



**PROJECT GOVERNANCE PRACTICES IN ETHIOPIA: THE CASE OF
FRONT-END PROJECT MANAGEMENT PRACTICES IN SELECTED
GOVERNMENT MINISTRIES**

A Research Report Submitted to the
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Department of Management
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In partial fulfilment of the requirements for the degree of
Executive Masters in Business Administration (EMBA)

by
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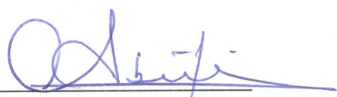
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June 2018

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DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Executive Master of Business Administration (EMBA) at the College of Business and Economics, Addis Ababa University. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.



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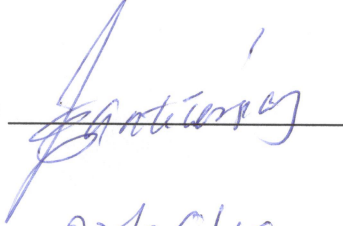
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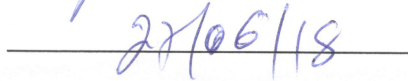
This is to certify that Abera Mengistu has carried out this research work on the topic entitled "Project Governance Practices in Ethiopia: The Case of Front-End Project Management Practices in Selected Government Ministries" under my supervision. This work is original in nature and it is sufficient for submission for the partial fulfilment for the award of Executive Masters in Business Administration (EMBA).

Fanta Tesgera (PhD)

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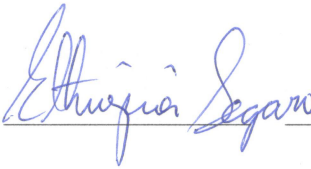
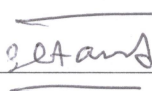
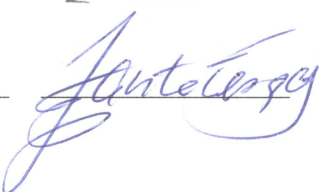


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DECLARATION

This research written by Abera Mengistu Anbesa, entitled “**Project Governance Practices in Ethiopia: The Case of Front-End Project Management in Selected Government Ministries**” and submitted in partial fulfilment of the requirements for the degree of Executive Masters of Business Administration [EMBA] complies with the regulation of the University and meets the acceptable standards with respect to originality and Quality.

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ABSTRACT

Project management success, achieving of the triple constraints, does not guarantee project success. More than 70% of projects fail or are challenged to achieve their planned objective (Standish Group, 2001). Thus, this raises the bigger question: is it morally, socially, economically and politically acceptable to decide funding of a project without figuring out whether the project can deliver the best service and with the most impact? Good project planning at the early stages of a project (the “front-end”) has been found to contribute significantly to the minimization of uncertainties, maximization of project benefits and thereby ensuring better opportunity for project success or reduce the ubiquitous problems that prevent the achievement of project success. The introduction and uses of front-end project management will be of critical importance for developing countries like Ethiopia in their selection of right projects and making an optimal decision only on projects that will have better impact for the social good. Accordingly, project governance practices in selected Ministries in Ethiopia have been explored in this study. A qualitative research design, with a case study methodology was used in the study; an in-depth interview of Directors and senior experts from four government ministries was considered as a data source. The ministry offices include Ministry of Finance and Economic Cooperation, Ministry of Communication and Information Technology, Ministry of Trade and National Planning Commission. A total of 12 senior executives and senior experts were interviewed on one-on-one basis. Thus, this study explored the front-end project management practices with regards to project definition and document preparation (presence of cost benefit analysis, benefit realization plan, organization change management and risk management plan), appraisal, and decision-making process in Ethiopia. Furthermore, the operating project management framework for achieving project success through the implementation of front-end project management for IT projects was explored. Accordingly, the study revealed that, the front-end planning is not adequately practiced. This was due to lack of personnel with the appropriate skills at different level, lack of clarity in mandates and of use of guidelines in the preparation and appraisal of public sector projects among others. The outcome of the study will be useful for the policy makers in public-sector IT projects front-end planning, in the determination of projects that can deliver the desired objective and support the senior management evidence based decision making process whether to approve, terminate, or modify projects.

Key words: front-end project planning, benefit realization planning, organizational change management, project management framework

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ACRONYMS

Abbreviation	Meaning
BPR	Business Process Reengineering
BRM	Benefit Realization Management
CBA	Cost Benefit Analysis
CEO	Chief Executive Officer
COTS	Commercial Off the Shelf
CPS	Current Performance Standard
CSF	Critical Success Factors
DB	Database
EICTDA	Ethiopian Information and Communication Development Agency
EPA	Environmental Protection Agency
ETA	Ethiopian Telecom Agency
FDRE	Federal Democratic Republic of Ethiopia
GTP	Growth and Transformation Plan
HPR	House of Peoples Representatives (The Parliament)
HR	Human Resource
ICT	Information and Communication Technology
IEG	Independent Evaluation Group
IFC	International Finance Corporation
IFMIS	Integrated Financial Management Information System
IICIS	Integrated Immigration Control Information System
IT	Information Technology
KPI	Key Performance Indicators
M&E	Monitoring and Control
MCIT	Ministry of Information and Communication Technology
MEDAC	Ministry of Development and Economic Cooperation
MOE	Ministry of Education
MOF	Ministry of Finance
MoFEC	Ministry of Finance and Economic Cooperation
MoFED	Ministry of Finance and Economic Development
MoP	Management of Projects
MOT	Ministry of Trade
MOTI	Ministry of Trade and Industry
NPC	National Planning Commission
OCM	Organizational Change Management
OTRLS	Online Trade Registration and Licensing System
PID	Project Initiation Documents
PIM	Public Investment Management
PIR	Post Implementation Review
PMBOK	Project Management Body of Knowledge

Abbreviation	Meaning
PMI	Project Management Institute
PSCAP	Public Sector Capacity Building Programme
QA	Quality Assurance
RFP	Request for Proposal
TIN	Tax Identification Number
TOR	Terms of Reference
WBS	Work Breakdown Structure

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Project Governance:

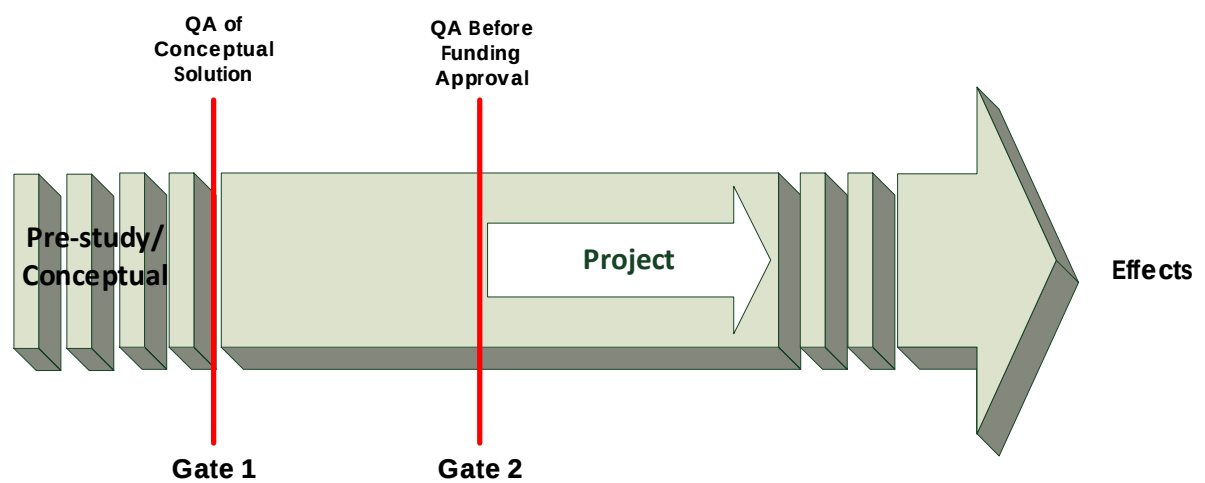
The root word governance is from the Latin word *gubernare*, which means 'to steer'. Project governance would mean to steer project in the desired direction (Bevir, 2013). The concept of governance is not new, it has existed as long as any form of human organization has existed. Simply put "governance" means the process of decision making and the process by which decisions are implemented (Crowther & Seifi, 2011).

The word governance is associated with words like government, governing and control (Klakegg et al., 2008). In the context of organization, governance provides a framework for ethical decision making and managerial action within an organization that is based on transparency, accountability, and defined roles (Muller, 2009).

According to Bekker (2014), since the late 1990s the term project governance has attracted much attention and debate in the project literature and the incorporation of governance into the project field reflects a widening of focus away from the day-to-day technical, operational and supporting activities that need to be fulfilled to ensure the delivery of project outcomes.

Samset & Volden (2016) state that, governance is about processes of rule more than institutions of government. It relates to processes and decisions that seek to define actions, grant power, and verify performance. Different instruments are available to improve governance, ranging from legally binding regulations, to economic and other types of incentives, as well as information and skill development. The challenge in governance is to identify the optimal mix of different instruments.

Samset and Volden(2016) further discuss that, project governance refers to the processes, systems, and regulations that the financing party must have in place to ensure that projects are successful. This would typically include a regulatory framework to ensure adequate quality at entry, compliance with agreed objectives, management and resolution of issues that may arise during the project, and standards for quality review of key appraisal documents. These processes and regulations can often be described in terms of stage-gate phase models shown in Fig 1 below.



Source: Adapted from Samset & Volden (2016) Norwegian QA Scheme

Figure 1 - Quality Assurance Scheme

On the other hand, Alie (2015) explain that, project governance is a term that is used quite loosely in the project management community and argue that there is a growing tendency, that when a project fails, project governance seems to be the root cause for the unsuccessfully executed project.

Thus, this study will explore the Ethiopian regulatory framework to ensure adequate quality at entry.

Public Sector Projects and Their Governance in Ethiopia

Ministry of Finance and Economic Cooperation (MOFEC) and National Planning Commission (NPC) serve as regulators to ensure adequate quality at entry and

Ministry of Information and Communication Technology as capacity building and project management support provider to public sector organizations.

Over the last two decades, the Ethiopian government has initiated some capital investment projects towards setting up and installation of ICT infrastructure and implementation of e-government services such as the government portal, WoredNet, SchoolNet etc. Some ministry offices such as the Ministry of Finance and Economic Development, Ministry of Trade, Main Department for Immigration and Nationality Affairs, Ethiopian Revenue and Customs Authority etc. have followed similar initiative and as part of their undertaking of Business Process Reengineering (BPR) and as part of the E-Government initiative engaged in ICT projects by the name of Integrated Financial Management Information System (IFMIS), Online Trade Registration and Licensing System (OTRLS), Integrated Immigration Control Information System (IICIS), and Revenue Net respectively etc. The objectives of these projects were development of software to process online applications for service delivery to the public. Local and international software development and integration firms were engaged to develop or customize these software as the case demanded. With the view of developing a blueprint and application for the respective organizations' transformation into an effective and efficient service delivery institutions; comprehensive studies on the existing systems and processes of the Ministries and relevant government organizations were made. As a result, the respective systems were developed at the federal level and rolled out to the regions in some cases to branch offices in phased manners.

Online Trade Registration and Licensing System (OTRLS)

The OTRLS project was conceived as a result of strategic studies made by Ethiopian Information and Communication Technology Development Agency (EICTDA). The bid was published in December 2009 by EICTDA, contract was signed on May 2010, and the project was operational since August 2011 with the fund from Public Sector Capacity Building Programme (PSCAP) through EICTDA now Ministry of Information and Information Technology (MCIT). The project was started as turnkey project (design and build) with a budget of 800,000ETB. The

objective of the project was to build federal level trade registration database and improve the service delivery to the business community. Due to the efforts made by the contractor and commitment from MoTI senior management, the system (OTRLS) received buy-in from the client (MOTI). As a result, the Government of Ethiopia (GoE) decided to roll it out to all regions phases by phase. Accordingly, another Request for Proposal (RFP) for second phase of the project was published on September 2013 to enhance OTRLS by including all competency and other requirements for trade licenses in Ethiopia. The contract was signed on October 2013 and the implementation was completed in June 2015 including a one-year maintenance support. The project's second phase initiatives were implemented through a collaborative effort between GoE and the World Bank Group (WBG). The objectives of the second phase were i) to conduct essential upgrades to the existing OTRLS to make it ready for deployment to other regions, ii) conduct capacity building to support rollout, iii) rollout the OTRLS to four regions (Amhara, Oromia, Tigray and Dire Dawa City Administration) and iv) enhance the existing MoT business portal. The second phase was successfully completed and it was operational since 2015. Subsequent phases that will create additional capabilities were planned; however, none were implemented due to lack of readiness on MoT side. Nevertheless, OTRLS was rolled out to additional regional states and federal administrative cities by MoT IT team; to date MoT has connected 745 trade registration and licensing services offices nationally.

The study revealed that both project phases were delayed due to scope creep; and since the contract was firm fixed price there were no change in cost. The project delivered a system that was accepted by the client (MoT) and is currently supporting the nation's trade registration and licensing service. The system (OTRLS) implementation has created centralized trade name registration and reduced the efforts on the business side by cutting the need to produce tax clearance from Ethiopian Revenue and Customs Authority (ERCA) through interconnection OTRLS with ERCA's system. It has also reduced the service delivery time to the business.

Therefore, the aim of this study is to explore the front-end project management practices in Ethiopian context in selected ministries. Namely at Ministry of Finance and Economic Cooperation (MOFEC) (as public project fund provider), Ministry of Information and Communication Technology (MCIT) (as regulator for public IT projects), National Planning Commission (NPC) (as a regulator), World Bank (as funder) and Ministry of Trade (MOT), (as project implementer of the OTRLS).

1.2 PROBLEM STATEMENT

Various publications have discussed that front-end planning is a key element to overall project success (Ryan *et al.* 2008; Shiferaw *et al.* 2012; and Samset & Volden 2015). In addition, many case studies have been made and results published corroborating that implementing project management does create value for the organization (Crawford & Helm 2009; Mengel *et al.* 2009; Turner *et al.* 2010; and Lawani, & Moore 2016). However, there are limited studies in the specific context covering public sector project in developing countries, especially in information technology area in Ethiopia. Therefore, there is a need to explore the challenges developing countries have faced and how they have responded to these challenges when appraising projects and making optimal decisions for projects that bring better impact. In addition, project governance that improve project success needs to be explored and best practices developed. Project governance has only recently become an issue of importance in the project management community (Muller, 2009). Funding organizations must have processes, systems, and regulations in place to ensure that projects are successful (Samset & Volden, 2015). This would typically include a regulatory framework to ensure adequate quality at entry, compliance with agreed objectives, management and resolution of issues that may arise during the project, and standards for quality review of key appraisal documents. According to Samset and Volden (2015), lack of competence among planners, having hidden agendas during planning, underestimation of costs and overestimation of benefits, unrealistic and inconsistent assumptions, and how to secure essential planning data and adequate contract regimes are found to be among the many

challenges the public investment projects are facing. Many of these problems are encountered as part of the front-end decision-making phase preceding the final decision to go ahead.

Much has been researched on the value of project management and project success. Project management being universal in nature, there are no clear guidance as to which tools and techniques are relevant for specific type of project. Scandinavian nations, Sweden and Norway have introduced a gated approach to appraise projects before decisions are made for funding (Samset & Volden, 2015). Similarly, nations like Australia's Tasmanian state have developed project management framework from which project managers can easily pick relevant tools and techniques that suits their project at hand (State of Tasmania, 2011).

Furthermore, Milošević & Iewwongcharoen (2004) state that to deliver good project results, project managers must first have good project management tools; leading to the questions of which project management tools to use and when. With the availability of large number of project management tools, project managers cannot use 100 tools to manage a single project. They need a manageable set of tools that they can use effectively and efficiently. Countries like Australia have developed Project Management Guidelines covering 11 key elements of project management such as planning and scoping, outcome realisation (including organisational change management), stakeholder engagement, risk management, issues management, resource management, quality management, status reporting, and project closure (State of Tasmania, 2011). Thus, it is important to explore the tools and analyse their contribution in the project management and in the decision-making process at project level. This remains unanswered in Ethiopian context and deserves further investigation.

Considering the limited studies in the specific context covering public sector project in developing countries, especially in information technology area in Ethiopia, this research explores the Ethiopian context of project governance practices; the challenges the country has faced and how it has responded to these challenges when appraising projects and making optimal decisions for projects that bring better impact.

1.3 RESEARCH QUESTIONS

More importantly, the study is aimed to address the following research questions.

1. What components comprise the front-end project management practices in public projects in Ethiopia?
2. How do regulatory bodies enforce the front-end project management practices in public sector IT project management's appraisal and establishing national project management framework?
3. How do the different stakeholders practice the project governance and use elements of the front-end project planning and project management framework in public sector IT projects in Ethiopia?
4. What are the issues of common interest, which must be adhered to enhance the realization of benefits of such projects by the different stakeholders (funders, regulators, project implementers of the government organizations) in Ethiopia?

1.4 RESEARCH OBJECTIVES

General Objectives

Projects do not meet their desired strategic objectives and fail most of the time. Standish Group's (2015) study shows that only 13% of large government projects succeeded. This raises the bigger question: is it morally, socially, economically and politically acceptable to decide funding of a project without figuring out whether the project can deliver the best service and with the most impact?

As part of the Macro-economic and Fiscal Framework, Ministry of Finance and Economic Development (MOFED) estimates the expenditure for each fiscal year per each public body segregated by recurrent and capital expenditure; provide justifications on the budget endorsed by the Council of Ministers to the House of People's Representatives (Proclamation No. 648/2009, Federal Democratic Republic of Ethiopia (FDRE), 2009). In addition to this, MOFED has developed

guidelines that will help public sector organizations to prepare project proposal and appraisal guidelines.

MCIT / Ethiopian Information and Communication Technology Development Agency (EICTDA) is mandated to give training, advice on project administration and implementation, releases directives and follow through its implementation to facilitate the utilization of information and communication technology in government organizations.

In summary, the Ethiopian government has mandated previously MOFED now National Planning Commission (NPC) and Ministry of Finance and Economic Cooperation (MOFEC) to appraise public sector projects before granting them fund and on the other hand MCIT is mandated to build project management capacity and provide technical support to both private and public organizations by Proclamation No 916/2015.

Thus, the objective of this study is to explore the front-end project management practices in Ethiopia at Ministry of Finance and Economic Cooperation (MOFEC) (as public project fund provider), Ministry of Information and Communication Technology (MCIT) (as regulator for public IT projects), National Planning Commission (NPC) (as a regulator), World Bank (as funder) and Ministry of Trade (MOT), (as project implementer of the OTRLS), and report the findings designed to: capture the front-end project planning, and evaluation of project designs and management experiences of people active in project management of the OTRLS project office and determine the extent to which the front-end project management practices has helped MOT's project; and discover which elements in the front-end project management practices were useful to make their project success and share their success on tools and techniques as best practices.

Specific Objectives

According to the study by Lawani & Moore (2016), there are differences in the execution and performance of IT projects by public sector organizations. Hence the research objectives that guide this study are:

- To explore the extent to which MOFEC, NPC and MCIT, use front-end project management practices to appraise, influence the decision-making process, granting of fund and support the project management of projects thereof;
- To explore similarities and differences in the decision-making styles of the two Ministries (MCIT and MOT) in appraisal and the implementation of projects, particularly OTRLS project implementation and identify key dimensions that contributed for better or bad project performances.
- Explore those practices and elements of the front-end project planning and project management framework that are used more often by the high - performing team.
- To identify issues of common interest, which must be adhered to enhance the realization of benefits of such projects.

1.5 IMPORTANCE AND BENEFITS OF THE STUDY

Managing the delivery of projects in a “developing country” context presents a number of challenges, many of which are idiosyncratic in nature and therefore difficult to address within the scope of the traditional project management role (Yanwen, 2012). Thus, this study contributes to the policy domain and the academics in project management in developing countries, specifically in Ethiopia pertaining to the impact of front-end project management practices, the need for project management framework at national level to guide project management in the public sector organizations and other project management dimensions that are identified in this study.

From a practical perspective, the study contributes to the project management practices in Ethiopia by exploring critical elements in front-end planning of projects and make recommendations for improvement in the preparation of project documents /proposals, appraisal, selection, decision making and national project management framework.

From scientific (theoretical) perspective, the study contributes to the knowledge enhancement in the project management from the execution oriented outlook bound by the iron triangle (cost, quality and time) to benefit realization of projects.

1.6 STUDY DELIMITATIONS AND ASSUMPTIONS

The delimitations and assumptions that relates to this study is discussed in the sections that follow.

1.6.1 Delimitations

- This study is limited to the context of the Ethiopia public service IT projects, the MOFEC, NPC, MCIT, MOT's OTRLS project, and the World Bank to a limited extent as funder to OTRLS project, therefore, the results may only be considered valid in this particular context.
- The research was focused on public-sector IT projects and their front-end project planning and management only;
- This study was based on self-report responses to the interview questions and such responses are often known to be affected by participants' biases. It is possible that bias may be introduced as participants in their retrospective assessments cannot or do not always accurately recall past situation's attributes;
- The study was dependent on only group of respondents at each Ministry offices, for the data to be collected (in-depth interviews). Thus, the study was limited to interview of the management at respective Ministry offices, the project management team of MOT for OTRLS and their project consultant only. Data was not collected from the customers or external stakeholders.
- The study didn't address projects that have top-down project approach or projects without active participation of the implementing organization.

1.6.2 Assumptions

The following basic assumptions underlie the research study. It is assumed that:

- Projects are useful instruments for implementing strategic initiatives.
- MOFEC and NPC are government body that appraises public sector projects. MCIT is government body that will provide technical support to implementing organizations, and follow up adherence.
- Information received through interview from the management teams and senior experts at each government offices are truthful and with minimal biases

1.7 DEFINITION OF KEY TERMS

This study involves a number of key concepts. The manner in which these key terms are defined for the purpose of this study is considered below. The definitions are not that of the researcher, they are taken from National Research Council (2001), Tasmanian Government (2008), Zwikael & Smyrk (2012), PMI PMBOK (2013), and Gasik (2014), and Murray, (2015).

Benefits: Are measurable and quantifiable improvements, which are normally expressed in financial terms, so they can justify any investment that may be required from the business (Zwikael & Smyrk, 2012)

Benefits Realization: is a process to make benefits happen and to make people fully aware of them throughout the entire process (Zwikael & Smyrk, 2012).

Business Value. A concept that is unique to each organization and includes tangible and intangible elements. Through the effective use of project, program, and portfolio management disciplines, organizations will possess the ability to employ reliable, established processes to meet enterprise objectives and obtain greater business value from their investments (PMI PMBOK, 2013).

Front-End Planning: There are many approaches to front-end planning, which is also known as pre-project planning, preconstruction planning, project programming, feasibility analysis, schematic design, scope definition, or

conceptual planning. Whatever it is called, successful front-end planning requires the active involvement of senior management before decisions are made that will determine the fate of a project (National Research Council, 2001).

Front-end planning in the project environment is defined as the period to point of official endorsement (project sanction) to proceed, when the appropriation for expenditure for full budget funding occurs. It is the period prior to commencing the detailed engineering, procurement, construction, and start-up commissioning phases of the project (Murray, 2015).

The front-end planning stage encompasses determination of the mission need or business objective, the scope for a project to fulfil the mission or objective, project justification, basic project definition, an outline of the general design, approximate benefits and costs, funding sources, risk factors facing the project, a basic organizational structure for the project, and a preliminary project execution plan. Based on the information developed in this phase, senior management must determine whether to approve, terminate, or modify the project (National Research Council, 2001).

Objective: A project objective is a statement of the overarching rationale for why the project is being conducted. It focuses on what the project is going to achieve, rather than what is produced (Tasmanian Government, 2008).

Outcomes: Outcomes are the benefits or other long-term changes that are sought from undertaking the project. They are achieved from the utilisation of the project's outputs. Outcomes are linked with objectives, in that if the outcomes are achieved then the project's objective(s) have been met (Tasmanian Government, 2008).

Outputs: Outputs are the products, services, business or management practices that will be required (produced) to meet the identified outcomes. They may be new products or services, or 'fixed things' called alternants. Outputs link with outcomes, in that the outputs are used by the project's customers to achieve the outcomes (Tasmanian Government, 2008).

Project Governance: The alignment of project objectives with the strategy of the larger organization by the project sponsor and project team. A project's governance is defined by and is required to fit within the larger context of the program or organization sponsoring it, but is separate from organizational governance (PMI PMBOK, 2013).

Project: is a temporary endeavour undertaken to create a unique product, service, or result. The temporary nature of projects indicates that a project has a definite beginning and end. The end is reached when the project's objectives have been achieved or when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists (PMI PMBOK, 2013).

Public projects: is a project executed by a public administration or with the participation of a public administration, or implemented with the involvement of funds from the budget of such an administration (Gasik, 2014).

Target Outcomes: are outcomes that have a measurable benefit and will be used to gauge the success of the project. Usually there will only be a small number of target outcomes for any project (Tasmanian Government, 2008)

1.8 STRUCTURE OF THE STUDY

Chapter 1 discusses brief background about the project followed by Introduction. The introduction starts by specifying the problem statement followed by purpose statement, research objective, and goes on to specify the importance and benefits of the study. In subsequent sections, it discusses about the research resources and methods, limitations and assumptions and closes by defining key terms.

Chapter 2 Covers literature review focusing on projects, project governance, project front-end planning and management, challenges in achieving project success. It discusses researchers views on how project success is defined (Pinto

& Slevin, 1988; Munns & Bjeirmi, 1996; Morris, 2013 and Samset & Volden, 2015).

Chapter 3. covers the research design and methodology employed. Under this chapter, description of inquiry strategy and broad research design for this research is discussed. Sampling techniques and sizes suitable to this qualitative research and unit of analysis are also discussed. Furthermore, data collection and analysis method is addressed. Reliability, validity and ethical considerations are also discussed at the end of the chapter.

Chapter 4 discusses in detail the research findings and Chapter 5 covers the conclusions, implication and areas for future research.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

Projects

Aurik et al. (2015) state that, the goal of strategy is to align the organization with the future and take advantage of it. According to Serra (2017), organizations use projects as instrument to implement their strategic objectives. Business success depends on projects success and project failure or success leads to the failure or success of business strategies. Thus, effective project governance enables strategic success.

Kaplan & Norton (2008) state that, many researches made in the last 20 years have found that 60 to 80 percent of organizations fail to implement their strategies by failing to deliver the expected outcomes.

In addition to this, there are differences in the way project success is defined by researchers and experts in the field. For some, there is no distinctions between project management success and project success. Munns & Bjeirmi (1996) view: project management and project success as not necessarily directly related as they have different objectives. They argue that project management's objectives are to control time, cost and progress while project objectives are to meet organization objectives set for the project. This shows that the project management is oriented towards planning and control and the focus is short term until the product is delivered for use. In contrast, the project success exceeds the life of the development lifecycle, or is long term.

Differences are also noted among organization in measuring and reporting the success rates of projects. For example, the CHAOS report (The Standish Group, 2015) states that 19% of the software projects failed to deliver on time, on budget, with a satisfactory result. 50% are completed but late, over budget, and with unsatisfactory results. On the other hand, PMI in its pulse of the profession (2015) states that on average, 64% of the projects are successful in meeting their goals.

Another study made by Merrow (2011) states that “65% of all industrial megaprojects failed to meet business objectives.” Price Waterhouse and Cooper (2004 & 2012) state that project management was the reason for 50% project failures. Moreover, project's stakeholders do not necessarily share the same view of success (Shenhar *et al.*, 2002).

Key issues that emerged in the course of Nogeste & Walker (2005) is that 'project stakeholders tend to assume their inexplicit needs will become embedded in formal specifications, despite intangible project outcomes being rarely discussed. This often results in explicitly specified tangible outcomes being delivered to stakeholders who perceive the project as being somewhat unsuccessful because it did not deliver inexplicit intangible outcomes.' (Communication failure resulting in poor requirement)

Thus, it is necessary to ensure that projects are conceived and executed in accordance with the organization's standards and policies and with best project management practices. Therefore, project governance, a management framework, that defines the way decisions are made all across a project's life cycle, which includes all relevant aspects of the decision-making process, such as the objectives of the decision making process (why), the type of decisions to be made (what), the periodic or ad hoc events when the decision making happens (when), the place where the decision making happens (where), the roles and responsibilities involved in the decision-making process (who), and the ways decisions are made, recorded, and communicated (how) is critical (Serra, 2017:8).

Project Governance and Front - End Planning

Samset & Volden (2015) define project governance as the processes, systems, and regulations that the financing party must have in place to ensure that projects are successful. This would typically include a regulatory framework to ensure adequate quality at entry, compliance with agreed objectives, management and resolution of issues that may arise during the project, and standards for quality

review of key appraisal documents. Project governance has only recently become an issue of importance in the project management community (Muller, 2009).

Morris (1994) stated that, project management had an extremely narrow focus, reflected only in the project life cycle, and ignoring the critical front-end and missing the institutional elements that more accurately typify the responsibilities of the project owner and the project manager and developed the management of project paradigm which involves managing the definition and delivery of the project for stakeholder success as shown in Figure 2 below.

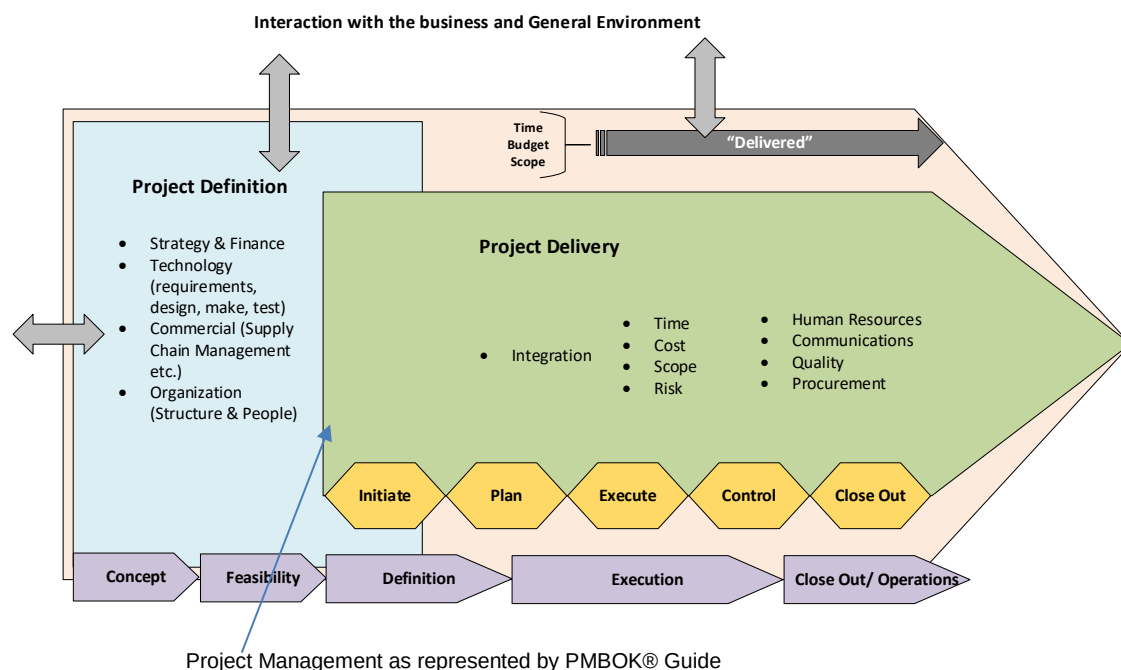


Figure 2 - "Management of projects" compared with traditional project management Morris (2013)

Management of Project covers both project definition and project management as represented by PMBOK ® (Project Delivery).

The effective governance ensures that important and relevant decisions, such as selection, authorization, prioritization and cancellation are made at the correct time by the appropriate group of people according to a standard set of rules and that these decisions are appropriately recorded, communicated, and implemented. By performing governance, organizations can focus on the programs and projects that can deliver more value (Serra, 2017).

Zwikael & Smyrk (2012) define benefits as measurable and quantifiable improvements, which are normally expressed in financial terms, so they can justify any investment that may be required from the business. Furthermore, Benefits Realization is a process to make benefits happen and to make people fully aware of them throughout the entire process.

Benefits are realized because of the successful changes to fill the value gap, which is the difference between the current situation and the target future situation expected in the strategic plan (Kaplan & Norton, 2008). Determining the value of benefits enables organizations to identify, prioritize, and support their most relevant initiatives, as well as to evaluate whether they are successful or not (Serra, 2017:11).

Besides, Cleland & Ireland (2002) state that decisions made early in the project process will, "...set the direction and force with which the project moves forward as well as the boundaries within which the work of the project team is carried out." They call this process as the front-end planning and define it as the process of thinking through and making explicit the objectives, goals, and strategies necessary to bring the project through its life cycle to a successful termination when the project's product, service, or process takes its rightful place in the execution of project owner strategies. Ryan et al. (2008) argue that successful execution of the front-end planning results in increased potential for project success.

According to Klakegg (2009) as quoted in Shiferaw *et al.* (2012), several governments are developing project governance systems for regular reviews of major public investment projects. The objectives of such system are the elimination of project failure (Shiferaw *et al.*, 2012). Nonetheless, having a project governance system is not a guarantee to have good projects; commitment from the decision makers play key aspects. Project governance systems if done will have significant positive effects on the quality and speed of decision making (Klakegg & Haavaldsen, 2009).

Based on Morris's management of projects, Artto *et al.*, (2016) argue that initiating and developing this value-creating operational network as early as possible, i.e. during the front-end phase of a project, yield substantial increases in the value created over the system lifetime.

Munns & Bjeirmi (1996) developed a model that includes utilization stage which is absent in PMI and different concept for project closing stage/phase. PMI's closing phase takes after product is delivered to the client, while in the Munns & Bjeirmi (1996) case it is takes place after the product life cycle is completed. Their model is as shown in Figure 3 below.

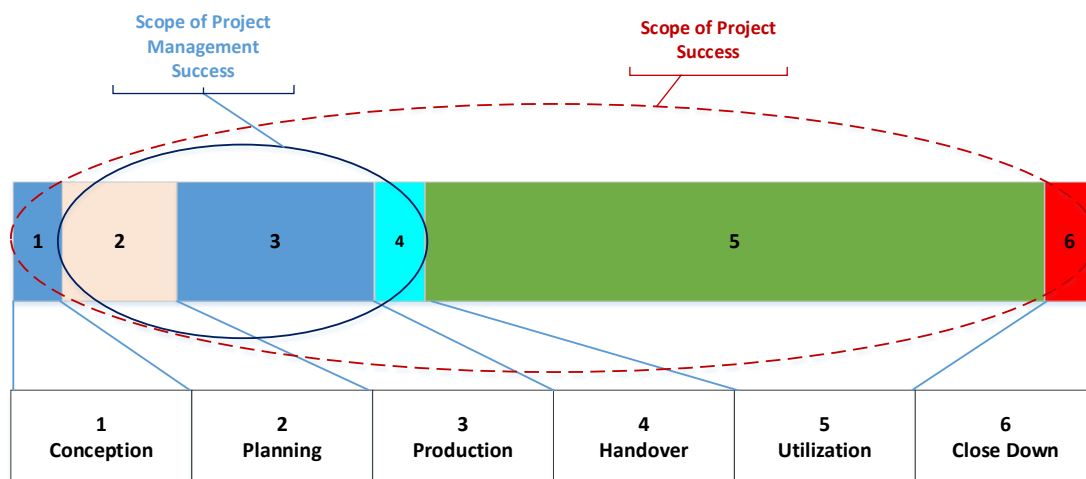


Figure 3 - The scope of success with in the Project life cycle (Munns & Bjeirmi, 1996)

Figure 4 illustrates and differentiates the scopes of the project and project management and the involvement of the project team and the client and other parties.

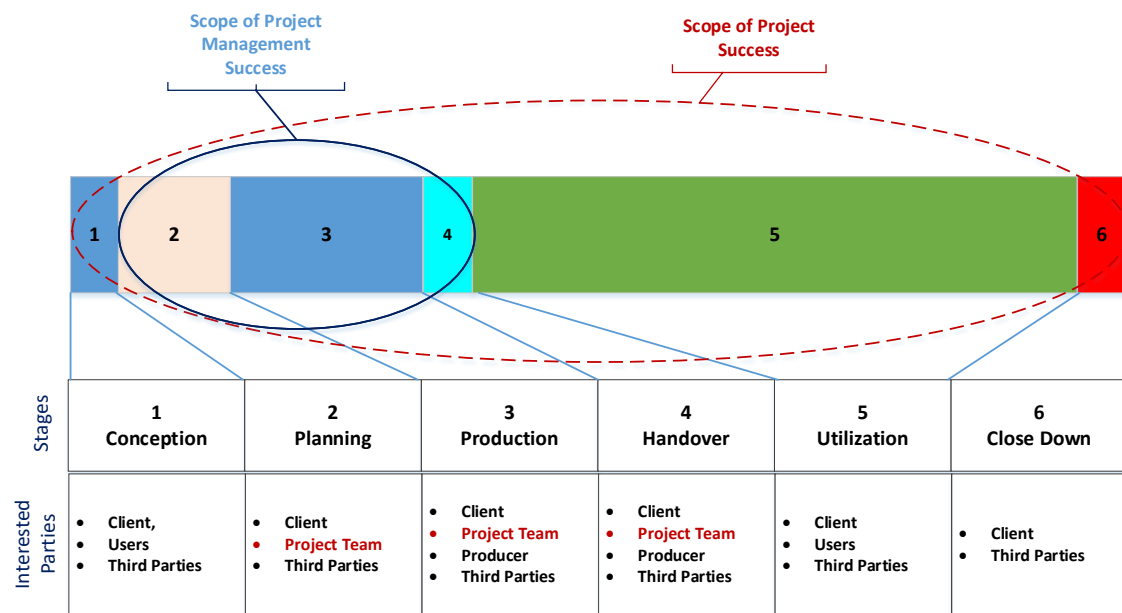


Figure 4 - Interested parties at each stage of the project life cycle (Munns & Bjeirmi, 1996)

Putting Morris's Management of Projects and Munns & Bjeirmi (1996) model together, will give project practitioners the correct scope for a project a success.

In summary, projects are exposed to uncertainty in varying degrees, and uncertainty is the highest at projects initial stage, when the project concept is conceived, causing decision making difficult. On the other hand, uncertainty is reduced through availability of information which comes overtime. Nonetheless, decision-makers juggle with different ideas and strategic solutions to a problem in the initial stages, but once decisions are being made, essential choices become locked, and it is more difficult and expensive to change the overall design (Samset & Volden, 2015). Careful evaluation of risks at the front-end thus increase project success.

Merrow (2011) and Morris, (2013) highlighted the front-end phase including the project definition, as important for ensuring strategic project success. A study by the World Bank based on a review of some 1125 projects concluded that 80% of the projects with a satisfactory identification, preparation and appraisal process at the project front-end were successful, while only 35% of those with an unsatisfactory quality-at-entry achieved success (IEG, 1996). According to Samset & Volden (2015), this creates the paradox of the significance of front end

management: **less resources are used up front to identify the best conceptual solution (project governance), than to improve tactical performance during implementation (project management).**

2.2 THE ROLE OF PROJECT MANAGEMENT IN ACHIEVING PROJECT SUCCESS

Project management has long been considered as an academic field for planning-oriented techniques and, in many respects, an application of engineering science and optimization theory. Much research has also been devoted to the search for the generic factors of project success (Soderlund, 2004). According to Kerzner (2009) one of the most difficult tasks is predicting whether the project will be successful. Morris (2013) on the other hand argues that many academic researchers are primarily interested in projects as examples of temporary organizations, rather than in questions about building a discipline for the delivery of goals and emphasises on the need to focus more on enhancing values and influencing context. Morris further states that, building value through the complete management of projects is what the new future of project management is all about.

Soderlund (2004) argues that the widespread use of projects in organizations today is the driving force in the search for factors that influence project success. Pinto & Winch (2015) discuss that the management of projects involves the definition and delivery of project for stakeholder success. However, despite extensive research in recent years, there has been little agreement on the critical factors of project success (Pinto, 1987). A major reason, according to Soderlund (2004) is the widespread assumption that a universal theory of project management can be applied to every project. The search for such a universal theory may be inappropriate given the fundamental differences that exist across projects. Of course, as stated by Winch (2000), the contention is not that all projects are the same, but that there is a generic form that can be called project organization.

According to Lawani & Moore (2016), utilization of project management in private sector is different from the public, however it is becoming a means for improvement. Project management was introduced in the public sector lately due to the demand of public reform project to address government spending and improve efficiencies in the service delivery.

Developed nations like UK and Australia have record of achievements in project management, however, developing countries still struggle in implementing project management to deliver value to the public (Lawani & Moore, 2016).

The term project management practice has been associated differently by different authors. For example, Crawford (2005) with competence, Abbasi & Al-Mharmah (2000) as tools and techniques and Brookes & Clark (2009) as capability of an organization in dealing with its projects. Similarly, the value of project management has been identified differently by different authors. For example, Besner & Hobbs (2006) through investigating the uses of tools and techniques, Thomas & Mulla (2008) through value constructs, and Thamhain (2004) through the use human side. Based on different authors definitions, Lawani & Moore (2016) define the project management practice in public organization as a “project management system demonstrating specific project management tools and techniques that will enhance management processes through the actions of a project manager or professional in order to support government organizations in managing public projects”.

Munns & Bjeirmi (1996) argue that successful project management techniques will contribute to the achievement of projects, but project management will not stop a project from failing to succeed. The right project will succeed almost without the success of project management, but successful project management could enhance its success. Selecting the right project at the outset and screening out potentially unsuccessful projects, front-end project planning, will be more important to ensuring total project success.

After reviewing the thirty years studies revolving around project success, Cooke-Davis (2004) summarized project success factors and proposed a distinction

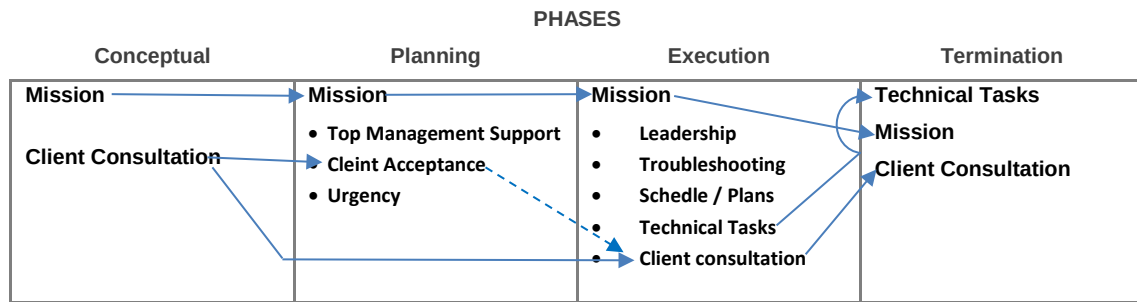
among three levels of project success: doing projects right, doing the right projects, and doing the right projects right. According to Besner & Hobbs (2006), most of the literature focuses on doing projects right instead of doing the right projects right; though previous studies have identified some significant and consistent results, the factors only partially explain project success and the dynamics leading to project success remain largely undisclosed.

Morris (2013) on the other hand argues that “effective management of projects is more than just execution-oriented project management. Projects are undertaken to create value and deliver benefits. Shaping the interaction between the sponsor's goals and the way the project (or programme) is to be developed, in the best way possible, absolutely crucial - probably one of the most important aspects of managing a project”.

Cook-Davies (2004) stated that delivering project success is necessarily more difficult than delivering project management success, because it inevitably involves “second order control” (both goals and methods liable to change) whereas the latter involves only first order control (hold goals constant, and change practices to meet pre-determined goals).

Shenhar et al. (1997) offer a chronological sequence of events as a compound definition of project success: (1) meeting time, budget, and other requirements, (2) impact on the customer, (3) benefit to the performing organization, and (4) preparing the future.

Pinto and Slevin (1988) stated that “the initial phase, Conceptualization, refers to the point at which a strategic need has been recognized by top management. As an answer to What factors are most important to project success; they voiced it depend on the phase of the life cycle in which the project resides. However, from their CSF summary chart shown in Figure 5, for each phase clarity of mission and consultation of client stand out as the important factors. This is further complemented by Samset & Volden (2015).



Critical Success Factors, in order of importance (Pinto & Slevin, 1988)

Figure 5 - Summary of Study Results: Critical Factors at Each Project Phase (Pinto & Slevin, 1988)

According to Samset & Volden (2015) "... it is necessary to distinguish between the projects tactical and strategic performance. Success in tactical terms typically means meeting short-term performance targets, such as producing agreed outputs within budget and on time. These are essentially project management issues. Strategic performance, however, includes the broader and longer-term considerations of whether the project would have a sustainable impact and remain relevant and effective in its operational phase, throughout its lifespan. This is essentially a question of getting the business case right, or, in short, of choosing the most viable project concept". This is illustrated in Figure 6 – Successful Projects extracted from Samset (2014) below:

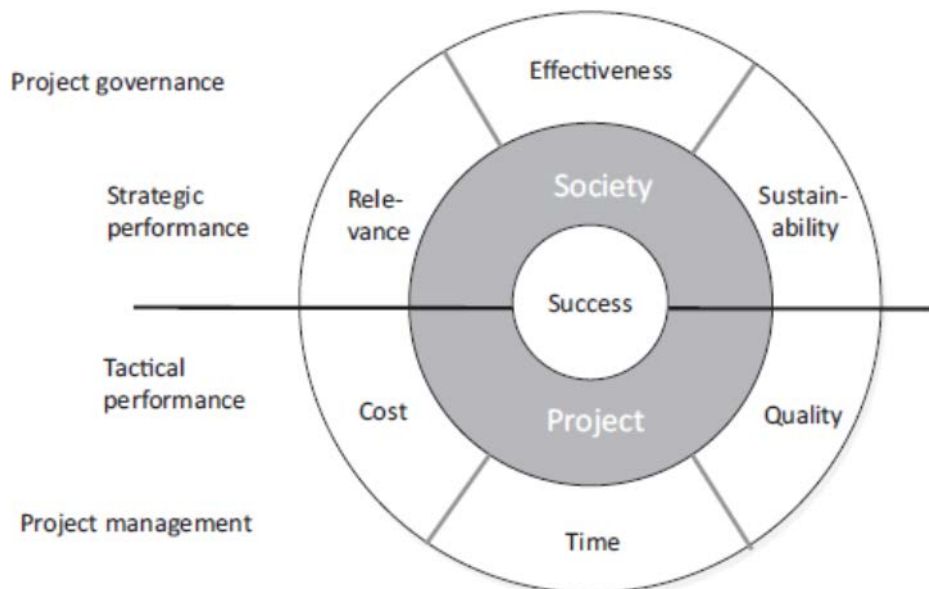


Figure 6 - Successful projects- Tactical performance and strategic performance (Samset, 2014).

Tactical performance is a question of delivering the project outputs as planned, while strategic performance is the worth or utility of the project as seen in a long-term perspective (Samset, 2014).

We will move to the discussion of project tools and technique with Shenhar *et al.* (2002) argument in which they stated that it is not the use of a project management methodology that leads to project success; it is the experience of using a project management methodology and the ability to tailor it to the context of a project links to project success.

2.3 PROJECT TOOLS AND TECHNIQUES

According to Besner & Hobbs (2006) study PMI's PMBOK® Guide (PMI, 2004) identifies an extensive set of project management tools and techniques, all of which are generally considered valuable and applicable to most projects most of the time. However, it does not outline the relative importance of the many tools and techniques and under which context to use. Rather it states that it is necessary to adapt practice to the particular situation by choosing which tools and techniques to employ without providing guidance as to which tools are most valuable in which contexts. It further states such considerations are outside the PMBOK® Guide's scope.

After studying the use of 29 project management tools and techniques, Thamhain (1998) concluded that the contribution of project management tools and techniques to project performance is conditional based on how they are integrated into the project management process and the way the project team accept those processes. Furthermore, Milošević & lewwongcharoen (2004) state that to deliver good project results, project managers must first have good project management tools; leading to the questions of which project management tools to use and when. With the availability of large number of project management tools, project managers cannot use 100 tools to manage a single project. They need a manageable set of tools that they can use effectively and efficiently.

Thus, this forces one to pose the next question, do countries need a national level operational project management framework with appropriate tools identified for every context and phases? The answer will be a yes, for example countries such as Australia have developed Project Management Guidelines covering 11 key elements of project management such as planning and scoping, outcome realisation including organisational change management, stakeholder engagement, risk management, issues management, resource management, quality management, status reporting, and project closure (State of Tasmania, 2011).

Among others, managing benefits involves ensuring that they are harvested effectively and that lessons learned from so doing are fed back so that future projects are changed and shaped (strategy, configuration, plans, etc.) accordingly (Edkins *et al.*, 2013). Besner & Hobbs's (2004) web based survey of 753 experienced project practitioners identified four database tools that have greatest potential to improve project performance but had low utilization rate namely: lessons learned, historical data, risks and cost estimating data. It was also found that it is difficult to build such databases by individual practitioners and Besner & Hobbs (2006) identified the need for organizational support. Especially the lessons learned from projects or between projects, risk management documents, and contingency plans were ranked by practitioners among the best tools that contribute to project performance. The top seven are as follows:

- Lessons learned/post-mortems
- Requirements analysis
- Scope statement
- Work breakdown structure (WBS)
- Project management software for monitoring of schedule
- Project management software for task scheduling
- Project management software for resource scheduling.

In addition, Besner & Hobbs (2006) identified tools having higher than average level of potential but a lower than average level of use:

- Database of lessons learned,
- Database of historical data

- Database of risks
- Database for cost estimating
- Database or spreadsheet of contractual commitment data
- Project management software for multi-project scheduling/leveling
- Project management software for monitoring of cost
- Project management software for cost estimating
- Project management software for resources leveling
- Earned value
- Feasibility study
- Stakeholders analysis
- Configuration review
- Graphic presentation of risk information.

Besner & Hobbs's (2006) analysis has shown that the front-end phase has some very specific characteristics. It draws upon business skills to make greater use of tools directly associated with the strategic front-end, such as choosing the right project and managing the organizational interfaces—stakeholder analysis, cost/benefit analysis, feasibility studies, responsibility matrix, and resources oriented tools, among others.

We will move to the next section of benefit realization management with Samset & Volden (2015) in which they stated, lack of competence among planners, avoidance of hidden agendas during planning, underestimation of costs and overestimation of benefits, unrealistic and inconsistent assumptions, and how to secure essential planning data and adequate contract regimes are found to be among the many challenges the public investment projects are facing. Many of these problems are encountered as part the front-end decision-making phase preceding the final decision to go ahead.

2.4 BENEFIT REALIZATION MANAGEMENT

As demonstration of project's importance to strategy implementation, the focus of projects and project management must shift from product creation to value creation (Musawir *et al.*, 2016). All IT projects have outcomes, but not all

outcomes are benefits. Thus, benefits must be actively managed. Often, there is a lag in benefits accumulation after the implementation. Therefore, managing for the benefits does not stop when the technical implementation of the project is completed, it continues until each of the expected benefits has either been achieved or it is clear it will not materialize (Ward *et al.*, 2007). Liu & Lin (2008) stated that 'effective deployment of appropriate IT investment evaluation methodology and benefits realization methodology are critical to the successful outcomes for IT project'. Most organizations do not have formal process to evaluate their IT projects they are at the risk of failing to establish clear IT project goals and design. Instead, organizations relied on limited cost analysis associated with their decision. Furthermore, Ward *et al.* argue that, much attention is paid to ways of justifying investments, with little effort being expended to ensuring that the benefits expected are realized.

Forrester Research as quoted in Liu & Lin (2008), indicated that only 51% of public sector organizations had considered making some serious efforts in realizing the expected benefits of their IT investments. Most organizations focus on the implementation of technology not on the realization of expected business benefits. Cooke-Davies (2002), argues that benefits are not delivered or realized by the project manager and project team, they require the actions of operations management.

According to Ward *et al.* (2007), benefits arise from the changes made by individuals or groups within or outside the organization. These changes must be identified and managed successfully if the benefits are to be realized. 'Benefits realization' and 'change management' are therefore inextricably linked and sum up the process of producing a benefits realization plan as a series of questions (listed below) that must be answered to develop a robust business case for the investment and a viable change management plan to deliver the benefits.

- 1) "Why do we have to improve?"
- 2) What improvements are necessary or possible? These have to be agreed by the key stakeholders and become investment objectives.

- 3) What benefits will be realized by each stakeholder if the organizational objectives are achieved? How can each benefit be measured?
- 4) Who owns each of the benefits and will be accountable for its delivery? The benefit owner will be responsible for the value assigned to the benefit in the business case.
- 5) What changes are needed to achieve each benefit? This the key to realizing benefits through identifying explicit links between each benefit and required changes.
- 6) Who will be responsible for ensuring each change is made successfully?
- 7) How and when can the changes be made? This requires an assessment of the organization's and specific stakeholder group's ability and capacity to make the changes."

Ward et al. (1996) insist that, only after completing the assessment and the feasibility of achieving the target benefits thoroughly tested, should a business case requesting funding for the IT investment be put forward. More importantly, this case will be supported by a comprehensive benefits delivery plan which greatly increases the likelihood of the benefits being realized.

Likewise, Ashurst & Doherty (2003) argued that IT project delivery focused on technology only is dangerous strategy as it may increase the likelihood of failure; furthermore, potential benefits may not be realized without appropriate plan for an organizational change. Additionally, Doherty & King (2001) as quoted in Ashurst & Doherty (2003), indicated that high levels of systems failure witnessed in recent years is estimated to range between 30% - 70% can be largely blamed on the failure of organisations to address the business change and the wider organizational issues. Similarly, Ward et al (1996) noted that, it is becoming increasingly recognized that benefits are generally derived from the organisational change that accompanies the introduction of IT, rather than from the functionality provided by the IT.

Musawir et al. (2016) in their international study on 333 sample projects found out that, effective project governance, and benefits management as strong and significant predictor of project success and together both factors predict 34.5% of the project management success and 31.3% project investment success.

Projects being the principal means by which the organization deals with change they are initially established with some level of perceived value to be obtained and may be documented in a business case, or articulated in a concept plan. However, due to lack of understanding associated with the value, the deliberate application of Organizational Change Management (OCM) is overlooked. Mostly the value of OCM is limited to communication, training, and dealing with the resistance to change without having OCM in the form of project results and organizational success (Powers & Been, 2014).

Powers & Been's (2014) study shows that 'with good or excellent OCM, a project is 80 to 95% likely to meet objectives. With only poor OCM; a project is only 16% likely to meet objectives.' Thus, showing the usefulness of OCM as cascaded from the benefits realization plan.

Musawir et al. (2016) have identified effective project governance has a strong and positive effect on benefit management as well as project success. Benefit management itself has a strong and positive effect on dimensions of project success and accordingly developed structural model that is shown in Figure 7.



Figure 7 - Structural model (Musawir et. al., 2016)

2.5. PROJECT FRONT-END MANAGEMENT

Previous sections have discussed what the literature says about projects, project management and their respective success and benefits planning. This section has been presented at the end since it is not possible to discuss about the impact of project front-end management and planning before defining and reviewing what researchers discuss about project success.

Archibald et al. (2012) assert that there is always a "Project Incubation/Feasibility Phase" prior to the currently recognized start of most project management

standards, and also recognizes that there must be an additional “Post-Project Evaluation Phase” after the standard Project Close-out Phase. These before and after phases must be recognized as belonging within the domain of project management. Archibald et al. (2012) “Project Incubation / Feasibility” phase is the same as project front-end.

There is not a single definition for project front-end; nonetheless, Faniran & Smith (2000) define project front-end as the early project stages when crucial and binding decisions are made about: (1) the project’s feasibility, and (2) strategies for executing the project. They reasoned that front-end project management at the early stages of a project to provide potentially significant opportunities for eliminating, or reducing, several problems that challenges achievement of project success; and further stressed relevance of Front-end project management in developing countries where inherent factors of uncertainty and unpredictability in the operating environment of projects are rampant. Edkins et al. (2013) state that, the front-end finishes with acceptance by the sponsor of the project definition documentation which upon receiving consent of approval, the remainder of the project life-cycle stages would then commence. Edkins et al. (2013), further state that many of the things that cause projects not to succeed have their origins in decisions made in the project’s front-end.

According to Williams & Samset (2010) all activities from the time the idea is conceived, until the final decision to finance the project is made into project front-end. It includes concept identification and selection, but not detailed planning stages are included into project front-end. At this stage the consequences of decisions will be highest, while the information available is at its lowest. Samset & Volden (2015) argue that projects are exposed to uncertainty in varying degrees, and uncertainty is the highest at projects initial stage, when the project concept is conceived, causing decision making difficult. Once decisions are being made, essential choices become locked, and it becomes difficult and expensive to change the overall design. Figure 8 below illustrates the challenges of the decision making:

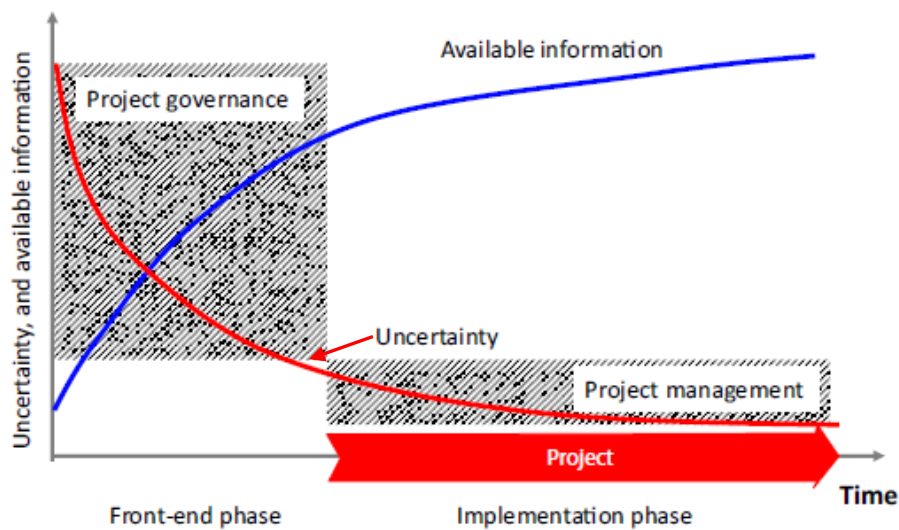


Figure 8 - Diminishing of uncertainty (Samset, 2010)

The front-end work plan should incorporate the following tasks (Faniran & Smith, 2000):

- Defining the purpose of the project (expectations/requirements of the client);
- Determining how the project purpose will be achieved (procurement strategies, operational processes and key resources that will be required to achieve the project objectives);
- Investigating financing arrangements for funding the project;
- Identification of constraints to achieving the project objectives (risk identification and analysis);
- Developing project procedures (e.g. reporting and review procedures, responsibility areas, authority to spend money etc); and
- Definition of project termination points to ensure that expenditure of time, resources and money is not wasted.

Among the countries that uses quality assurance (QA) scheme in project front-end Norway is one. According Shiferaw et al. (2013) Norway has two QA stage one at concepts stage and the other one after the feasibility study. The Norwegian external QA scheme is shown in the Figure 9.

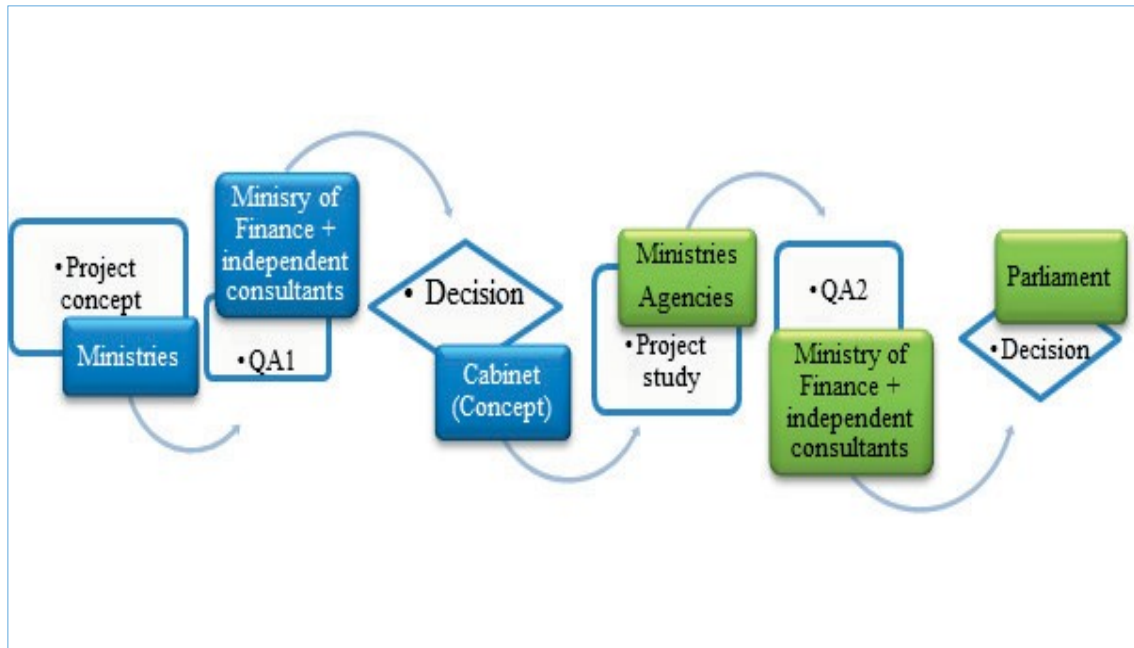


Figure 9 - Project development process according to the Norwegian QA system (Shiferaw, 2013)

The Klakegg's (2008) studies on 80 western and international companies and 40 case studies made by Samset & Volden (2016) in Norway show the findings of their empirical study findings made on project front-end. Details will be found in Table 1 and 2 below.

Samset & Volden (2016) made empirical case studies research on major public projects that have been subjected to external quality assurance under the Norwegian QA scheme. They used the term 'paradox' to describe situations with counter-intuitive results, some of which were based on fallacious reasoning or incomplete or faulty analysis and they identified ten 'paradoxes' in their studies. The first three (number 1 -3) paradoxes were identified based on desk studies and literature reviews. The remaining seven (number 4–10) were identified based on case studies made involving 5–40 cases, most of the cases were major public projects that have been subjected to external quality assurance under the Norwegian QA scheme. The result of their research is as summarized in Table 1.

Table 1 - Situations with a counter- intuitive result based on Samset & Volden (2016)

#	Paradoxes	Situations
1	How success is understood	Success is measured in terms of tactical performance rather than strategic performance.
2	The significance of front-end management and managing uncertainty and risk	Most resources are used to improve tactical performance during implementation (project management), and much less up-front to identify the best conceptual solution and ensure strategic performance (project governance).
3	Early information overflow /overkill up-front	Decisions are locked-in up-front by masses of detailed and quantitative information, instead of carefully selected facts and judgmental information relevant to highlight the essential issues.
4	The unexplored opportunity space	The choice of conceptual solution is made up-front without systematically defining and scrutinizing the opportunity space
5	Strategic alignment	Strategy and alignment of objectives are highlighted as essential concerns, but in most cases the internal logic of causalities and estimated probabilities of realization are erroneous in the finally approved strategy.
6	The significance of cost estimation	The focus is on the final cost estimate (the budget) to promote tactical success, while the earliest cost estimates that might determine strategic success are overlooked.
7	Decision makers' disregard of benefits/cost analysis	Systematic and detailed estimation of cost and benefits is commonly done up-front, but disregarded by decision makers, who tend to emphasize other aspects.
8	"Predict and provide" practices	The tendency is to choose a "predict-and-provide" strategy rather than explore alternative solutions.
9	Perverse incentives	Public investments with no financial obligations for the target group may cause perverse incentives and result in counterproductive projects
10	Myopic decisions	Long-term viability is the intention but the planning horizon is commonly too short, resulting in sub-optimal choices that will prove inferior in the long run.

On the other hand, a research made by Klakegg (2008) in Norway regarding the governance and strategy, requirements of the project and the relevant technology, engagement with the stakeholders of the project, establishment of project targets and estimates, principal risks involved and value to be achieved and people involved in the front-end project planning on elaborating the assessment of 80 international senior experts from western developed countries has revealed what is summarized in Table 2 below.

Table 2 - Research Finding of Front-End Planning of Projects (Klakegg, 2008)

Front-end topics from the literature (theoretical)	Summary findings from the research (Empirical)
The governance and strategy of the front-end of the project	A noteworthy finding was the very clear role that the Finance Director or equivalent took as sponsor in the front-end
The requirements of the project and the relevant technology	In the three engineering dominated case studies the use of Technology-Readiness Level assessments were found to be routine
The engagement with the stakeholders of the project	The identification and engagement of stakeholders, both internal and external, was seen as one of the most vital functions of those managing the front-end.
The establishment of project targets and estimates	Clearly defined aims and objectives were set as part of the front-end. In some cases, NPV and IRR was used in others the targets for the project could be to enhance reputation or establish new markets
The principal risks involved and value to be achieved	The clarity of understanding of these risks was not mirrored with the consideration of value. This reinforces the view that value is more esoteric and less capable of more scientific and rigorous evaluation.
The people involved in the front-end	There is a diverse range of individuals and teams involved in the front-end as options and alternatives are considered.

According to PMI (2016) a research conducted on maintaining a focus on benefits during project execution in April 2016 among 717 project management practitioners to gain deeper insight into how various roles and responsibilities align with benefits realization management during project execution through in-depth interviews with senior executives revealed the following:

- Organizations that invest in benefits realization identify a significant role for project managers, especially during project execution
- Organizations that more fully realize benefits engage cross-functional teams.
- Organizations that successfully deliver on strategy have the right tools and processes in place to monitor and measure benefits.

The research also revealed 83 percent of organizations lack maturity with benefits realization. Among the reasons the following were mentioned: (1) many organizations struggle with the fact that project-driven benefits are not fully realized in short time or even years after a project ends, so they don't always know who's responsible for managing the benefits. (2) The leadership doesn't

always connect project execution with sustainable business benefits. Instead, they often see projects as an end unto themselves, and their organizations measure a project's success by whether it comes in on time and on budget.

Shiferaw et al. (2012) research that focused on the front-end governance of major construction projects identified the following:

The society's priorities are unknown, misunderstood, or ignored because the society's priorities have not been investigated at all or planners and decision makers have ignored the society's priorities due to political or personal reasons. Thus, the planning experts do not define projects based on the priorities of the public; they define projects based on the priorities of decision makers.

Government of Ethiopia (GoE) might have been overambitious in defining major public investment projects, and enough time has not been given for front-end project planning and preparation.

The GoE has experienced a top-down project approach especially for major public investment projects. In this approach, most of the projects are defined and planned at the top level without active participation of the public and other stakeholders, stakeholders are expected to participate in the implementation process. Relevant stakeholders are not involved in the planning and decision-making processes of public investment projects; as result, some important project stakeholders do not have an ownership feeling for projects, and they are not committed to the project's success.

In the beginning of projects, they are very ambitious, but their commitment decreases as the project progresses and after projects are completed.

Ethiopia has a project governance system, but the project governance system is not effective. MoFED, which is theoretically responsible for appraisal of projects and evaluation of project concepts, seems powerless to control the project preparation and development process.

Most researches done around project front-end planning are focused on construction industries. The researcher did not find empirical studies on IT related project front-end planning in Africa, specifically in Ethiopia.

2.6 SUMMARY

In this chapter, literatures covering the difference between project and project management has been discussed and project management success has been identified as subset of project success. In addition, the role of project governance, and the critical nature of project front-end planning, project tools and techniques, benefit realization management and organization change management has been reviewed and their impacts on project success and public IT projects in particular has been explored. Especially, much emphasis has been placed and discussed on how the front-end planning where project benefits planning are aligned with the organizations' strategies and how the organizational change management helps to ensure the realization of planned benefits with the selection of the right project management tools and frameworks. In addition, the theoretical and empirical frameworks of project front end have been discussed by taking the researched made in Norway and in Ethiopia.

In the next chapter, the research design and methodology that will be used in this study will be discussed.

CHAPTER 3: RESEARCH DESIGN AND METHODS

3.1 INTRODUCTION

This chapter discusses about how this research is designed and methodology employed, the research's conceptual framework, the researches validity, reliability, and ethics.

3.2 DESCRIPTION OF INQUIRY STRATEGY AND BROAD RESEARCH DESIGN

This research is considered to be an applied research; the researcher hopes that the outcome of this study will be used by regulators and policymakers to improve the way public IT projects are appraised, selected or rejected and managed in Ethiopia. According to Merriam (2009:1), when there is an interest to knowing about certain practice and improve it through applied research, then qualitative research will be the most suited design choice. Qualitative research attempts to get an in-depth opinion from participants (Dawson, 2002:14).

Among other forms of research, qualitative research philosophically mostly falls under an Interpretive research, and this research assumes that reality is socially constructed, that is, there is no single observable reality (constructivist perspectives). Rather, there are multiple realities, or interpretations, of a single event (Merriam, 2009: 8).

The philosophical position of this research is critical approach as it seeks to bring about change in the project governance practice in Ethiopia, especially in the public-sector IT projects. This is shown by the frame of the research questions posed in this study. On the other hand, Critical research goes beyond uncovering the interpretation of people's understandings of their world, it focuses less on individuals than on context.

Basically, qualitative researchers are interested in understanding the meaning people have constructed, that is, how people make sense of their world and the experiences they have in the world (Merriam, 2009:13).

According to Merriam (2009), the following four characteristics are identified by the nature of qualitative research namely:

- “Focus is on the process, understanding, and meaning (how people interpret their experiences, how they construct their worlds, what meaning they attribute to their experiences.);
- The researcher is the primary instrument of data collection and analysis;
- The process is inductive; (researchers gather data to build concepts, hypotheses, or theories rather than deductively testing hypotheses as in positivist research) and
- The product is richly descriptive (Words and pictures rather than numbers are used to convey what the researcher has learned about a phenomenon” (p13-16).

In addition to the above, sample selection in qualitative research is usually (but not always) non-random, purposeful, and small, as opposed to larger, more random sampling in quantitative research.

Thus, this research has all the characteristics that identifies it as a qualitative case-study research, hence it follows a qualitative research methodology. Creswell (2007) defines a case study research as “a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audio-visual material, and documents and reports), and reports a case description and case-based themes” (p.73).

To distinguish the case study research from other types of social science research, Yin (2009), stated that “Case studies are the preferred method when (a) "how" or "why" questions are being posed, (b) the investigator has little control over events, and (c) the focus is on a contemporary phenomenon within a real-life context” (p.2).

This research poses “how” and “why” questions, makes an in-depth description and analysis of project governance in public -sector IT projects, which makes it confined or delimited to and qualifies it as a case study.

This study is an exploratory and retrospective study conducted as a descriptive research on the project governance practices focusing on front-end project planning and uses of project management tools and techniques to cover in the absence of national project management framework for the public sector. Keeping in mind the research goals, the research strategy needs to review publication, journals, books and articles written on the subject area and collection of relevant data from MOFEC, NPC, MCIT, and MOT senior experts, executives and a consultant, hired by World Bank, to OTRLS project through in-depth interview to answer the research questions posed by the study above.

The literature review was mainly based on internet searches using mainly Google Scholar, Emerald, JSTOR, Research Gate, SAGE, and Science Direct publishers available resource about the study.

There are several ways of doing social science research, namely but not limited to case study, experiments, surveys, histories, economic and epidemiologic (Yin, 2004). Each method has its own advantages and disadvantages; nevertheless, the methods overlap in many ways and not marked by many boundaries. Thus, a case Study research method is more suitable for this research for the following reasons: the researcher has no control over the events under study, the focus is on contemporary phenomenon within real life context, and the study explores the present circumstance in the project governance practices in the public sector in Ethiopia which requires an extensive and in-depth description of the phenomenon. The method has been selected for this research project as it enables to use the qualitative data analysis. Based on the literature review and research objectives the researcher has developed the conceptual framework for the study graphically as shown in Figure 10 below.

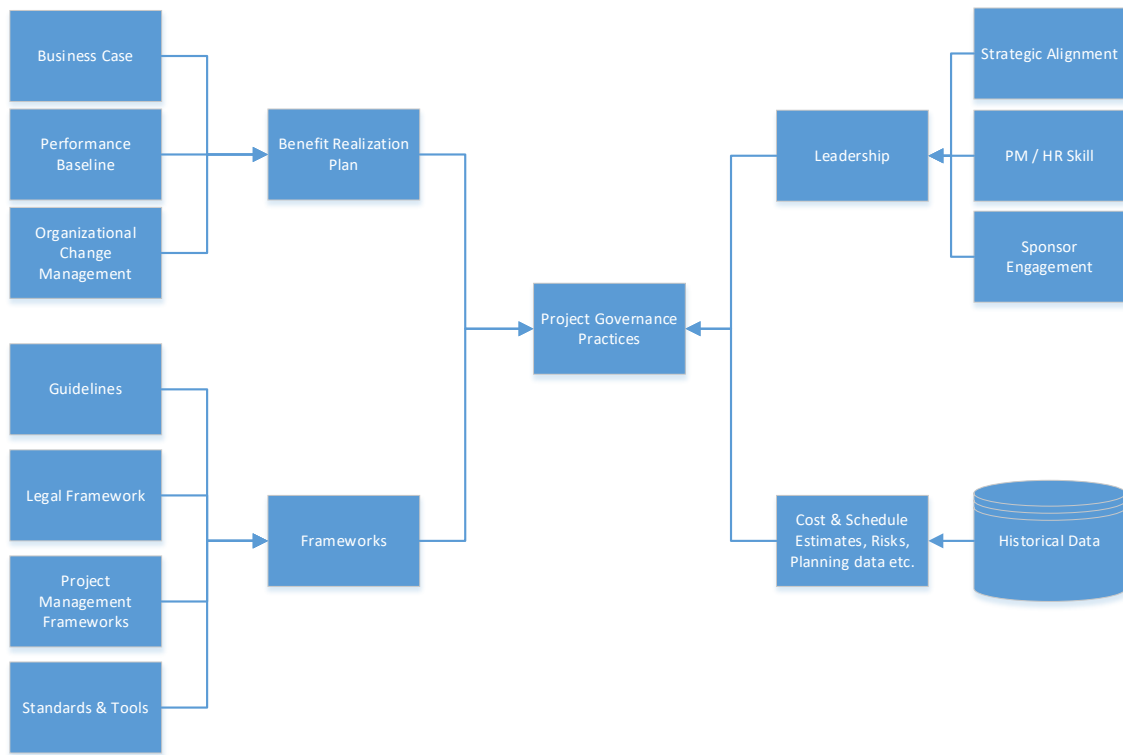


Figure 10 - Conceptual Framework

3.3 SAMPLING

According to Luker (2008) as quoted in Neuman (2014), using the word sampling creates confusion in qualitative research because the term is closely associated with quantitative studies. A purposeful non-random participant, has been picked from the senior experts and executives from the MOFEC, NPC, MCIT, MOT, consultant and the OTRLS developer company to stand-in for the many to provide valuable information, clarity, insight, and understanding about project governance practices in the public-sector IT projects.

Flick (1998) as quoted in Neuman (2014:247) unlike the quantitative research, in qualitative research, “it is their relevance to the research topic rather than their representativeness which determines the way in which the people to be studied are selected”. According to Englander (2012), do they have the experience that I’m looking for? Thus, the researcher identified organizations that have mandates in the project front-end and IT project support, and random IT system implementation that went well. Accordingly, MOFEC and NPC were identified as having direct oversight on public-sector project governance and MCIT as having

mandates to provide technical and management support on IT project to public sector organizations. MOT was identified as a result picking a system implementation having wider national coverage. The consultant and the developer company were picked due to the relationship they had to OTRLS implementation.

Englander (2012:21) argues that, “if a researcher has a qualitative purpose and a qualitative research question, he or she seeks knowledge of the content of the experience, often in depth, to seek the meaning of a phenomenon, not “how many” people who have experienced such phenomena.” Giorgi (2009) points out, not confuse research based upon depth strategies with research based upon sampling strategies and recommends that one uses at least three participants because one or two subjects would be too difficult for the researcher to handle.

Based on the recommendations by Flick, (1988), Giorgi, (2009) and Englander, (2012) a total of 12 senior Directors, senior experts, a consultant and local contractor CEO were selected based on their experience.

3.3.1 Units of Analysis and Units of Observation

Components that comprises the front-end project management in public IT projects in Ethiopia and their level of importance as viewed by different stakeholders, its impacts on IT project success, and how regulatory bodies enforce the front-end project management in project management appraisal and establishment of national project management framework are used as units of analysis.

3.3.2 Population, Study Population and Sampling Frame

The population for this study comprises of the senior management and senior experts from the regulators and executive bodies of the government. As stated above the participants were purposefully non-randomly picked from the four government ministries.

MOFEC has two main branches led by two State Ministers, one for Public Administration and another one for Economic Cooperation. The Public Administration branch has eight Directorates under it, of these the Budget Preparation and Administration Directorate is responsible for the public-sector project appraisal and reviewing projects for funding. In Consultation with the Director a senior team leader that has extensive experience in project appraisal and M&E has been interviewed. At NPC, the project appraisal and M&E arm had two Directorates for Infrastructure related investments. Accordingly, the three senior experts in project appraisal and M&E and a senior Director were interviewed; total of four staffs, as bulk of the appraisal and evaluation work falls under this organization. Regarding MCIT, the researcher interviewed two senior Directors that focuses on most public-sector IT projects and capacity building, in addition to this the researcher interviewed a senior expert from Standards and Regulatory Affairs Directorate. NPC and MCIT fall under regulators while MOFEC plays funding provider and to certain extent regulatory role.

From the executives, two Directors from MOT, one that served as a project manager and a World Bank Consultant as a project team member and representative of the funder were interviewed. Lastly one person from local contractor has been interviewed. The selection of the local contractor was based on active role the company played in the development of OTRLS. Participants were mainly selected based on their work experience and their capacity to provide information that the researcher was looking for; in additions to this, recommendations by senior management team was factored during the selection.

As summary, eight participants from regulators, two from funders, two from executives from the project implementer and one from local contractor; a total of twelve people were interviewed. Table 3 below summarizes the interviewees

Table 3 - Interviewees

Institutions	Number of Participants	Interviewees
National Planning Commission (NPC)	4	Director, Senior experts
Ministry of Finance and Economic Cooperation (MOFEC)	1	Sector's senior expert
Ministry of Communication and Information Technology (MCIT)	3	Directors, Senior Expert
Ministry of Trade (MOT)	2	Director, Project Manager
Local Contractor	1	CEO
World Bank	1	Consultant
Total	12	

3.3.3 Sampling Method and Sample Size

Since the study follows qualitative study, the sampling method was purposeful non-random sampling based on participants experience; the participants from the four government offices and local contractor were 12 as shown in Table 3 above.

3.4 DATA COLLECTION

According to Neuman (2014), in a qualitative study, a nonlinear path will be followed to emphasize and become intimate with the details of a natural setting or context. There are fewer standardized procedures or explicit steps, and one must often devise on-the-spot techniques for one situation or study (p.195).

3.4.1 Data Collection Method

The researcher used data both from primary and secondary sources. This research being qualitative, primary data was collected through in-depth interviews and the secondary data was collected /mined from relevant publications.

The researcher was the primary instrument for data collection and analysis: the data are mediated directly by the researcher rather than through questionnaires, surveys or other data collection instruments for better outcome.

Based on Creswell (2002), the way data are collected and procedures that were used during the case study include:

- How the data collection intent relates to research questions.
- How to gain approval and access to study sites and participants.
- Data collection from multiple sources of information, and collaboration with the identified organizations.
- Data analysis and interpretation relative to the design.
- Preparation of research report suitable for dissemination.

In addition to using interviews and observations, case study researchers often review existing documents or create and administer new documents from which to gather information related to the research questions (Hancock & Algozzine, 2006). Thus, the results of document analysed has been summarized in narrative or other form of illustration showing the outcomes. Documents examined by the researcher include peer-reviewed material extracted from the Internet, public records, documents collected from the four ministries, physical evidence, and instruments created by the researcher. Authenticity of documents was verified. Data triangulation strategy was used to detect or minimize biases resulting from participants during the interview.

An in-depth interview method with interpretive approach was adopted to explore the project front-end planning practices in Ethiopia. To avoid researcher biases, the number of respondents engaged were fairly large inclusive of multiple voices compared to Giorgi's (2009) recommendation of at least three. In addition to respecting respondents' opinion, supporting their feelings and recognizing their response; the researcher had established prior good connection with most respondents through previous work relationship, this has enabled the researcher to have good rapport and trust, which is important in eliciting good responses.

Clear and open-ended questions were asked in Amharic without pre-determined answers; which enabled respondents to articulate their thoughts and ideas and talk freely. The questionnaires were used as checklists, meaning, the sequences were not followed as much as possible; smooth and natural flow of respondents' replies without interruptions of ideas were maintained yet covering all questions; the researcher considers this has enabled to obtain rich data. Naturally, probes and follow up questions were used to enrich the obtained data. In cases where respondents did not understand the questions such as what front-end project planning is, the researcher rephrased the question or provided clarifications so that misinterpretation is avoided. All interviews were made face-to-face as it offered the researcher the opportunity to uncover information that is not accessible using other techniques such as questionnaires and observations.

In-depth interviewing is more than just describing facts; presenting events might differ greatly depending on the language being used as a medium. Thus, although the questionnaires were prepared in English, to overcome the language barrier, the interview was conducted in Amharic. Mackay and Gass (2005:174) state that "...depending on the research questions and resources available, interviews can be conducted in the interviewee's L1 [first language], thus removing the concerns about the proficiency of the [interviewees] impacting quality and quantity of the data provided".

3.4.2 Interview Design and Measures

Mason (2002) as quoted in Hancock & Algozzine (2006:39) stated that, interviews of individuals or groups allow the researcher to attain rich, personalized information. Thus, interview questions were more flexibly worded or it was a mix of less structured questions. In other words, semi structured interview questions were used where specific information is desired from all the respondents. However, the largest part of the interview was guided by a list of questions or issues to be explored. To respond to the situation at hand, the order of the questions was not determined ahead of time so that the interview captures the emerging view of the respondent, and their ideas on the topic. To do this, series

of one-to-one interviews was held. In this effort, the researcher asked good questions, minimize biases through neutral stance. Open-ended questions were also posed so that participants can express their views. Nonetheless, where applicable, the researcher challenged the understandings of respondents / participants.

Ideal Position questions are good to use in evaluation studies because they reveal both the positives and the negatives or shortcomings of a practice. While interpretive questions provide a check on what the researcher thinks he/she is understanding, as well as offer an opportunity for yet more information, opinions, and feelings to be revealed (Merriam, 2009:98).

The interview questions were developed based on the research questions and objectives. Since there were different type interviewees (regulators, fund providers, project team, and local contractor) specific questions that applies to each interviewee type were developed, nevertheless, standard questions that applied to all were also used across the board. The interview questions used for the study are shown in Appendix 1. Amharic was used as medium during the interview so that interviewees can express themselves freely and without language barrier and elicit good data.

Nine out of twelve interviews were audio tape recorded where respondents were willing and cooperative, otherwise notes were taken (for three interviews) to document the interview content. Notes were always taken even when the interviews were recorded.

The interview audio records were transcribed by the researcher into English; the audio recordings were replayed several times (at least three to four times) during the transcription to capture interview data accurately.

3.5 DATA ANALYSIS

Data analysis is the process of making sense out of the data (Merriam, 2009). For this research, inductive and comparative analysis strategy was used to analyse the data as it suits interpretive qualitative studies.

In this case study research, making effective use of data collected from multiple sources is an interactive and repetitive process in which the researcher interacts with the information provider throughout the interview process without waiting until the end of the investigative process (Hancock & Algonzzie, 2006). Thus, ongoing examination and interpretation of the data was made to reach tentative conclusions and to make continuing refinement of the research questions. In addition to this, interpretation was made only to those data that are potentially meaningful to research effort; however, efforts were made not to make premature elimination of potential information as well.

According to Merriam (2009), qualitative data analysis is primarily inductive and comparative, thus, it was much-preferred to analyse the data simultaneously with data collection.

Making sense out of data involves consolidating, reducing, and interpreting what people have said and what the researcher has seen and read — it is the process of making meaning (Merriam, 2009). To do this, an inventory of the entire data set (interviews, filed notes, documents, memos) was created; organized and labelled. Microsoft (MS) Word and MS Excel spreadsheet, and AQUAD 7 computer-aided qualitative data analysis software were used to code or to label and systematize the data and make them easily retrievable. Primary (open) - coding was used; it began with an examination of the interview transcript (data) and assigning words or phrases that capture their essence; and the process was iterative with constant comparison, and updating process. In addition, as the analysis becomes more focused the codebook was updated based on ideas that surface during the analysis. Throughout the analysis, the research questions were revisited to ensure that they are still pertinent and interesting. Using the first-level codes coupled with interpretive creativity and theoretical knowledge of the researcher second-level and in some cases third-level codes were generated.

As part of the secondary coding, the researcher critically examined the codes already identified in primary cycles and then identified patterns and codes were grouped or categorized into interpretive concepts. At this stage, the researcher was able to explain, and synthesize the data. This was repeated until what is called theoretical saturation is reached (Glaser & Strauss, 1967) as cited by Tracy, (2013:195). Details of the steps taken are explained below:

The data analysis started with reading all transcribed data repeatedly to achieve immersion and obtain a sense of the whole. Then, data was read word by word by first highlighting the exact words and phrases from the text that appear to capture key thoughts or concepts. Next, the researcher approached the text by making notes of his first impressions, thoughts, and initial analysis; and continued the process by labelling the texts and codes emerged. These then become the initial coding scheme. Once the researcher labelled the data, the highlighted text together with their corresponding labels were cut and organized into a table with three columns for each participant. The table listed, column one - the participants code, column two - the highlighted text (corresponding evidence or data) and column three - the labels or codes using MS Word and MS Excel. Then the table was sorted based on the labels / codes.

Once the data was sorted, the researcher analysed how the codes fit together and relate. What seems more important, less important? Are there exceptions or critical cases that do not seem to fit? And considered alternative explanations. Explore paradoxes, conflicting themes, and evidence that seems to challenge or contradict the researcher's interpretations. To trace connections, the researcher used notes on white board, and drew diagrams showing the categories and relationships besides the two-dimensional tabular matrix. These codes then were sorted and based on how different codes are related and linked a 4th column categories were created, the categories. This was done for all participants data. Then, all tables for each participant were merged into one table and the table was sorted by the categories.

These emergent categories were used to organize and group codes into meaningful clusters and about 20 subcategories were identified. Then another

round of analysis was carried out and based on the relationships between subcategories (categories identified in previous round), the researcher combined or organized this larger number of subcategories into a smaller number of categories to identify patterns and bring meaning to the responses. The graphical representation shown Fig 10 was developed to help in organizing these categories into a hierarchical structure.

This approach allowed the categories to emerge from the data, and helped gaining direct information from study participants without imposing preconceived categories. In addition to this, reading and re-reading the transcripts and analysis have helped to ensure that the data are correctly categorized.

The computer-assisted qualitative data analysis tool, AUQUD 7.5.51, 2017, was used in parallel to the manual analysis to analyse texts, such as notes, documents, and interview transcripts: preparation, coding, analysis.

Knowledge generated from the researcher's content analysis is based on participants' unique perspectives and grounded in the actual data. The researcher acknowledges the limitations in developing a complete understanding of the context, while identifying key categories. Thus, to establish trustworthiness or internal validity within a paradigm of reliability and validity, the researcher has used peer debriefing, prolonged engagement, persistent observation, triangulation, negative case analysis (searching for and discussing elements of the data that do not support or appear to contradict patterns or explanations that were emerging from data analysis) as much as possible.

List of the findings together with their synthesis and tapping their meaning will be discussed in the findings section.

3.6 RELIABILITY AND VALIDITY

Anastasi & Urbina (1997) as quoted by Marczyk *et al.* (2005) state that, reliability refers to the consistency of the measure, validity focuses on what the test or measurement strategy measures and how well it does so. We will look at each one of them separately in subsequent sections. Ensuring validity and reliability in

qualitative research involves conducting the investigation in an ethical manner, (Merriam 2009:209), the ethical consideration will also be discussed.

3.6.1 Reliability

Merriam (2009) states that strategies that a qualitative researcher can use to ensure for consistency and dependability or reliability are triangulation, peer examination, investigator's position, and the audit trail. Marczyk *et al.* (2005) on the other hand identified four types of reliability methods, namely: Test-retest, split-half, alternate-form and interrater reliability methods.

Thus, multiple methods of collecting data (method of triangulation), was used as a strategy for obtaining consistent and dependable data, as well as data that are most congruent with reality as understood by the participants. In addition, an inductive, iterative process of reading and rereading the transcriptions was used to produce subcategories for information analysis within the context of four research areas of interest: (a) how the front-end project planning was used in project governance practices, (b) what tools were used as part of the front-end project management (c) How would the presence or absence of project management framework affect project management practices, and (d) how do stakeholders perceive the importance of front-end project planning.

Statements were partitioned into units, grouped in common category headings, analysed, and summarized. Plausibility of subcategories was established by testing them with new information units until all relevant information has been assigned to a category. In this way, common codes were identified and differences between participants views noted. Establishing information analysis credibility also involve (a) uncovering biases that might skew the researcher's perspective, and (b) comparing obtained outcomes to previously published research findings.

Furthermore, the researcher recorded memos describing details of the process of conducting the research as it is being undertaken including but not limited to data collection, categorization, decisions to build an audit trail.

3.6.2 Validity

To rule out the possibility of misinterpreting the meaning of what participants say and do and the perspective they have on what is going on, as well as being an important way of identifying the researcher's own biases and misunderstanding of what has been observed, an internal validity check was made through respondent validation. Thus, the interview was summarized and presented to respondents for their validation before moving to the next questions.

3.7 ETHICAL CONSIDERATIONS

It is important to earn the trust of the interview participants for eliciting good data. Thus, the purpose of the interview was explained to respondents; and they were assured that whatever they say will be kept in confidence before beginning the interview. Privacy of participants was protected by not disclosing any harmful information that may turn out during the process.

The anonymity of individuals, roles and incidents in project was protected through use of pseudonyms and the researcher dissociated names from responses during coding and recording process.

An accurate account of the interpreted data was made through debriefing between the researcher and participants.

Finally, the details of the research together with the study design will be released so that readers can see for themselves the credibility of the study (Neuman, 2014).

3.8 SUMMARY

In this chapter, the research methodology, the sampling technique and sample size, units of analysis, data collection, data analysis method, and reliability and validity including ethical considerations have been discussed. Accordingly, qualitative case study research methodology was used; and data was collected through an in-depth interview with senior management and experts from four government ministries, namely: from MOFEC, NPC, MCIT, MOT and the local

contractor. Inductive and comparative analysis strategy was used as qualitative data analysis method. To ensure consistency and dependability or reliability; triangulation, peer examination, investigator's position, and the audit trail was used and internal validity check was made through respondent validation. As ethical considerations, privacy of participants was assured by maintaining anonymity of respondents, keeping accurate account of interpreted data and finally releasing the research together with the study design.

CHAPTER 4: RESEARCH RESULTS & DISCUSSION

4.1 INTRODUCTION

As described in the preceding chapters and using open-ended questions an in-depth interview was conducted and results were analysed and findings were summarized; details of the same is presented in the following sections.

4.2 DESCRIPTION OF THE SAMPLE

In-depth Interviews were conducted with senior experts and Directors as shown in Table 3. The result of the in-depth interview with total of 12 senior management staffs and senior experts and local contractor CEO was analysed and the findings are presented in the following sections. Details of the findings are shown in Annex 1.2.

4.3 RESULTS PERTAINING TO THE RESEARCH OBJECTIVES

Project Governance Practices and Decision-Making Processes:

In line with the first research objective, the research findings have identified four key themes, namely: HR skills gaps, legal framework, guidelines, standards and frameworks, and project governance practices. These four themes were used to explore the extent to which MOFEC, NPC and MCIT use the project front-end management practices to appraise, influence the decision-making process, granting of fund and support the project management of projects thereof. The relationship shown in Figure 11 came out of the data analysis of the interview data.

For the sake of anonymity of interview participants their names and positions are not used. A code comprising of “P” + two digits is used to identify interview participants, such as P01, P07 etc.

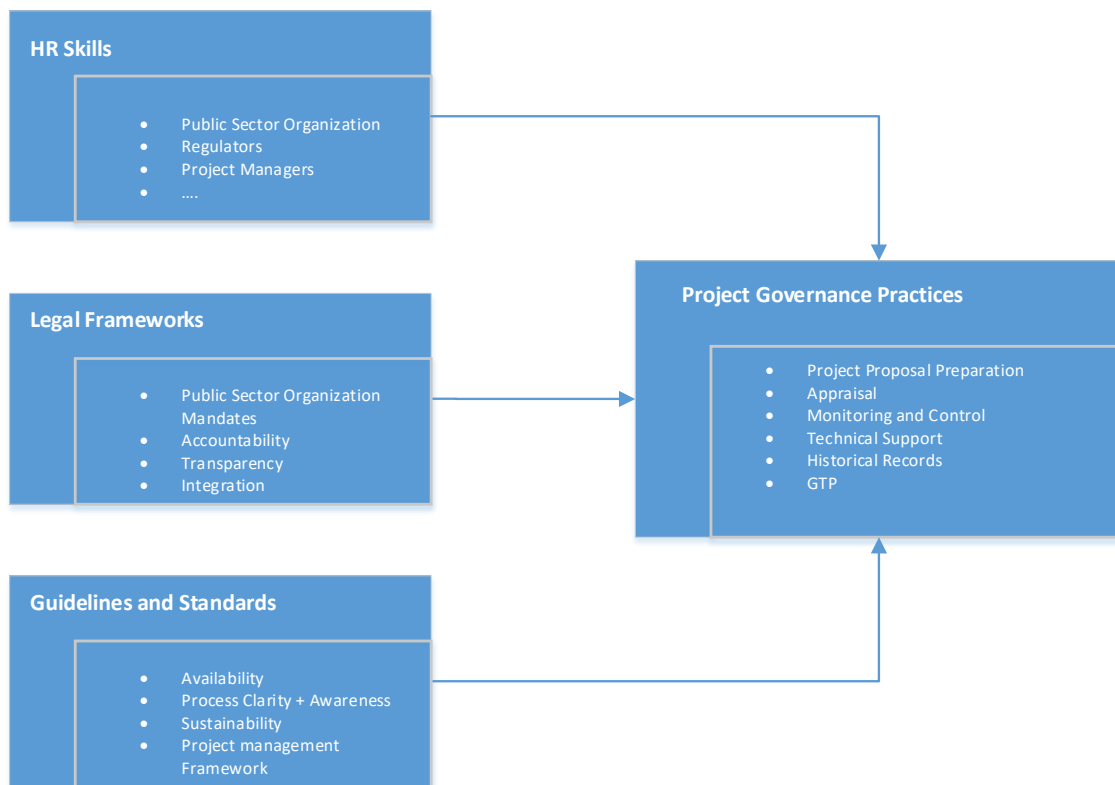


Figure 11 - Themes and their Relationship

HR Skill gaps:

The interviews with all participants revealed that there are skill gaps in personnel with the appropriate skills almost at all levels; at the regulators, consultants and at the public-sector organizations level, even though the degree may differ. Quality of project proposals/ studies received from public sector organizations is of low quality and this is a clear indication of the low skilled planners that organizations are maintaining.

Project proposals are not prepared and submitted mostly; according interview participant [P09], “when submitted most of the proposals are not bankable /acceptable proposals as they do not address all project parameters stipulated in the Preparation Guidelines for Public Sector projects”. It takes NPC several review and commenting cycles before it reaches an acceptable stage.

In addition, the trainings provided by MCIT are mostly on technical areas and do not contribute to skill development in the preparation of project proposals. It has

further been found out that the quality of training received by graduates does not enable them to prepare bankable proposals. According to P09, “the HR skill problem is not limited to the preparation of proposals, it is manifested in all project management endeavours from initiation to ex post evaluation”.

Legal Framework:

Over the last twenty years there has been new proclamations being issued almost every five or four years. The changes in proclamations resulted in merging of executive organs, in this specific case MOF and MEDAC merged to form MOFED and MOFED was later split into MOFEC and NPC. Similarly, EICTDA and ETA were merged into MCIT. According to P08 and P09, “The splitting of MOFED has created grey areas on the mandates of MOFEC and NPC”. In addition, the merging of EICTDA and ETA and downgrading of the agencies to Directorate level. According to P05, “...the merging has not helped us to be more effective and focused in discharging our duties and responsibilities better”.

It has been noted that all three organizations (MCIT, MOFEC, and NPC) have been reactive instead of acting proactively and enforce what they have been empowered to do by law (P05, P08 & P09). For example, unless situation demanded, no operational linkage or exchange of data and collaboration has been observed that facilitates front-end project management between them. However, e-government related project requests are being forwarded to MCIT by MOFEC, otherwise public sector organizations do not go to MCIT to get their prior approval before they submit their IT project proposals / budget requests to MOFEC or NPC. Unless in rare circumstances, organizations do not present their proposals to NPC. Until recently MOFEC was not sending project proposals to NPC for appraisals.

It has been reported by participants P08 & P09 that, “it would have been possible to force public sector organizations to follow the standard process; if we MOFEC or NPC introduced the guidelines and enforced the law and refused to finance projects without proper study documents”.

From the interviews it has been observed that all three, MOFEC, MCIT and NPC, have not developed regulations, directives, guidelines and created awareness and established working relationships among themselves and the public sector organization at large. They all operate in silos lacking collaboration and integration of efforts through information sharing for proper project governance and project front-end management.

NPC is making commendable efforts and making some progress in this regard, currently it is in the process of finalizing Public Investment Management directive and have already finalized directive on M&E of projects. Ratification and implementation of the documents has been reported by P09 and P11 “ the implementation of this directive will bring about significant change in solving the ubiquitous project governance problems”.

Guidelines, Standards and Frameworks

MOFED had prepared Appraisal Guidelines and Preparation Guidelines for Public Sector Projects in 2004 and 2006 respectively; however, emphasis was not made on demonstrating the importance of these guidelines in relation to project planning analysis to efficiently allocate scarce resources and make them publicly available and known to public sector organizations. The preparation guideline identifies the importance of the stage and describes the investment / project proposal should be prepared in the form of feasibility study for financing. In order for the project idea to be accepted and approved by decision makers the proposal (the feasibility study) must be technically sound, financially feasible, economically viable, politically suitable, and socially acceptable and it further details how to do sensitivity analysis and requests for having internal project implementation arrangements. The details of each one of these have been described in more than 100 pages content. Similarly, the Appraisal guideline dictates to look at several parameters during project proposal appraisal such as standards developed by the national regulatory bodies like Environmental Protection Agency (EPA) etc. When looking at social, it asks to check whether there is stakeholder participation, is it known to community, does it affect the

community asset value etc., Institutional aspect: coordination, integration, absence of duplication of efforts and the likes. Financial aspect looks at profit aspects, for productive sector and use objective criteria like cash flow, cost benefit analysis, Net Present Value, return on investment, payback period and for social sector use, cost effectiveness. The Economic cost looks at general development country wide such as real value, opportunity cost and the likes. The two guidelines do match in their contents however, it would be beneficial to look at both while preparing feasibility studies.

Currently projects do not undergo through the processes outlined in the guidelines either for preparation nor for appraisal. According to P09, “projects implementation has moved from objective criteria (using the steps specified in the guidelines) to veto criteria (political decisions)”. Most projects do not have charter, proper study documents are not appraised, and have no or limited accountability. Projects usually receive prior approval before they come to NPC or MOFEC for appraisal. Recently MOFEC has started telling public sector organizations to obtain approval from NPC, accordingly, NPC has started appraising projects but most proposals received are not bankable /acceptable proposals as they do not address all project parameters stipulated in the preparation guideline. It takes NPC several review cycles before it reaches an acceptable document stage; so far, NPC is focused mainly on mega projects linked to the Growth and Transformation Plan (GTP).

Similarly, a number of IT standards have been developed and documented by MCIT Standard and Regulatory Directorate but they have not been endorsed by the Councils of Minister and became directives. Furthermore, these guidelines and standards are not available online for public use; those who know about their existence can collect by submitting an official written request. MCIT is mandated to develop project management framework to guide all public sector organizations’ project management; thus far, the framework has not been developed and its negative effects have been observed in OTRLS implementation.

Project Governance Practices

Projects can be identified through anyone of the following: from sector priority, from study, from direction received from above, sectorial evaluation, national policy, and related sources by sector ministries as implementation mechanism of GTP goals. However, public sector organizations mostly do not prepare project proposals and have them properly appraised.

Ethiopian budgeting system is based on ceilings, budget ceiling is allocated to sectors, then to institutions. Institutions will prepare their recurrent and capital budget (budgets used for implementing projects) request within their ceilings. The budget is not evaluated among sectors; the review is within sectors. According to P08, “institutions defend their requests and secure their budget”. Thus, in the current practice, it is the requesting organization that identify and prioritizes their projects. Mostly projects appear in the public sector organizations annual budget requests. As part of the annual budget review MOFEC reviews requests and makes recommendations as most requests come from priority sectors, then, it will be presented to the government as part of budget review and approval; first to Councils of Ministers and then to House of People’s Representative (HPR). Figure 12 shows the process flow.



Source: Compilation of interview data

Figure 12 - Project proposal review and approval process

Evidently, proper project proposals are not prepared, even when prepared on rare cases they do not have the correct parameters. In addition to this, unlike other countries where project front-end management is implemented, no gate control activity being played by MCIT through prior appraisal of IT project proposals.

Projects need to be linked to public sectors strategic objectives, the case of OTRLS shows that it is not the case. The first phase was initiated and implemented by MCIT, external to MOT. The second phase was upgrade after observing the advantage of using the system; the third phase was discontinued during the change of top management. According to P11, “had the project was linked to the strategic objective of the owner (MOT), the development of the system could have continued irrespective of who is in the office”.

The study finding shows that MOFEC, NPC and MCIT, do not adequately use front-end project management practices to appraise, influence the decision making process, granting of fund to public sector projects. However, it has been found that donor financed and government co-financed projects are strictly documented and appraised according to the donors' requirement before they receive funding approval.

The monitoring and evaluation is mainly focused on financial and physical performance measurement of projects, it has been reported that both financial and physical performance reports mostly do not match or not comparable.

Regarding the components that comprise the front-end project management in public projects, depending on project governance practices, the project development, review and approval processes do differ. For example, the Norwegian project development according to their QA system as document by Shiferaw et al. (2013) is shown in Figure 9. On the other hand, the current project proposal development, review and approval process of Ethiopia as documented by the researcher is as shown in Figure 12. Evidently, there is big difference between the two in the way concepts are developed screened, feasibility studies quality assured before funding approval is received. In the case of Ethiopia,

project proposals from public sector organizations are not presented to MoFEC nor to NPC, rather requests are received as part of the annual budget request at MoFEC. Thus, in a situation where the front-end project management is not adequately practiced (Ethiopia), it is very difficult to name the component that comprises the front-end project planning; other than saying that there are none at this time.

Concerning how regulatory bodies enforce the front-end project management in public sector IT project management's appraisal and establishing national project management framework, the study has revealed that the regulatory bodies do not enforce the front-end project management as part of their project governance practices. Lately, the government has recognized the challenges that are being faced and it is in the process of drafting and finalizing a public investment management directive, this directive once ratified, it is expected to solve all observed problems from project identification to ex-post evaluation. However, for the time being the regulatory bodies are not enforcing it. Furthermore, there is no project management framework; nevertheless, there are IT standards, quality assurance, interoperability frameworks that are not published.

With regards to how different stakeholders rank the importance of front-end planning in public IT projects in Ethiopia, all stakeholder that were interviewed: MoFEC, MCIT, NPC, MOT, the World Bank Consultant and the local contractor rank the importance of front-end project planning as very high without a difference.

Pertaining to how the perceptions of the front-end project management components differ across the different stakeholders (funders, regulators, project implementers of the government organizations in Ethiopia); the term front-end project management is not common known to most, however they all recognize the importance of project identification, feasibility study, quality assurance and selection processes. Though they appreciate the concept, the benefit realization planning and management part is new. They all appreciate the inclusion and its use in the planning and selection process. However, it has been reported that the World Bank has this as a practice; they have a process of identifying where the

project stands and set the targets to be achieved and how to measure it through impact analysis reports.

Front- End Project Management Practices and Outcomes:

Inline with the 2nd research objective, pertaining to similarities and difference in the appraisal, decision making and implementation of projects, projects prioritization and selection are made by the sector ministries themselves, MOFEC mostly receives project funding requests as part of sector ministries' annual budget requests. The role of MOFEC is mostly limited to checking against resource envelop and decide to recommend the request or not; it does not appraise projects and its associated benefit.

On the other hand, MCIT had made strategic studies and identified projects that will make a difference in the public service delivery through questionnaires and group discussions and documented strategic document with high level project requirement without going into details of project feasibility study in the past when Public Sector Capacity Building Programme (PSCAP) fund was available. The reasons for the strategic studies were to solve problems in the public service deliveries by using automated means and bring about good governance. The strategic study was reviewed and approved by MCIT's top management and PSCAP's fund was used to implement projects identified in the strategic documents and OTRLS project was one of them. Therefore, the selection of projects was not based on detailed feasibility study where all parameters including benefits and their realization mechanisms were identified. Thus, it lacked what front-end project management requires in terms of content and review and approval process. OTRLS had two major phases of implementations, the first phase was implemented by MCIT with the support of PSCAP fund and the second phase, the upgrade phase one implementation, was supported by World Bank. In both cases the funding was not from treasury fund; thus, it did not go through the MOEFD or current MOFEC/NPC line. The second phase of OTRLS started with World Bank Trading and Competitiveness Department team's assessment at federal and regional level which resulted in high level

roadmap and detailed requirements before World Bank committed fund to support the project. It has been reported that OTRLS second phase implementation had baseline and pre-set achievement targets.

With regards to OTRLS implementation, HR skill, requirement clarity (scope), project management organization, project monitoring and control, sponsors commitment, change management and developer's company track record and flexibility were identified as key dimensions from interviews. The findings of what went well and what did not is summarized in the Table 4 below:

Table 4 - Observations on OTRLS Implementation

Dimensions	What Went Well	What Did Not Go Well
HR Skills	• Project manager received short training course provided by MCIT • MOT had staff that know their business requirement very well • Assignment of Consultant by World Bank to support and monitor and control project implementation	• The project team did not have the required skill • Staff turnover was high
Requirement Clarity (Scope)	• Developer's use informal data collection method by working closely with key business experts	• The initial requirement used for the RFP was high level limited to non-functional requirement and lacked functional requirement details • Lack of detailed design resulted in high scope creep during implementation and delays in schedule
Project management organization	• Had good project management office organization with good representation of stakeholders including from regions • Chaired by MOT top management, the State Minister • High Sponsor's commitment	• First phase project was managed by MCIT, and MOT's role were minimal (It was driven from outside the organization) • As a result externally driving the project, first phase's project handover was challenging • The project was stopped on the third phase after change

Dimensions	What Went Well	What Did Not Go Well
		in top management
Project monitoring and control	• There were bi weekly regular meetings with the steering committee • Problems were easily solved • Regions were participating through Vidoe Conference	
Sponsor commitment and support	• The commitment and support was very high	
Benfit Realization	• Baseline was estbalished for second phase of OTRLS implementation • Impact analysis was carried to verify acheivement of targets • Customer satisfaction survey was carried out and the feedback was good	• There were no benefit realization plan for phase one
Chanage management	• The system upgrade demanded change in legislation; and it was made • Trainings were provided to top management and users separately • Care was taken to manage resistance to change	• Required changes were not identified in adavance as part of the planning phase (as there was limited or no planning phase) • No change management plan in place
OTRLS Developer's Company track records and flexibility	• Had very good track record implementing sucessful system in public sector organization • High flexibility in accomodating clients needs • Flexibility to work informally to gather requirements • Flexibility to obtain user buy-in (use of several demonstrations of the developed software from time to time)	

Source: Compilation of Interview Results

As it can be seen from the comparison table above, poor requirement or lack of clarity in the MOT needs, lack of proper project planning and the project being

managed from the outside has made the first phase implementation very challenging. According to P03, “had it not been for an experienced and flexible software developer company, the project would have been a failure”.

On the other hand, the sponsors high commitment and support, the developer’s flexibility and very good experience, presence of World Bank’s assigned consultant, trained and committed project manager and regular monitoring and control of project progress has led to extensive use of the system at national level; according to P01 “... as many as 745 office all over the country use the system”. P03 stated that “... the system has helped to improve the service delivery by more than 22% a year after the OTRLS implementation”.

Elements of Front - End Planning:

In line with the 3rd research objective, the interviews showed that absence of standard project identification, preparation, appraisal and selection practices. Low HR skill in project planning and organizational competences burden with bureaucratic process, aggravated by insufficient cooperation between the ministries has been found out to be the impediments towards project front-end planning.

The interview has also revealed that, government has made studies and identified the problems observed in public investment, project monitoring and control and made good progress towards implementing better project investment management through the implementation of directives and guidelines. Furthermore, NPC is planning to conduct trainings on the M&E guidelines and print the guidelines and make them publicly available.

Therefore, the study did not find relevant front-end project management practices besides the efforts being made by the government to create and implement one.

Issues to Enhance the Realization of Benefits:

Pertaining to research objective 4, the study had revealed that projects lack proper technical design and planning. OTRLS project when initiated by MCIT started with high level non-functional requirement with little focus on functional requirement. Detailed requirements and design were worked out by the Software developer company after signing of the contract. This is a clear indication that proper project planning did not take place before reaching the procurement of service stage.

The project planning stage should at least identify the needs (requirements), make proper technical design, know where the organization operational performances (are preidentified) in terms of indicators or measures, and set clear targets in terms of the pre-identified indicators or measures. This will have formed the benefit of planning. In addition to this, the planning should have a benefit realization management in which steps are clearly described how progresses are monitored and attainments are measured against the plan including clear time lines. Projects entail changes and changes needs to be managed to reap the planned benefits. Thus, benefit realization management plan should have been complimented by Organizational Change Management, to deal with structural, procedural, people related issues.

OTRLS first phase did not have this, the second phase started with detailed requirements and identification of the initial state of the project and set targets. The team also measured realization of the same through impact analysis report. This was found out to be good practice that needs to be upheld.

4.4 SUMMARY

This chapter discussed about the study findings. The findings were presented in line with the research objectives. The research did identify four themes: lack of skills of HR engaged in projects, legal framework, guidelines, standards and project management frameworks, and governance practices and discussed the findings in detail. Furthermore, it explored similarities and differences in the

decision-making styles of the three Ministries, MOFEC, NPC and MCIT, in appraisal and the implementation of projects, particularly OTRLS project implementation and identified key dimensions that contributed for better or bad project performances in tabular forms. Moreover, those practices and elements of the front-end planning and project management framework in the country have been discussed and the findings on issues of common interest, which must be adhered to enhance the realization of benefits of such projects were presented.

In the next chapter, the conclusions, implications and areas for future research are discussed.

CHAPTER 5: CONCLUSIONS, IMPLICATIONS & AREAS FOR FUTURE RESEARCH WORK

5.1 INTRODUCTION

This chapter builds on the findings discussed in the previous chapter and summarizes the main findings and draws conclusions. It further discusses the implications of the study and make recommendations based on what the researcher found as gaps during the study, review of documents, researcher's personal experience and observations. In addition, the limitations of the study are revisited and issues for future research are identified.

5.2 MAIN FINDINGS

The findings of this study have been discussed in line with the research objectives; the main findings of the project governance practices study have revealed that project selection and prioritization takes at higher level especially for mega projects and at sector ministries otherwise. Project concepts, feasibility studies and proposals with alternative projects for appraisal and selection are not presented to MoFEC nor to NPC. The reasons for such practices have been found to be due to various reasons.

Lack of personnel with the appropriate skills to prepare bankable study, this may have been further attributed to the quality and lack of focused trainings that the personnel received and the limitations of capacity building after they joined their respective organizations; this has further been aggravated by high attrition rate. The skill gap problem is not limited to the preparation of study documents, it covers all ranges of project management and evaluation; though the degree may vary.

The presence of grey areas in the duties and responsibilities of MoFEC and NPC due to the legal framework not clearly specifying their respective mandates. In case of MCIT, with legal framework provision present; failure to legislate required directives and guidelines such as project management framework and support

the sector ministries have been found to be the major problem. In addition to this, not making the already developed standards and frameworks known and available to the public-sector organization and the public at large was found to limit their use only to those who know about its existence. MOFEC and NPC have not made efforts to introduce the available Preparation and Appraisal Guideline for Public Sector Projects and enforced them into practice. Noting the need for maximizing benefits to individuals and society through efficient allocation of scarce resources, feasibility study including benefit realization planning and risk management are not practiced so that evidence based decision making and selection of suitable projects are not performed.

Lack of proper engagement with project owners of sector ministries (stakeholders) throughout the investment lifecycle and collection of reliable project physical and financial performance data has limited building of national database to maintain historical data of public investments. Data collected as part of M&E efforts are inconsistent and not reliable, and records are either in MS Excel mostly paper based and they are not easy for data retrieval and organization.

When it comes to sector ministries like MOT/MCIT, OTRLS was started with limited information. Projects lack the required level of detail in specifying their needs. This usually leads to project cost overrun or failure when funds are not available to cover the cost variation; exemplifying the high need of project front end management.

Having said this, there is a promising effort by the government. The Government has recognized the problems revolving around the project governance practices and is currently in the process of developing directive on public investment management in consultation with World Bank and key government sector ministries. It has been reported that the directive will cover from project identification through all the life cycles of project management up to ex post project evaluation.

5.3 IMPLICATIONS TO THEORY, TO PRACTICE AND RECOMMENDATIONS

The researcher has long experience managing projects and has faced the pain and is one of the sufferers of the system's shortcomings and that was one of the main reasons for exploring this area to lay some grounds for future researcher.

Projects are developed from all sectors by people from different educational background with or without formal trainings on project management. Personnel need to have received proper trainings before they venture into any project identification and concept development. The trainings would enable them to get ready for the work. Thus, MCIT should ensure that capacity building trainings focused on strategic thinking and project management are provided to all institutions implementing projects and develop project management framework.

According to Dvir et al. (2003) and Wang and Gibson (2008), planning and analysis are important and the time spent on these activities will reduce risks and increase project success. Moreover, the implications of project front-end management have been discussed in the literature review sections; and its impacts are massive especially for developing country with scarce resources. Decisions should be made based on evidences; this will be possible only if care is taken and proper feasibility together with clear benefit realization plan is worked out in advance. Therefore, MCIT and NPC better consider starting to enforce bottom up project planning accompanied with acceptable proposal fulfilling all preparation and appraisal parameters.

Morgan's (1987) research shows that approximately 1%-3% of the total project cost are expended during the early or front-end stages of a project. Yet, effective management of the front-end activities can save enormous time and money downstream in the project (Faniran and Smith, 2000). Though, no statistical research studies are available for Ethiopia, the implication of not practicing project governance through proper project front-end planning is expected to be high. The identification of projects, preparations of concepts, feasibility studies and evaluations has significant impact for successful project governance. Accordingly, the researcher will make the following recommendations:

HR Skills

- Reinforce the expertise of personnel and public officials and institutions involved in public investment, notably at federal and regional level through the provision of focused training on project governance. Colleges and Universities better equip graduates with trainings on project management and evaluations based on the national standards and guidelines; NPC is planning to institutionalize training at Masters level on the same. Thus, it is advised that teaching institutions support the effort in designing better curriculum and provide the training accordingly.
- So far it has been reported, challenges have not been encountered in evaluating project proposals, however both MOFEC and NPC will find the challenges sooner or later. Projects are becoming more complex requiring multi-disciplinary skillsets, such projects require independent review team. Thus, NPC and project appraisal regulatory bodies better take inventory of local expertise from the academics, professional societies, practitioners, civil servants, and international consultants and develop pool of experts by area of expertise and prepare working arrangements to serve as support providers or independent evaluators of project study documents and ex post evaluation on a need basis.
- By focusing on results and promoting learning from experience across all level of government; it is necessary to create national database for project management and historical records, and conduct regular forums for experience sharing. The researcher personal experience shows that it is very difficult to get planning data. Thus, the creation of the database will help planners to make realistic and consistent assumptions, secure essential planning data and adequate contract regimes and avoid risks from lessons learned. In addition, for maintaining better historical records it is recommended to enforce provision of consistent M&E reports whose physical progress directly equates to financial performance, otherwise the efforts will be useless and historical records will be misleading. Thus, it recommended to build single point of truth at NPC for mega projects and at MOFEC for the rest and all other consumers of such data can tap to it. The database can be one

since both NPC and MOFEC track project information. An integrated database with appropriate privileges can serve better. Therefore, it is recommended for NPC and MOFEC to make joint effort in building this integrated database in consultation with key stakeholders.

- Furthermore, several projects are implemented by international firms, therefore, a mandatory technology transfer from international implementers to local professionals needs to be enforced through legal frameworks.
- Certified project management professionals and planners are critical for good project governance, and as much as possible if projects are designed and managed by certified professionals the project governance practices will significantly improve. Thus, it is better if MCIT considers providing capacity building training on project initiation document preparation and project management until higher education institutions fully take over the training and develop a framework of certifying professionals with different skill set.

Legal frameworks

- NPC is currently working on Public Investment Management (PIM) directive, which is a belated but commendable exercise. However, to enrich the directive, the draft requires review by a larger group of stakeholders, the academics, public and private organizations participation before it is enacted. Thus, NPC better consider a consultative meeting / workshop with key stakeholders and experts in the field to enrich the directive and before submission for endorsement.
- The grey area between NPC and MOFEC mandates and duties and responsibilities of other public sector organizations with respect projects and their management needs to be revisited and mandates clarified. Therefore, NPC and MOFEC as the owner project front-end planning consider as drafting a proposal to GoE.
- It may have been considered in the PIM, however the introduction of at least two quality gates QA scheme like that of Norway as shown in Fig 10 and establishment of independent evaluators/ review boards will help in creating evidence based decision making. So, it is suggested that NPC to consider this if it has not already incorporated it in its draft.

- Collaboration, information sharing between public sector organizations and establishment of single point of truth for project related information through integration of efforts and clear accountabilities is of high value. NPC and MOFEC better consider development of legal framework besides clarifying duties and responsibilities of executive bodies in relation to projects and their governance.

Guidelines standards and frameworks

- Appreciating the efforts being made by NPC, the existing guidelines for the Preparation of Public Sector Projects needs to be updated by introducing benefits realization planning and management thereof including organizational change management. The feasibility studies prepared by public sector organizations need to show what the pre-project statuses of the implementing organizations are (in terms of measurable indicators) and what the planned targets are, how it will be achieved and how attainments will be measured. Thus, it is recommended for NPC to consider updating the existing Preparation of Public Sector Projects guideline to incorporate benefit realization planning.
- In the absence of project management frameworks for IT projects, it is advisable that MCIT considers developing project management framework based on Tasmanian Government Project Management Framework, the framework is composed of project management planning (PMP) document templates, fact sheets (instruction sets for the preparation PMPs) and the project management guideline. Thus, MCIT need to consider developing project management planning (PMP) document templates, the how-to instruction sets for the PMP templates and adapt Tasmanian Government Project Management Guidelines as it is based on PMBoK and contains all relevant elements including benefit realization management. Furthermore, it is advisable if MCIT to add IT related templates such as stakeholder management, statement of operation requirement / functional requirements specification and other software design and planning documents etc. and

introduce them for public use together with the already developed standards and frameworks, and follow up their adherence thereof. Summary of Tasmanian Government project management framework is presented in Appendix 1.3 as reference.

- It may be challenging to maintain highly skilled multi-disciplinary experts at MCIT, hence, it is important for MCIT to consider establishing Project Management Advisory Committee / Board to assist both MCIT and public-sector organizations with projects. The advisory team can be composed of experts from Professional Societies, Associations and the academia and can assist in the adaptation of the suggested guideline and development / adaptation of different PMP templates.
- Similarly, NPC and MOFEC need to introduce the updated guidelines and the new directive to public sector organizations and enforce their use. In addition, working with the teaching institutions for better adoptions as part of the institutionalization effort is important.
- Projects' technical designs are mostly worked out after the project has been approved and budget has been allocated and after the project implementation has already started. This has been observed in OTRLS implementation, as a result both the developer and the client MOT has suffered a lot; according to P04, "80-90 percent of the requirements were known after signing of the contract". Had it not been for resilient and flexible contractor, the project would have died at its infancy. Such practices result in scope creep for the client and unplanned additional budget requests which are usually difficult to secure. Thus, MCIT to consider the need for projects detail design to be completed prior to implementation; use of designers or consultant as it is critical for developing clarity of requirement and monitoring and control of implementation thereof and enforce the implementation of the same.

Benefit Realization Management and Organization Change Management

- There are several researches conducted in the area of project front-end management in the construction industries and infrastructure projects. There

are various standards also introduced by Construction Industries Institute (CII) of Austin, Texas. In case of Ethiopia, comparative study has been made by Shiferaw et al. (2013) on construction sector performance and front-end project management practices of Norway, Netherlands and Ethiopia. However, the researcher did not find studies on project front-end on the IT sector in Ethiopia. IT by its nature comparatively being new its implementation differs from that of Construction Industry (CI). Unlike CI, IT project implementation is not limited to technology implementation; it requires changes in the organizations process, technology and people; demanding the need for an Organizational Change Management (OCM). As part of project front-end management Benefit Realization Management (BRM) and planning needs to be integrated with OCM so that results / planned targets can be realized. Thus, cost benefit analysis made as part of the feasibility study may not work for IT projects unless it is complemented by BRM plans. Since IT project implementation without OCM is not effective, project front-end of IT projects needs to account for BRM + OCM as part of their feasibility study. Thus, MCIT together with NPC need to consider updating the Public Project Preparation Guideline with BRM + OCM.

- The basis for project design needs to be preparation of real alternative concepts that is aligned to the organizations strategic objectives instead of the usual single one, so that subsequent analysis, deliberation and decision-making will be in selecting viable and effective design. Thus, NPC, MOFEC and MCIT need to strive for quality and consistency in regulatory system across all levels government.

5.4 LIMITATIONS

Focus group discussion was planned, however due to time availability of senior management staff members from the selected ministries it was not conducted. Considering the identified skill gap in key personnel skill at all levels of front-end project planners, the researcher needed to explore further with higher education institute and corroborate the finding. However, due to time shortage this was not addressed.

5.5 AREAS FOR FUTURE RESEARCH WORK

The main findings discussed in this chapter have identified issues that need to be explored further. Among the few identified, the key personnel role in project governance and planning is critical. Thus, future research needs to explore further to better understand the reasons for such problem and how it can be improved.

5.6 CONCLUSIONS

The study on project governance practices in the selected ministries have revealed that currently project front end planning is not adequately practiced at least as per the guidelines prepared by MOFED, on rare cases when practiced, project documents submitted by executive bodies do not have the required parameters and lack quality. The study has uncovered that there are a number of areas that all stakeholders identified in the research to work out; starting with providing focused project management and evaluation training that is more practical and based on local standards, project governance and legal frameworks to revising the directives, guidelines and developing new project management frameworks and introducing them to the public and following up the implementation and adherences thereof.

5.7 SUMMARY

This chapter has summarized the main findings of the study as project selection and prioritization takes at higher level for mega projects and at sector ministries otherwise. Project concepts, feasibility studies and proposals with alternative projects for appraisal and selection are not presented to MoFEC nor to NPC. It further discussed the reasons for such practices. The implication of the findings was discussed and recommendations were made under the themes identified by the study. Limitations of the study were stated and the areas for future research were highlighted.

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APPENDIX

1.1 INTERVIEW QUESTIONS

This survey is a part of a Masters research project which includes exploring the project governance practices in Ethiopia: The case the front-end project planning selected government ministries, MOFEC, NPC, MCIT and MOT.

This research project will be submitted to Addis Ababa University, College Business and Economics, Department of Management in partial fulfilment of the requirements for the degree of Executive Masters in Business Administration (EMBA).

By answering these questions, you also accept that I may use your answers in the scientific analyses and all respondents will be kept anonymous.

The Interview will take approximately 45 – 60 minutes to answer.

Thank you for your time

Abera Mengistu

1.1.1 MOFEC / NPC

- 1) What is project selection process for funding look like?
- 2) Who participates in the assessments / evaluations and at what stages?
- 3) What study documents are presented?
- 4) Which documents are mandatory and what are the contents?
- 5) Which project design document do you think are the most important and useful to evaluate a project for selection and funding?

- 6) Do you have project proposal preparation and appraisal guidelines that stipulates the government requirement and are project owners aware of your requirement?
- 7) Does the selection process differ based on the funding sources?
- 8) How do you enforce the project proposal evaluation before approving funding?
- 9) What does the project funding approval hierarchies look like and does it apply for all kinds of project or it is project amount driven?
- 10) How do you monitor and control once funding is approved and for how long?
- 11) How do you control whether benefits are realized or not?
- 12) What are the common challenges you are facing in the project front-end management and how do you manage it?
- 13) How do you rate the importance front-end project planning where projects are assessed or evaluated before funds are approved?
- 14) Do you keep records of the appraisal and M&E processes thereof?

1.1.2 MCIT

- 1) How is the support for project management initiated? Please elaborate the process, is it standardized and supported by a guideline known to public bodies
- 2) What type of support do you provide and why?
- 3) How do you rate your effectiveness or the impact of your support in the sector?

- 4) Do you take part in project post implementation review and build / update project records and document lessons learned?
- 5) What are the common challenges you are facing while providing project management support and how do you manage it?
- 6) Do you collaborate / support MOFEC/NPC in project assessment / evaluation and thereof?
- 7) Which project design document do you think are the most important and useful to evaluate a project for selection and funding?
- 8) How do you rate the need for project management framework document and its impact on project success?
- 9) How often do you monitor and control project implementations? How do you make sure that government project owners adhere to standards?
- 10) How do you rate the importance front-end project planning where projects are assessed or evaluated before funds are approved?

1.1.3 MOT

- 1) How was OTRLIS initiated and what kind of documents were prepared for funding? Who prepared them?
- 2) Was it internally reviewed by senior management? What were the basis for the schedule and cost estimate of the project?
- 3) Which government agency were involved in selecting the project for funding?
- 4) Which project design document do you think are the most important and useful to evaluate a project for selection and funding?

- 5) Did you have a performance baseline in place before you set target objectives. Were the objectives SMART?
- 6) What was the level of the projects strategic alignment with the Ministry's strategic objective?
- 7) Did you have a business case for your project and was it based on cost benefit analysis?
- 8) Did you've a benefit realization management document in place? How did you measure your benefit when it was realized?
- 9) Have you made thorough risk analysis and have a management plan in place? What was considered as a major risk by then?
- 10) How do you rate the importance front-end project planning where projects are assessed or evaluated before funds are approved?
- 11) What did your project management organization look like? What was the level of the sponsor engagement? How do you rate the project management skills of the project team?
- 12) What project management tools did you use to manage and control the implementation of OTRLS?
- 13) How do you rate your project success and what measures did you use to rate it?
- 14) Who were OTRLS stakeholders and how did you engage and what their level of their engagement?
- 15) Have you done post implementation review and what were the takeaway lessons?
- 16) How do you rate the impact of Project Management Framework on the overall project management and achieving the project outcome?

1.1.4 CONSULTANT + CONTRACTOR

- 1) How did you find the OTRLS project definition document completeness? What sets of documents do you think need to be there to make the system delivery efficient and effective.
- 2) How did you find the requirement clarity and stakeholders feedback after implementation? How do you rate their level of satisfaction?
- 3) Which project management approach do you think would have worked best Agile or the traditional waterfall?
- 4) Do you think OTRLS has is strategic alignment with the organizations business objective? Aren't there other objectives that should have been automated than OTRLS?
- 5) How do you rate OTRLS project success and why? What are the measures you used to say so?
- 6) In your opinion what should a project owner do to make a project a success before and after implementation?
- 7) How do you rate the impact of Project Management Framework on the overall project management and achieving the project outcome?
- 8) Did you conduct a post implementation review and what were the findings? What were stakeholders feedback and what were the take away lessons learned from overall OTRLS project implementation.
- 9) How did your project management organization look like? What the level of the sponsor engagement?
- 10)How do you rate the project management skills of the project team?
- 11)How do you rate the importance front-end project planning where projects are assessed or evaluated before funds are approved?

1.2 IN-DEPTH INTERVIEW FINDINGS

The data analysis of the in-depth interview has identified four categories or themes, namely: findings related to human resources skills engaged in project planning and management, legal framework, guidelines, standards and project management frameworks, and project governance practices. Project governance practices is further sub divided into major parts, namely general (applicable to all projects) and OTRLS related.

A - HR SKILLS

1. It has been reported by all interview participants that there is gap in the skill of human resource almost at all levels, at the regulators and at the public sector organizations, though the degree may vary. It has been explained that the quality of project documents received from public sector organizations is a clear indication of the type of HR organizations are maintaining. Because of its poor quality, it requires NPC several review cycles before it reaches approval stage. This is an attribution of the HR skill and this has been further aggravated by the staff turnovers.
2. It has been stated that project management courses provided by the teaching institutions misses project preparation and project monitoring and control. Recognizing the skill gap of fresh graduates in project management (that received 3-6 credit hours courses at colleges), an effort has been made with Ministry of Education to revise the curriculum and introduce additional courses on project management. However, the effort was not successful due to failure to amend the curriculum by Ministry of Education (MOE). Currently, observing the challenges and the quality of HR skill involved at different level of projects, NPC is in the process institutionalizing specialized training on project management and evaluation.
3. Unlike the construction sector, there is no legal provision for the design and supervision consultant for IT projects. Had this been in place, the problem with the HR skill could have been complemented and failure rates of IT projects would have been minimized. Furthermore, International

companies implement projects, but there is no law that forces them to partner with local companies for effective Knowledge transfer and project sustainability thereof. Government as the owner of most projects, needs to consider how to build the HR skill through effective knowledge transfer from the implementer.

4. Lack of awareness at senior management level of public-sector organizations for IT and systems is the major problem. Organizations do not hire qualified and suitable size of IT team, even when organized and staffed, they fail to make them busy or utilize them.
5. Mostly project studies are outsourced to consulting firms; however, there are limitations in HR capacity to monitor the execution of studies per their Terms of Reference (TOR) and receive quality deliverables. The following was a quote from the interview “The role of a consult should be to provide support not to totally replace the owner, the consultant should make an independent review and come up with alternatives that are free from biases not to provide something that the client does not understand as a solution; how will the client implement something that it does not know”, (P09).
6. MCIT is providing technical trainings based on questionnaires to assess public sector organization IT training needs, such trainings are good for sustaining the existing system, but it is not helping in IT strategic management. On the down side, HR that received such trainings becomes marketable and they leave for other jobs.
7. There is high staff turnover and one participant specifically said, “by the time I joined the organization, the entire IT team including the Director had left”, (P03). A study has been made by MCIT on HR attrition rate and the turnover was identified to be due to the civil servants’ low pay scale for IT professionals in comparison to the private sectors.

B - LEGAL FRAMEWORK

Using government proclamation that define duties and responsibilities of executive organs of Ministry of Finance (MOF), MEDAC, MOFED, MOFEC,

MCIT, and NPC comparing their mandates as related to projects is shown in Table 5 at the end of this Annex. The summary of findings related legal framework regarding projects governance are as follows:

1. The demarcation between MOFEC and NPC is grey. MOFEC expects NPC to do all project appraisals and proclamation 281/2013 for the establishment of NPC did not clearly specify NPC role in that regards. Despite lack of enforcement, it has been explained that there was no problem when the two organizations were working as one, under MOFED.
2. As per Proclamation No. 916/2015 Art 25 sub art 11, MCIT is required to ensure mission critical systems and services in public sector are computerized and online services are gradually available to users, however, this was possible until PSCAP fund was there. In addition to this, MCIT did not use the advantage of Proclamation No. 916/2015 Art 25 sub art 18, and issue directives on project administration and implementation nor create proper interface with MOFEC/NPC to regulate IT projects preparation and appraisal thereof.
3. Directorate level organization of public sector organizations does not allow discharging of duties and responsibilities as it lacks focus and power. Ministries should have Agencies; some directorates need to be upgraded to Agency level. For example, MCIT had two Agencies, Ethiopian Information and Communication Technology Development Agency (EICTDA) and Ethiopian Telecom Agency (ETA) that turned into Directorates when MCIT was established. At the time of EICTDA, the interventions were more focused and effective. P05 sated “That is the benefit of Agencies, they are agencies for specific tasks. When it comes to Ministries, their portfolios become very large”, (P05).
4. Government has the awareness that projects are not being completed in time with required quality and resources are being wasted. Accordingly, development of Public Investment Management (PIM) directive is underway with the support of World Bank and participation of key public sector organizations. The draft PIM directive is expected to cover all the

processes form project identification to ex post evaluation. Among other things, the draft directive is expected to cover cost adjustment and the mandatory assignment of competent project manager. Current law of the country allows price variation up to 30% by MOFEC, but it does not have clauses how to manage cost variation beyond the 30%. The PIM is expected to clearly identify the role and responsibilities of parties involved around public investment management. NPC has stated once the directive is enacted all confusion will go away and major problems currently being observed will be solved accountability, transparency and integration of effort will be created.

5. Revision or development of directives and guidelines are sometimes conducted by engaging different stakeholders, due to internal problems in organizations in nominating the right person from the core process team, the invitation goes to the wrong expert and the inputs provided lack substance.
6. Regulators fail to enforce directives and guidelines properly, for example INSA sent out circular to all institutions not request fund and secure foreign currency without their prior permission for any of their IT Projects as enforcement mechanism, and it was adhered to.

C - GUIDELINES

1. There are two guidelines prepared at the time of MOFED in 2004 and 2006 one for Preparation and another one for Appraisal of Public Sector Projects and these guidelines are not publicly available and the process specified in the guidelines are not followed. MOFEC / NPC did not create awareness and enforced by public sector organizations to use their project preparation, and appraisal guidelines and holding them accountable.
2. Similarly, number of standard documents such as Software Quality Assurance framework, IT Audit Framework, IT Infrastructure Management, Enterprise Architecture and Management, GIS standards, Interoperability Framework etc. has been developed by Standard and Regulatory Directorate of MCIT. The guidelines and standards are not

available online publicly, however those who know about its existence can collect by submitting an official written request. The guidelines have not been endorsed by the Councils of Minster and become directives.

3. Strategic document, guidelines and directives are prepared and remain for internal use, they did not receive legal backing through the endorsement of Councils of Minsters. This has limited the power of the documents; for example, MCIT initiated OTRLS project for MOT, however the project was stopped / discontinued when there were changes in MOT top management. Had the document obtained legal backing, the document could have served as instrument to continue implementation irrespective who is in office.
4. Recently, Monitoring and Evaluation guideline has been prepared by NPC and endorsed by the Councils of Minsters. Printing of 5,000 copies of the same is under way with the support of AfDB. Once the printed copy is ready, it has been mentioned that they are planning to conduct national level workshops to create the awareness and enter the guideline into force. It has been further emphasized, once the guideline is in use and with proper follow up all problems revolving around M&E and data inconsistency will go away as directive contains clear accountabilities with strict responsibilities.
5. National level project management guideline / framework has not been developed so far, however, its need has been appreciated by all participants as it will be very important and helpful, especially with the situation.

D - PROJECT GOVERNANCE PRACTICES

The findings revolving around project governance is presented as General and OTRLS related. Under General, project appraisal, Benefit realization and change management, project monitoring and control, historical records and technical support are detailed to be followed by findings on OTRLS project. The OTRLS project findings covers from project initiation to closure.

GENERAL

PROJECT APPRAISAL

1. Planning should be both ways; that is, top to bottom and bottom up. General macroeconomic directions are given from the top and institutions prepare their plans accordingly, thus the plan will be the intersection of the two. From the top there is national vision, from the bottom sectors based on their resources, performance, and sectoral direction the plan will be prepared in consultation and intersection of the two. Ethiopian budgeting system is based on ceilings, budget ceiling is allocated to sectors, then to institutions. The Institutions will prepare their recurrent and capital budget request within the ceiling. The budget is not evaluated among sectors; the review is within sectors. Institutions argue and secure their budget; capital budgets will be used for implementing projects.
2. Projects can be identified through one of the following: from sector priority, from study, from direction received from above, sectorial evaluation, national policy, and related sources. Moreover, Projects are initiated and prepared by sector ministries as implementation mechanism of Growth and Transformation Plan (GTP) goals. The correct process for public sector organization is to present their project proposals to NPC, and NPC shall appraise it against the GTP from different angle. If it is found to be acceptable from different dimensions, then the proposal should be forwarded to MOFEC for financing or jointly reviewed by both parties against the resource envelop. Then if MOFEC recommends it, it will be presented to the government as part of budget review and approval. First to Councils of Ministers and then to House of Peoples Representatives (HPR). However, currently there is no or limited project appraisal and selection process in place, mostly projects appear in the budget requests.
3. The Appraisal guideline dictates to look at several parameters during project proposal appraisal such as standards developed by the national regulatory bodies like EPA etc. When looking at social, it asks to check whether there is stakeholder participation, is it known to community, does

it affect the community asset value etc., Institutional aspect: coordination, integration, absence of duplication of efforts and the likes. Financial aspect looks at profit aspects, for productive sector and use objective criteria like cash flow, CBA, NPV, return on investment, payback period and for social sector use, cost effectiveness. The Economic cost looks at general development country wide such as real value, opportunity cost and the likes.

4. However, currently projects do not undergo through the processes outlined by the guidelines. The last 10 years, projects appraisal did not go through this process, “projects implementation have moved from objective criteria to veto criteria”, (P09). Most projects do not have charter, proper study documents, are not appraised, and have no accountability. Projects usually receive prior approval before they come to NPC for appraisal. Recently MOFEC has started telling public sector organizations to obtain approval from NPC, accordingly, NPC has started appraising projects but most proposals received are not bankable /acceptable proposals as they do not address all project parameters stipulated in the guidelines. It takes NPC several review cycles before it reaches an acceptable document stage; so far, NPC is focused mainly on mega projects linked to the GTP.
5. MOFEC receive fund requests for projects that the government has already approved or the requesting organization has decided to do; since the projects funding requests are coming from priority sector it is almost a must to finance them.
6. NPC plans to categorize projects on project financial values and associated risks, namely: simple (Type C), mild (medium Type – B), rigorous (high risk, high resource Type – A). Type A and type B are huge projects. Type C level projects are low; thus, these projects will be screened at institutions (public sector organizations) level. Final budget screening will be jointly done between MOFEC and NPC; this is still at draft level.
7. Donor funded projects, such as World Bank and the like do carry out proper project appraisal before providing funds; all projects should fulfil

their requirements. Thus, the possibility of projects having necessary documents and getting seriously scrutinized are very high. If government co-finances the project; the organization that receives the fund, MOFEC together with the donor will appraise the project documents before it is presented to the House of Peoples Representative (HPR).

8. MCIT has limited capacity to lead national IT projects in centralized manner, in addition to this, “the Ministry had an undocumented consensus that centralizing will negatively affect the growth of the IT sector, thus it recommends decentralization of governance and empowerment of public sector organizations”, (P05). On the contrary some staffs had a view of having an early centralization with standardization is a must, as it will be very difficult to undo / reverse the malpractices at later stage. The reasons being HR skills and organizational competencies.
9. It has been stated that the problem with public sector organizations not preparing proper project proposals lies with MOFEC and NPC. It is possible force public sector organizations to follow the standard process, if MOFEC refuses to finance projects without proper documentation.
10. It has been observed during the study that there is no or limited practice of planning benefits. There are tangible and intangible benefits, high impact projects that have feasibility study do show them, but it does not incorporate the benefits realization plan. In addition, projects that pass the appraisal process are approved by identifying which GTP target it will achieve, which policy it will meet and what benefit it will bring.

PROJECT MONITORING AND CONTROL

1. In the country where government intervention is high, the monitoring and control should be very high, with the reduction in government intervention, like other countries the monitoring and control shall go low. Accordingly, MOFEC does quarterly monitoring and evaluation (M&E) of project while NPC does semi-annual. It has been reported that MOFEC does mostly financial while NPC does physical in a form of a study report. The NPC’s

M&E views at macro level on selected few and mega projects, and the M&E is planned on yearly basis to serve as an input for GTP midterm review, annual report and final year review. Sectorial monitoring and evaluation is being made by the sector ministries, not by NPC, they report their financial and physical project performance to MOFEC on quarterly basis. NPC makes field visit as part of the monitoring on selected few projects too.

2. There is standard reporting format prepared and shared by MOFEC to public sector organizations. However, public sector organizations submit reports with inconsistent data. As an example, it has been reported that “a project for 25Km road construction could report data over the period of the project life time that could add up to more than 25KM”, (P09). It has been further discussed that the data inconsistency could be due to several reasons, to name some it may be due to data aggregation problem, data being mostly with the consultant instead of the owner project owners themselves may not have the current data, and lack of accountability. Project implementing public sector organizations are not held accountable for their reports with inconsistent data and for not taking corrective actions. In addition to this, it has been reported that the learning curve of monitoring and evaluation is high, this may be one of the reasons for the quality of the current work. In addition to this, most public sector organizations do not have organizational structure and staffing that supports the planning and M&E.
3. Public sector organizations are required to report to many parties such as HPR, Prime Minister’s offices, MOFEC, NPC, and to sector Ministry office. There is not a single point of truth as data maintained by parties do not match; showing the need for coordination and integration of efforts. It has been pointed out that, “had there been proper coordination, the possibility of receiving inconsistent report will not be possible as institutions will be talk to each other”, (P08).
4. The monitoring and evaluation of projects is done at various level: at institutions, by the consultant, by Ministries, MOFEC, NPC, Prime Minister

Office, HPR permanent / standing committees. Government has realized the huge gap or problem in the M&E of projects. Accordingly, it has been reported that national assessment has been made together with donors before the development of monitoring and evaluation manual that has been endorsed by the Prime Minister's office. It has been reported that the findings of the assessment were that there are duplications in the monitoring; actually, monitoring is overdone and what is missing is accountability following evaluation.

HISTORICAL RECORDS

1. It has been reported that the project profile maintained at NPC and MOFEC are not organized and electronic databases, they are either using paper based, or MS Excel as database. With the inconsistent data received from public sector organizations, the profiles are not reliable. However, both offices are planning to build database. It has been reported that the focus of monitoring and control is until implementation is completed lacks ex post evaluations. Therefore, there is no organized historical record which is readily available for use.
2. Donors do have exit report for projects they support, but public sector projects never do it and it is not expected of them. MOFEC always look for information when projects will be completed since it follows project execution only.
3. As an example of uses historical records (experience), it has been pointed out that, most RFP for system procurement have generic nature, they are mostly focused on non-functional requirements instead of functional requirement that specifies the scope of the project. Therefore, local contractors use their experiences and make an estimated price, usually it falls close to $\pm 10 - 15\%$ to the actual cost.

TECHNICAL SUPPORT

1. Public sector organization have skills on their respective core businesses, they may have ICT department which may not necessarily be highly skilled, in such instances MCIT should be able to provide better support.
2. It has been reported that since the focus of current investment is on infrastructure, expertise gap has not been observed so far. However, the days are close where highly skilled resource may be required.
3. It has been observed that MCIT is more reactive in the provision of its technical support to public sector organizations, they wait until requests come their way.
4. It has been pointed out that most government organization use similar systems. Software developed for one organization could be used by another organization with little or no change. But this is not practiced, there is a lot of duplication of efforts and wastage too.

ONLINE TRADE REGISTRATION AND LICENSING SYSTEM INITIATION TO IMPLEMENTATION

Project Initiation and Planning

1. MCIT had a practice of making proper assessment and developing of strategic document that were endorsed by Ministry's top management, the strategy document identifies projects and it does high level requirements, OTRLS was identified as part of the strategic document.
2. OTRLS was implemented through the MCIT's way of doing projects, driving projects from outside using the Public Sector Capacity Building Program (PSCAP) fund, it did not consider the stakeholders readiness. OTRLS was identified because there were service delivery challenges at MOT, previously MOTI. Since the fund was coming through MCIT, the OTRLS project was managed by MCIT's project manager. All documents such as RFP, requirement analysis was developed by EICTDA/MCIT professionals. The project received users' buy-in because of the efforts made by the OTRLS developer company. It has been explained by participants that "when a project is initiated, one must organize a team and proper IT department and tackle the technical problems by identifying users' needs and plan the project in detail first before opting for procurements", (P04).
3. OTRLS started with high level requirements documented by MCIT. Thanks to highly knowledgeable MOT staff, 80-90% of the requirement was compiled through informal discussion with business team and the requirement was shaped overtime. OTRLS would not have been practical had it not been for the developer company flexibility, perseverance and drive to see it completed. It has been commented by the participants that "the major reason for software projects failure in this country is due starting projects without identifying needs and documenting clear requirements", (P02). Furthermore, in the absence of clear needs from MOT and lack of stakeholder's engagement, the developer company used various means to get customer buy-in, demonstrated the developed OTRLS software and

collected their feedback from time to time. This had required a lot of effort from the developer side.

4. The first phase of OTRLS was implemented with MCIT support, after completing the first phase additional requirements were identified especially with trade naming, it required MOT to legislate changes before implementing phase two. The second phase of OTRLS started with World Bank Trading and Competitiveness Department team's assessment at federal and regional level which resulted in high level road map and detailed requirements. This was completed before World Bank committed fund to support the project. OTRLS second phase implementation had baseline for OTRLS and they made an assessment and set targets; later after completing implementation, they developed an impact report to measure the benefits; the target covered the amount of time it took for the businesses to get license renewal services. It was not in terms of financial terms or savings, it was in terms of compliance cost; cost to the government and business community. In addition to this, they made use of survey questionnaire to assess customer satisfaction, and the feedback was good.

Benefit Realization and Change management

1. As there was no benefit realization planning there were no organizational change management plan in place. The change management was limited to breaking resistance, get buy-in and facilitate smooth implementation through top management regular follow-up and awareness creation and repeated training. The awareness creation and user training were provided to the management and users separately. The team were very careful whenever they were talking about the system, they avoided the control elements of the system as it will be misinterpreted and will be source resistance.
2. The top management follow-up and support had contributed a lot towards adoption of the system and had made the change management easier.

The steering committee used to review project progress every two weeks, this has helped a lot.

Project Organization and Sponsors Commitment

1. OTRLS project had project management organization led by project steering committee. The Steering Committee was composed of representatives from all regions and end users Directorate Directors, member from MCIT, and the consultant. The committee was chaired by the State Minister. The project had consultant from World Bank and an ICT Director as its project manager. Initially the project manager was from MCIT later when they entered the second phase and upgraded OTRLS, the project manager was replaced by a newly hired ICT Director from MOT.
2. The OTRLS then top management had very good commitment towards the project and had the ambition to see the project completed and operational in short time. The working relationship that they created with Ethio-telecom, ERCA, EPPCO and MOFED had significantly helped the project to be completed successfully.
3. It has been reported that communication being 80% of the project managers role, project managers fail to understand the need to communicate. "They lack the skill to expressing themselves verbally and in written form, this may be due to language barrier", (P02).
4. Higher officials at public sector organizations do not have the awareness on the need for business process reengineering, mapping of business process, and building staff capacity before engaging in any automation effort. It has been reported that decision makers should have the right awareness, they need to stop thinking IT as a solution to all of their problems, and realize that technology is just an enabler.

Stakeholder Buy-in and Developer's Flexibility

1. It has been observed that the OTRLS developer company made several efforts to get the interest of MOT users through demonstration, and

trainings. But, once the MOT users started to use the system and customer feedback was high. The news reached further high in the government to the prime minister level and decision to roll it out nationally has been made. The initial plan was for federal level use. It has been reported that “now 745 offices use the system all over the country to provide trade registration and licensing service”, (P01).

2. The OTRLS developer company had good track record in delivering projects and went out of its way / did not limit themselves to terms of reference, to complete the development without additional cost even though there were additional requirements. Had contractor implemented as per the contract, it would have been very difficult and OTRLS wouldn't have been functional. The developer's perseverance and flexibility to handle scope creeps has helped a lot.

Legal Framework

Proclamations that defined the powers and duties of the public-sector organizations of the Federal Democratic Republic of Ethiopia has been enacted since 1995 almost every five years. All along there were some changes in the establishment as merging or splitting of executive bodies that look after planning, monitoring and evaluation of project. In Proclamation 4/1995, Ministry of Finance (MOF) and Ministry of Economic Development and Cooperation (MEDAC) were separate public-sector organizations. MOF and MEDAC were merged and became one, Ministry of Finance and Economic Development (MOFED), through Proclamation 256/2001. MOFED then restructured as Ministry of Finance and Economic Cooperation (MOFEC) in the proclamation 916/2015 and National Planning Commission (NPC) was established as separate organ (as breakaway from MOFED) through the proclamation 281/2013. Over these periods, Ministry of Finance have been receiving additional duties and responsibilities from MEDAC and transferring some to NPC. Relevant details of the duties and responsibilities of each public-sector organizations MOF, MEDAC, MOFED, MOFEC and NPC in relation to project appraisal, support, and evaluation is summarized as shown in the Table 1 below.

Table 5 - Public sector organizations' duties and responsibilities related to development projects

MOF	MEDAC	MOFED	NPC	MOFEC
Proc 4/1995 Art 18	Proc 4/1995 Art 13	Proclamation No. 691/2010 Art 18	COUNCIL OF MINISTERS REGULATION No. 281/2013	Proclamation No. 916/2015 Art 18
1. prepare and submit to the Council of Ministers, together with its recommendations, a consolidated annual budget of the Federal Government upon Analyzing recurrent budget proposals received from Federal Government organs, capital budget proposals prepared and forwarded to it by the Ministry of Economic Development and Cooperation and requests from Regional Governments for budgetary subsidies; and administer the approved budget;	2. prepare and, upon approval, follow up the implementation of long, medium and short – term development plans that are based on the country's development strategy and to be 'executed by the Federal Government;	2/ establish a system for the preparation and implementation of national development plan, and in cooperation with the concerned organs prepare the country's economic and social development plan and follow-up the implementation of same upon approval;	9. Objective The objective of the Commission shall be to prepare five-year plans of national development in the framework of country wide balanced growth within the context of a long-term perspective plan of fifteen years, and conduct periodic evaluation of the implementation of the plans.	10.1(e) provide assistance and advice to Regional States, as necessary; and provide coordinated support to Regional States eligible for affirmative support as coordinated by the Ministry of Federal Affairs and Pastoralist Development;
	4. in cooperation with the concerned organs, cause the study and preparation of and review projects based on the	3/ establish a system for the preparation and implementation of development projects; conduct pre-implementation evaluation of	2/ conduct assessment of growth factors in terms of increase in capital and productivity necessary for the attainment of	2/ The powers and duties given to the Ministry of Finance and Economic Development by the provisions of other laws, currently

MOF	MEDAC	MOFED	NPC	MOFEC
Proc 4/1995 Art 18	Proc 4/1995 Art 13	Proclamation No. 691/2010 Art 18	COUNCIL OF MINISTERS REGULATION No. 281/2013	Proclamation No. 916/2015 Art 18
	long, medium and short-term plans and to be executed 'by the Federal Government;	project proposals submitted for financing;	the annual growth in gross domestic products set in the plan;	in force, other than those related to the powers and duties of the National Planning Commission, are hereby given to the Ministry of Finance and Economic Cooperation.
	5. prepare annual development: programme and supporting capital budget proposal upon analyzing development programmes and supporting capital budget proposals received from Federal Government organs; present said annual development programme and supporting capital budget proposal to the Ministry of Finance for consolidation into the annual Federal Government budget and, upon approval, follow up the implementation of same;	4/ follow up and evaluate the performance of general, sectoral and multi-sectoral development plans; prepare a national report on the implementation of development plans which shall include the performance of regional states plans;	5/ disaggregate the sectors referred to in sub-article (4) of this Article into their sub-sectors, and further down to groups of products or branches of industry to enable the plan to guide the implementation; 7/ draw out sector plans iteratively in consultation with the relevant federal and regional public sector organizations, detailing programs and projects to be undertaken as well as reform measures pertaining, to policies and legislations;	
	9. prepare plan preparation and presentation guidelines; ensure the distribution in due time of same to concerned organs;		8/ formulate plan implementation matrix by line ministries at the federal level and. regional bureaus showing actions to be undertaken covering the entire sector plan;	
	11. evaluate the execution of development plans and submit annual report to the Council of Ministers.		9/ conduct periodic monitoring and evaluation of the plan implementation;	

Source : FDRE proclamations

MCIT

Proclamation No. 916/2015 Art 25 – the following are the relevant sub articles that relate to IT projects and technical support that the Ministry should provide

2/ facilitate the creation of institutional capacity for the effective implementation of information technology development policy;

3/ set and implement standards to ensure the provision of quality, reliable and safe communication and information technology services;

9/ facilitate the creation of fast and affordable information access;

10/ follow up, and provide necessary support for, the implementation of modern information network between and within Federal and Regional Government institutions;

11/ ensure mission critical systems and services in public sector are computerized and online services are gradually available to users;

14/ issue certificates of competence to information technology professionals and entities whose accreditations do not fall under the jurisdiction of other government organs;

18/ give training and, advice on project administration and implementation to facilitate the utilization of communication and information technology in Government organization; issue directives and follow up implementation of same;

1.3 SAMPLE PROJECT MANAGEMENT FRAMEWORK OUTLINE:¹

Countries have project management frameworks at national or state level to regulate and assist practitioners in the project management planning efforts. The researcher has identified the Tasmanian state project management framework suitable for adaptation to Ethiopian context. Nonetheless, the researcher considers that there are templates that needs to be worked on further such stakeholder management, statement of operation requirement / functional requirements specification and other software design and planning documents etc. However, the researcher recommends for MCIT to consider considering and develop a framework that suits the local situation in Ethiopia based on this project management framework.

The Tasmanian Government Project Management Framework includes three parts:

- The project management guidelines
- Series of project templates and
- Series of fact sheets

All three put together form a personalize-able project management framework and provide templates, guidance and explanations on how to develop and manage key aspects of projects.

Project Management Guidelines

Building on the knowledge of experienced project managers the Tasmanian Government has developed Project Management Guidelines (Version 7.0) that provide information and guidance on how to manage a project throughout its life cycle to project management practitioners.

¹ Sources: <http://www.egovernment.tas.gov.au> accessed on May 30, 2018. Specific pages are as follows:
http://www.egovernment.tas.gov.au/project_management/tasmanian_government_project_management_guidelines accessed on May 30, 2018

http://www.egovernment.tas.gov.au/project_management/supporting_resources/templatesets accessed on May 30, 2018

http://www.egovernment.tas.gov.au/project_management/supporting_resources/fact_sheets accessed on May 30, 2018

The Guidelines identify and describe the key processes such as management of project quality, risks, planning and scoping activities, budget, stakeholder management, benefits realization and project review and closure. The guideline version is

- Tasmanian Government Project Management Guidelines Version 7.0
July 2011

Templates

Considering the need to manage a project effectively, Tasmanian State has developed required templates. The templates have attached guides for their use and application, to be modified to suit the particular requirements of the project by users. The Project Management Templates have been developed to support and capture the results of project planning processes. The actual amount of documentation required is primarily dependent on the size and complexity of the projects. The project sizes have been categorized into three. Namely: very small, small to medium and medium to large projects. The following table summarizes the project templates their uses and applications and maps their use as per the project sizes.

Table 6 - Tasmanian State Project management framework, list of project planning templates

#	Project Template	Uses and Applications	Project size		
			Very Small	Small to Medium	Medium to Large
1	Project proposal template and guide v3.0	Provides a template and guide to assist in developing a project proposal which is usually the first document developed to introduce a project. It expands the initial concept or idea to broadly define the scope of the proposed project and provide an estimate of the resourcing, time and costs associated with progressing the initiative.		X	X
2	Project business case template and guide for medium to large projects v2.1	Provides a template and information on why, when and how to develop a project business		X	X

#	Project Template	Uses and Applications	Project size		
			Very Small	Small to Medium	Medium to Large
		case for projects.			
3	Project business plan template and guide for medium to large projects v2.1	Provides a template and information on why, when and how to develop a small project business plan.		x	x
4	Project review and evaluation report template and guide for large projects 2.1	Provides both a template and detailed guide on completing the template to assist in developing a project review and evaluation report for large projects			x
5	Project execution plan template and guide v1.1	Provides both a template and detailed guide on completing the template to assist in developing a project execution plan			x
6	Steering committee agenda template and guide v2.1	Provides a standard agenda for project steering committee meetings.		x	x
7	Steering committee terms of reference template and guide v1.1	Provides a template and guide to develop terms of reference for a project steering committee.		x	x
8	Outcome realization plan template and guide v1.1	Provides both a template and detailed guide on completing the template to assist in developing a project outcome realization plan			x
9	Risk management plan template and guide v1.1	Provides both a template and detailed guide on completing the template to assist in developing a detailed risk management plan			x
10	Project risk register template and guide v1.3	Provides guidance on setting up and maintaining a project risk register.		x	x
11	Project issues register template and guide v1.2	Provides guidance on setting up and maintaining a project issues register.		x	x
12	Quality management plan template and guide for medium projects 1.0	Provides both a template and detailed guide on completing the template to assist in developing a medium quality management plan.		x	x
13	Quality management plan template and guide for large projects	Provides both a template and detailed guide on completing the template to assist in developing a quality management plan for large projects.			x
14	Project phase review report template and guide v1.2	Provides both a template and detailed guide on completing the template to assist in developing a project phase review report			x
15	Project brief template and guide for very small projects v2.2	Provides both a template and detailed guide on completing the template to assist in developing a	x		

#	Project Template	Uses and Applications	Project size		
			Very Small	Small to Medium	Medium to Large
		project brief for very small project			
16	Project status report template and guide v2.4	Provides both a template and detailed guide on completing the template to assist in developing a project status report.	x	x	x
17	Project closure report template and guide	Provides a downloadable template which includes a guide to project review and closure.	x	x	x

Source: Compiled by the researcher based on information from Tasmanian State's eGovernment portal

Fact sheets

The Tasmanian State fact sheets contain explanations and guidance on how to develop and manage key aspects of a project. There are 19 fact sheets covering all project management planning areas.

- 1) Why Project Management Fact Sheet v1.2
- 2) Language Matters Fact Sheet v1.2
- 3) Project Documentation Fact Sheet v2.2
- 4) Document Control Fact Sheet v1.3
- 5) Managing Small Projects Fact Sheet v1.2
- 6) Managing Projects with Legislative Implications Fact Sheet v1.1
- 7) Checklist for Major Business Initiatives Fact Sheet v1.2
- 8) Conducting a Feasibility Study Fact Sheet v1.2
- 9) Project Sizing Fact Sheet v1.3
- 10) Project Estimation Fact Sheet v1.2
- 11) Developing a Business Case Fact Sheet v1.2
- 12) Steering Committee Nuts and Bolts Fact Sheet v1.2
- 13) Developing a Project Business Plan Fact Sheet v1.2
- 14) Developing a Risk Management Plan Fact Sheet v1.4
- 15) Developing a Project Communication Strategy Fact Sheet v1.2
- 16) Developing a Work Breakdown Structure Fact Sheet v1.2
- 17) Developing a Gantt Chart Fact Sheet v1.2

18)Developing a Milestone History Monitor Fact Sheet v1.2

19)Closing a Project Fact Sheet v1.3