closing is always conducted, 91.1% disagreed or strongly disagreed that lessons learned from the project are disseminated, while 73.6% agreed and strongly agreed that Documenting and achieving was always done. In project closure, evaluation of the project after the closing to determine the level of achievement of the objectives of the project and its success and lessons learned is rarely conducted. There is no disseminating in the lessons learned from the project. However, Documenting and archive all Documentation for the project after finishing is done for most projects. Overall project closure is not well managed; the end term evaluation is not conducted.

Table 4. 7 Project Closure

Item	Response (%)				
	Not Sure	Strongly Agree	Agree	Disagree	Strongly Disagree
Evaluation of the project after the closing to determine the level of achievement of the objectives of the project and its success and lessons learned is always conducted	2.9	0	17.6	73.5	5.9
lessons learned from the project are disseminated	2.9	0	5.9	67.6	23.5
Documenting and archiving of all Documentation for the project after finishing is always done.	2.9	5.9	67.6	23.5	0

Source: research data, 2019

4.4 Establish the Level of Maturity in TCAA

The level of maturity is guided by criteria set in appendix 2 to this research; there are five levels of maturity, Initial, Repeatable, Defined, Managed and Optimized. The initial phase is that chaotic situation where structures do not exist and success is a combination of chance and personal effort of project teams. Repeatable is the stage

where prior experiences and successes are employed to improve subsequent projects and this is evident only in some strategic projects. Defined is a third stage where a systemized approach has started to take root and is documented. Managed is where the systems are integrated in the wider business management and are measurable. Optimized is the highest level of maturity where project management structures are self improving and self sustaining. The maturity level is based on set of best practices in project cycle management; it sets an index for measurement of the level of maturity and helps to plan for improvement in project cycle management.

4.4.1 Business Alignment

In Business alignment, 97.1% of respondents said the organization project management strategy does not existing in document form, 67.6% disagreed and strongly disagreed that most projects proceed regardless of their relative contribution to strategic objectives while 32.4% agreed, this indicates that some projects would still proceed regardless of their contribution to strategic objectives, 52.9% disagreed and strongly disagreed that there is a commonly understood expression of projects contribution to organization projects and 61.8% disagreed and strongly disagreed that organization strategy is used to validate selection of projects.

Table 4.8: Business Alignment

Item	Response (%)				
	Not Sure	Strongly Agree	Agree	Disagree	Strongly Disagree
Organization project management strategy exist in document form	0	0	2.9	55.9	41.2
Most projects proceed regardless of their relative contribution strategic objectives	0	0	32.4	58.8	8.8
There is a commonly understood expression of projects contribution to Organization strategy	14.7	2.9	29.4	35.3	17.6
Organization strategy is used to validate selection of projects	11.8	2.9	23.5	61.8	0

Overall, the organization project management strategy does not exist in document which is an important attribute in reaching maturity level 3, this deficiency is one of the root causes of poor performance in project life cycle management. The study has also established that most projects will only proceed if they contribute to strategic objective. Business alignment moderately attempted, however, a defined portfolio does not exist. The business alignment component in maturity level 2.

4.4.2 Benefits Management

55.8% of respondents disagree and strongly disagree that projects proceed, only when there is an articulated justification, 73.5% agree that project success is measured only in terms of meeting time, cost and quality expectations, 73.6 disagree and strongly disagree that a midterm evaluation is done to revisit project justification, and 97% agree or strongly agree that the organization has the authority to alter or stop projects when necessary.

Table 4.9: Benefits Management

Item	Response (%)				
	Not Sure	Strongly Agree	Agree	Disagree	Strongly Disagree
Projects proceed, only when there is an articulated justification	5.9	8.8	29.4	52.9	2.9
Projects success is measured only in terms of meeting time, cost and quality expectations	20.6	14.7	58.8	5.9	0
At the end of a project, an evaluation of benefits is done	5.9	2.9	17.6	61.8	11.8
Once a project has begun, a midterm evaluation is done to revisit its justification	0	0	2.9	73.5	23.5
The organization has the authority to alter or stop projects when necessary	0	14.7	85.3	0	0

Source: research data, 2019

The results indicate that some analysis is undertaken, however, an approach to benefit management does not exist, project success is measured on narrow term of cost, time and quality expectations and not on attaining the outputs, outcomes and goals envisaged at project initiation. Midterm and end term evaluations are not conducted. Benefit management is on maturity level 1, Initial.

4.4.3 Systemized Approach

On systemized approach, 64.8% of respondents said project work is largely not distinguished from business as usual activity, 61.8% agreed or strongly agreed that the organization has access to impartial assurance services (audits), most of these services however are external and not built into the project cycle management, 85.3% disagreed or strongly disagreed that lesson learned are used to improve subsequent projects and 76.5% said the organization does not invest in project management tools.

Table 4.10: Systemized Approach

Item	Response (%)				
	Not Sure	Strongly Agree	Agree	Disagree	Strongly Disagree
Project work is largely indistinguishable from business as usual activity, and is delivered by people who work mostly in the business as usual environment	2.9	23.5	41.2	23.5	8.8
The organization has access to an impartial assurance service (Auditing/monitoring and evaluation)	2.9	5.9	55.9	35.3	0
The lesson learned from previous projects are used to improve subsequent projects	0	0	14.7	64.7	20.6
Organization invest in project management tools that deliver value	0	0	23.5	61.8	14.7

Source: research data, 2019

When projects are delivered by people mostly work in the business as usual environment the essence of a project is lost, further when lessons learned are not used to improve future projects, there is no systemized approach to repeat benefits and avoid shortcomings. The systemized approach is usually documented, which is not the case in the case study. The systemized approach is still at initial stage.

4.4.4 Project Organizations

On project organization, 85.3% said there is no procedure to manage change, 50% disagree that participants often move in out of management positions within individual projects, 34% agreed and 17.6% were not sure, 88.2% agree or strongly agree that when those in project are not unable to make a decision they turn to line management structure for guidance, 79.5% agree that responsibility for delivering project success lies with the project manager, while 52.9% do not agree or strongly disagree that the project manager has powers commensurate to his responsibilities and 79.4% disagreed or strongly disagreed that people were clear about their respective responsibilities and boundaries of authority.

Table 4.11: Project Organizations

Item	Response (%)				
	Not Sure	Strongly Agree	Agree	Disagree	Strongly Disagree
There are procedures to manage change.	5.9	0	8.8	73.5	11.8
Participants often move in and out of management positions within individual projects	17.6	2.9	29.4	41.2	8.8
When those involved in a project are unable to make a decision, they turn to line management structure for guidance	0	5.9	82.4	11.8	0
Responsibility for delivering project success lies with the project manager	2.9	8.8	70.6	17.6	0
The project manager power is commensurate to the responsibilities	2.9	5.9	38.2	44.1	8.8
People are clear about their respective responsibilities and boundaries of authority	0	0	20.6	55.9	23.5

Source: research data, 2019

The project organization is at initial stage

4.4.5 Planning and Control

On planning and Control, (Resource, cost and time management), 58.8% of responders disagreed or strongly disagreed that project success criteria is clearly stated, 35.3% agreed while 5.9% were not sure. 79.4% said Project plans consist mainly of a timeline or bar chart, 70.5% Disagreed or strongly disagreed on existence of a clearly articulated list of specific deliverables that each project will deliver, 73.5% Disagreed or strongly disagreed that there are frequent senior management meetings, 85.3% disagreed or strongly disagreed that project cost estimates are realistically prepared.

Table 4.12: Planning and Control

Item	Response (%)				
	Not Sure	Strongly Agree	Agree	Disagree	Strongly Disagree
Project success criteria is clearly stated	5.9	0	35.3	55.9	2.9
Project plans consist mainly of a timeline or bar chart	2.9	11.8	67.6	11.8	5.9
There is detailed, clearly articulated list of specific deliverables that each project will deliver	2.9	5.9	20.6	67.6	2.9
We have frequent senior management project meetings	2.9	2.9	20.6	67.6	5.9
Project time and cost estimates are prepared realistically	2.9	0	11.8	64.7	20.6
Key resources become available in time	2.9	2.9	50.0	44.1	0
Time, cost and quality expectations are aligned	8.8	0	8.8	70.6	11.8
Project plans are regularly updated	2.9	5.9	44.1	44.1	2.9
Up to date project cost are available in real time	5.9	2.9	50.0	35.3	5.9
Variations always go through the approval process	0	11.8	67.6	17.6	2.9

Source: research data, 2019

53 % agree that key resources are available in time, while 44.1% disagreed or strongly disagreed implying they are moderately available in time. 82.4% disagree or strongly disagree that time cost and quality targets are aligned, 50.1% agree project plans are regularly updated, while 41.2 disagreed or strongly disagreed implying they are not regularly updated in a significant number of projects. 79.5% agree or strongly agree that variations go through the appropriate approval processes. The study established that Resource, cost management and time management are all not well managed and are still at level 1, initial

4.4.6 Risk Management

94.1% of respondents disagreed or strongly disagreed that there is adequate risk management, 55.9% agreed or strongly agreed that identified risks and issues are reported to senior managers, indicating that risk and issue escalation to management is still not always reported to management.

Table 4. 13 Risk Management

Item	Response (%)				
	Not Sure	Strongly Agree	Agree	Disagree	Strongly Disagree
There is adequate risk management	2.9	0	2.9	70.6	23.5
Identified risks and issues are always reported to senior managers	0	0	44.1	47.1	8.8

Source: research data, 2019

There is no approach to risk management and therefore the maturity level is still at stage 1, initial.

4.4.7 Change Management

On change management, 82.4% disagreed or strongly disagreed that projects routinely met time, cost and quality targets, 85.3% said most projects are completed with substantial change in scope and 64.7% disagreed that the impact of change is adequately analyzed before change is accepted.

Table 4.14: Change Management

Item	Response (%)				
	Not Sure	Strongly Agree	Agree	Disagree	Strongly Disagree
Projects routinely meet time, cost and quality targets	2.9	0	14.7	61.8	20.6
Most projects are completed with minimum change in scope	0	2.9	11.8	73.5	11.8
The impact of change is adequately analyzed before a change is accepted.	5.9	0	29.4	47.1	17.6

Source: research data, 2019

Overall, there is little or no change management and therefore the maturity level is still at stage1.

4.4.8 People Management

On people management, 76.5% agreed that personnel are assigned to projects based on appropriate skills and competence, 76.4% disagreed or strongly disagreed that there is a high turnover of project personnel, 100% said there is an insufficient competent personnel to manage projects, 79.4% disagreed or strongly disagreed that there is a system to train personnel in project management.

Table 4.15: People Management

Item	Response %				
	Not Sure	Strongly Agree	Agree	Disagree	Strongly Disagree
People are assigned to projects based on required skills and competence	0	0	76.5	14.7	8.8
There is a high turnover of project-related personnel	11.8	0	11.8	73.5	2.9
There are sufficient competent personnel to manage projects.	0	0	0	73.5	26.5
There is a system to train personnel in project management.	0	2.9	17.6	55.9	23.5

Source: research data, 2019

4.4.9 Project Management maturity level Summary

The project management is mostly on initial stage with only two aspects on repeatable stage. Overall the project maturity level still in initial stage and therefore, the organization may plan to progressively raising to level 3, Defined, by documenting the PCM and allowing it to ultimately grow to level 5, Optimized.

Table 4. 16 Project Management Maturity Level Summary

Item	Level 1 Initial	Level 2 Repeatable	Level 3 Defined	Level 4 Managed	Level 5 Optimized
Business alignment		✓			
Benefits management	✓				
Systemized approach	✓				
Stakeholder management	✓				
Quality management	✓				
Resource and cost management	✓				
Time management	✓				
Risk management	✓				
Change management	✓				
People management		✓			

Source: research data, 2019

CHAPTER FIVE

CONCLUSION AND RECCOMENDATIONS

5.1 Chapter Overview

This chapter presents summary of the findings from the research, conclusions and recommendations on the study *Challenges facing Public Sector Standardized Systemized Approach to Project Cycle Management in Tanzania, Case of Tanzania Civil Aviation Authority*. Suggestions for further research on the subject are presented.

5.2 The Main Findings of the Study

This chapter draws from the research objectives in chapter 1 and research findings in chapter four. The objectives of this study were as follows

- i. To identify deficiencies in public sector project cycle management,
- ii. To establish the level of maturity in project cycle management
- iii. To recommend measures to be undertaken to establish a standardized systemized approach to project cycle management in the public sector

5.2.1 To Identify Deficiencies in Public Sector Project Cycle Management

The study revealed that project cycle management is not done well in public sector, the phasing of the project cycle is also not clear as a result the established good practice on what need to be done in each phase is not consistently applied in all projects, the study revealed that at initiation phase, feasibility studies are rarely conducted for projects and projects are not tested for sustainability and the Project Charter which describes scope, objectives, time, budget, and risks are not prepared and there are normally no clear job descriptions for the project teams. At

planning stages, detailed plans which describes how to implement the project are rarely prepared which includes, quality plans to monitor the quality of the outputs and to identify actions that will be used to achieve the required quality, risk plans, communication plans, human resource plans, procurement plans etc. are rarely prepared.

At implementation, the study has revealed that cost is not managed so it does not exceed the allocated budget for the project, time is not managed effectively, risk is also not managed effectively, in general standards for delivery of project are rarely set, and midterm evaluations are not conducted. On project closure the study revealed that, evaluation of the project after the closing to determine the level of achievement of the objectives of the project and its success and lessons learned are not conducted there is no disseminating the lessons learned from the project. The study has also revealed that there are no sufficient qualified persons to manage projects, more over organizations are not investing in useful tools to manage projects and there is not training initiative to empower personnel in project management practice.

5.2.2 To Establish The Level of Maturity in Project Cycle Management

Objective two supplements objective one in estimating an index to measure project cycle management maturity. The level of maturity was guided by set criteria, with five levels of maturity, Initial, Repeatable, Defined, Managed and Optimized. The initial phase is that chaotic situation where structures do not exist and success is a combination of chance and personal effort of project teams. Repeatable is the stage where prior experiences and successes are employed to improve subsequent projects,

Defined is a third stage where there is a documented articulated management approach. Managed is where the systems are integrated in the wider business management and are measurable. Optimized is the highest level of maturity where project management structures are self improving and self sustaining.

The study has concluded that, a major deficiency that the project management strategy is not documented and therefore it is difficult to establish if the strategy exists at all. The study also recognized that project work is largely indistinguishable from business as usual activity, and is delivered by people who work mostly in the business as usual environment. Project and non project activities are sailing in the same environment in the organization and by doing so losing the essence of a project.

People in both project and business as usual departments are unclear about their respective responsibilities and boundaries of authority which results in frustration of project management. The study also concluded that lessons learned from previous projects are not gathered to be applied to subsequent projects, this is mainly a result of not doing midterm, end term and impact evaluations. Cost management, time management, quality management, stakeholder management, people management, management of change, are not satisfactorily done, this results in most projects routinely miss time, cost and quality targets. The project management is mostly on initial stage with few aspects on repeatable stage. Overall the project maturity level still in initial stage.

Zurga (2018) explain, the term maturity in project management indicates implementation of a standard methodology and accompanying processes' so that a

high probability of repeated results exists. The maturity is based on a life-cycle concept, and on a concept of continual improvement higher maturity implies better usage of PM tools, techniques, rules and integrative functions. Maturity levels facilitate organizational transitions from an immature state to become a mature and capable organization.

5.2.3 Measures to be undertaken to Establish a Standardized Systemized Approach

The study has concluded that the absence of clear documented framework for project life cycle management and the level of maturity are still at its initial stage. There should be establishment of documented framework preferably at National level that will include the elements required for an effective project management system which are.

Principal Legislation passed by the parliament for management of public projects, Subsidiary Operating regulations made by the Ministers, Establishment of institutions and offices to manage the legislations, The institutions will also issue guidance documents, provide training, conduct oversight including audits and have powers to correct deviations by taking corrective and enforcement actions. At institution level, public sector intuitions may prepare guidance documents to standardize their approach to project cycle management, establish offices to manage project portfolios, conduct human resource training and provision of tools to manage projects.

Janem (2011) concluded, Performance during implementation is not up to expectations, this is due to absence of clear internal coordination mechanism and

regulations within public institutions... to obtain high level of efficiency of implementation of the public projects, a clear and well defined system should be institutionalized.

5.3 Conclusion

The study was carried out at Tanzania Civil Aviation Authority, a typical public sector institution which represents a cross section of the public sector. Respondents were people with experience in managing public projects. The results of the study showed that project cycle management is not comprehensively and consistently implemented, most activities in each phase of a project life cycle are not carried out, phases are not clearly defined and therefore not successfully completed before a subsequent phase is initiated. The study result also showed that the project management level of maturity is at its initial stage, the project management framework lacks a clearly articulated and documented approach or documented methodology which is key in obtaining a standardized and systemized approach. The deficiency in Rules and Regulations in management of project cycle management.

In conclusion, the study has showed that there is a gap between the project cycle management in public sector and the established best practices. This may be attributed to the absence of clear framework for project life cycle management, the absence of documented rules and regulations. The study has showed that projects cycle management does not follow systemized approach.

5.4 Recommendations

In order to create a standardized and systemized approach the following are recommended.

- i. At institution level, it is recommended that rules are established and guidance documents are prepared to standardize their approach to project cycle management. The framework should include Management activities, decision making procedures, key tasks, roles, responsibilities and accountabilities.
- ii. It is also recommended to include in the organization structure an office to manage and coordinate project portfolios. Institutions need also acquire and maintain adequate and sufficiently trained personnel to manage projects and acquire equipment and tools to enable personnel to work efficiently.
- iii. At National level it is recommended to enact a Principal Legislation passed by the parliament for management of public projects supplemented by Subsidiary Operating regulations made by the Ministers. The principal legislation should also Establish institutions and offices to manage the legislations. The institutions will also have the task issue guidance documents, provide training and have powers to conduct correct deviations by taking corrective and enforcement actions

5.4 Recommendations for Further Research

Similar studies should be carried out to more institutions in the public sector in order to enrich the knowledge base on the gaps that exist in the management of project life cycle in the public sector to eventually help in improving the system.

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APPENDICES

APPENDIX 1 - QUESTIONNAIRE

QUESTIONNAIRE

Dear Respondent

My name is Bernard Kavishe, a student at Open University of Tanzania pursuing Masters of Arts in Monitoring and Evaluation. As part of my Dissertation I am doing a study

“Challenges in Tanzania Public Sector Standardized Systemized Approach to Project Cycle

Management, Case of Tanzania Civil Aviation Authority”. I have prepared this questionnaire to collect data for the study. I kindly request you to respond to the questions, the success of the study depends on your contribution. Guarantee is given that your information will be confidential and will not be used for any other purpose apart from academic for this study only. Clarification for any issue during data collection will be provided by the researcher.

PART 1: DEMOGRAPHIC INFORMATION

1. Gender of the Respondent : Female () Male ()

2. Age of the respondent

a) Below 25 years ()

b) 25 -35 years ()

c) 36-45 years ()

d) 46-55 years ()

e) Above 55 years ()

3. Level of education (indicate the highest)

Phd(), Masters (), Bachelor Degree(),

Diploma()

Certificate() A’level/’Olevel ()

4. How long have you worked in the public sector

a) Less than 1 years ()

b) 1 - 5 years ()

c) 6 - 10 years ()

d) Over 10 years ()

5. Give an estimate of number of public projects, including working groups, you have participated in planning/managing and have a good understanding of .

- a) Less than 5 ()
 b) 6 - 10 projects ()
 c) Over 10 projects ()

PART 2 –PROJECT CYCLE MANAGEMENT

Key 1 = Strongly Agree, 2= Agree, 3 = Disagree, 4 = Strongly Disagree , Blank = Not Sure

Initiation Phase

<i>NO.</i>	<i>Current State</i>	<i>Agree</i>		<i>Disagree</i>	
IP1	Projects are checked for alignment to state policies and organizational strategic goals				
		1	2	3	4
IP2	Feasibility Studies are normally conducted for projects				
		1	2	3	4
IP3	Projects are tested for sustainability				
		1	2	3	4
IP4	Project Teams are appointed at the Beginning				
		1	2	3	4
IP5	"Project Charter" which describes scope, objectives, time, budget, and risks are always prepared				
		1	2	3	4
IP6	There are "Job Description" for project team				
		1	2	3	4

Planning Phase:

PP1	Detailed plans describing how to implement the project are always prepared				
		1	2	3	4
PP2	Quality plans to monitor the quality of the				

outputs and to identify actions that will be used to achieve the required quality are always prepared

1	2	3	4
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PP3 Risk plan for the project are always prepared

1	2	3	4

PP4 Communication plan for all related parties are always prepared

1	2	3	4

Execution Phase

PE1 Costs is managed so it does not exceed the allocated budget for the project

1	2	3	4

PE3 Time is Managed effectively

1	2	3	4

PE4 Standards for the delivery of project outputs are always set

1	2	3	4

PE5 Risk is effectively managed

1	2	3	4

Project Closure:

PC1 Evaluation of the project after the closing to determine the level of achievement of the objectives of the project and its success and lessons learned is always conducted.

1	2	3	4

PC2 lessons learned from the project are disseminated

1	2	3	4

PC3 Documenting and archiving of all Documentation for the project after finishing is always done.

1	2	3	4

PART 3 PROJECT MANAGEMENT MATURITY LEVEL

Key 1 = Strongly Agree, 2= Agree, 3 = Disagree, 4 = Strongly Disagree , Blank = Not sure

NO. Current State

Agree	Disa4gree
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PROJECT ALIGNMENT

PA1 Organization project management strategy exist in document form

1	2	3	4

PA2 Most projects proceed regardless of their relative contribution strategic objectives

1	2	3	4

PA3 There is a commonly understood expression of projects contribution to Organization strategy

1	2	3	4

PA4 Organization strategy is used to validate selection of projects

1	2	3	4

BENEFITS MANAGEMENT

BM1 Projects proceed, only when there is an articulated justification

1	2	3	4

BM2 Projects success is measured only in terms of meeting time, cost and quality expectations

1	2	3	4

BM3 At the end of a project, an evaluation of benefits is done

1	2	3	4

BM5 Once a project has begun, a midterm evaluation is done to revisit its justification

1	2	3	4

BM6 The organization has the authority to alter or stop projects when necessary

1	2	3	4

SYSTEMIZED APPROACH

SA1	Project work is largely indistinguishable from business as usual activity, and is delivered by people who work mostly in the business as usual environment				
		1	2	3	4
SA2	The organization has access to an impartial assurance service (Auditing/monitoring and evaluation)				
		1	2	3	4
SA3	The lesson learned from previous projects are used to improve subsequent projects				
		1	2	3	4
SA4	Organization invest in project management tools that deliver value				
		1	2	3	4

PROJECT ORGANIZATIONS

PO1	There are procedures to manage change.				
		1	2	3	4
PO2	Participants often move in and out of management positions within individual projects				
		1	2	3	4
PO5	When those involved in a project are unable to make a decision, they turn to line management structure for guidance				
		1	2	3	4
PO6	Responsibility for delivering project success lies with the project manager				
		1	2	3	4
PO7	The project manager power is commensurate to the responsibilities				
		1	2	3	4
PO8	People are clear about their respective responsibilities and boundaries of authority				
		1	2	3	4

PLANNING AND CONTROL

PAC1	Project success criteria is clearly stated				
		1	2	3	4
PAC2	Project plans consist mainly of a timeline or bar chart				
		1	2	3	4
PAC3	There is detailed, clearly articulated list of specific deliverables that each project will deliver				
		1	2	3	4
PAC4	We have frequent senior management project meetings				
		1	2	3	4
PAC5	Project time and cost estimates are prepared realistically				
		1	2	3	4
PAC6	Key resources become available in time				
		1	2	3	4
PAC7	Time, cost and quality expectations are aligned				
		1	2	3	4
PAC8	Project plans are regularly updated				
		1	2	3	4
PAC9	Up to date project cost are available in real time				
		1	2	3	4
PAC10	Variations always go through the approval process				
		1	2	3	4

RISK MANAGEMENT

RM1	There is adequate risk management				
		1	2	3	4
RM2	Identified risks and issues are always reported to senior managers				
		1	2	3	4

CHANGE MANAGEMENT

CM1	Projects routinely meet time, cost and quality targets				
		1	2	3	4
CM2	Most projects are completed with minimum change in scope				
		1	2	3	4
CM3	The impact of change is adequately analyzed before a change is accepted.				
		1	2	3	4

PEOPLE MANAGEMENT

PM1	People are assigned to projects based on required skills and competence				
		1	2	3	4
PM2	There is a high turnover of project-related personnel				
		1	2	3	4
PM3	There are sufficient competent personnel to manage projects.				
		1	2	3	4
PM5	There is a system to train personnel in project management.				
		1	2	3	4

PEOPLE MANAGEMENT

PM1	People are assigned to projects based on required skills and competence				
		1	2	3	4
PM2	There is a high turnover of project-related personnel				
		1	2	3	4
PM3	There are sufficient competent personnel to manage projects.				
		1	2	3	4

PM5 There is a system to train personnel in project management.

1	2	3	4

APPENDIX 2 - CAPABILITY MATURITY MODEL

	Level 1 Initial	Level 2 Repeatable	Level 3 Defined	Level 4 Managed	Level 5 Optimized
Business alignment	No alignment	Limited to some mandatory and strategic projects	A defined portfolio exist	Decision on which projects to promote and pursue are based on business and project performance metrics	Regular appraisal is conducted
Benefits management	No analysis is undertaken	Limited to mandatory and strategic projects	An approach to benefits management exists	Benefits management is universally applied and data driven decision making is applied	Actual benefits are measured and used for decisions on future projects
Systemized approach	No systemized approach	Limited to mandatory and strategic projects	Processes and deliverables documented. Immature support/assurance function in place	Processes and deliverables universally applied. Procedures fully integrated. Mature Support assurance function in place	Systemized approach examined and improved. Recognized project management standards.
Stakeholder management	Projects are managed using business as usual structure	Dependent on personal abilities	An approach to stakeholder identification and management exists	Project management team operates a commonly understood process. Stakeholders are actively	Structures exist which accommodate stakeholders

	Level 1 Initial	Level 2 Repeatable	Level 3 Defined	Level 4 Managed	Level 5 Optimized
				managed	
Quality management	Not established	Limited to mandatory and strategic projects	Documented, apply to most projects	Universally applied.	Regularly reappraised for improvement. Recognized quality standards
Resource and cost management	Managed through business as usual channels	Limited to mandatory and strategic projects	Applied to most projects. There is a standardized reporting system	Recourse control and cost management is integrated in organization systems and procedures	Lessons learned are used to improve.
Time management	Project time Schedules are not common	Limited to mandatory and strategic projects	Applied to most projects. Time, cost and quality not fully managed	Timescale management is integrated with organization systems and procedures	Lessons learned are used to improve subsequent projects.
Risk management	No approach to risk management	Limited to mandatory and strategic projects	Exists and applied to most projects.	Integrated with organization systems and procedures	Lessons learned are used so that future scenarios accommodate suitable mitigations
Change management	Little or no management	Limited to mandatory and strategic projects	Exists and applied in most projects	Project change control is aligned to portfolio change management	Lessons learned are guide future decisions

	Level 1 Initial	Level 2 Repeatable	Level 3 Defined	Level 4 Managed	Level 5 Optimized
People management	High turnover of staff	Key staff engaged in multiple projects	The support/ass urance function facilitate recruitment of project practitioner s	Individual performance aligned to career development . Demand and supply management of specific skill types is widely practiced.	People performance is measured and managed. Career path integrated with industry standards

Appendix 3: Clearance Letter

THE OPEN UNIVERSITY OF TANZANIA

DIRECTORATE OF POSTGRADUATE STUDIES

P.O. Box 23409
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Our Ref: PG201700094/01

Date: 12th September, 2019.

Director General,
Tanzania Civil Aviation Authority,
P.O Box 2819,
Dar es Salaam.

RE: RESEARCH CLEARANCE

The Open University of Tanzania was established by an act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No. 55 in the official Gazette. The act was however replaced by the Open University of Tanzania charter of 2005, which became operational on 1st January 2007. In line with the later, the Open University mission is to generate and apply knowledge through research.

To facilitate and to simplify research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to both its staff and students who are doing research in Tanzania. With this brief background, the purpose of this letter is to introduce to you **Mr. KAVISHE, Bernard Boniface** Reg No: **PG201700094** pursuing Master of Arts in Monitoring and Evaluation (**MA (Monitoring & Evaluation)**). We here by grant this clearance to conduct a research titled **"Challenges in Tanzania Public Sector Standardized and Systemized Approach to Project Cycle Management: Case of Tanzania Civil Aviation Authority."** He will collect his data from 15th September, 2019 to 30th October, 2019.

In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O. Box 23409, Dar es Salaam. Tel: 022-2-2668820. We lastly thanks you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours sincerely,


Prof. Hossea Rwegoshora
For: VICE CHANCELLOR
THE OPEN UNIVERSITY OF TANZANIA