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Front-End Project Governance

Choice of Project Concept and Decision-Making
– An International Perspective

Thesis for the degree of Philosophiae Doctor

Trondheim, September 2013

Norwegian University of Science and Technology
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Preface and Acknowledgement

This thesis has been conducted at the Norwegian University of Science and Technology, Department of Civil and Transport Engineering. The idea for this research initiated from discussions I had with my supervisor regarding ‘front-end project governance system’, and was developed in to a research topic based on published and unpublished results, and recommendations of various research at the Concept research program.

First and foremost, thanks to the Lord, for he is good. Then I would like to thank the University and the department for providing me with generous academic, administrative and financial facilities.

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people. From my first paper to the last sentence of this thesis, his support has been incredible. He is a really very helpful, cooperative and resourceful person. He was always welcoming when I visited him and happy to review my papers.

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Thank you to the scholars and practitioners who met with me from August 2009 – July 2013 and offered such thoughtful, candid reflections on different questions.

It is not easy to find words to express my love and acknowledgement to my lovely mother, ጌጤነሽ በየነ. You are my root, mom; if you had not been the kind of woman you are, I would never have reached the level I am at today. All that I am or hope to be, I owe to you.

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The last but the best goes to my wife, Hi mu, with the most profound thanks and love for her unwavering support. She has been a key figure throughout my career, providing the bedrock of both strength and courage. My daughter, *lille Solyana*, the last chapter of this study, this is a gift from your father.

Asmamaw Tadege Shiferaw

July 2013, Trondheim

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Paper 2

Shiferaw, A. T. and Haavaldsen, T. (2012). *Project Governance as a Critical Success Factor for the Development of Public Investment Projects*: Peer-Reviewed Proceedings of the 3rd International Conference on Construction and Project Management – ICCPM 2012, Dubai. Vol. 5, pp. 67-71. ISBN 978-981-07-3009-3, IACSIT Press. August 4-6, 2012.

Paper 3

Shiferaw, A.T., Klakegg, O.J, and Haavaldsen, T. (2012). Governance of Public Investment Projects in Ethiopia. *Project Management Journal. 43(4),* 52-69. PMI.

Paper 4

Shiferaw, A. T., Klakegg, O. J., and Haavaldsen, T. (2011). *Governance of Public Investment Projects in Ethiopia.* Peer-Reviewed Proceedings of the12th Annual International Conference (Challenges in the Era of Globalization). Edmonton, Canada. ISBN: 0-9765288-6-X, pp. 742-741; May 17- 20, 2011.

Paper 5

Shiferaw, A. T and Klakegg, O.J. (2012). Project Evaluation: Accomplishments, Shortfalls and Lessons Learned in Ethiopian Housing Development Projects. *Journal of Management in Engineering. ASCE 29(3), 289-301.*

Paper 6

Shiferaw, A. T. (2013). *Governance for Sustainability: The Dutch Experience for Transport Infrastructure Projects*. Submitted to Journal of Construction Engineering and Management ASCE.

Paper 7

Shiferaw, A.T. (2013). *The Dutch Project Governance System: Weaknesses and Improvements.* Peer-reviewed proceedings of the 7th Nordic Construction Economics and Organization 2013 conference. Trondheim, ISBN: 978-82-312-0273-0, Akademika forlag pp 203-214. May 12-14, 2013.

Paper 8

Shiferaw, A. T. (2013). *The Norwegian Project Governance System: Weaknesses and Improvements.* Peer-reviewed proceedings of the 7th Nordic Construction Economics and Organization 2013 conference. Trondheim, ISBN: 978-82-312-0273-0, Akademika forlag pp. 178-190, May 12-14, 2013.

Paper 9

Shiferaw, A. T. (2010). *Likely but Unintended Consequences of Budget Margins According to the Norwegian Quality Scheme.* Peer- Reviewed Proceedings of the Third International World of Construction Project Management Conference 2010. UK, Coventry University ISBN 978-1.84600-0409, pp. 55-62, October 20-22, 2010.

Abstract

The demand for new investment projects is increasing; however, the preparation of a large number of those projects has had practical problems and the relevant systems and processes have been criticized. According to recent publications, a lack of problem analysis, lack of alternatives, contested information/misinformation, and many pitfalls in the decision-making process are among the main causes for concern. Following on from this, improving the front-end project governance processes and systems has been the subject of increased attention as it may be seen as a requirement for the success of investment: by increasing the effectiveness of a project governance system, it will be possible to select and implement the right project concepts and make optimal decisions. However, achieving effective project governance and control has so far proved to be a challenge but important.

With this in mind, this thesis aims to increase the understanding of the front-end governance of public investment projects by exploring the experiences of different countries, and to contribute knowledge within the evolving debates on what to do to develop effective governance frameworks. The thesis looks at project governance processes and systems of three countries (the Netherlands, Norway and Ethiopia), aims to put forward good experiences through comparison and also hopes to answer the following questions: How do project governance systems and processes in these countries function to select project concepts and make decisions? What good experiences exist to improve the mechanism of choosing a right project concept and for making optimal decisions?

To answer these questions I have collected data from the three countries in person, primarily through interviews, questionnaires and case studies, as well as reviewing a range of secondary resources, namely documentation and scientific literature. Findings of the research indicate that the Netherlands and Norway have made efforts to improve the effectiveness of their front-end project governance systems. Both countries have tried to develop contemporary processes, procedures and project governance structures that aim to

develop the right project concepts; have developed stage gates for the quality assurance process; and have established go/no go approvals.

In these countries, many reforms have been introduced: more attention has been given to identifying the needs and priorities of stakeholders; obligatory requirements have been developed to search for alternative concepts; and *ex-ante* evaluation criteria have been identified and adopted. On the other hand, due to a positive economic outlook, Ethiopia is planning and implementing ambitious investment projects. There have been achievements in this regard but the findings of this research indicate that there are significant problems that are associated with the front-end project governance system of the country.

The project governance systems and processes of the Netherlands, Norway and Ethiopia have some similar features but needless to say they have differences too. This research provides project governance experiences of the three countries. In these experiences, regardless of them being good or bad, there can be lessons other countries can learn from. The good experiences that are identified in this study include: the Dutch experience to involve as many participants as possible in the early phase; the efforts to integrate different policy issues horizontally and vertically in the project preparation process; the use of IT infrastructure to get feedback from stakeholders; and the Norwegian system of outsourcing the review of project initiative documents to independent consultants.

In general, this study shows some similarities and some differences in the project preparation and decision-making processes, procedures and systems of the three countries. Expanding similar research to other countries is possible and can be an opportunity to learn from differences. In addition to this, I suggest that developing a system to translate the lessons into action and to track whether the designed effect has come as planned can be useful to improve the effectiveness of project governance system.

1 Introduction

Introduction

1.1 Boom of investment and the need for effective project governance

Over the past few decades, many major public investment projects have been implemented worldwide and there has also been a tidal wave of interest for new investments. Referring to the Economist (June 7, 2008: 80), Flyvbjerg (2009) describes the situation as the "biggest boom of investment in history". However, the preparation and the implementation processes of several of those projects have sparked debates and the effects of some of the projects have been a disappointment because they misfired and appeared as white elephants—alleged as a potential waste of citizens' money with negative social and environmental consequences (Williams and Samset 2010; Priemus 2007 and 2008; and Flyvbjerg 2009 and 2012). Conversely, initiatives of some of the investments have faced strong resistance from stakeholders, including moves and counter-moves that have led to a vortex because stakeholders believe that the economic benefits of the projects are outweighed by the damage caused to the natural environment and the degradation of the quality of life for society (Dias et al. 2011 and Tillema and Arts 2009). In some countries, such conflicts between different project stakeholders have polarized pro- and anti-project sentiment and triggered long and costly legal battles that only end when one side "wins" at the cost of the other. This type of combat between countering forces can sidetrack project promoters into wrong choices or lead inexperienced ones to kill good concepts (Miller and Lessard, 2008).

Following on from this, in recent years early-stage problem analysis, choosing the right project concepts and making the right decisions at the outset have become issues of steadily growing importance as these elements may be seen as requirements for the success of investments. In this regard, considerable research has been made by different researchers (Chapman 2012, Klakegg 2009, Miller and Lessard 2001 and 2008; O'Leary 2012; Priemus et al. 2008; and Samset and Volden 2012). In the UK, National Audit Office (NAO) and the Office of Government Commerce (OGC) have conducted research and listed eight common

causes of why investments can and do go wrong (UK Treasury, 2007): lack of a clear link between the project and key strategies/policies; lack of political commitment and ownership from senior management; lack of participation of stakeholders in the early stages of project development process; and inadequate resource and skill are at the top of the list. According to Garland (2009), in one way or another, these factors have connections with the effectiveness of a country's project governance system.

Project management scholars, Cicmil and Braddon (2012), Cook-Davies (2009), Flyvbjerg (2012), Garland (2009), Klakegg (2009), Miller and Lessard (2001), Priemus (2007), Priemus et al. (2008), Samset and Volden (2012), O' Leary (2012), Weaver (2007), Williams and Samset (2010), and Williams et al. (2009) recommend better project governance at all stages of a project development process as a requirement to solve the specified problems. Miller and Lessard (2001) made an important contribution when they reminded us of the need for effective governance systems which is important in the project shaping process. Therefore, for the successful development of projects, identifying and analyzing the problem, developing alternative solutions, identifying the possible impacts of projects, and good decision-making are vital (De Bruijn and Leijten, 2008).

In recent years, it seems that the need for better project governance is gaining in maturity. The idea is that with an effective project governance system, a project initiative could be implemented successfully while ineffective project governance could position a project to failure (Garland, 2009). However, achieving effective project governance and control remains difficult (Weaver, 2007). Therefore, increasing the understanding of the front-end governance of public investment projects of different countries (processes, systems and their effects) could be helpful within the evolving debates on what to do to develop more effective governance systems (Samset et al. 2006, Samset 2008, and Williams and Samset 2010).

This study is the result, in part, of this recommendation and the rising importance given to front end project governance system in many countries. The study provides an international

dimension by investigating different processes, procedures and frameworks that have been adopted in different countries for the selection of project concepts and decision-making. The study puts considerable stress on inter-country variation and compares the project governance systems in the Netherlands, Norway and Ethiopia. However, I do not advocate any particular system. The intension is to learn how different systems work and to see what lessons can be drawn from the different systems that are used to select project concepts and to make decisions.

1.2 Sustainability in the early project development process

In all too many cases, it has been difficult to define project success, because as Pinto (2010), and Samset and Volden (2012) describe, success is a highly complex and aggregated measure. Therefore defining what success is, and measuring it is a bit tougher (Müller and Turner, 2009). For the purpose of this study, I would like to define the success of projects at a more strategic level as implementing projects according to the need and priority of the users and the affected parties, considering the sustainability of the project's positive effects, and to win public approval. Failure of projects means failure to deliver all the planned benefits sustainably and failure to win public approval. Therefore, meeting the demands of the public and ensuring the sustainability of the positive effects of projects are important criteria in the process of developing successful projects (Klakegg, 2010).

The development of successful projects is the result of multiple and interdependent episodes (Miller and Lessard, 2008). The issue of sustainability is one of the most important issues that must be addressed in this process. Some scholars argue that it is difficult to ensure the sustainability of a project's effects at the front end of the process (Klakegg 2010; O'Leary 2012; and Samset 2003). Of course it might be difficult to assess the sustainability of a project's effect in the early phase. But it is advisable to study the requirements of sustainability up-front and to consider them during the project development process, because building adaptive capacity is a prerequisite for sustainability. This includes bringing more proactivity as a way of dealing with problems that affect the socio-

economic systems and the environment. In this regard, project promoters are required to specify sustainability requirements that must be met if the project is to have sustainable effects in the long term. Sustainability requirements that need to be considered in the early stages of the project development process should include policy issues, economic and financial aspects, socio-economic aspects, institutional aspects and environmental aspects (Organization for Economic Cooperation and Development [OECD], 2006).

I posit that identifying and considering sustainability requirements in the early phase of a project development process is essential for fostering agreement from all stakeholders in relation to the project's initiatives. In this study, sustainability is studied as an important criterion for selection of the right project concept. The aim is to study sustainability as a concept and to explore the potential advantages of sustainability requirements in the early phase of the project development process based on the experiences of different project governance systems.

1.3 Relevance in the early project development process

OECD (2006) defines project relevance as a criterion to assess the needs and usefulness of a project. It is a principle to decide whether a project initiative is prepared and implemented according to stakeholders' interests. This means a project would be relevant if it is selected and implemented considering the wishes of the owners, the users and the countering forces. In addition, the extent of the objectives of an initiative aligned with the needs and priorities of the owners, the users and the affected parties, their achievability and their alignment with the development policies and strategies of the area are conditions that must be tested to ensure the relevance of projects.

Therefore, in the development of public investment projects particularly in the front end phase, ensuring the relevance of projects is as an important requirement (Klakegg, 2010). Several projects have failed in this wider perspective because they are not required by or are the priority of the public, or the objectives of the projects are not aligned with the

development strategies of the area. This means that important stakeholders of the project initiative were not consulted about their needs and priorities at the initial stage, and most of these projects were initiated and developed using top–down strategies of project promoters.

To ensure the relevance of projects at the front-end, the participation of relevant parties during the project preparation and decision-making processes is vital (Deelstra et al., 2003) because participatory project preparation and decision-making is a means to getting the relevant information about the problem, the needs and priorities of the stakeholders, the possible alternative solutions, and uncertainties. Therefore creating a system to identify and prioritize nationally significant projects is required, focusing resources on the highest priority investments that deliver the most benefits in line with sustainability. Through participation, information could be gathered from different participants and flow to the decision-makers and then a project study will start based on consensus between important stakeholders. In the case of public investment projects, the participants could be the national government, provinces, the public or a variety of actors (e.g. market parties, environmental and social activities and other private parties) that have the resources and means of power that can be decisive for the success of projects. Participation also creates a state of ownership which can ease implementation and ultimately lead to the success of projects. Therefore, the project governance system should have a means to include all the relevant stakeholders from the beginning so that they have a say about their interests and can resolve their differences before the final decision on a project concept.

This study focuses also on governance requirements that are necessary to ensure the relevance of projects, because I believe that in the early phase of the project development process it is very important to know how the wishes of users or local inhabitants and the opposition are addressed, and how the objectives of a project are aligned with policies and strategies of national governments. How and when relevant stakeholders get a chance to have a say on project initiatives and how different governance systems check the alignment of project objectives with strategies are important queries.

1.4 Structure of the thesis

As shown in Figure 1.1, this thesis is structured in eleven sections. The first section introduces the rationale of the research, the need for effective project governance, and presents sustainability and relevance as requirements for the successful development of public investment projects. Chapter two introduces the scope and the limitations of the research. The scope part describes areas covered in this research and where the information that is used specifically comes from. While limitations part describes factors, usually beyond the researcher's control, that may affect the findings of the research and how the findings are interpreted. Chapter three presents the research methodology. In this part, the research process and the study design are discussed. Chapter four discusses the conceptual background of the study. In this part, governance, project governance, effective project governance, governance requirements for relevance and sustainability are defined and discussed. Chapter five introduces the Netherlands, Norway and Ethiopia and presents the summary of the project governance systems in these countries. Chapter six, seven, and eight provide the results of the research and discuss on the choice of project concept, information development and decision-making, and on relevance and sustainability issues respectively. Chapter nine presents lessons and good experiences drawn from the three countries. Chapter ten focuses on the validity of the research. Finally, the conclusions, recommendations and the contributions of the research are presented in chapter eleven.

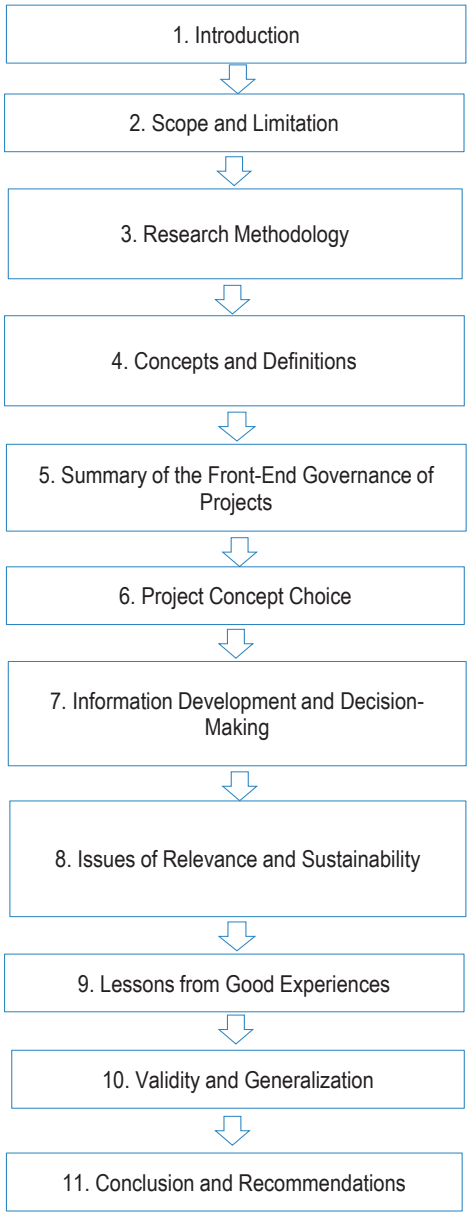

Figure 1.1: Thesis structure

1.5 Research problem, purpose and questions

Problem definition is the first and most essential step in research because it provides the focus and direction for the entire research (Polonsky and Waller, 2011). Similarly Sekaran (2003) describes the importance of problem definition: "no amount of good research can find solution to the situation, if the critical issue or the problem to be studied is not pinpointed clearly". Taking this into account, I started this research by defining the research problem statement. Based on the research problem statements, the research purpose and the research questions were then developed.

Research problem statement:

As described in section 1.1, for decades the provision of successful major public investment projects has been a challenge whether in developed or underdeveloped countries. The causes for low success rates of projects are interrelated and most of them are believed to be facets of project governance. Particularly poor front-end planning and decision-making may have made the success of those projects much harder. This study looks into the front-end project governance systems of three countries at the national level, principally the project concept selection processes and decision-making procedures.

The intention is to identify different processes and procedures and frameworks of the countries' front-end project governance and to derive lessons to inform better project concept selection and decision-making. In order to do this, the following two sub-problem statements are developed.

Sub-problem 1: Identify processes, procedures and frameworks that are developed in the Netherlands, Norway, and Ethiopia in order to select project concepts and to make decisions.

Sub-problem 2**:** Derive lessons from the project governance experiences of the Netherlands, Norway and Ethiopia to inform better project concept selection and decision-making.

Research Purpose

The purpose of this study is to enlarge understanding of front-end project governance systems and to share experiences on how project concepts are selected and how decisions are made in different project governance systems. The research does not focus heavily on project governance theory but focuses on the processes, procedures and frameworks that have been developed in the selected three countries. To achieve this purpose, the research focuses on:

- Understanding key concepts of project governance systems
- Studying the front-end information development processes in the Netherlands, Norway, and Ethiopia
- Studying information quality control systems in the Netherlands, Norway and Ethiopia
- Studying decision-making procedures in Norway, the Netherlands and Ethiopia
- Comparing project preparation and decision-making processes of the Netherlands, Norway and Ethiopia, and drawing lessons from experiences.
- Presenting and communicating key research results.

Research questions

1. What are the important requirements, processes and frameworks that are developed for selecting project concepts and for making decisions? (in the Netherlands, Ethiopia and Norway)
    1.1 Do the established processes and structure of the project governance framework help to select the right project concept?

1.2 Do the decision-makers, at the higher level, receive or demand relevant information about the problems and the alternative solutions before they make decisions on project concepts?

1.3 Are relevance and sustainability of projects considered as key criteria for selecting a project concept and for making decisions?

2. What can we learn from the project governance frameworks of Netherlands, Norway and Ethiopia, which may apply to other countries?

2 Scope and Limitation

2. Scope and Limitation

The scope and limitations of the research *Front-end project governance: Choice of concept and decision-making–an international perspective* are described as follows:

The project development process covers the life of the project as it moves through different phases from problem analysis to completion and operation of the project. It is a very wide topic to cover in a single piece of academic research, therefore the scope of this research is designed to cover only part of the front-end phase of the project development process. According to Samset (2009), the front-end phase of the project development process covers areas from project commencement when a project concept is conceived until the final decision to finance the project is made. However, this study does not cover all areas of the front-end phase as Samset defined. As illustrated in Figure 2.1, the study covers only part of the front-end phase: the initiation and exploration stages. It covers processes and procedures from the initial problem analysis and needs assessment to the choice of project concept and the decision-making associated with that. This means the study does not cover the project study, project implementation and post-project phases.

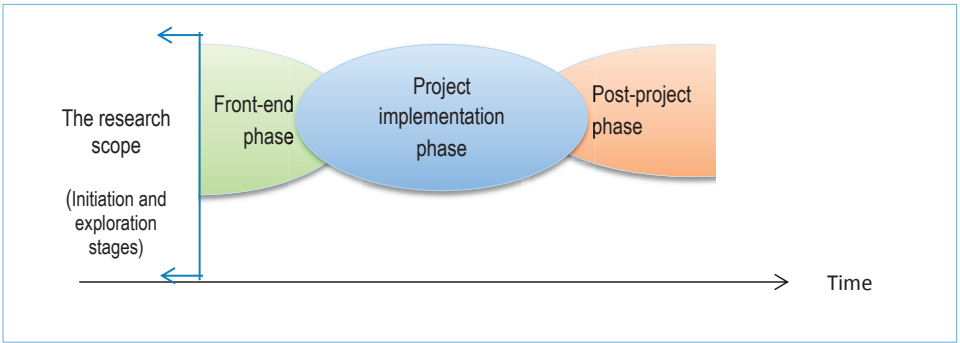

Figure 2.1: Project different phases and scope of the study (time dimension)

The research is framed around national studies, and it is all about the governance of projects, in particular related to the current rules, processes and procedures that are applied in the three countries. The study is not about managing projects nor does it consider project management issues.

The study has an international perspective because it covers three different countries (geographically, economy, politics etc.) It covers the front-end project governance experiences in the Netherlands, Norway, and Ethiopian. It would be good to include more countries but there was a time limitation, and studying more countries could be done through intensive research rather than academic study.

The word "project" includes many issues and is a massive term. According to project management institute [PMI] (2008) project is "a temporary endeavor undertaken to create a unique product or service…" The goal of a project could be splitting an atom, producing a new cell phone or developing an atomic bomb or many other things. The present study looks purely at public investment projects, particularly major construction projects that are handled by the national governments. The study does not consider small projects.

This study has no large sample size. But I do not consider the sample size of this research as a serious limitation, because acquiring more data does not necessarily lead to more information (Huberman and Milles, 1994). I used different data collection methods and a purposeful sampling strategy, in case if there is any shortcomings related to the sample size. Language is also considered as limitation of this research. In the Netherlands and Norway, there are research studies that are related to the topic of this study, but the research is conducted in Dutch and Norsk. I am limited to being able to read all the data from these studies and interpret them. As a solution, I have focused on English publications, but in some cases, I have got translation services from my Dutch and Norwegian colleagues. Shortage of literature on project governance is also limitation. Similarly, lack of prior research on the topic is a limitation for this research, particularly in Ethiopia, but previous studies in the Netherlands and Norway are used as a prelude.

3 Research Methodology

3. Research Methodology

Research is a process of steps that are used to collect and analyze information in order to increase our understanding on the issue about which we are concerned (Creswell, 2005), and it should be conducted in a systematic way to gain knowledge (Belbin, 1981). This chapter draws a picture about the manner in which this research has been conducted. It describes the research process, the research design, and the methods I choose to conduct the research. But research methodology is not a list of methods and techniques. Rather it is a careful and explicit account that reasons out the suitability of the research approach chosen: the research design, methods and techniques adopted (Jankowicz, 2011). Therefore, as Jankowicz describes, specifying the methodology and giving reasons why a particular method was adopted are good research practice. To meet this requirement, considerable attention has been paid to methodology: explicit and deliberate choice of approach, method and techniques; and I justify why I select them.

3.1 Research process

Before proceeding to the details of the research methodology and techniques, it seems appropriate to present a brief description of the research process. According to Jankowicz (2011), the research process of any research program is divided in to two: the project process and the research process. The project process covers all the activities in which our research work draws directly on skills we already possess, and the second phase contains much that is new, at least not obvious at first glance. On the other hand, the research process consists of a series of closely related actions or steps necessary to effectively carry out research. Figure 3.1 illustrates an overview of the actions and steps involved in the research process of this study.

First the research problem statements are defined from literature (conceptual literature concerning the concepts and theories of project governance, and empirical literature consisting of studies made earlier which are similar to this research theme). According to Elis and Levy (2008), the research problem is drawn from the general domain drawn by the

topic, and the identification of a problem is a cornerstone of any quality of the research. In this case, results and recommendations of various research at the Concept research program and several publications related to project governance and project management are used as an input to develop the research problem statements.

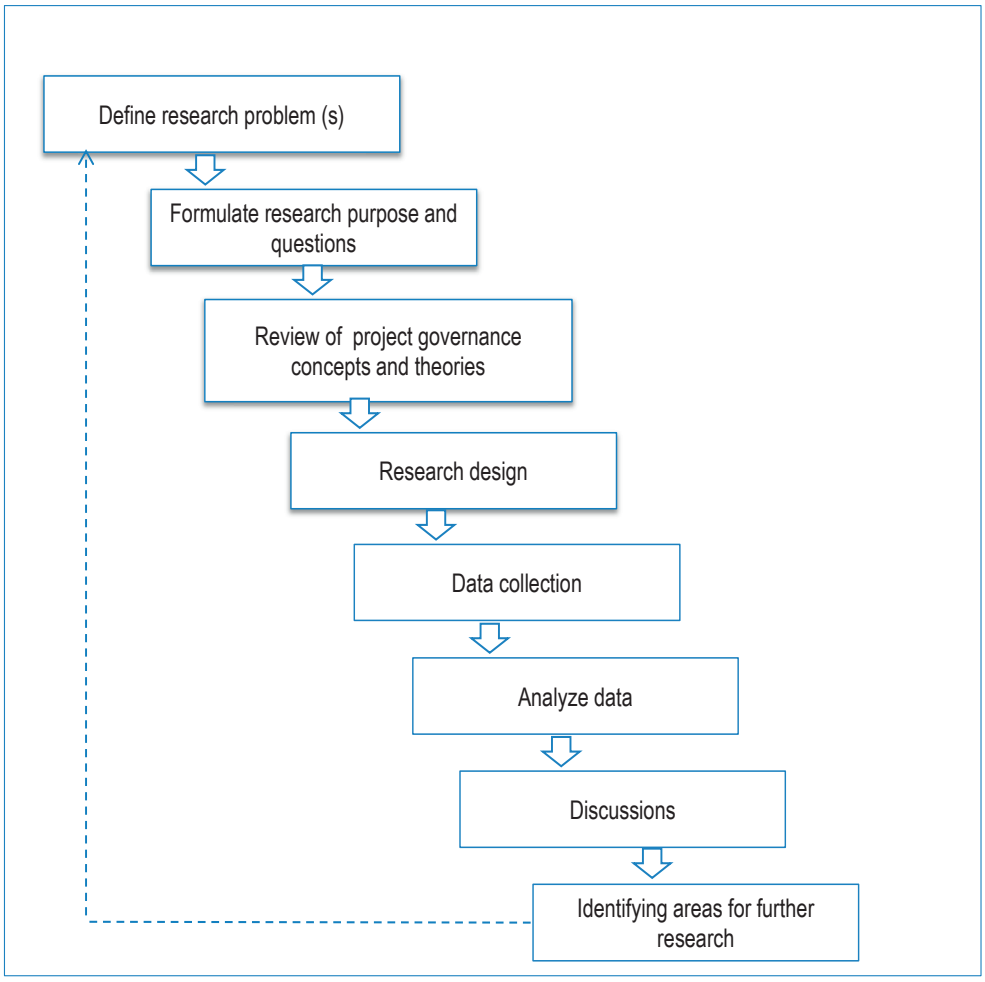

Figure 3.1: Steps involved in the research process

Secondly, the research purpose and the research questions are developed. Research purpose is the major intent or objective of the study used to address the problem (Creswell, 2005) and it is operationalized by the research questions. According to Creswell (2005), research questions narrow the research purpose into specific questions that the researcher would like to answer or address in the study. As shown in the introduction chapter, in this study research purpose is narrowed to two basic research questions.

After that, research instruments are chosen and the study analysis and the platform for the research strategy are identified. Then data are collected from the three countries (Ethiopia, the Netherlands and Norway). Data are collected based on the research questions and the purpose of the research. According to Robson (2002), the data that the researcher collects depend on the research questions and objectives which have given a particular focus to the researcher's observation.

3.2 Research design

The research design is the blueprint for fulfilling the research objectives and answering questions (Cooper and Schindler, 2008), and it provides a framework for the collection and analysis of data (Bryman and Bell, 2007). As mentioned in the introduction part, this study is part of an ongoing research at the Norwegian University of Science and Technology, Department of Civil and Transport Engineering and the Concept research program. Therefore, the study is not designed as the resolution of a one-off problem; rather it is designed to contribute knowledge to the continuing improvement in our understanding and sensitivity of project concept choice and decision-making. This research is thus designed to view project governance systems whole pictures of three countries. It is deliberately framed around national studies of the Netherlands, Norway and Ethiopia, not look at the details of projects.

The choice of research countries was based on the availability of contacts, the familiarity with the languages, finding cases, and full availability of English language documentations.

The Netherlands is selected because the Dutch planning system is widely acknowledged in the international project management literature, due to the link between researchers in the Netherlands and Norway, and the availability of English publications. Ethiopia is selected because for the last few years the country has developed several major public investment projects and it is of interest to include a case from a developing country. In addition, Ethiopia is my home country and it is believed that collecting data from one's home country would be relatively easy. The Norwegian system is included because many scholars have studied the Norwegian front-end project governance system (Samset et al. 2006; Klakegg 2010; Klakegg et al. 2009; Magnussen 2010; Christiansen 2011; Concept undated; Samset 2008; Olsson 2006; Klakegg and Haavaldsen 2009), and there are publications in English. Furthermore, Norway is hosting the researcher and the probability of getting reliable data from Norway was believed to be high.

Data collection is an important aspect of any type of research study (Saunders et al, 2007). Therefore, to collect relevant data regarding the front-end project governance systems of the three countries, I have defined a research framework. According to this framework, the research work starts with determining the research problem statements (already discussed in chapter one). Then based on the research problem statements, the research questions are prepared, then the research questions are disaggregated and then both primary and secondary data are collected from the three countries.

Primary data is collected for the specific purpose of the research, and secondary data is collected from other sources (Saunders et al, 2007). According to Robson (2002), the choice of the data collection method is critical, and it depends on the research questions and objectives, variables to be measured, the source and the resources available. In this particular research, after knowing the nature of research questions and objectives; examining the variables and the sources, and the resources available in the research countries, I plan to use both primary and secondary data sources and three different data collection methods, because as Babbie (2008) describes a good study design uses more than

one research method, taking the advantage of their individual advantage. The data collection methods that are used in this research include:

1. Examination of extensive documentation provided by the respective governmental offices, records of meetings of officials, and an extensive literature review;
2. Case studies relevant to the study; and
3. Interviews (face to face and telephone), and questionnaires

The primary data is collected using questionnaires, case-studies, previous speeches of officials, observation, and semi structured interviews as well as discussions with stakeholders in the selected three countries. The secondary data is collected from documentations of the three countries, scientific literature, periodicals, media sources and other sources based on the primary sources.

I prefer to use three different data collection methods, because the use of two or more data collection methods and the triangulation of data from these sources could increase the study accuracy and credibility (Denzin1978; Creswell and Miller 2000). Triangulation is the use of two or more sources of data or data collection methods within one study to facilitate the validation of data through cross verification, and it is a preferred approach in qualitative research (Bogdan and Biklen, 2003). This research is mostly a qualitative research and the use of different data collection methods and triangulation is advantageous for validation of data— quality and trustworthiness of the research.

Denzin (1978) identifies four basic types of triangulation. The first one is data triangulation and it depicts the use of multiple data sources in the same study; the second one is theoretical triangulation, which is the use of multiple theories in the interpretation of phenomenon; the third type is investigator triangulation, which is the use of more than two researchers in an investigation; and the fourth type is methodological triangulation. Methodological triangulation is preferred for this research, because methodological triangulation involves using two or more methods to gather data, such as interviews,

observations, questionnaires, and documents, and these methods are the preferred data collection methods for qualitative research (Bums and Grove, 2005).

There are two types of methodological triangulation that are used to achieve the validity of the research: 'between-method triangulation' — combining and using both qualitative and quantitative methods in studying a single phenomenon; and 'within-method triangulation'– – cross checking for internal consistency (Hussein, 2009). I prefer the 'within-method' triangulation, because I do not have enough qualitative data to conduct 'between-method triangulation'. Figure 3.2 illustrates 'within-method' data triangulation of this research. The data used for analysis of this research are developed based on the methodological triangulation of different data sources: questionnaires, interviews, and review of documentation.

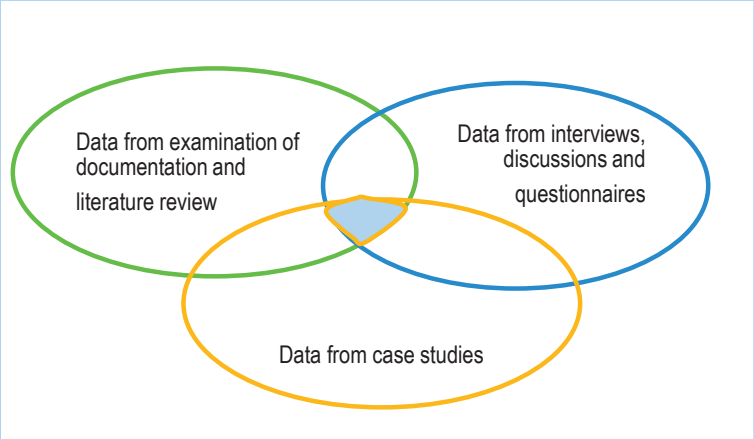

Figure 3.2: The three data collection methods and methodological triangulation

This research is designed as a mixed research (qualitative and quantitative) but mostly it is a qualitative research. It is conducted based on both inductive and deductive approaches, depending on the cases examined (for details refer papers in part two of this thesis). The value of qualitative research needs to be argued for and justified against established criteria.

In this study, I have planned to demonstrate the value and integrity of the research based on methodological triangulation, and using the criteria credibility, criticality and integrity.

Data collection starts with study of different relevant documents. A large body of literature has been reviewed on the general domain of the research (project governance), together with other fundamental theories underpinning the main aim of the research. In this case, the aim is to collect data about the project governance systems of the Netherlands, Norway and Ethiopia. This is then followed by self-administered questionnaires distributed to relevant stakeholders and it is collected in person. Then one-to-one site and telephone interviews are conducted with key players of the project governance systems of the selected three countries. Then study reports of the three countries are prepared. Finally a comparative analysis is made and lessons drawn. The framework of the research strategy is illustrated as shown in Figure 3.3.

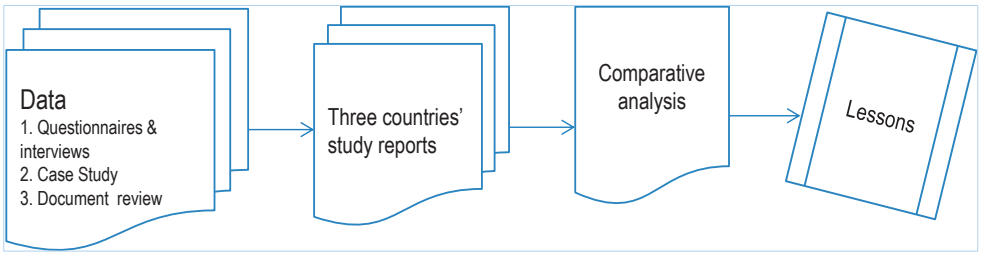

Figure 3.3: Framework of the research strategy

Questions for the interviews and questionnaires are prepared based on the research questions. As I discussed in the introduction part, the research questions are developed based on the research objectives and considering the suitability of the research methods that are selected to be deployed in the three research countries. Addressing the key tasks of identifying the front-end project governance experiences of the Netherlands, Norway, and Ethiopia is the priority of the research.

I traveled to Ethiopia for data collection from the last week of July 2010 to the last week of August 2010 and for the second time from the 1st week of February 2011 to the 1st week of

April 2011. In these periods, I interviewed 50 professionals: public officers, planners, researchers, market parties, and a few people from the general public. There were also two surveys, and a total of 72 respondents are participated.

Similarly, I traveled to the Netherlands (1st week of July 2011 and 3rd week of November 2011) and there were also several electronic communications and interviews with planners, public officers and researchers in the Netherlands. 12 key professionals are participated in the interviews, and questionnaires, and most of the respondents are interviewed at least two times.

Over the last four years, I have had several interviews and discussions in Norway. Different research results of the Concept research program, reports and quality assurance documents of the Norwegian project governance system, and PhD studies on the Norwegian project governance system are studied and used as source of evidence.

In the first phase, the project governance system in Ethiopia was studied. As discussed above, questionnaires, semi-structured interviews, extensive document reviews and a case study were the preferred research instruments to collect data. In the second phase, the project governance system of the Netherlands was studied, based on interviews, document reviews and case studies. In the third phase, information about the Norwegian project governance system was reviewed from previous research for the Concept research program and other studies relevant to the theme, and there were also interviews and discussions with Norwegian researchers. Then important findings were drawn based on the research questions and according to the research objectives, and finally comparisons were made. Figure 3.4 illustrates the general roadmap of this research.

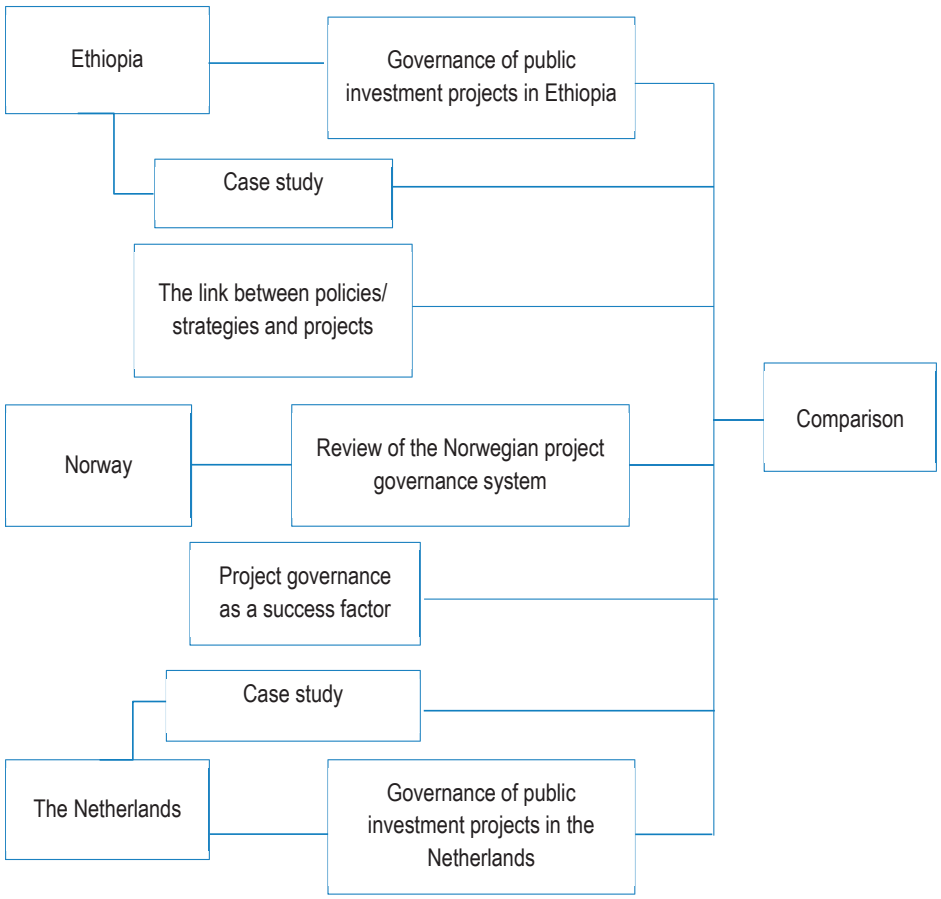

Figure 3.4: The research approach roadmap in brief showing the research countries, planned research approach and comparison

In parallel, preparing and publishing research results in internationally recognized journals and peer-reviewed conference proceedings were part of the whole research process. The papers were prepared based on the data from the three countries and organized as shown in Figure 3.5. In this regard, nine articles were prepared and published. Table 3.1 provides a list of the papers and their objectives, and Figure 3.5 illustrates the organization of the thesis and the papers' connection to demonstrate the full picture of the study.

Table 3.1: List of papers published on the research theme and their objectives

	Paper #	Title	Objective
General papers on project governance	1	Linking policies to projects: The key to identifying the right public investment projects	This article discusses the project governance system as a means to linking policies to projects. The article looks at governance of public investment projects; the importance of the project governance system in selecting the right projects; and factors that could affect the implementation of the project governance system.
	2	Project governance as a critical success factor for the development of public investment projects	This paper provides a comprehensive overview of the front-end project governance system and demonstrates the front-end project governance systems of the Netherlands and Norway. Further, the paper discusses the front-end project governance system as a critical must-have feature for the successful development of public investment projects.
Project governance system in Ethiopia	3	Governance of public investment projects in Ethiopia (a)	The purpose of this article is to map and review the governance of public investment projects in Ethiopia. It also identifies the most important front-end challenges of public investment projects in the country.
	4	Governance of public investment projects in Ethiopia (b)	This is similar to paper three but it is a small conference paper. The purpose of the article is to investigate the project governance system in Ethiopia and find the challenges in relation to that.
	5	Project evaluation: Accomplishments, shortfalls and lessons learned in Ethiopian housing development projects	This is a case study, the purpose of which is to assess the efficiency, effectiveness, relevance, sustainability and impacts of housing development projects in Ethiopia in order for lessons learned to be drawn upon in the selection, design and implementation of future projects, particularly those in Ethiopia.

	Paper #	Title	Objective
The Dutch project governance system	6	Governance for sustainability: The Dutch experience for transport infrastructure projects	This paper explores the rules and framework developed for transport infrastructure planning in the Netherlands. It discusses the Faster and Better decision-making programs and presents a number of lessons on the theme: How the Dutch transport infrastructure projects' governance framework is reformed with respect to the governance requirements for sustainability? What can we learn from this reform to inform better infrastructure planning and decision-making?
	7	The Dutch project governance system: Weaknesses and Improvements	This paper investigates the most recent efforts of the Dutch government that have been made to improve the front-end governance of major infrastructure projects (project concept selection and the decision-making processes and procedures).
The Norwegian project governance system	8	The Norwegian project governance system: Weaknesses and Improvements	This paper reviews different findings on the Norwegian project system and discusses questions such as: Does the quality assurance (QA) system in Norway help the project concept selection process? Do decision-makers, at the higher level, receive relevant and reliable information about the problems and alternative solutions? Does the arrangement of the QA system address the issues of relevance and sustainability of projects?
	9	Likely but unintended consequences of budget margins according to the Norwegian quality scheme	This paper studies the likely but unintended consequences of budget margins based on the Norwegian QA system.

Finally, comparisons were made between the front-end project governance frameworks of the Netherlands, Norway and Ethiopia. The comparisons were made based on requirements that are important to select the right project concept and to achieve optimal decisions. The requirements are listed in the introduction and chapter four of this study. The nine papers listed in Table 1 are linked as shown in Figure 3.5 to show the platform of the research strategy.

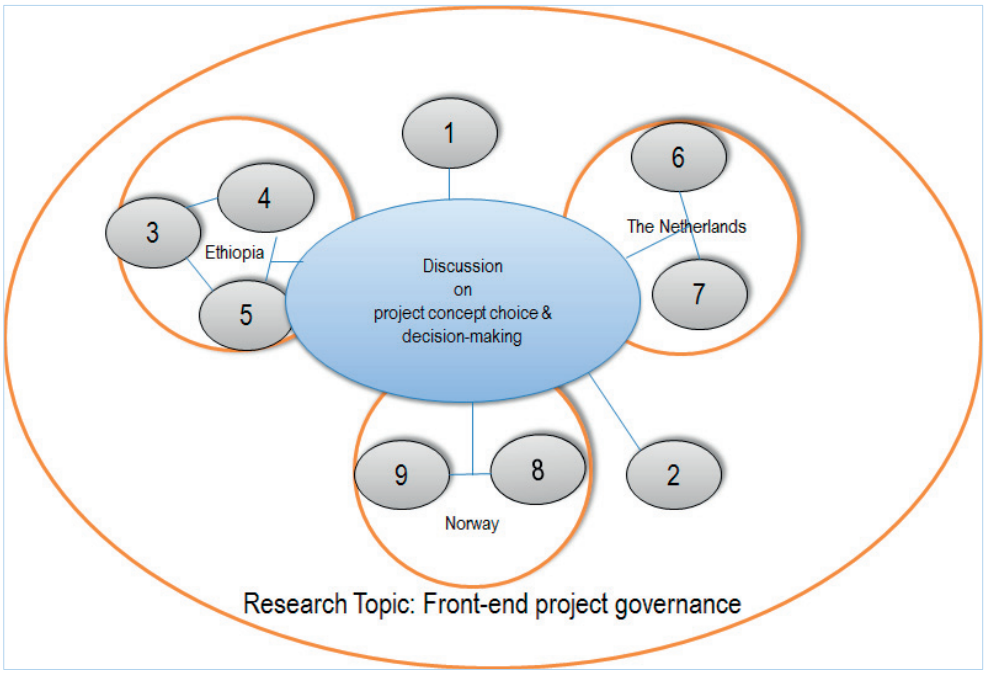

Figure 3.5: Platform of the research strategy showing the general domain, the countries studied, and the numbers from 1 to 9 indicate the articles published and their positions indicate the focus of the articles.

4 Concepts and Definitions

4. Concepts and Definitions

4.1. Governance

Governance is a sensitive word that has been defined in different ways by different organizations and authors with many divergent views. The Organization for Economic Commission and Development (OECD) (2006), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) (2011), World Bank (1991), World Bank (undated), Kaufmann et al. on behalf of the World Bank (2008), Asia Development Bank (ADB) (1995) and the Australian National Audit Office (ANAO) (2003) have defined governance according to their institutional interest. Similarly, different authors have also defined governance in a different manner. In this section, some selected definitions of governance that are relevant to this study will be examined and discussed.

OECD (2006) defines governance as: "……the process by which decisions are made and implemented (or not implemented)."

The World Bank (undated) defines governance as: "The process by which authority is conferred on rulers, by which they make the rules, and by which those rules are enforced and modified".

Thus, governance is the process of decision-making where the decision is made according to rules by the authorities. It is about how to take actions through various types of interactions (deliberation, negotiations, self-regulations or authoritative choice) (Kemp et al., 2005). Therefore, understanding governance requires an identification of the authorities and the rules, as well as the various processes by which they are selected, defined and linked together and with the society generally. This implies that depending on the characteristics of authorities, the type of rules and various processes, there could be different forms of governance and political processes. However, as Cadbury (2002) describes, whatever form it takes governance should be a holistic process and the goal should be meeting the interests of the stakeholders as far as possible, and its primary

function should be creating sustainable success (Mosaic undated; Brownill and Carpenter 2009; and Jones and Evans 2006). This means that meeting the interests of stakeholders and creating sustainable success are the two important requirements to help judge the effectiveness of a governance system.

4.2 Project governance

Project governance is the subset of governance, but it focuses on governing projects', programs' and portfolios' processes. O'Leary (2012), Garland (2009), Klakegg (2009), Association of Project Management [APM] (2006), Turner (2006, 2009), Clarke (2004), PMI(2008), Müller (2009), (Mosaic, undated), Narayanan and DeFillippi (2012) and others have all defined project governance in their own terms. In those definitions, project governance is presented with multiple interpretations but most describe project governance with processes, models, structures and principles that are established to choose projects that support the strategy and to achieve the objectives of projects/programs bringing together different episodes of a project-shaping process from choosing the project concept to execution and operation issues.

Particularly, the definitions given Garland (2009) and Miller and Lessard (2008) are aligned with the interest of this study. For instance, Garland defines project governance as: "the process of project decision-making and the framework, models or structures that are established to enable this". Similarly, O'Leary (2012) describes project governance as a means to provide the management structures, policies, processes and roles and responsibilities in the process to select and implement successful projects. In these definitions, project governance is described in relation to different activities which comprise processes, procedures and structures that are used by project promoters to develop and analyze information, to select the right project alternative, to make optimal decisions and to implement them successfully. This implies that to understand project governance it is very important to understand the various processes, structures, principles and the different episodes that are developed to resolve problems and arrive at a closure.

According to Johnston and Evans (2006), governance structures are mechanisms that are necessary to achieve good governance, and authorities make decisions according to the framework provided by the project governance structures. The structure of project governance is useful to set out lines of accountability within the authority; to give the stakeholders the chance to participate effectively (collaboration, dialogue and interaction) in the project development process; enable the authority to deliver the required outcome by providing resources, giving direction, enabling trade-offs and timely decision-making; and to provide access to independent advice, support project reporting and information dissemination to the stakeholders, and provide framework project disclosures (UK Treasury, 2007).

In contrast, processes and procedures of a project governance system are mechanisms that are used to assist decision-makers. Governance principles are a basis for the design of project governance models and help to solve problems that result from ineffective project governance (Garland, 2009). Projects are paths of interdependent shaping episodes, therefore identifying and understanding those episodes, processes, procedures and principles in detail goes a great deal towards understanding project governance (Miller and Lessard, 2001). The various processes and procedures in project-shaping efforts help to refine, reconfigure and eventually agree on acceptable concepts and continue on to include the implementation and operation phases (Miller and Lessard, 2008). For instance, in the early front-end phase, from initial hypothesis to formal contracts and funding decisions, there are various processes that characterize the progression of projects. These include but are not limited to problem analysis, alternatives evaluation and ranking, negotiations between stakeholders and concrete moves to meet the expectations of stakeholders as well as choice of a project concept.

However, it is important to note that the structures and the various processes available do not make decisions by themselves; rather, they provide the framework through which decisions on projects can be made (O'Leary, 2012). According to O'Leary, this framework is an organizational capability to make the right decisions at predefined key decision points

in the life cycle of a project. The framework provides the management structures, processes, set of policies and roles and responsibilities to ensure the selection of the right project concepts, the alignment of strategies/policies with the right project objective and the key go/no go decision points.

From this description, one can understand that the selection of the right projects and the optimal decisions depend on the framework and the set of policies, structures, processes and other supporting practices that are developed to enable this as well as the culture of the decision-makers at different governance levels. In other words, the selection of the right projects or the effectiveness of the decision-making process depends on the effectiveness of the project governance framework (Shiferaw and Klakegg, 2012). This begs the questions "what does the right project mean" and "what does effective project governance mean".

The answer is that all too often what is right for one stakeholder may not be right for the other stakeholders. The actors involved, the criteria applied, the methods and the process used, the proposals submitted and the decisions made determine the rightness of the project (Sieber and Braunschweig, 2005). On the one hand, Cooke-Davies (2009) recommends front-end alignment of projects to business strategy as a requirement for doing the right project. On the other hand, Klakegg (2009) describe the right projects based on the alignment of the project objectives with the needs and priorities of the stakeholders and the sustainability of the project's positive effects as main requirements. Weaver (2007) and Garland (2009) recommend the establishment of effective project governance for the selection and implementation of the right projects.

Looking at the above descriptions of right projects, it is the responsibility of governance to improve the project preparation and decision-making towards shaping the right projects. This means the selection and successful implementation of the right projects depend on the processes, rules and structures of the project governance system, and how these elements of a project governance system support the project selection, decision-making and implementation processes, namely the effectiveness of the project governance system.

4.3 Effective project governance

Weaver (2007) defines effective project governance as a means to select the right project concept, make the right decisions and deliver the selected project in a way that meets the expectations of key stakeholders. In doing so, it includes activities like analyzing the trigger problem, evaluating the users' needs and priorities, evaluating the benefits and predicting the possible impacts of alternatives, checking the alignment of project objectives with government policies and strategies and allowing the involvement of relevant stakeholders in the project preparation and decision-making processes.

In contrast, as described in the introduction part of this study, there are several problems that result in failure of projects where ineffective project governance might be a significant factor. Some of the problems that arise would have been managed and dealt with if effective project governance systems had been implemented. The extent to which a project governance framework could solve those problems is one of the measures of its effectiveness (Garland, 2009).

Weaver (2007) summarizes the effectiveness of project governance as setting the "right objectives", then asking the "right questions" and making the "right decisions". In doing so, improving the effective project governance requires:

- Specifying the distribution of rights and responsibilities among different stakeholders
- Defining the rules and procedures for making decisions
- Defining the strategic framework needed to select the "right" projects to undertake
- Building the right set of skills
- Encouraging the efficient use of resources
- Monitoring performance
- Requiring accountability at all levels for the stewardship of those resources.

4.4 Project governance framework

Miller and Lessard (2008) define the project governance framework as setting a structure: a set of decision-making processes and methods for collecting and analyzing information to ensure that creativity and discipline are considered. Similarly Klakegg et al. (2009) define the project governance framework as "an organized structure that is established as authoritative within the institution, comprising processes and rules established to ensure projects meet their purpose". From these definitions, one can understand that the project governance framework is a decision-making structure that embraces predefined processes, procedures, principles and rules that are useful for selecting the right project option and doing it right, and then achieving the project's objectives.

The project governance framework also enables scrutiny at the right level and at the right time; helps to ensure the involvement of stakeholders' interests from the beginning; and allows advice and consultation from independent sources for best practice, such as legal, accounting, policy and financial issues (UK Treasury, 2007). This implies that the effectiveness of a project governance framework depends on how the governance structure and the various processes and systems support the decision-making process (O'Leary, 2012), and how the key elements of a project governance are organized in a framework to select and implement the right project concept and to make the optimal decision.

In the case of public investment projects, in order to challenge the problems related to projects' successes, public sector bodies are required to develop and put in place better project governance frameworks. The arrangement should focus on the key issues that are related to the selection of the right project concept and decision-making processes. It needs to provide better information to the decision-makers; it should find a way to balance the top–down and bottom–up project approaches; it is good if it is designed with staged gates to test the suitability of project initiative to proceed to the next stage; and an effective information quality control system should be prepared at the outset.

In addition, according to Garland (2009), to be effective a project governance framework must meet the following criteria:

- Be clear in its objective
- Facilitate the process for efficient and effective decision-making
- Be accountable and have clarity of accountability
- Have a clear difference between the governance structure and the organization structure
- Ensure that the relevant stakeholders are part of the process
- Support the efficient and effective project initiation.

Jänicke et al. (2001) generalize the required changes in public investment projects' governance frameworks into four main wider issues:

- The coherent integration of policies and strategies
- A strategic role for public authorities such as Parliament
- The broad participation of civil society in the planning and decision-making processes
- A long-term view of problems and resulting strategies.

There should be also a "right" system to monitor and adjust the framework as needed. However, as shown in Figure 4.1, the successful implementation of a project governance framework and the implementation of a system to monitor and adjust the framework depend on the culture and capability from stakeholders. Therefore, it is equally important to develop the right culture and capability of institutions and stakeholders, because so far the cultural changes within the government, policy issues, structural, resourcing and skill issues are challenges for implementing effective project governance systems (Garland, 2009).

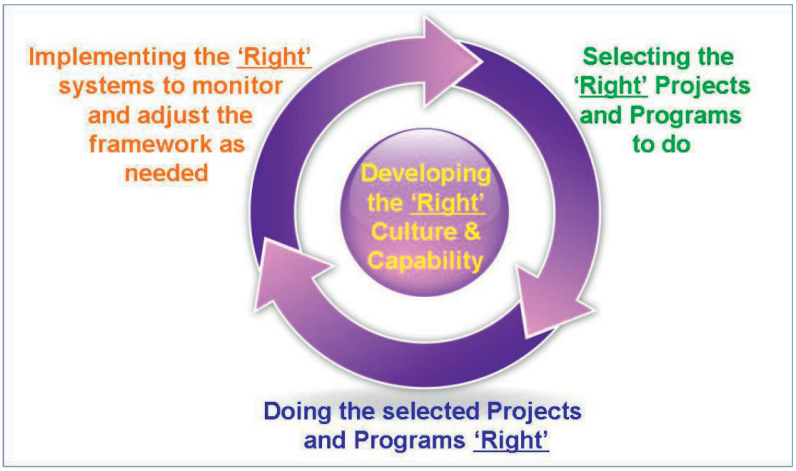

Figure 4.1: Project governance framework (Mosaic, undated)

4.5 Elements of project governance framework

According to O'Leary (2012) project governance encompasses five elements: stage-gate approval process, stakeholder representation, formal roles and responsibilities, quality assurance, and contracts and sign-off. Narayanan and DeFillippi (2012) also recommend those five elements to be included in developing a project governance framework, and add two other elements: the degree of out sourcing and information technology as focal points of governance.

Stage-gate approval process (gateway process): This is a project assessment process that involves a project "passing through" a gate designed to check the suitability of the proposal to proceed to the next stage of its development (Garland, 2009). Klakegg (2009) and Cooper et al. (2002) suggest the stage-gate or gateway process as a typical process in which the projects are subject to scrutiny on critical predefined stages.

Involvement: Key stakeholders representing different interests must be part of the project-shaping and decision-making processes. Therefore, the building process of a project governance structure must identify the different parties and their perspectives from which

the project initiative may be viewed and the multiple tests that it should be subjected to (Miller and Lessard, 2008). Involving stakeholders and making decisions preferably in collection at the predefined key decision gates is important for at least four reasons: it enshrines the legitimacy of the action; helps to reduce risk of conflict; improve the use of knowledge and information from a wide variety of sources and mobilize innovative ideas from participants; and through their involvement people and organizations learn about environmental problems (Coenen 2002; and Innes & Booher 2004).

Formal roles and responsibilities: It is also necessary to identify and state the duties and responsibilities of stakeholders involved in the project development and decision-making processes. In most cases, the stakeholders involved in the development of public investment projects include the general public, the national government, local and regional authorities, project promoters, environmental groups and market parties. Therefore, during development of a project governance framework, specifying the roles and responsibilities of those stakeholders is very important to reduce confrontations and to solve dilemmas (Miller and Lessard, 2008).

Quality assurance: This is a system to ensure adequate quality in the process of project development, compliance with agreed objectives, and management and resolution of issues that may arise during the project (Samset et al. 2006; and Christensen 2011). Similarly, O'Leary (2012) describes quality assurance as processes to facilitate collective decision-making by providing an independent view of the project's compliance with initial agreements and progress against a plan. It is therefore a framework set up to make sure all the right questions are being asked, to initiate key questions in the process and to develop answers. The quality assurance process depends on the information received (Garland, 2009) and to qualify through this system any project initiatives must answer questions, for example: "what is the value for clients and opponents", "is value created properly shared", "what are the alternatives", "what are the market estimates", "how is the project financed", and "what are the risks" (Miller and Lessard, 2008). It is therefore important to build a quality assurance system in a project governance framework in order to examine projects at

key decision points in their life cycle to provide assurance that they can develop successfully to the next stage (Office of Government Commence [OGC], 2007).

Contracts and sign-off: This involves the use of documented official agreements within the governance process at the right place and that form an agreed point of reference for resolution of any subsequent issues or disagreements (O'Leary, 2012). According to O'Leary, signed off deliverables and contracts are important to mark the exit from one phase to the next, but essentially holding the earlier decisions relevant to the project.

4.6 Project success

Traditionally, the success of projects was defined as doing projects "right": delivering projects on time, within budget and to a high standard. But many researchers do not agree with this definition because measuring project success is not a simple and straightforward operation (Samset and Volden, 2012). Some added additional criteria to measure project success. For example, Pinto (2010) adds client acceptance as a fourth criterion because the primary goal of a project is customer satisfaction and if client acceptance is a key issue we must ask this question in evaluating a project's success. Therefore, the assessment of a project's success must consider whether the completed project is acceptable by the end users. Users accept projects if projects are implemented for the right reasons (Mosaic, undated). The "right reasons" include benefit to customers, if projects meet the needs and the priority of the users and the affected parties (relevance), and if projects have sustainable positive effects and few negative consequences. This depends on how the project initiative is assessed in the front-end and decision made, because it is the "front-end" processes and the decisions that determine if the "right" project is being selected for the "right" reasons.

In the case of public investment projects, the success of an investment project is part of a larger process. In addition to implementing the projects efficiently, the degree to which project objectives are achieved, the consequences of the project and how the project contributes to the strategies of the national government, provinces or municipalities are

important requirements. Samset and Volden (2012), Klakegg (2010) and OECD (2006) define success of public investment projects considering the above requirements as choosing the relevant alternative, achieving the objectives, delivering the project efficiently and with sustainable positive effects and with little or no negative effects (the five success criteria). Flyvbjerg (2012), Winter et al. (2006), Williams et al. (2009) and several others agree that high-quality front-end processes and decisions are important to meet the above requirements of success. Therefore, in order to succeed, public investment projects must be defined carefully at the outset. In addition to checking the relevance of projects, project owners should look into the sustainability of the project's positive effects and the possible impacts of the project on the society, environment and the economy.

A project's success in the sustainability context depends on how well key environmental, social and economic issues are managed. In turn this depends on the identification of those key issues, considering them upfront and their translation into a set of effective principles or criteria to guide the project through each stage in the life cycle of the project (AusCID, 2003). This could be managed by developing an effective governance system because as discussed above, there are requirements to address the issues of sustainability and relevance. At the front-end phase, alternative proposals should be evaluated against sustainability principles, and the selected alternative should be re-evaluated at various phases of the project development process.

4.7 Sustainability

There are many definitions and principles developed by different organizations and nations regarding sustainability, although the basic concept evolves from the UN conferences of the 1980s and 1990s: meeting the needs of the present without compromising the ability of future generations to meet their own needs (UN, 1987a, 1987b). From a project development perspective, OECD (2006) defines sustainability as the continuation of benefits from a development intervention after the chosen investment project has been completed. Traditionally, the development of projects or the benefit of projects has been

equivalent to economic growth but over time the principles of sustainability have become widely accepted and its ambitions widened to: ensuring the rights of the poor and future generations, applying precautionary measures, and understanding the interconnections between the three spaces of sustainability: environment, economy and society (Gibson2006; Leichtfuss 2004; and AusCID 2003).

The day-to-day running of public investment projects takes place within those interrelated three spaces of sustainability, therefore the defining and designing process of projects require consideration of those ambitions of sustainability. However, as Leichtfuss (2004) describes, dealing with development and sustainability is complex and needs a better approach and effective and efficient decision-making. How do we find the way to fulfill our development needs and in a sustainable way? How do we deal with the conflicting interests? What are the requirements of governance to support compromises? Leichtfuss (2004) remarks “a lot of intelligence is needed to make sustainable development true” because pursuit of sustainability is a long-term and a continuous, indeed never-ending process (Kemp et al., 2005). Gibson (2006) advises to design sustainability assessment more aggressively as an integrative process and build sustainability assessment into a larger overall governance regime. In this regard, there is growing recognition of the importance of establishing a better project governance framework (Klakegg 2010; OECD 2006; and Schnurr and Holtz 1998).

This implies that a project governance framework that integrates the social, economic and ecological considerations of investments on all scales is a requirement for achieving the goals of sustainability. Shiferaw and Klakegg (2012) argue with this assumption, suggesting that an effective project governance framework has a defined structure, principles and governance elements to ensure the selection of the right project concept considering the social, ecological and economic values of initiatives. Figure 4.2 indicates graphically the three values that must be considered in developing projects.

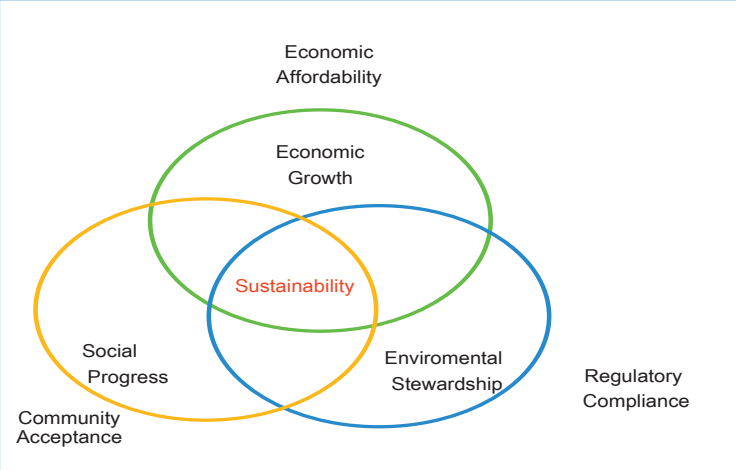

Figure 4.2: The graphical representation of the three primary components of sustainability that must be considered in developing projects (CSO, undated)

In general, to meet the demands for projects and to achieve the goals of sustainability, it is important to reform the traditional project governance framework, rules and procedures considering the requirements of sustainability. But it is also important to note that the reform or the implementation of a new project governance framework, rules, procedures, structures and principles is not enough by itself for the implementation of sustainability goals. The reform of governance frameworks will be successful if it is accompanied by major reforms on other governance requirements.

OECD (2002) suggests a high level of political commitment, integration of policy objectives across sectors, adaptation of policy implementation tools and a high degree of public participation as governance requirements for sustainable development. Similarly, Kemp et al. (2005) discuss governance requirements for sustainability and suggest policy integration; common objectives, criteria, trade-off rules and indicators; information; and programs for system innovation. Therefore the integration of the following requirements of governance for sustainability with the revised rules and framework of a project governance system is indeed important for selecting the right project concept and for implementing it successfully according to the principles of sustainability.

4.8 Governance requirements for sustainability

Policy integration: Policy integration between the international level and national level is an important criterion for setting the development agenda at the local level. In the same sense, the integration of development policies at the national or regional level might work by bringing sectoral policy fields into some sort of coherence. Such integration of policies at different levels is important for sustainability because sustainability requires policy integration, good communication and consensus between stakeholders (OECD, 2002). Individual policy responses for the challenges of sustainability at the international, national or regional level are not effective; rather it is useful to have more vertical integration of policies at the international, national and sub-national levels of government, and horizontally between sectors. Policy integration is not the merging of policies to form one integrated policy dealing with everything; there remains a need for specialized policies (Hertin and Bekhout 2002; and Kemp et al. 2005).

Common objectives, criteria, trade-off rules and indicators: Structural changes that accommodate mandatory requirements to impose a sustainability-oriented framework are important. These include revising the planning and decision-making processes, as well as co-management and other mechanisms that engage multiple governance institutions and local communities to meet the needs of the present and future societies. Implementing process-oriented tools such as long-term shared sustainability objectives, common criteria for planning and decision-making, specified rules for making trade-offs and compromises, and widely accepted indicators of needs for action and progress towards sustainability are important (Kemp et al., 2005; Gibson, 2006)

Information: There are several policy instruments such as regulations, rules, laws and processes that address the issues of sustainability. There are also different assessment tools and evaluation processes to assess the project initiatives based on these policy instruments. The aim of this evaluation process is to deliver the right information to the decision-makers regarding the social, ecological and economic values of projects and their associated

negative impacts. To ensure the quality of this information (decision basis), carefully integrated, monitored and adjusted applications of multiple tools is necessary. Further, there should be a system to determine whether the information is meaningful to the decision-makers. However, as Deelstra et al. (2003) elaborate, there is a weak link between the available information and decision-making. To strengthen the missing link, a governance framework should be developed to provide the right information to the decision-makers.

Programs for system innovation: Governance for sustainability has to be more anticipatory, future-oriented towards the long term using visions of sustainability and be concerned with learning, innovation and adaptation (Kemp et al., 2005). In order to adopt the requirements and sustain them, there should be a need to change and the principal mechanism for change is innovation. Innovation is the process of making changes to something established by introducing something new that adds value (O'Sullivan and Dooley, 2009). In this regard, as discussed previously, reform of a project governance framework should consider sustainability upfront and adopting a system for innovation is necessary. To do so, the reform should evolve effective processes of applying innovation for new knowledge, new rules and procedures, and new organizations to identify nature and coordinate actions for more sustainable solutions.

4.9 Relevance of projects

As discussed in section 1.3 of this thesis, ensuring the relevance of a project is one of the most important criteria for developing successful projects. Ensuring the relevance of a project deals with activities and decisions associated with proposing a project. Identifying the problem, identifying the needs and priorities of the public, checking the alignment of the project's objectives with strategies and policies, aligning the public's needs and priorities with the project's objectives, and searching alternative solutions and their analyses are the front-end requirements that must be solved to ensuring the relevance of a project (Samset and Volden 2012; Klakegg 2010). Similarly, Priemus (2007) describes project relevance as a criterion to assess the legitimacy of the project. According to Priemus,

if the public authorities regard the project initiative as “needed and useful”, the initiative is relevant to be considered for further studies.

4.10 Governance requirements for relevance of projects

In the development process of public investment projects, the key considerations of governance in assessing the relevance of project initiatives are specified below:

Problem identification: A clearly identified list of problems is the most suitable beginning for identifying potential solutions, and a valid problem analysis is essential in order to determine whether the proposed alternative is legitimate. Priemus (2008) underlines the general need for problem analysis at the start of the solution’s development process. According to Priemus, the first questions that should be asked at the start of the process are:

- What is the problem(s) now and what is the problem in the short term and in the long term?
- Who is affected by the problem?

In this process, there is a chance that a problem for one actor might be a solution for the other. It is therefore important to present all the related problems from a broader perspective. As problems are often perceived differently by different parties, it is not correct to conduct the problem analysis purely in relation to some parties and it is not possible to reach the strongest possible consensus, which is indeed important to keep the relevance of the project. Stakeholders and affected parties must have a chance to be involved in the problem identification and solution development processes. A generally shared problem analysis enhances the possibility that the selected alternative will still be endorsed by everyone at a later stage. Therefore, at the start, the project governance needs to focus on problems more than the solution.

Participation: Participation of relevant stakeholders should be part of the problem identification and solution development processes (Innes and Booher, 2004). Participation involves the active involvement of stakeholders (national government, regional authorities, municipalities, lobby groups, statutory bodies and the public). The involvement could be information provision, consultation, deciding together or acting together. Participation of relevant stakeholders helps to identify the problem; improve the relevance of the plan; develop a common basis; raise awareness; and could help to overcome future conflicts. Further participation facilitates the possible alternative solutions development, determines the objectives of the project, appraises alternatives, and chooses the preferred alternative and implementation options.

Aligning needs and priorities of the public with project objectives: Relevance of the project refers to the objectives of the project, and it is a matter of to what extent the objectives are aligned with the needs and priorities of the users and the affected parties (Klakegg 2010; OECD 2002; and Samset, 2003). In the case of public investment projects, to ensure the relevance of the project initiative, objectives of projects should be consistent with the needs and priorities of the society. Klakegg (2010) explains that project objectives are vital in explaining the purpose and intended effects of the project, and they should be consistent, realistic and verifiable based on the needs analysis of the users (Samset 2006; and Christensen 2011). Therefore, a project governance framework needs to have requirements to align the purpose/objective of a project with the needs and priorities of the public because it is an important requirement in keeping the relevance of the project.

Aligning project objectives with strategy: It is important that the project's purpose is aligned with the government's strategy (O'Leary, 2012). Projects are policy implementation tools that are one way in which policies are put into practice and are designed in order to provide economic, institutional or social developments. Therefore, as Shiferaw and Klakegg (2012) present at the strategic level, policies should be aligned with public needs and priorities, and objectives of public projects should be aligned with policies of government. In other words, the objectives of projects should be aligned with the important priorities in the

society and the needs of the users (Samset and Volden, 2012). To ensure the relevance, public investment project initiatives should be subjected to questioning along this line and decision-makers should examine the relationship between projects, public needs and policies before making decisions.

Alternative analysis: Identifying, designing and screening alternatives are crucial steps in the project development process. However, it has been indicated that alternatives are seldom generated and worked out at the early phase of the project development process (Priemus, 2007). According to Priemus, often the solution/final project precedes the problem analysis and may be the source of project failure. In order to keep the relevance of the project and succeed in the future, various alternatives must be prepared in the early phase based on the formulated problem and according to the objectives, values, criteria, boundaries and constraints set by relevant stakeholders. Therefore, alternative concept analysis is one of the fundamental requirements for governance of projects.

5 Summary of Front-End Governance of Projects

5. Summary of Front-End Governance of Projects

The Netherlands, Norway and Ethiopia

As discussed in the methodology section, this study is deliberately framed around national studies. This is quite different from other works in the field that took a project-based approach. From my perspective this approach is helpful to understand the very different approaches at the national level and to find good experiences. This chapter introduces some facts and figures about the three case countries, and introduces their project governance frameworks.

5.1 Netherlands as a country and the way projects are governed

Facts and Figures

The Netherlands is located in the Western Europe 52 30 N, 5 45 E, bordering the North Sea to the North and West, Belgium to the South, and Germany to the East (CIA, 2013). The government of the Netherlands is a constitutional monarchy. It includes the King and the ministers (Government of the Netherlands, 2013). The Netherlands was a founding member of the European Union, and it is a modern, industrialized nation. The population of the Netherlands is estimated 17.3 Million with a total area of 41, 543 sq. km (World Economic Forum [WEF], 2012) —— a large population in a small country. Looking at this, some say efficient planning is an essential way of life in the Netherlands. As a matter of fact, planning, regulating and organizing are of major importance to the Dutch life. This year, the global competitiveness report ranks the Netherlands 5th (2012/2013). The Netherlands are rated high in its innovation capacity, heightened efficiency, and stability of its financial markets (World Economic Forum, 2012). Dutch are also known for consensus based decision-making; communication is direct and participative; decisions are supposed to be made by importance; and precision are the norm (The Hofstede center, undated).

The Dutch economy is the sixth-largest economy in the Euro-zone: GDP (PPP) - per capita is $42,300 (2012 est.). Figure 5.1 illustrates GDP per-capita of the Netherlands for the last 20 years. Industrial activity in the Netherlands includes mainly food processing, chemicals, petroleum refining, and electrical machinery. The country also known with its highly mechanized agriculture and it is a large exporter of agricultural products. The government also sought to boost the domestic economy by accelerating infrastructure programs in a densely populated country where there are an increasing numbers of voices (people and organizations) demanding the right to be heard.

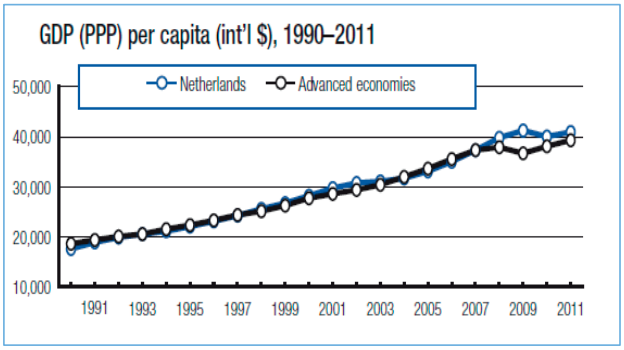

Figure 5.1: GDP per capita from 1991 to 2011 (The Netherlands) (WEF, 2012)

Project governance in the Netherlands

In the Netherlands a proposal for a new project initiates either from ministries, local provinces, municipalities, port authorities or from the public and that is plausible. All the proposals from those parties end-up by requesting a large sum of money. In order to identify projects that really worth implementing, somebody must evaluate, prioritize and decide and there should be a system with set of criteria to evaluate project proposals, and to provide the right information to the decision makers. In this regard, every ministry in the Netherlands has developed its own planning, prioritization and decision-making processes and procedures. In this study I focus on a project governance system developed by the Ministry of Transport and the Environment (MIRT rules and framework), and give an introduction regarding a project coordinating mechanism that is developed at the national

level, based on the budgeting process of FES (the Fund for the Strengthening of the Economic Structure).

Every year, the Ministry of Finance presents the public budget plans for the year x+1 on the third Tuesday in September of the year x. The Parliament makes decisions regarding the annual budget of each ministry at different times at the end of the year (November or December). The Ministry of Infrastructure and the Environment, the department with by far the biggest investment volume, has developed MIRT (Multi-year Plan for Infrastructure, Spatial Planning and Transport)— an investment program set up by the national government to improve coherence between investments in the special planning, economy, mobility and livability; and the 'Faster and Better' project— the national government in collaboration with other stakeholders work on the preparations and a decision-making procedures to facilitate the successful development and implementation of investment projects (I & M, undated).

Therefore, all new project proposals within the ministry of I & M must meet the MIRT and the 'Faster and Better' requirements if they wish to be eligible for funding (I & M, undated). In addition to the departments' budget, the Dutch Government invests revenue from the exploitation of natural gas reserves in the long-term development of the national economic structure. The Fund for the Strengthening of the Economic Structure (FES) is assigned for this purpose.

Project governance in the case of FES Funding

FES-sponsored projects are projects that have strategic macroeconomic importance for the Netherlands. They are related to traffic and transportation, environment, knowledge and innovation, and spatial planning (Priemus, 2008). In order to check the eligibility of project proposals to FES funding, the Dutch Government has developed a coordinating mechanism to control how new project proposals are submitted, evaluated, prioritized and decided on. Figure 5.2 illustrates the structure of this coordinating mechanism. The project

development process in this case initiated either from ministries, provinces, municipalities, or port authorities. Then the project proposals will be submitted to the Interdepartmental Commission for Strengthening the Economic Structure (ICRE) —for assessment and prioritization. ICRE is a committee of officials from different ministries that is established to advise the Cabinet by assessing, prioritizing and monitoring the progress of large investment projects and on the expenditure of FES. In the ICRE, the Ministry of Finance has a strong position (Priemus, 2008), because the Ministry of Finance plays an important role in improving and criticizing the quality of the decision-bases.

In addition the Dutch planning bureaus (independent research organizations) advise ICRE in scrutinizing the project proposals. For example, CPB (Netherlands Bureau for Economic Policy Analysis) and PBL (the Netherlands Environmental Assessment Agency) advise ICRE regarding the long-term effects of the proposed projects. In the evaluation process, cost-benefit analysis and the alignment of the project purpose with the national government policies and strategies are important criteria. The relationship between a proposed project and the problem, the long-term environmental impacts of projects, and the social and economic values of the proposals are also the evaluation criteria of the planning bureaus.

Looking at the roles of all parties in this process, it is difficult to say that ICRE plays a quality gatekeeper role due to the key role played by the planning bureaus. It might be more apt to say that planning bureaus play more of a gatekeeper role than ICRE, because planning bureaus have a mandate to say whether a project is good or not and these are crucial suggestions in the project decision-making process.

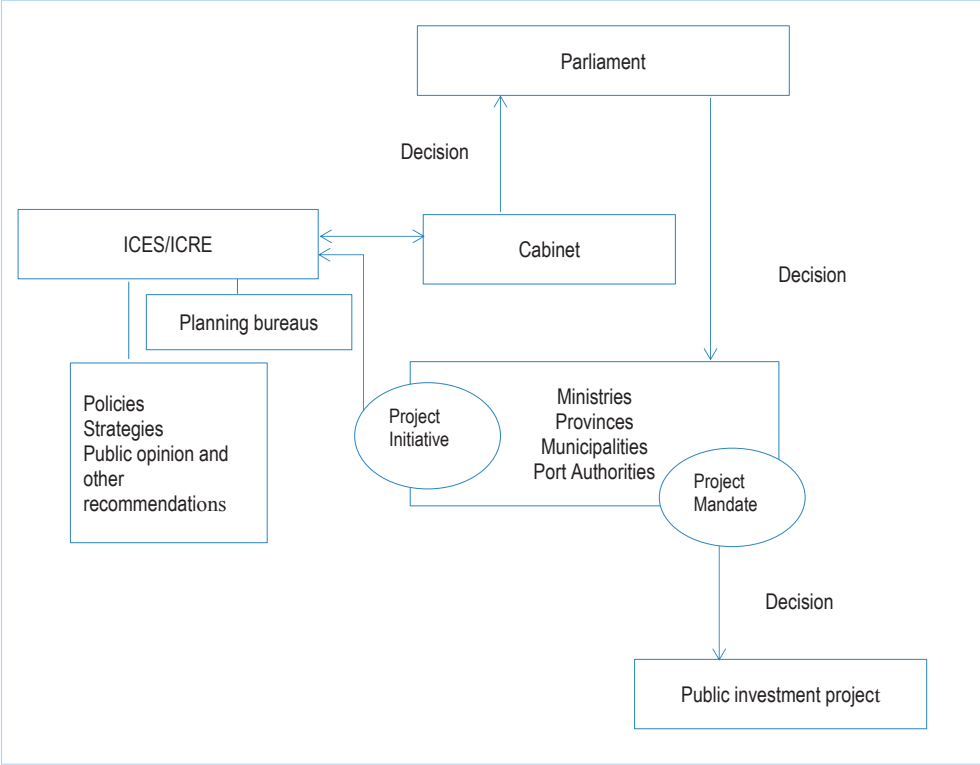

Figure 5.2: Project governance structure for FES funding and procedure for project development: project initiative, evaluation, decisions

I discussed the role of ICRE in the case of FES funding with Professor Hugo Priemus, who is a professor at Delft University of Technology. Professor Priemus is certain that the prioritization of project proposals at ICRE is a political process because the government's strategies and policies play a major role. He explained that at the strategic level, the government's strategies and policies are aggregated into economic, environmental and social categories. Theoretically the ICRE prioritization bases on the evaluation of project proposals based on these three pillars of sustainability, and on all the relevant benefits and impacts of a proposed project. For example, the economic impact of a transport project proposal is evaluated based on OEEI (a research program on the economic impact of infrastructure) guidelines (Eijgenraam *et al*., 2000). These guidelines recommend the

assessment of all the relevant costs and benefits of a project, both quantitative and qualitative. If the benefits outweigh the costs, the project is considered desirable from an economic perspective (Transport Research and Innovation Center [TRIC], undated). The social cost-benefit analysis of a project is carried out after identifying all the social benefits and costs of the project. Whenever possible, a quantitative analysis is recommended. However, in practice it has been difficult to evaluate the social benefits and costs of a new project initiative in a quantitative manner. Therefore the social benefits and costs of a project are often evaluated based on qualitative information (Priemus, 2008).

After prioritizing project proposals, ICRE makes a formal recommendation to the Cabinet. The Cabinet is the ultimate body for co-ordination of public investment projects, and makes decision based on the information from ICRE. Then the decision of the Cabinet goes to the Parliament. The Parliament, the highest authority in this process, makes the final decision on budgets, but in practice the role of the Parliament is mostly not significant (Tijdelijke Commissie Infrastructuurprojecten [TCI], 2004). Finally after the approval of the project proposals by the Parliament, the project initiators prepare a detailed project study and then make decisions in the subsequent stages. In principle, this project assessment system is the same for all types of projects if they wish to be eligible for FES funding. However, if project initiators (ministries, provinces and local developers) do not need FES funding, it is not necessary to follow this interdepartmental procedure.

But for the last couple of years several critics have questioned the effectiveness of the rules and the frameworks of ICRE with queries from different parties looking for changes in the ICRE system. The revision on the project governance system was needed to cope with the changes in society, economy, cultural diversity and environmental issues or in general to cope with sustainable development. According to TCI, several of the ICRE proposals would not fit within a regional framework so the committee recommended a more transparent procedure for project evaluation and decision-making (Priemus, 2007).

In 2010, the Rutte-Cabinet decided to discontinue FES-policy: for the wider future the

decision-making process is not clear at all. [So I will not discuss further this framework in this thesis]

Governance of infrastructure projects in the Netherlands—MIRT Rules and the framework

To improve the infrastructure projects development process, the Dutch Government has reformed the project governance structure and project development policies of the country. In this regard, recently the Ministry of Infrastructure and the Environment has developed an investment program called MIRT (Meerjaren Programma Infrastructuur, Ruimte en Transport), and a Faster and Better decision making project. MIRT is an integrated program (Van Remmen and Van der Burg, 2008) of different categories (spatial planning, the economy, accessibility and livability (Tillema and Arts, 2009). The main objective of the execution of the MIRT program was to implement the Cabinet policy of improving the preparation and decision-making processes of infrastructure projects, and it was developed in the pursuit of coherence and synergy effects between different policy fields (e.g. mobility, housing, nature and water), spatial scales (e.g. local, regional and national), and between the national government and regional/local governments.

The MIRT program has rules, procedures and a framework— 'rules of the game' in order to direct how a project initiative that needs state funding should be developed and how decisions on project initiatives should be made. It is believed that relevant Ministers are seen to be interested with the new approach, because the process is developed in inclusive way to include all stakeholders to discuss on the agenda (Marshall, 2009).

In this study I am interested to explore the MIRT 'rules of the game' to better understand the project shaping and decision-making process of the Netherlands and to draw best practices that could help to increase the performance of governments project governance. (The MIRT process will be discussed in the next chapter)

5.2 Norway as a country and the way projects governed

Facts and Figures

Norway is situated in the North of Europe 62 00 N, 10 00 E bordering the North Sea and the North Atlantic Ocean, Sweden to the West, and Finland and Russia to the North East (CIA, 2013). The government of Norway is constitutional monarchy with a parliamentary system. Norway is not a member of European Union. The population of Norway is estimated 5.1 Million and its total area is about 385, 186 sq.km— the second least densely populated country in Europe. The 2013 human development report identifies Norway as the best country in the world (UNDP, 2013). Global competitiveness index ranked Norway 15th this year (2012/2013), and the country is characterized by well-functioning and transparent public institutions, and private institutions are also known for admirable ethics and accountability (World Economic Forum, 2012).

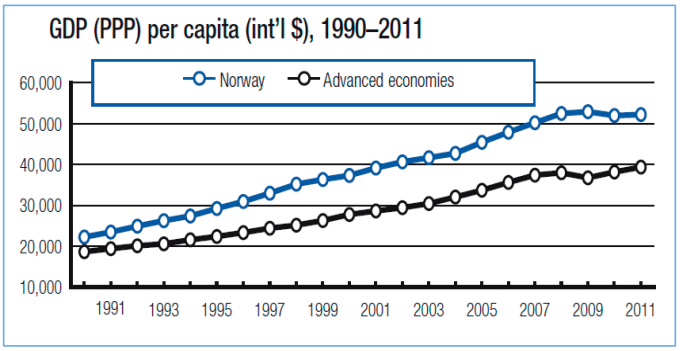

Figure 5.3: GDP per capita from 1991 to 2011 (Norway) (WEF, 2012)

Norway has prosperous mixed economy, a large state sector, and an extensive social safety net (CIA, 2013). Norway has the second biggest GDP (PPP) per-capita $ 55, 300 (2012) in the world and it is the second wealthiest country in the world. Figure 5.3 illustrates GDP-per capita of Norway for the last 20 years. The country has natural resources like - petroleum, hydropower, fish, forests, and minerals - and is highly dependent on the

petroleum sector, which accounts for the largest portion of export revenue and about 20% of government revenue (CIA, 2013).

Project Governance in Norway

The Norwegian front-end project governance framework was established in 2000 to ensure the successful development of public sector projects in the country with a total budget of NOK 750 million and above. According to the Concept research program reports, poor engineering and management, false budgets, scope changes, delays, cost overrun and benefit shortfalls were problems that were associated with major public investment projects in Norway (Concept, undated). However, the then familiar problem and the main reason for the establishment of the new framework were the massive budget overruns and cost control respectively. But later in 2005 the scope of the framework was expanded to include the assessment of the early stage project concept selection and decision-making processes. Then the framework expanded to include all the analyses and decision making processes from the initial project proposal until the final decision to finance the project (Concept undated, Klakegg 2010, Magnussen 2010, and Samset et al. 2006).

The new framework provides a platform for controlling the early phase project shaping process where information about the project is analyzed, alternative solutions developed, the structure and the procedure necessary to ensure the development of viable project secured, and decisions made. As shown in Figure 5.4, the framework is organized with two decision gates (QA1 and QA2) where decisions on project concept and on the project study documents are made respectively (Samset et al. 2006, Klakegg et al. 2009, and Christensen 2011). Project promoters (mostly ministry offices and agencies), quality assurance independent consultants, the Cabinet and the Parliament are the key stakeholders involved in this framework, and the roles and responsibilities of these parties are specified within the framework.

In this framework project initiators are expected to give a particular emphasis on the selection of project concepts, on the preparation of project costs, and on predicting risks and opportunities of alternatives. Then the documentation from the project initiators will be scrutinized by independent consultants that are employed by the Ministry of Finance (Concept, undated). But decisions on the preferred project concept, which is according to Samset (2008, pp 186) "the single most important decision that will determine viability and utility of a project" and decisions on the project budget are made based on political priorities by the Cabinet, and by the Parliament respectively.

Samset et al. (2006) generalize the rationale of developing the Norwegian quality assurance: increasing political control on key decision points; improving the quality of the information basis they rely on; to focus only on relevant issues; and to adopt a stage gate approval process.

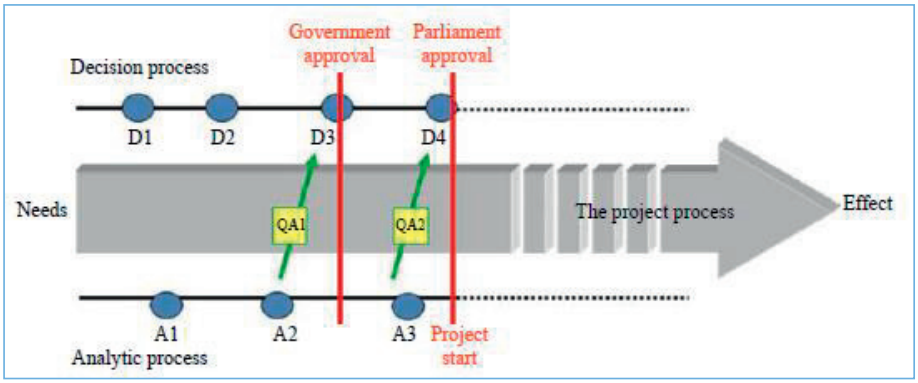

Figure 5.4: The Norwegian quality-at-entry regime for major public investment projects (Christensen 2011; Klakegg 2010; and Samset et al. 2006)

In the assessment of QA1, the following requirements are set by the Ministry of Finance (Concept, undated): the proposal relevance in relation to societal needs and priorities; the purpose of the initiative; the availability of opportunity space and alternative concepts.

Similarly, Det Norske Veritas, DNB (2007), one of the independent consultants that are employed by the ministry of Finance, describes the scope the work for QA1 as:

> "Our main deliveries in terms of QA1 work include assessments of the effect of the project compared to society needs, the relevance of the requirements and their prioritization, cost-benefit analyses, including uncertainty analyses of the alternatives, and recommendations regarding a further decision strategy and guidelines for the basic engineering phase".

On the other hand, the main objective of the QA2 assessment is described as improving the quality of the decision bases most importantly cost estimates and uncertainties before the Parliamentary decision is made on the budget of the preferred alternative. The assessment of QA2 includes review of QA1 documents, the overall project management document, a complete base estimate for costs, and an assessment of at least two alternative contract strategies (Samset, 2008).

The QA2 consultants are expected to come up with recommendation on the following issues (Concept, undated):

- The cost frame including necessary contingency reserves as indicated in the Figure 5.5.
- Pre-planning to ensure an efficient implementation.

DNB (2007), one of the independent consultants that are employed by the ministry of Finance, describes the scope the work for QA2 as:

> "Regarding QA2 deliveries, these cover cost framework recommendations, including provisions for uncertainties, project organization and management, contract strategy and proposals regarding simplifications and reductions."

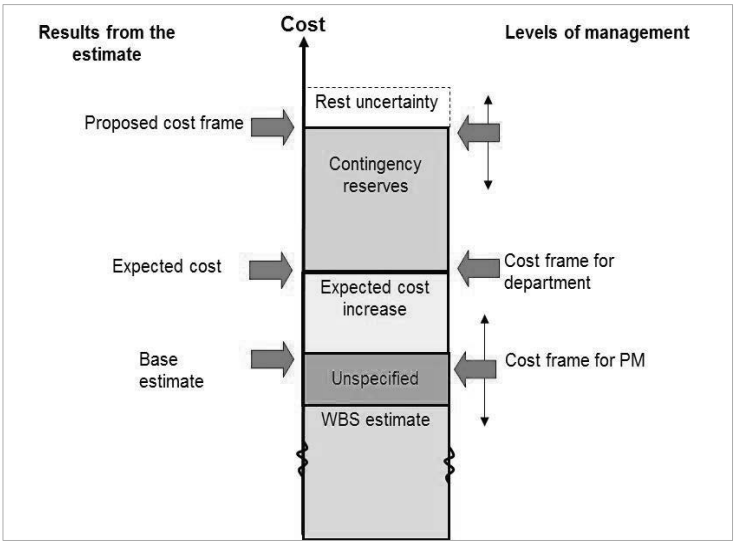

Figure 5.5: The Norwegian QA system, cost frame model (Concept, undated)

5.3 Ethiopia as a country and the way projects governed

Facts and Figures

Ethiopia is located in the horn of Africa, 8 00 N, 38 00 E and borders with Djibouti and Somalia to the East, Kenya to the south, Sudan and South Sudan to the West, and Sudan to the North. Ethiopia has a federal system of government (CIA, 2013). The government is composed of two tiers of parliament: the House of People's Representatives and the House of Federation. The executive branch includes a President, Council of State, and Council of Ministers. Ethiopia is Africa's oldest independent country and the second most populated nation in the continent (BBC, 2013). The population is estimated 93,877,025 (July 2013). The total land area of Ethiopia is 1.1 million km^2 (UNDP, 2013). Ethiopia is a founding member of united nation and the African Union. The headquarters of the African Union based in Addis Ababa (UNDP, undated).

According to the IMF reports Ethiopia is one of the fastest growing economies in the world for the last 10 years. Ethiopia ranked 121 in the 2012-2013 global competitiveness index

(WEF, 2012). According to UNDP (undated) the poverty rate in the country is estimate 29.6%.

Ethiopia's economy is based on agriculture, which accounts for 46% of GDP and 80% of total employment (UNDP, undated). Coffee has been a major export crop. GDP per capita of Ethiopia for the year 2012 was $1200 (CIA, undated). Figure 5.6 illustrates GDP per capita of Ethiopia for the last 20 years.

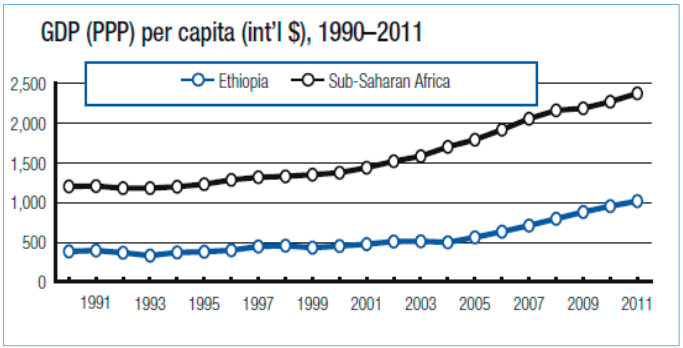

Figure 5.6: GDP per capita from 1991 to 2011 (Ethiopia) (WEF, 2012)

Project governance

Following the boom of investment projects in Ethiopia, in 2006 MoFED (Ministry of Finance and Economic Development of Ethiopia) has developed a new project development guideline to coordinate public investment projects in the country. The guideline has new processes, procedures and a framework that are used for the preparation and evaluation of public sector projects. According to MoFED (2004, 2006a, 2006b) the purpose of the guideline is to help practitioners to develop viable projects that help to meet the development need and priorities of the government. According to that guideline public investment projects in Ethiopia must be developed based on the government's medium term development plans (MoFED, 2006a). Previously SDPRP (Sustainable Development and Poverty Reduction Program) and PASDEP (A Plan for Accelerated and Sustained

Development to End Poverty), and now GTP (Growth and Transformation Plan) are the government's medium development plans.

According to this guideline, if sectors have budget or if a project is 'demand driven'— a project that has consistent objectives with the government's development plan, sectors can initiate a project. They are expected to develop project concepts based on their sectoral strategy (it is developed according to the national development strategy), and then they have to submit the project concept to MoFED. MoFED evaluates project proposal (project concept) and makes decision. The ministry approves the project concept, or returns for amendment. On the other hand, if the source of finance is assistance or loan 'Donor driven project', MoFED checks the alignment of the proposal with the government development strategies. After checking the project proposal, MoFED recommends the proposal to the Council of Ministries and further to the House of People's Representatives. Decisions on those projects will be the council of ministries and the house of people representatives.

The project governance structure of Ethiopia as shown in Figure 5.7 contains the House of People's Representatives, the Council of Ministries, MoFED, and sectors as key stakeholders. It also specifies the roles of each element in the project development process. The House of People's Representatives issues proclamations and laws and approves issues related to public investment projects. The Council of Ministries issues regulations and directives and makes decisions. MoFED issues project directives, makes decisions on important issues from sectors, evaluates project proposals, and finds budget for approved projects.

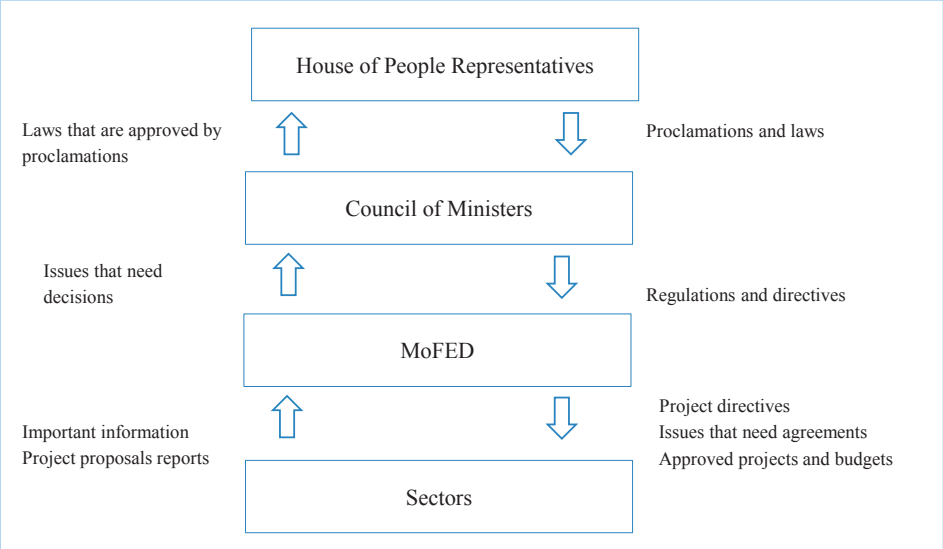

Figure 5.7: Project governance structure in Ethiopia (adopted from MoFED, 2006a)

According to this structure, the planning and programming units of sectors play a key role to initiate a project. Sectors initiates project proposals based on the sectoral strategy. MoFED has a responsibility to organize project proposals (evaluate and ensure that the requirements are fulfilled), Proclamation No. 642/2009, (Ethiopian Federal Democratic Republic [EFDR], 2009). The Cabinet and the Parliament make decisions.

The guideline urges sectors to prepare their project proposal keep in mind the following requirements:

- The relevance of the project according to the needs and priority of the public
- The alignment of the objectives of the proposed project with the government development strategy
- Evaluation of cost benefit
- The true pictures of the economic impact of the projects/programs in order to ensure that public funds are used for viable projects

- Financial analysis in order to determine the long-term budgetary implications and to provide an adequate financing plan for a proposed project.
- Procurement and contract strategies.

Table 5.1 summarizes the three countries project governance frameworks against the typical elements of project governance.

Table 5.1: Summary of project governance frameworks of the three countries based on typical elements of project governance

Governance elements	Netherlands, MIRT rules of the game	Norway, QA system	Ethiopia, MoFED
Stage-gate approval process	5 gates are designed to test proposal suitability to the next stage of its development. Covers from problem analysis to operation	2 gates are designed to test proposal suitability to the next stage of its development Covers only from project concept selection to the final decision to finance the project	No specified gates
Stakeholders representation	Ministry of I& M makes decisions at all gates Significant efforts to involve stakeholders vertically and horizontally Broad participation of stakeholders up-front (exploration phase)	Cabinet and Parliament make decisions More participation between QA1 and QA2 Public participation is often in the project study phase	Often top down project approach, and less representation of stakeholders
Formal roles and responsibilities	Roles and responsibilities of stakeholders are specified The structure is defined and each party in the process has defined roles and responsibility	Roles and responsibilities of stakeholders are specified There is clarity regarding individual or group responsibilities	The guide line has set the roles and responsibilities of key stakeholders
Quality assurance	Checks and balances within the ministry of I &M The Dutch media Parliamentary scrutiny	Independent consultants are employed to check the quality of documents	Ministry of Finance in house service
Contracts and sign-off	Any documented agreements are part of the process	Any documented agreements are part of the process	Any documented agreements are part of the process
Degree of out sourcing of key functions	Most of the process are in house but there are initiatives to outsourcing	Quality assurance of project documents is out sourced	Most of the processes in the explorative phase are in house
Information Technology	More developed use of IT tools, to accept comments and complaints from public: official website of the ministry, and social media twitter	There is a trend to accept comments from the public online, but not much developed	Not implemented

6 Project Concept Choice

6. Project Concept Choice

In this chapter, I grapple with the 'choice of project concept', tracking its rising importance in the project governance. In particular, I discuss the project concept selection processes and structures of the Netherlands, Norway and Ethiopia. This chapter answers the first research question 1.1 that is posted in chapter one.

6.1 The Netherlands

'Do the established processes and structure of the project governance framework help to select the right project concept?'

Yes: Evidence from the various sources indicates that the reforms in the Dutch project governance system, particularly the MIRT framework, and processes satisfy several requirements of an effective project governance system that are discussed in the chapter four of this thesis. Therefore, I can say that the implementation of the MIRT framework, structures, processes and other supporting practices in the Netherlands can facilitate the selection of the right project concepts. The following evidence supports my answer: Solutions developed through MIRT rules and framework (Table 6.1); the requirements developed to ease the project concept selection process (listed below); the front-end project governance structure adopted (Figure 6.2); the project governance elements evolved (Table 5.1); the development of other mandatory governance requirements (Chapter 8), and the procedures for information development and decision-making (Chapter 7). These are important reforms that can improve the effectiveness the project governance system, and then the selection of right project concepts in the Netherlands.

Studies by the TCI committee and the Elverding committee identified various front-end project preparation problems and decision-making flaws (TCI, 2004; Commissie-Elverding, 2008) as shown in Table 6.1. As part of the solution, there have been reforms in the Dutch infrastructure projects governance system, for example the implementation of the MIRT rules and framework and the 'Faster and Better' project. In this study, I have investigated

the MIRT rules and framework and the 'Faster and Better' project in relation to the previously identified project governance problems within the country, and discussed the effects that the MIRT rules and framework brings to the project selection process. Table 6.1 summarizes the situation before the implementation of MIRT and important changes that are made within the MIRT program.

Table 6.1: The Dutch **p**roject preparation problems and proposed solutions according to MIRT rules and frameworks

#	Problems related to project concept development in the Netherlands	Solution according to the MIRT rules and framework
1	Premature conclusion without solid problem analysis	• Checking the presence of the problem, detailed analysis of the problem, and the need for agreement between important stakeholders is set as a requirement for developing a project concept.
2	Conflict between relevant stakeholders	• Discussion, negotiation and consensus on the agenda are set as the starting point for a new concept. • Early phase participation of different stakeholders is taken as an anchor and used as part of the problem identification and solution development.
3	Lack of political commitment	• Clear and unambiguous decision points (MIRT 1 and MIRT 2) are established in the political arena (for problem identification and selection of preferred project concept.) • The alignment of the development policy of the area with objectives of a project is set as a precondition. • The initial stage of the project development process is set as a political process in which various regional/local authorities get the chance to discuss and agree on the development policies and strategies.
4	Lack of alternative analysis	• Developing the maximum number of alternative solutions is set as a mandatory requirement. • Evaluation of alternatives is conducted step by step and the evaluation criteria are predefined.
5	Lack of clear go/no go stages	• Clear and unambiguous decision points (MIRT 1 and MIRT 2) are established in the political arena for the selection of a project concept.
6	Lack of need assessment and prioritization	• In the agenda the following questions are set for discussion: ✓ What do we want in this area? ✓ How can we do that? and ✓ What type of projects do we need? • Creating a link between the development policy of the region and the objective of the project is set as a mandatory requirement.

In general after the implementation of MIRT, the project concept selection process in the Netherlands is eased through the following requirements:

1. Discussion, negotiation and consensus on the availability problems and the need for solutions are set as the starting point for project development.
2. The alignment of the development policy of the region and the objective of initiatives is set as a requirement to develop a project concept.
3. Participation of stakeholders is a requirement during the problem identification and solution development processes.
4. The presence of the problem and the results of the problem analysis are important requirements to get a start decision in the solution development process.
5. Developing the maximum number of alternative solutions at the beginning is a mandatory requirement.
6. Evaluation of alternatives is conducted step by step and the evaluation criteria are more or less predefined.
7. The preferred project alternative needs a political decision before proceeding to the project study.

According to the MIRT rules and framework, the project concept selection process in the Netherlands starts with political and administrative meetings. In those meetings the national government, provinces and municipalities discuss the development needs of an area and develop a strategic development agenda for an area; the problems and the objectives of initiatives are discussed in relation to the policies of the national and regional governments; initiatives are prioritized; and efforts are made to facilitate collaboration among the different stakeholders.

This implies that discussion, collaboration and consensus between important stakeholders are set as a requirement for starting a new project concept. In the discussion, the problems are analyzed and initiatives that have objectives not consistent with the national and regional development strategy are rejected, and initiatives that are considered to be relevant are supposed to be included in the agenda. Involving different stakeholders is considered part of the problem identification process and the legitimacy of the initiative will be determined based on the results of those meetings.

Getting the consent of stakeholders regarding the availability and type of problem is an important step in the process of developing useful solutions. Achieving consent about the problems is crucial to proceed to the next stage because it determines if the rest of the project selection process can be successful. In this regard, the Netherlands has moved forward.

The main topics of the discussions at this stage center around: What do we want in this area (What are the problems in this area)? How can we do that? And what type of solutions do we need? Once the problems are identified during stakeholders' discussions, then the identified problems will undergo detailed investigation at the exploration phase (see Figure 6.1). At the explorative phase, requirements are outlined to search for as many as alternative solutions and the associated uncertainties, and to evaluate them considering the problems and the objectives agreed by the stakeholders during the stakeholder meetings.

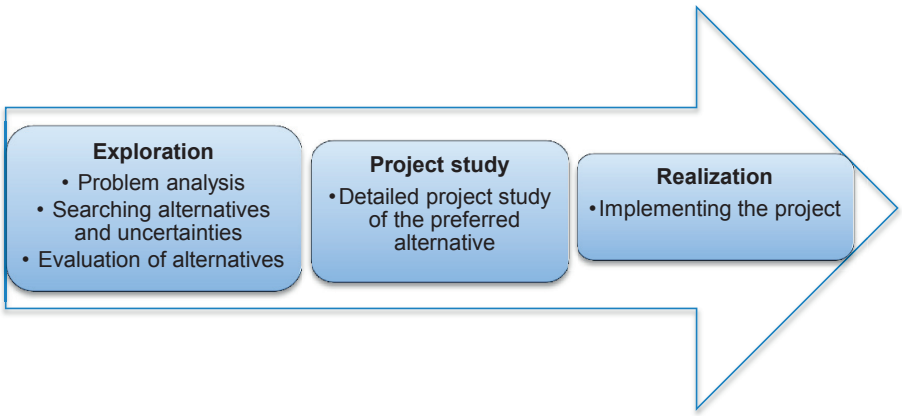

Figure 6.1: Three phases of the MIRT process

The explorative phase of the MIRT process is organized with four sub-phases (starting, analytical, evaluation and decision phases) as shown in Figure 6.2. In the starting phase, the administrative decisions of stakeholders are developed to become a concrete explorative project study. The starting phase of the exploration phase addresses the alignment of the

policy direction of the government, a detailed problem analysis, and there is also participation from stakeholders.

In the analytical phase — Sieve 1 (Figure 6.2), all the possible alternative solutions are expected to be developed before they are then evaluated qualitatively. In this evaluation, the values and related impact of each alternative on the economy, environment and society are assessed. Then based on the results of the assessment and in consultation with relevant stakeholders the best three alternative solutions are selected. Those three alternatives are then recommended for further evaluation and prioritization.

In the evaluation phase — Sieve 2, the three alternatives are evaluated quantitatively by involving different planning expertise, considering different parameters and using different evaluation tools, considering the environmental and social aspects as well as the economic aspects of each alternative. Then this evaluation ends by recommending the most promising project concept for further project study. However, this does not mean that the preferred alternative will advance directly to the next phase — the plan development phase.

- There is a decision to peruse the preferred alternative at the project study phase. The decision is an administrative anchoring of the preference decision, MIRT 2— a 'Decision on a preferential alternative' (I & M, 2010).

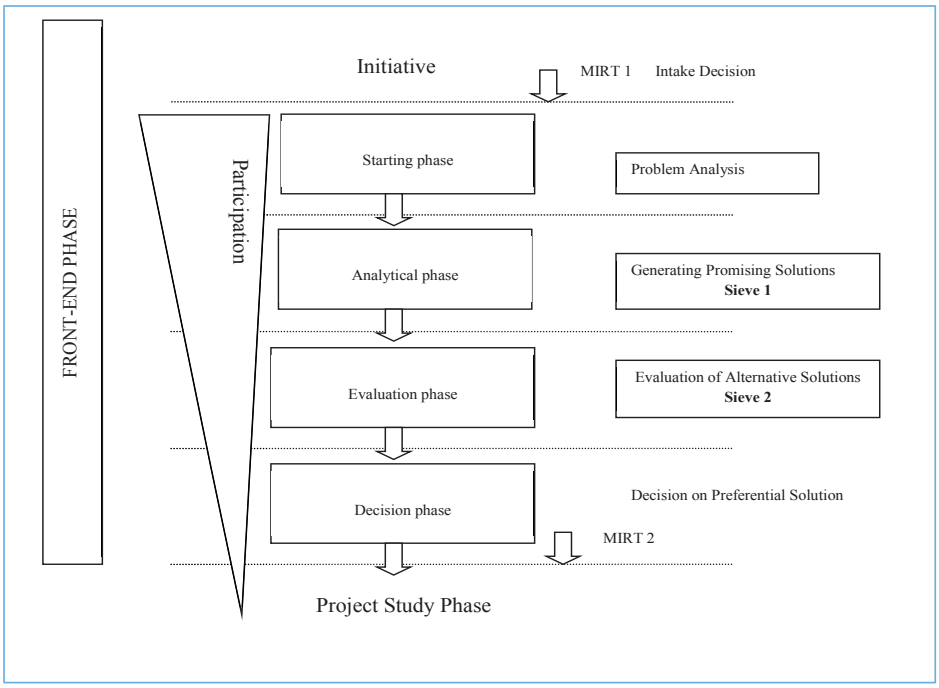

Figure 6.2: The MIRT explorative phase (front-end phase)

6.2 Norway

'Do the established processes and structure of the project governance framework help to select the right project concept?'

Yes: Evidence from various sources indicates that the Norwegian quality assurance system (QA) urges the project promoters to prepare projects according to the requirements set by the Ministry of Finance, and this has helped project promoters to improve their performance — project concept selection. The following evidence bases my answer. (Table 6.2), which indicates problems related to the project concept selection process before the QA system, and the solutions developed within the QA system; (Figure 6.3), which, illustrates the structure of the project concept development process; the project governance elements evolved (Table 5.1); the development of other mandatory governance

requirements (Chapter 8); the procedures for information development and decision-making (Chapter 7), and other important procedures that are discussed below indicate that the implementation of the QA system in Norway makes a significant contribution to improve the selection of the right project concepts.

Table 6.2 summarizes the problems related to the project concept selection before the QA system as well as the solutions developed within the QA system.

Table 6.2: Summary of problems before the QA system and the proposed solutions according to the Norwegian QA system

#	Problems related to the project concept selection (identified before the QA system)	QA system
1	Less attention to the public needs and priorities	The possible effects of each alternative concept should be evaluated with the society's needs and priorities, and it is set as a mandatory requirement to be checked (QA1).
2	Optimism bias	The QA1 requirements oblige project initiators to explain the overall strategy of the project [consistency, realism and verifiability are important requirements]. Detailed specification, detailed uncertainty analysis and cost benefit analysis of alternatives are also set as a mandatory requirement to clear optimism bias.
3	Limited alternatives	Preparing at least two alternatives and the zero-option are set as mandatory requirements of QA1.
4	Unrealistic budgets	The project budget will be checked by independent consultants in the later stage –– QA2.
5	Low participation	In my view, participation might not have been considered to the required level

In most cases, in Norway the process for a new project development starts from the ministry offices, agencies or provinces. The triggering conditions to start a new project from these offices are problems and/or the need for solutions. Then the proposal will be reviewed by the third party: independent consultants (QA1 consultants). The outsourcing of the quality assurance task to the independent consultants is the most important development

in the Norwegian project governance system. The QA1 consultants review the proposals based on the government's predefined quality requirements. Essentially the relevance of the project proposal is evaluated based on the needs of society and the purpose and goal of the proposal. The uncertainties and the cost benefit analyses of alternatives are also part of the evaluation process. Finally, the consultants give their recommendation and a decision will be made by the Cabinet.

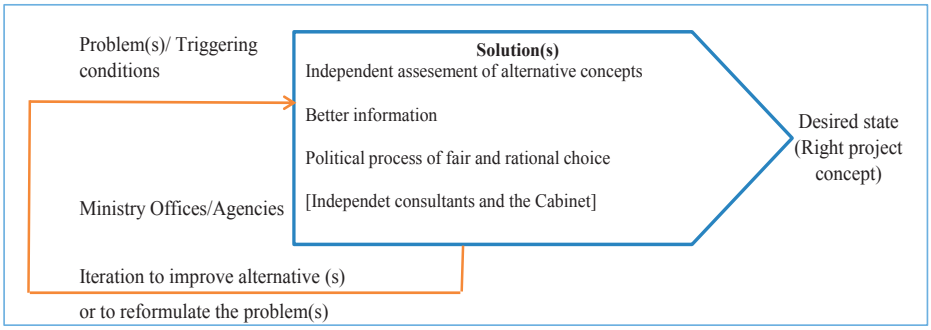

Figure 6.3: The structure of the project concept development process

If a project concept does not satisfy the requirements, the documents will be returned to the project initiator for further review. If the Cabinet decides to proceed, the project's detailed study will be done by the agencies under the supervision of the project initiators. The structure of the solution process (Figure 6.3), the adoption of mandatory requirements to check the proposals and the expectations of the stakeholders have placed project initiators under an obligation to take into consideration the requirements of the QA system when they prepare new project proposals.

However, there are still a few points that might affect the selection of the right project concept. For instance, in the starting phase of the process, when the problems are discussed or when the triggering conditions are assessed, the requirements may not be clear or may not be part of the QA system. As discussed in the literature part of this study and in the case of the Netherlands, when the problems and the triggering conditions are analyzed,

discussion, negotiations and consensus between stakeholders is crucial to selecting the right project concept. But discussions, negotiations and consensus between stakeholders regarding the problems and the possible solutions are not set as a requirement in the QA system. Of course, the Norwegian planning legislation does require the participation of society in the project development process, but it is involved late in the project study phase.

Each ministry identifies the problems (the triggering conditions). In this scenario, there is a probability that ministry offices may try to have their projects placed on the government's agenda while looking at the problems (triggering conditions) only from their own perspective.

It is important to note here that different stakeholders perceive problems differently and therefore the solution should not be a one-way communication from top to bottom. As Innes and Booher (2004) describe, the problem identification and the solution development process should be a multi-dimensional model where discussion, learning and course of action are joined together and where the polity, interests and citizenry co-evolve. If relevant parties are invited for discussion, and if stakeholders are involved in the problem definition phase, the process for project development begins from a common basis.

Engaging stakeholders in problem analysis and solution development process could enhance the possibility that the selected alternative will still be endorsed by everyone at a later stage. An additional gate at the front, maybe gate QA0 and some regulatory requirements could be helpful to ensure the legitimacy of the triggering conditions. That would further refine the project concept selection process and ultimately improves the success of projects.

6.3 Ethiopia

'Do the established processes and structure of the project governance framework help to select the right project concept?'

No: Of course Ethiopia has adopted a project development guideline; processes and structures for the development of public investment projects. The results of this study indicate that the guideline has several useful requirements that could help to improve the project selection process in the country. However, the guideline lacks some mandatory requirements. Therefore, the project development processes and structures of Ethiopia may not help the selection of the right project concept. The following evidence bases my answer: The need for alternatives, the need for the participation of stakeholders, uncertainty analysis, and other important requirements are not set as mandatory requirement (Part 2 of this thesis, paper 3, 4 and 5); the project governance elements evolved (Table 5.1); the development of other mandatory governance requirements (Chapter 8); the procedures for information development and decision-making (Chapter 7), and other important procedures that are discussed below.

In addition, according to some of the interviewees of this research, the current project governance system in Ethiopia seems not mandatory, because in practice planning problems, decision-making pitfalls and 'lock-in' are common. In most cases the real decision regarding the choice of a project concept is made much earlier. As shown in the following examples, several projects are initiated, developed and implemented but not according to the process and structure set in the guidelines (as indicated in chapter 5 of this thesis). Therefore, we could say that the project governance system in Ethiopia is static and has not been brought to life because the system of governance that includes the activities of executives in the governance model is not dynamic.

In Ethiopia, the government might have been overambitious regarding the development of public investment projects. From my perspective, the high ambitions of the government

have often favored launching millions and billions of dollars' worth of large public sector projects via an approach akin to 'development at all costs'. These biases are among the causes of the low success rate of public investment projects in the country. The following typical examples of projects are presented to support my argument.

1. Housing development projects in Ethiopia have been implemented in different regions of the country and the projects have demanded huge amounts of money. The evaluation of the projects indicate shortfall, especially in small towns. The decision to implement similar projects in every town without undertaking a solid proper problem analysis and need assessment has affected the success of the projects. In some towns there are completed apartments that do not attract end users. The financial recovery of the projects is not as expected and the contribution of the projects towards the strategic goal of the program is not significant [Paper 5].
2. The construction of 23 universities within ten years is a good example of ambitious implementation of public investment projects in the country [Paper 1]. It is part of the government's policy to build demand-driven technical and vocational education, training and higher education programs. The expansion of higher education for a country like Ethiopia is encouraging; however, the link created between education development and private sector development and service delivery is weak (Development Assistant Group Ethiopia (DAG), 2006). The number and quality of teachers in those universities, the country's financial capacity for maintenance and the operation are all risks. At the moment, it is not easy to find job for new graduates from those new universities. This implies that the plan for expanding higher education should have been supported by an analysis of labor market demand and should have been better linked to plans for private sector development, growth and service delivery [Paper 3].
3. The Ethiopian Roads Authority (ERA) constructed thousands of kilometers of federal road projects in the period 1997–2007 under the Road Sector Development Program (RSDP). The investment amount during that period was estimated to be more than $US3 billion (World Bank, 2004). At the end of the RSDPs (RSDP I and II), the

government declared it a ‘success’. In fact, it has been a big achievement and the government has no doubt made infrastructural advances that are visible across the country. Roads have been built and expanded; however, it is not always a success story. There are critics challenging the successes of these projects. Some federal road projects have been constructed in remote areas where traffic volume is far below the average. One can easily understand that these projects could not generate sufficient additional revenue for the government (benefit shortfalls), nor could they cover their running and maintenance costs. Furthermore, the government may not have financial capacity and is not allocating sufficient budget for maintenance and operation. The government might have political or social objectives to invest in those areas but unless these investment projects have adequate economic return, their positive effects might not be sustainable [Paper 3].

4. The development of large- and medium-scale hydropower projects has received priority and the government is investing a large amount of money in these projects. Some development analysts believe smaller-scale water projects are more suited to meeting the immediate needs of the poor nation (International Rivers, undated). In the last couple of years, Ethiopia has developed large- and medium-sized dams, for instance, the Gibe I and II projects have been implemented and have started operation. Gibe III is under construction but it has raised the most concern among environmentalists. Similarly, the Grand Ethiopian Renaissance Dam is now being developed and is expected to cost US$4.8 billion. However, the Grand Ethiopian Renaissance Dam has also raised questions about environmental and social impacts (International Rivers, undated). In general, hydropower projects are expensive and need huge investments. The size of the investment and the environmental and social impacts of the investment underline the need to choose projects wisely. Misjudgment can result in financial, social as well as economic disaster [Paper 3].
5. In the Growth and Transformation Plan (GTP) period (2010/11–2014/2015), the government has approved highly ambitious development plans. Several major public investment projects are planned as part of this development plan, for example thousands

of kilometers of railway projects, thousands of kilometers of road projects, huge hydropower developments and many other new development projects. Some fear that the size and number of projects that are in progress and planned in this period might exceed the country's capacity both technically and financially [Paper 3].

Table 6.3 summarizes the project concept selection processes of the Netherlands, Norway and Ethiopia.

Table 6.3: Summary of the different project governance frameworks: Choice of project concept

Netherlands, MIRT rules of the game	Norway, QA system	Ethiopia, MoFED
Requires maximum participation in the problem identification and solution development (stakeholders as co-initiator)	More participation in the project study not in the choice of concept	Often top down (centralized), but sometimes from beneficiaries
Tries to create shared priorities among potential stakeholders and then evaluates initiatives against those priorities	Focuses on evaluating documents of initiatives based on predefined requirements	Governments mid and long range plans, development strategies (Systematic sources)
It has political character focused on will shaping	A political process and assisted by independently reviewed information	It is a political process Donors interest and their formalities have influences
Broad comparison of alternatives, as many as possible Program approach	At least two alternative concepts and zero option is a requirement	Little or no alternatives (lock-in)

As indicated in Table 6.3, the most important reforms in the Netherlands include: maximum participation of stakeholders in the problem identification and solution development processes; evaluation of project initiatives against shared priorities of potential stakeholders; shifts towards programmatic approach; and broad comparison of alternatives. The results of this study indicate that the reform will probably make a significant contribution to improve the selection of project concepts in the Netherlands.

Unlike the Netherlands, the Norwegian QA system is not a reform of the existing project preparation processes of the ministry offices and agencies. Rather, the new arrangement in Norway focuses on ensuring the quality of information (documents) from the ministry offices and agencies. These new arrangements can create expectations and awareness among stakeholders. For instance, stakeholders' expectations may rise from the fact that the proposal is analyzed. The actors then expect to be scrutinized and therefore they can improve their performance — the selection of a project concept is thus could be improved.

On the other hand, as indicated in Table 6.3, the project concept selection process in Ethiopia is often a political process, and it follows a top-down approach. The government is might have been ambitious and the approach is like 'we need all types of projects'. In this approach projects are not always selected and developed according to the guidelines prepared by MoFED. Quite often, important stakeholders may not be invited to have a say on project initiatives (implies that projects may not be prioritized according to stakeholders priorities); there is very little or no chance to evaluate alternatives (there is a tendency to lock-in). As Cantarelli et al. (2010) discuss, in this kind of approach, there is always a path dependency even though a better alternative is present; in addition to this, donors' interest and formalities have also an influence on the choice of project concept.

7 Information Development and Decision-Making

7. Information Development and Decision-Making

In this chapter, I focus on the information development processes and decision-making procedures of project governance frameworks in the Netherlands, Norway and Ethiopia. In particular the chapter presents and discusses the results of the research question 1.2 that is posted in chapter one.

7.1 The Netherlands

Do the decision-makers, at the higher level, receive or demand relevant information about the problems and the alternative solutions before they make decisions on project concepts?

Yes: The MIRT program is an initiative established to deliver faster and better information to the decision makers. The various processes and procedures of the MIRT program are organized with the intention of delivering the right information to decision-makers. Evidence from various sources indicates that decision makers in the Netherlands are getting better information regarding the problems and the alternative solutions before they make decisions. We could say, at the present decision makers in the Netherlands are in a position to decide on project initiatives based on the information developed through the system, and theoretically they are demanding better information, though problems persist in the political culture of governance.

As discussed in Section 6.1, in the Netherlands the project development process starts with discussion and negotiation on problems, and ends with a decision on a preferential solution (MIRT 2). At the beginning, it is a political process in which several stakeholders are involved. In those discussions, various problems are discussed and prioritized, and the alignment of the national government's and the regions' strategies are checked. At the end of the discussion, there is a point to test the proposal suitability to the next stage of its development and to make a 'start decision' (MIRT 1).

The MIRT 1 decision is made based on the information developed through discussion, processing and manipulation of data in a way that adds knowledge to the decision-makers.

Here we see that the bases for the MIRT 1 decision are: information that shows the presence of the problem(s); the need for solutions from a certain group; the area agenda that is developed based on the strategy of the national government and the region for the area; and most importantly the consent of different stakeholders.

Therefore, decision-makers at the Ministry of I & M make the MIRT 1 decision after checking if the information is developed through the MIRT process. Making the start decision (MIRT 1) means the Ministry of I & M recognizes the presence of a problem(s) and gives permission for further investigation of the identified problem and for the development of alternative solutions. This decision results in a demand for more information about the problem and the possible alternative solutions. The information about the possible solutions is developed through two stages of the evaluation process.

Analytical phase (Sieve 1)

The main objective of evaluating at this stage is to screen the best three alternatives from all of the available options. At the end of this phase, experts from different disciplines in consultation with the public administrators choose three promising alternatives based on the following information:

- Detailed problem analysis
- Detailed need assessment based on high level of participation of stakeholders
- Judging the alternatives and their contribution with regard to the goal
- Scanning the impacts of alternatives (qualitative information)

Evaluation phase (Sieve 2)

In the evaluation phase, broad and quantitative information about the three alternatives are developed. Business cases are prepared and the required types of actions are determined in

consultation with the public and MIRT administration (I &M, 2010). Finally, the three best alternatives are compared and prioritized based on the following information and then the preferred alternative is put forward for the final decision.

The decision-makers use or demand the following information to make the final decision on the preferred alternative (MIRT 2):

- More detailed analysis on the three alternatives (qualitative and quantitative)
- The impacts of each alternative
- Clear information on what to achieve and where the project is to be implemented
- Information on legal, environmental and financial requirements
- Information regarding cost benefit analysis
- Insight into the effects on the economy, nature, environment and space
- Information from MIRT 1 decision

Information quality assurance system

In the MIRT program, unlike the Norwegian project governance system, there is no independent institution that oversees the quality of the decision bases. However, the Ministry of I & M or other ministries oversee if the procedures are followed carefully. The Ministry of I & M has a sort of controlling function to check whether all the MIRT procedures are followed within the Ministry or when the local developers and provinces are applying for national funding. The Ministry checks whether the project concept is selected and developed according to the rules and framework of MIRT. Within the procedures of MIRT, there are checks and balances: the policy part of the Ministry checks the implementation part of the Ministry.

The MIRT project development procedures and decisions are public documents, and they are open for the people so people can say Yes or No in the process and can react to the national government. The ministry website is open to accept comments from anyone

interested and recently social media (twitter) is also used to get complaints, suggestions and feedbacks from the general public.

Furthermore, every year the Ministry of I & M has to report to Parliament about the progress of projects and specify what the Ministry has done. The Parliament then has the possibility to scrutinize how the procedures of MIRT are being followed.

Dutch media reports are another important means, though indirect, of improving the quality of the decision bases. The governance culture of the Netherlands also has an important role in this perspective, where it has quite a good open culture, and has a good score in international ranks too (Marshall 2009; and Woltjer 2009).

Overall, to get national funding it is mandatory to develop project concepts according to the MIRT rules of the game because they are legal procedures that everybody has to follow. Planners are supposed to follow the formal MIRT rules and procedures. Planners should also consider the interests of all concerned parties, but the final Yes or No decision is always political**.** I have interviewed Hugo Priemus, who is a professor at Delft University of Technology, about the use of information in the Dutch decision-making process and he commented favorably that in recent years a certain discipline has been established in the Dutch decision-making process, namely, better use of information, quality decision-making and a democratic process.

7.2 Norway

Do the decision-makers, at the higher level, receive or demand relevant information about the problems and the alternative solutions before they make decisions on project concepts?

Yes: The main intention of (QA1) is to anchor the main decisions on project initiatives back to the right place (right political level), and providing the right information to the decision makers. Evidence of this investigation indicates that the Norwegian quality assurance system is developed in a way that adds to the knowledge of the decision-makers.

I have interviewed Professor Knut Samset, who, as a research director of the Concept research program commented that in the QA system the choice of project concept is political, and the independent consultants review the professional quality of documents and provides better information for the decision makers. Therefore, we could say, after the establishment of the QA system, decision-makers receive relatively relevant and processed information about the problems and the proposed solutions; on the other hand there is also expectation for processed information from the decision-makers; and there are also indications that the information can be used as an input in the decision-making process.

Figure 7.1 illustrates the process of data manipulation, organization and decision-making in the development of public investment projects in Norway. In this process, there are four important parties involved: ministry offices/agencies, independent consultants, the Ministry of Finance and the Cabinet. Often ministry offices are interested in implementing projects, and they keep pushing to get the 'go' decision for their project proposals. In contrast, the Ministry of Finance, which is responsible for financial issues, is concerned with the value of money they are investing, and they agree on project initiatives only if the proposal is valuable in relation to the predefined requirements. To achieve this, the Ministry of Finance has to agree with independent consultants to review the quality of information developed by project promoters.

Consulting offices evaluate the information developed by the project promoters based on independent evidence and as per the predefined screening criteria of QA1. The consultants are independent institutions and they recommend a project proposal after assessing whether the proposal is well thought out in terms of the evaluation requirements. Consultants criticize project proposals from a logical perspective and normally they are not expected to be enthusiastic. Consulting offices play a key role in this process, because they have a mandate to say whether the project is good or not in relation to the predefined requirements of the Ministry of Finance. These are important suggestions in the project development process. Finally the Cabinet decides 'go' or 'no go' on project concepts.

The Cabinet makes decisions based on the information developed by the independent consultants by looking at: the relevance of the alternatives; the possible impacts; the cost benefit analysis; and the achievability of the project objective and others

After the Cabinet makes a decision on the preferred project concept, the project study will start. At the project study phase, the responsible ministry and the agency will prepare the project documents. Costs, benefits and contract strategies and other requirements will be fulfilled and the project document will be sent to the independent consultants. The independent consultants will review the project documents on the basis of predefined requirements. They review project costs and recommend a cost framework, provisions for uncertainties, project organization and management, contract strategy and proposals regarding simplifications and reductions. Finally, the Parliament will make a go/no go decision — an implementation decision.

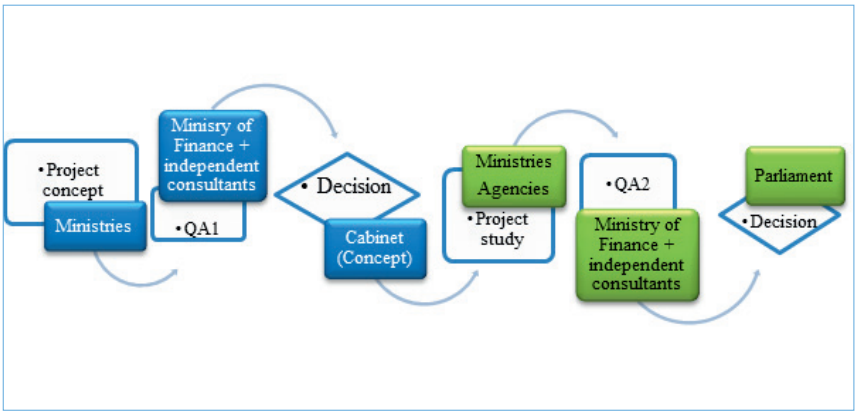

Figure 7.1: Project development process according to the Norwegian QA system

The QA system is developed to assist the decision-making process. The system verifies information and provides better information to the decision-makers. It also facilitates the decision-making process by identifying factors affecting decisions. Figure 7.2 shows the structure of the chain of command in the QA system. In this process, each project alternative (A0, A1, A2, A3...) is evaluated and prioritized based on the requirements of the

Ministry of Finance, and the strategy of the national government. The decision will then be made based on the detailed information about the alternatives from the consultants (the suggestions of the independent consultants can be used to decide which project to select).

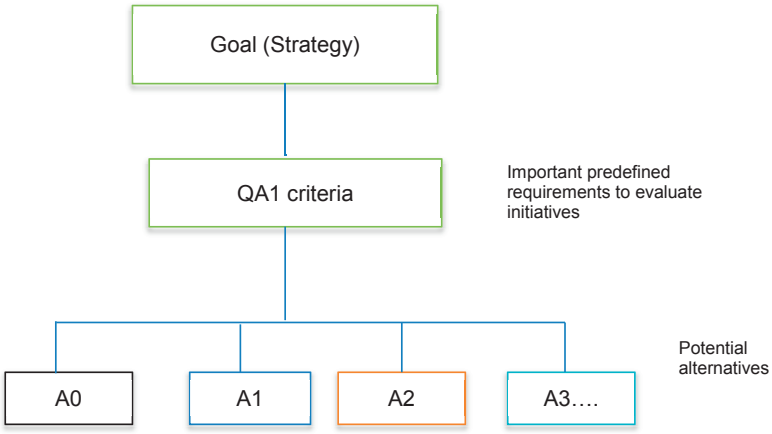

Figure 7.2: The structure of a chain of command in the QA system

7.3 Ethiopia

Do the decision-makers, at the higher level, receive or demand relevant information about the problems and the alternative solutions before they make decisions on project concepts?

No: The project governance system in Ethiopia is not active in providing relevant information regarding the problems and the possible alternative solutions to the decision-makers and decision-makers may not demand information regarding their project initiatives from the system.

As discussed in Section 6.3, the project development guideline of MoFED is not functioning as per the framework presented in this thesis. In practice, the starting phase of projects is centralized. This means the central government selects a certain type of project and then the next step is often the project study. I interviewed Abebe Dinku, who is a

professor at Addis Ababa University, about the use of information in the decision-making process of Ethiopia, and he commented that questions such as what are the real triggering conditions; what are the possible alternative solutions; what are the benefits and costs of alternatives; and what are the possible impacts of the proposals may not be as such basic formalities for making decisions.

However, it is well known that the right decisions cannot be taken without the right information (De Bruijn and Leijten 2007 and 2008). Information about the problem, alternative solutions, uncertainty analysis, cost benefit analysis considering economic, social and environmental issues, the impact of the project, involvement of stakeholders and other important decision criteria should be set as a mandatory requirement. For instance, the housing projects (paper 5) were started in order to solve housing problems in the country; however, the MoFED or regional Finance and Economic Bureaus did not make *ex-ante* evaluations in accordance with the project development guideline of the country: the real housing problem was not analyzed in detail; alternatives were not studied sufficiently; uncertainties were not properly analyzed; the cost benefit analysis was not genuine; and the impacts of the project on the economy, the society and the environment were not studied to the required level. Rather, the decision was made based on the interests of project initiators. In general incorrect information might have been used to make decisions.

Table 7.1 and 7.2 summarize the information development and decision-making process and procedures of the Netherlands, Norway and Ethiopia.

Table 7.1: Summary of the different project governance frameworks: Information development

Netherlands, MIRT rules of the game	Norway, QA system	Ethiopia, MoFED
Shifts towards broad participation process (stakeholders are part of the meetings that bases decisions)	Shifts towards investing resources to the front-end	Debates and discussion among the stakeholders are on the strategy not on individual projects
Negotiation and consensus as an anchor, and knowledge and rules are supportive	Focuses on providing better data for decision makers	Donors criteria and it varies from donors to donors
Standardized evaluation criteria	Predefined quality requirements	No laudable pursuit for better information
Multiple passes through screens with different criteria (Hierarchy process)	Two screens with different criteria (Hierarchy process)	
Opportunities for market parties	Third party review of information	
First qualitatively then quantitatively		
Improved quality of dialogue (IT)	Expectations and awareness among actors	

Table 7.2: Summary of different project governance frameworks: decision-making

Netherlands, MIRT rules of the game	Norway, QA system	Ethiopia, MoFED
Shifts towards staged decision-making	Shifts towards staged decision-making	The government controls the problems analysis and decision-making. (PM office)
A distinct set of milestone and decision gates established	A distinct set of milestone and decision gates established	Centralized decision-making
Decisions primacy back to politics (centralized decision-making)	Decision primacy back to politics (centralized decision-making)	
Ministry of I & M makes decisions	Cabinet makes decision	
Initiatives for faster and better decision making		
Hierarchy process but interactive (specific knowledge from different parties)	Hierarchy process	

The summary of the process of information development and decision-making in the three countries are indicated in Table 7.1 and 7.2. The Netherlands and Norway have developed systems for developing better information for the decision makers. Decision makers in these countries demand better information before they make decisions on project initiatives; and the systems are designed to deliver better information. In both countries: there are shifts towards developing better knowledge, towards developing better front-end processes; stage gated decision-making frameworks are established in the political arena; decision primacy backs to politics; and important prioritizing requirements are developed, and evaluating criteria are predefined to evaluate project initiatives against those priorities.

On the other hand, in Ethiopia, there is shortage of resources and there is very high demand for public services. The government has ambition to implement public investment projects whenever the resources are available. But problem identification, prioritizing initiatives, and often decision bases are not well formulated, and there may be flaws in decision-making. Rich countries like Norway and Netherlands, they have resources but they are very concerned on how, when and where to invest, on what type of initiatives should they invest. On the other hand, Ethiopia, with little resource, seems less concerned on the importance of prioritization and other front end requirements.

8 Issues of Relevance and Sustainability

8 Issues of Relevance and Sustainability

In this chapter, I discuss the issues of relevance and sustainability in the front-end project governance frameworks of the Netherlands, Norway and Ethiopia. In particular the chapter presents and discusses the results of the research question 1.3 posted in chapter one.

8.1 The Netherlands

Are relevance and sustainability of projects considered as key criteria for selecting a project concept and for making decisions?

Yes! As the assessments of the MIRT process against the governance requirements for relevance and sustainability of projects indicate (Table 8.1 and 8.2), the Dutch project governance reform involves several requirements to ensure the relevance of project initiatives, and to check the sustainability of the positive effects of initiatives. This implies that relevance and sustainability are considered as key front-end criteria for selecting new project concepts.

Relevance

Table 8.1 presents the assessment of the MIRT process in relation to the governance requirements for relevance.

Table 8.1: Assessment of the MIRT process in relation to the governance requirements for relevance of projects

	Governance requirements for relevance	The MIRT process
1	Problem identification	A system for problem identification and analysis is adopted and is relatively inclusive.
2	Participation of relevant stakeholders	Broad-based participation of different stakeholders is set as a mandatory requirement.
3	Aligning needs and priority of the public with project objectives	Area agenda meetings and the starting phase have objectives to test this alignment
4	Aligning project objective with strategy	Area agenda meetings and the starting phase studies have objectives to test this alignment.
5	Alternative analysis	Two stages of alternative analysis are developed to evaluate all the possible alternatives and then select the preferred alternative.

In the early phase of the MIRT process, there are efforts to provide opportunities for the public and other potential stakeholders to participate in the problem analysis and solution development processes. It is also a requirement to involve stakeholders to have a say on the triggering conditions and the possible solutions. For instance, political stakeholders from different levels (representatives of provinces and municipalities) are invited to raise issues and concerns, to contribute ideas and see those issues being addressed at the initiation phase.

If there is a consensus between stakeholders on the legitimacy of the problem and on the need for solution(s), or if the opinions and the views of potential stakeholders are heard and considered as co-initiators of the project, the probability of selecting a relevant project concept is very high. It is a better approach to select useful projects according to the needs and priorities of the stakeholders and to reduce claims at the later stages. In this regard, the MIRT process is organized with the intention of involving stakeholders from the early phase of the process, which is very helpful to ensure the relevance of project initiatives. However, some of the interviewees have described their concerns regarding the difficulty of getting all the relevant parties involved.

Checking the alignment of the development strategy/policy of the national government as well as the alignment of the project strategy and the needs and priorities of the public are important requirements in the MIRT process. Policies/strategies are discussed at the administrative meetings of MIRT, and the alignment of the policies/strategies of those stakeholders is discussed in relation to the objectives of the possible solution proposals in the area. Consensus, over all consent to move forward, is required to proceed to the next phase. However, building consensus could be a challenge.

Alternative assessment is another important requirement that is adopted to ensure the relevance of proposals. As discussed in Section 6.1 and 7.1, two steps of mandatory alternative analyses are introduced. In the first phase, all the possible alternatives are searched and evaluated qualitatively. In the second step, the most promising three alternatives are evaluated qualitatively and quantitatively, and communicated to decision-makers.

In general, the following efforts from the MIRT process are believed to be important to ensure the relevance of projects:

- ✓ Engagement of local and regional authorities in the area agenda setting process to identify ‘what is needed in the area’.
- ✓ Prioritization of initiatives based on the area agenda (political priorities) in collaboration with various stakeholders.
- ✓ Aligning objectives of investment projects/programs with the policies of the national and regional governments.
- ✓ The involvement of the general public in the project-shaping process.
- ✓ Participation of stakeholders including the affected parties.
- ✓ The adoption of two stages of alternative analyses.

Sustainability

Table 8.2 indicates the assessment of the MIRT process in relation to the governance requirements for sustainability.

Table 8.2: Assessment of the MIRT process in relation to the governance requirements for sustainability of projects

	Governance requirements for sustainability	**MIRT rules and framework**
1	Participation	In the MIRT process, participation of relevant stakeholders is taken as an anchor.
2	Policy integration	There are initiatives to integrate policies horizontally and vertically between different stakeholders.
3	Common objectives, criteria, trade-off rules and indicators	There are initiatives to create long-term shared sustainability objectives among stakeholders as well as efforts to create standard criteria for evaluation of proposals. Several new rules, processes and procedures have evolved.
4	Information	'Faster and Better' project is underway for better information development and decision-making.
5	Programs for system innovation	New processes, procedures, rules, regulations, changes in organizations, and extra steps in checking and balancing have evolved. Faster and Better project: structural improvement of legislation, stage-gate approval process, broad participation of stakeholders, administrative procedures and others. Market involvement in the early stage (specific knowledge from different parties). More room for innovation (creativity).

Predicting sustainability is not a simple task. However, as discussed in chapter four of this thesis, it is important to develop important requirements up-front to increase the probability of selecting sustainable projects. As shown in Table 6.3, the MIRT process has initiatives that could relatively match the governance requirements for sustainability.

Participation of stakeholders is one of the principles of good governance, and it is an important requirement for the sustainability of the project's positive effects. Participation in the MIRT process is taken as an anchor and is used as a consensus-building process. The general drift of this package of the MIRT process is to facilitate the sustainability of the project's effects in the long term.

In the MIRT process, there are initiatives to coordinate projects from different policy fields. New requirements are set to integrate one area of state action with another, both vertically (national government, provinces and municipalities) and horizontally across sectors. New projects develop by assimilating interests and policies from different stakeholders (vertically and horizontally). This could help to balance the ecological, economic and socio-cultural dimensions of project initiatives in the planning process and then to create sustainable plans as well as sustainable projects.

I discussed the MIRT process and its implementation with Professor Jos Arts, who, as strategic advisor of the Ministry of I &M, commented that the new arrangement of the MIRT process provides new clarity in developing long-term shared sustainability objectives between relevant stakeholders. Arts is very clear about the benefits of the MIRT process, foremost of which is the criterion provided by the new framework to involve different stakeholders in the ecological, economic and socio-cultural spaces and decision-making.

In the MIRT process, information regarding the costs and benefits of alternatives (qualitatively and quantitatively) is prepared considering the three dimensions of sustainability, uncertainties and the possible impacts. Professor Hugo Priemus, who is a leading professor at Delft University of Technology, also commented favorably on the current information development process, because he believes that the cost benefit analyses are relatively standardized. Different evaluation criteria as well as different models are used as sources of evidence to see the effect of each alternative on the economy, environment and society. According to Professor Priemus, this predefined information development

process reduces the complexity of the evaluation process and might help the efforts towards sustainability.

In the MIRT rules of the game, there are other new rules, processes and procedures to detail the steps a project should follow to take it through the planning phases and implementation. In these rules, processes and procedures there are plenty of conditions to be met in order to get funding for a project initiative. For instance, the involvement of market parties in the project-shaping process is a new trend. This early stage involvement of market parties would help to include new ideas in the planning process and find innovative and sustainable solutions.

8.2 Norway

Are relevance and sustainability of projects considered as key criteria for selecting a project concept and for making decisions?

Yes! The assessment of the QA system against the governance requirements for relevance of project initiatives (Table 8.3) indicates that the Norwegian project governance system has included certain upfront requirements that could help to ensure the relevance of project initiatives. These include alternative analysis and efforts to align project objectives with strategies and then to public needs, and others. In general, in the QA system there are significant efforts to ensure the relevance of project initiatives and relevance is considered as a key criterion. On the other hand, though sustainability is considered as criterion for developing projects, the governance requirements for sustainability are not detailed enough in the QA system (Table 8.4). Of course, sustainability of project effects is a long-term phenomenon and it might be difficult to assess upfront, but it is possible to implement useful governance requirements that may be helpful to keep the sustainability of the projects' positive effects.

Relevance

Table 8.3: Assessment of the QA system in relation to the governance requirements for relevance of projects

	Governance requirements for relevance	QA system
1	Problem identification	It is not included the QA system.
2	Participation of relevant stakeholders	The early phase participation of the relevant parties, for instance, the public, is not clearly indicated as a requirement.
3	Aligning needs and priority of the public with project objectives	There are requirements to check the alignment, and independent consultants (QA1) are assigned to check this.
4	Aligning project objective with strategy	There are requirements to check the alignment, and independent consultants (QA1) are assigned to check this.
5	Alternative analysis	Developing at least two alternatives and zero-option is a requirement, and QA1 consultants check this.

The Norwegian QA system is developed as a hierarchical system involving different levels of administration and providing checks and balances along the line connecting the major actors: ministry offices — the consultants — the decision-makers (Cabinet and the Parliament). The results of my key interviews in Norway indicate that evaluating the effects of the project initiative compared to society needs, their prioritization and cost benefit analyses including uncertainty analyses of the alternatives are important requirements to ensure the usefulness of the project. These are known requirements of governance that are used to ensure the relevance of a project concept.

However, as discussed in Section 6.2 the need for the active participation of stakeholders, particularly the general public, is not set as a requirement in the QA system. I have learned that the public and other affected parties are invited for comment during the project study phase, and they are involved between QA1 and QA2, but this is late because they are invited to participate in an already defined project.

Traditionally it is common that stakeholders such as the public, regulators and other parties depending on the project type have been involved in the project study phase, in which the

central government already has a certain preferred alternative. However, a more contemporary view is that stakeholders should be actively consulted at an earlier stage because effective participation of the public and other stakeholders and the administration in the early stage of problem definition will have a positive effect on ensuring the relevance of the project (Amado et al. 2010).

Furthermore, participation in the very early phase (in the project initiation phase) is not presented as a very important requirement (Table 8.3). This might reduce the relevance of a project, because there can be information that would not be considered in the decision-making process. The proposal here is that participation of important stakeholders should be called in the early phase ahead of the QA1, and the problem definition and project concept selection process should be more inclusive.

Sustainability

Table 8.4: Assessment of the QA system in relation to the governance requirements for sustainability of projects

	Governance requirements for sustainability	QA system
1	Participation	The early phase participation of the public and other stakeholders is not set as a requirement in the QA; rather it is practiced in the project study phase.
2	Policy integration	Requirements are not specified in the QA system.
3	Common objectives, criteria, trade-off rules and indicators	The QA system has not specified requirements to check the availability of shared sustainability objectives. Only a few important criteria are specified to evaluate project initiatives.
4	Information	Independent consultants are employed to ensure the quality of information.
5	Programs for system innovation	Involvement of consultants in relation to the budget.

In the cost benefit analysis there might be more focus towards economic issues because in the QA system the purpose of the cost benefit analysis is described in relation to economic issues —'ensuring the higher economic return'. Social and environmental issues are not presented as equivalent to economic issues. As argued in chapter four of this study, unless all three dimensions of sustainability are acknowledged from the beginning, the

sustainability of the positive effects might not be ensured. Therefore, for better assessment of project initiatives, the QA system needs more requirements related to social and environmental issues.

Research by Klakegg (2010) indicates that conflict over objectives and/or strategies concerning the project is the most important problem leading to a lack of sustainability (this study includes Norway). As discussed in relation to ensuring the relevance of a project proposal, front-end public discourse and discussions among stakeholders are important requirements to prioritize project initiatives, to avoid conflict over objectives and to create common objectives between stakeholders. The more participation there is, the more use of knowledge and information from a wide variety of sources and experiences, the more likely it is that innovative ideas from the participants will be mobilized (Woltjer, 2009), which is important for sustainability.

Integrating some aspects of policies and strategies of different ministries and the cooperation between different governance levels (central government, provinces and municipalities) are also important requirements for sustainability. However, it seems it might be given minimal concern in the QA system.

8.3 Ethiopia

Are relevance and sustainability of projects considered as key criteria for selecting a project concept and for making decisions?

No! The assessment of the MoFED guideline and the country's development plan indicate that there are some requirements that could be considered as useful to ensure the relevance and sustainability of projects. But there are also important governance requirements for relevance and sustainability that are not properly considered in the development of new projects (Table 8.5 and 8.6). So it may not be correct to say that relevance and sustainability are considered as key criteria in the development of public investment projects in Ethiopia.

Relevance

Table 8.5: Assessment of the MoFED guideline in relation to the governance requirements for relevance of projects

	Governance requirements for relevance	MoFED guideline
1	Problem identification	The guideline has requirements in this regard but analyzing the problems and prioritizing procedures are not detailed.
2	Participation of relevant stakeholders	Participation is not properly defined; the top-down approach is common. In practice projects are often defined based on the priorities of decision-makers.
3	Aligning needs and priority of the public with project objectives	Society's priorities are unknown, misunderstood or ignored.
4	Aligning project objective with strategy	The guideline properly states this and it is the main criterion for evaluating a project proposal.
5	Alternative analysis	There is a problem of lock-in. Alternatives are not properly searched and evaluated.

My interviewees at the MoFED, particularly planners and decision-makers insist that the relevance of a project initiative is checked within the existing project governance system of the country. Most of the interviewees at the Ministry office argue that project promoters, the Cabinet and the Parliament have responsibilities to assure the relevance of major public investment projects. But there are cases that indicate the public needs and priorities are not justified, the trends for problem analysis of the project area are weak, and too often decisions on project initiatives are made based on little information (Paper 3, 4, 5). To prove this claim, I have interviewed independent consultants and professionals. Associate Professor Wubishet Jekale, who is general manager at Jekale Construction Management Consultancy, commented favorably on the commitment of the government but he was critical on the project preparation and decision-making processes. In addition to this, I have evaluated the housing projects in Ethiopia (case study), the results of the evaluation indicate that some of the projects, particularly those implemented in the small towns, are not relevant.

Further, I have investigated (survey) the most important problems that affect the relevance of public investment projects in Ethiopia (Paper 4). The results indicate that society's

priorities are unknown, misunderstood or ignored leading to the problem of lack of relevance. The most important reasons given by the respondents were that society's priorities have not been investigated and have been ignored by planners and decision-makers due to political or personal reasons.

Several of my interviewees said that it is the top-down project approach of the government makes some projects less relevant. In the top-down project approach, the majority of the projects are defined and planned at the top level without active participation of the public and other stakeholders. In this approach, decisions about major public investment projects are made without consulting the users. This could be that either public priority is ignored and changed to other politically prioritized projects or that it is misunderstood by the decision-makers. I have interviewed Amare Asgedom, who, as head of Housing Development and Government Building Construction Bureau of the Ministry of Works and Urban Development of Ethiopia agreed with the less participation of stakeholders at the front-end of projects, but he insisted that the government development plan is prepared according to the interest of the public, and it is the source of all projects in the country.

In addition to this, the purpose and benefits of projects should be studied before starting projects and the problem and proposals should be evaluated and discussed with stakeholders without any exaggeration or undermining of the effects. Experience in Ethiopia shows that the objectives of major public investment projects have been stated ambitiously and the achievements are believed to be low compared to the initial plan.

In general the government might have been overambitious in defining major public investment projects because there is very high demand for public services. However, it is important to lower the ambition and to give enough time for front-end project preparation because experience has shown that without proper front-end investigation of the public needs and priorities, many public projects have failed worldwide. In particular, such a centralized project approach could result in non-relevant, resource-intensive, and ecologically degrading projects.

Sustainability

Table 8.6: Assessment of the MoFED guideline in relation to the governance requirements for sustainability of projects

	Governance requirements for sustainability	MoFED guideline
1	Participation	Not common for major projects. Top-down centralized approach.
2	Policy integration	Not specified.
3	Common objectives, criteria, trade-off rules and indicators	Not specified but few important criteria are specified to evaluate project initiatives.
4	Information	There is a procedure for information development but there is no information quality assurance system. Lack of go/no go gates.
5	Programs for system innovation	Not specified.

Lack of commitment to the project from the key stakeholders is identified as the most important problem leading to lack of sustainability of projects in Ethiopia (Paper 4). From my previous discussion in chapter four, we know that key stakeholders' support for a project is vital for the sustainability of projects. Conversely, lack of support from the key stakeholders is likely to result in project failure (Garland, 2009), because the involvement and consent of beneficiaries and stakeholders in project concept selection and decision-making processes has a significant sustainability dimension. As discussed in paper 3, in Ethiopia project stakeholders do not participate in the early stages of the project development process and they do not contribute ideas for the improvement of the project proposal. The ownership feeling and the commitment for projects might be low because project promoters do not consider them as important in the project initiation and preparation stages.

In addition to this, the commitment of decision-makers, who are in most cases considered as the project's initiators, is not consistent throughout the process. Usually at the starting phase, they are very ambitious but their commitment decreases as the project progresses and after completion.

Table 8.7 summarizes the issues of relevance and sustainability in the Netherlands, Norway and Ethiopia.

Table 8.7: Summary of different project governance frameworks: Issues of relevance and sustainability

	Netherlands, MIRT rules of the game	**Norway, QA system**	**Ethiopia, MoFED**
The issue of Relevance	There are significant efforts to ensure the relevance of a project initiative: Inclusive problem identification; Participation and discussions are important requirements; alignment between stakeholders priorities- area agenda- objectives of projects is set as a criterion; and two stages of alternative analysis is a mandatory requirement	There are significant efforts to ensure the relevance of a project initiative: Problem identification is not part of in the QA system; Early stage participation of potential stakeholders is not specified; The alignment of the stakeholders priorities - objectives of projects- development strategy is set as criterion; Preparing at least two alternatives and the zero option is a mandatory requirement	Projects are developed based on government's short and mid-term plans: Problem analysis and prioritization procedures are not detailed; The need for participation is not properly defined; and alternative analysis is not set as a mandatory requirement
The issue of sustainability	Relatively there is an effort for a balanced approach to address all the three goals of sustainability: Participation in the early phase is taken as an anchor; There are initiatives to integrate policies horizontally and vertically; Market parties' involvement, and there are rooms for innovation.	QA requirements focuses more on economic issues: Participation of stakeholders is not set as a requirement in the early phase; The need for policy integration is not specified; The quality of information are checked by independent consultants	There is relatively more focus on Social and economic issues: Participation is not a mandatory criterion; No information quality assurance system; and no visible system for innovation

As I discussed in this chapter and summarized in Table 8.7, both Norway and the Netherlands have developed better requirements to check the relevance of project initiatives. They have developed several front-end requirements to check the relevance of a project initiative before a project initiative proceeds to the next phase. Therefore, we could say that Netherlands and Norway consider relevance as a key criterion for selecting a new project concept and for making decisions.

On the other hand, Ethiopia develops projects based on the government short and mid-term plans. In this regard, there are certain requirements to check the relevance of the project initiatives, but there are important requirements that are not considered in the process. Therefore, I would say Ethiopia is not fully considering relevance as a key criterion for selecting a new project concept or for making decisions.

In the case of sustainability, the reform in the Dutch project governance system has important requirements that can help to achieve the goals of sustainability. Similarly, the Norwegian QA system considers sustainability as a key criterion for developing a new project concept, but the governance requirements for sustainability are not detailed enough like the relevance requirements. In the case of Ethiopia, sustainability requirements are not developed enough, and the goals of sustainability may not be considered as key criteria to make decisions on project initiatives.

- The answers for research questions 1.1, 1.2, 1.3 in Chapter 6, Chapter 7, and Chapter 8 respectively, and the explanations given on the project governance systems of the three countries in Chapter 5 give full answer for research question 1.
- The next chapter, Chapter 9, presents answer for research question number 2.

9 Lessons from Good Experiences

9. Lessons from Good Experiences

As discussed in the introduction, this study is not all about presenting different frameworks to compare them, but to draw good experiences which may apply to other countries. This chapter discusses the second research question: **'***What can we learn from the project governance frameworks of the Netherlands, Norway and Ethiopia, which may apply to other countries?'* The objective is to identify good experiences in the Netherlands, Norway and Ethiopia through comparison and to offer a number of lessons whereby the choice of project concept may be improved, and the information development system can be strengthened.

I have learned the following from my engagements with the front-end project governance frameworks of the Netherlands, Norway and Ethiopia:

- **Providing clarity up-front rewards**: In the Netherlands, early stage involvement of stakeholders, as many as possible, is set as an anchor to identify and analyze problems, to develop many alternative solutions, and to prevent hostilities and procedural delays. In this approach, stakeholders get the chance to discuss the problems(s) and the triggering conditions, the legitimacy of the needs and usefulness of solutions, the possible impacts of the alternative solutions, and they are part of the meetings that base decisions. In the project initiation and exploration phases, the MIRT framework provides chances to potential stakeholders to discuss the following types of questions, among others: 'what do we want in this area', 'how can we do that', and 'what type of solutions do we need'. These open discussions among stakeholders could provide clarity about the problem(s), the possible solutions and the potential impacts of the solutions. This helps to get clear feedback right from the start and facilitates the selection of the right project concept.

- **More use of information technology infrastructure in project governance can help to make the project governance system more effective**: In the Netherlands, the Ministry of I & M uses several workshops and sessions, and then publishes and distributes documents to get feedback from stakeholders. More importantly, in recent years the official website of the Ministry has been open to accept comments from anybody interested, and social media, particularly twitter, are used to involve as many stakeholders as possible. I discussed the advantages of using IT infrastructure as an element of project governance and its implementation with Wim Leendertse, the contract and market manager for the new Western River Crossing (Blankenburgtunnel) in Rotterdam (Netherlands). Leendertse commented favorably on the use of IT infrastructure, which he believes provides a new way of getting information about proposals from stakeholders. Leendertse commented that the Ministry of I & M had received more than 2000 complaints, suggestions and ideas about the new Western River Crossing Blankenburgtunnel project in one month from different stakeholders basically through the IT infrastructure.

  Therefore, with internet and social media such reach has grown dramatically, improving the use of IT infrastructure as a means to engage many stakeholders could be a good lesson to take on because it can help to scale up the capacity of the government to assess the needs and priorities of the people, to get more information about the solutions, and finally to select the right project concept and make the right decisions.

- **Increasing awareness and expectations among stakeholders improves performance**: The project governance frameworks in Norway and the Netherlands have obligatory requirements that must be met in order to get funding. The establishment of such mandatory requirements could enforce awareness and expectation among the project stakeholders. In these countries, if project promoters need funding from the national government, they are aware of the procedures to follow and the requirements and rules to obey, and they know that there are critical milestones where their proposals are

subjected to scrutiny. Therefore, I could imagine that the establishment of such mandatory requirements and the availability of checks and balances in the project shaping process could oblige project promoters to improve their performance. Similarly the establishment of such systems may increase the awareness of the decision-makers, which in turn they may use to demand assurance before they make their decision. This may be a good trend to practice in other countries too.

- **Balanced approach matters**: The initiative of the Dutch government to integrate different policy fields, horizontally between sectors and vertically along the hierarchy of the government, is a good lesson in the process to develop sustainable solutions. From my interviewees in the Netherlands, I have learned that efforts have been made to shape projects by assimilating interests and policies from different policy fields. This approach can help to balance the ecological, economic and socio-cultural dimensions of the project preparation process. This in turn could help to create sustainable plans as well as sustainable projects. It is very important to note here that integration does not mean the merging of policies to one solid policy dealing with everything; specialized policies remain.

- **Developing better information and communicating to the right people is key**: The need for faster and better information in the Netherlands and the Norwegian initiative to develop better information at the front-end of the project shaping process are important initiatives to provide assurance for the decision-makers. It could enhance the level of confidence of the decision-makers and therefore improve the results in decision-making. Research results also confirm that the use of better information can improve decision-making (Davenport and Harris, 2007), and according to Julian Foster, who is program director at Heathrow, (reported on the Telegraph July 4, 2013), communicating the information to the right people at the right time is key.

- **Stage-gated decision-making helps to develop better oversight on project initiatives**: The Netherlands and the Norwegian project governance frameworks have established staged gates to test the suitability of project proposals and to ensure that the proposal is progressing in the right direction. These countries have also defined major milestones to make decisions at the different junctions of a project shaping process. And before those points, key proposal documents (information) are subjected to scrutiny. The reviews take place at five gates (the Netherlands) and two gates (Norway). These experiences can be useful for other countries too, because it can help to develop better oversight into the project preparation processes and decision-making procedures of project initiatives.

- **Outsourcing of the quality assurance of documents can improve the quality of information**: The Norwegian experience of outsourcing the quality assurance of documents to independent consultants is a good experience. In Norway, independent consultants review project initiatives (documents) based on independent evidence and they are expected to criticize project proposals from a logical perspective. Therefore, involving an independent authority, presumably someone who knows the facts can give valid and independent evidence, that is, independent of the source.

- **By involving market parties in the early phase, it is possible to develop better solutions**: The Dutch experience to involve market parties in the early phase of the project development process (explorative phase) can be a good lesson to learn because involving private parties in the early project shaping process is important to develop innovative solutions. According to my interviews with Professor Jos Arts and Wim Leendertse, the involvement of market parties (contractors and consultants) in the explorative phase of a project development process is important to get new ideas and develop better solutions. Furthermore, it is an important opportunity for market parties because they can get relevant information regarding future projects.

10 Validity and Generalization

10. Validity and Generalization

Validity is defined as the degree to which a research result measures what it intends to measure (Kimberlin and Winterstein, 2008), or the truthfulness of findings (Altheide and Johnson, 1994). Developing validity standards (trustworthiness) of a qualitative research is a challenge. Whittemore et al. (2001) propose credibility, criticality and integrity as primary criteria to measure the validity of a qualitative research. Credibility refers to the conscious effort to establish confidence in an accurate interpretation of the meaning of the data; criticality refers to the critical analysis of all aspects of enquiry, and integrity helps to assure that the interpretation is valid and grounded within the data.

This research is a qualitative research; therefore how to assure the quality and trustworthiness of the research has been a challenge. According to Carboni (1995) the validity of a qualitative research depends on the judgment of the participants, and how data from the interviewees, documents, and questionnaires are interpreted and generalized by the researcher. Madill et al. (2000, pp.17) put it, " Qualitative researchers have a responsibility to make their epistemological position clear, conduct their research in a manner consistent with that position, and present their findings in a way that allows them to be evaluated properly".

As discussed in chapter three, multiple methods are employed in this research to collect and interpret data about a phenomenon (interviews, questionnaires and documents reviews), so as to converge on an accurate representation of reality. Attention has been given on the selection of the participants (few but very credible respondents are involved), and mostly published documents are used as source of evidence. Credibility (internal validity) — high quality evidence from multiple reputable sources (academics, practitioners and researchers), and public documents and scientific publications is used. The results of the questionnaires are discussed with the interviewees, and it is cross checked with data from literature and other public documents, as it is planned in chapter three — 'within-method'

methodological triangulation. I believe readers can see what I saw even if they disagree with my conclusion.

Criticality and integrity — in this research, I have given a devout attention to integrity and criticality during interpretation, assumptions and analysis of data, and have tried to avoid any influence in the research process. I used similar approach and similar research questions in the three countries. The data from each country are evaluated critically according to the requirements stated explicitly in the literature and in the introduction parts of this study. I would say the whole research process is conducted with a neutral background and I was critical to avoid biases. Respondents of the questionnaires are checked in between, clarifications are given for all inquiry and biases; data which do not fit with the research are rejected. Data are interpreted and used after double checking the sources. Interviewees have got a copy of my interpretation of their answers, and the evidence is used after I got confirmation from the interviewees through email. Most of the respondents of the questionnaires are interviewed based on the results of the survey. In general, in the whole process of this research, there were repetitive checks of interpretation, and deliberate efforts were made to fulfill the criteria promised in the methodology section of this thesis, and to avoid biases, and guard against distortion.

I do not think the sample size of this research affects the validity of the research. As I discussed, the validity of a qualitative research depends on the judgment of the respondents, and how the opinions of the respondents are interpreted. In this regard, the designed research approach is of great help. Through the designed research approach, I am able to map the project governance frameworks and processes that are developed for selecting project concepts (Chapter six); able to identify the information development processes and decision-making procedures of the three countries (Chapter seven); able to identify the front-end project governance requirements that are adopted in each research country (chapter eight); and able to draw some lessons through comparisons.

The study has no statistical test to determine whether the measure adequately covers a content area, or adequately represents a construct. I never intend to do that and do not have data to support such a test, because the research is mostly a qualitative research.

The findings of this research are valid within the situation they may be used (in the country where the data are collected). That means it is possible to generalize the findings in the country. I believe that I have got relevant answers from the few but very informative respondents who have been purposely approached. However, it is difficult to generalize all the findings to the world (to generalize all the findings to settings not studied), because a qualitative research — by definition— involves subjective interpretations, therefore generalization is complicated and controversial (Polit and Beck, 2010).

Research findings can be generalized from one situation to another situation, if the study population is representative of both situations (Gassie, 1968). Instead, it is possible to transfer good lessons from this research (idea, program or experience) to the other countries with different situation (case-to-case transfer). Case-to case transfer is possible in a qualitative research whenever a person in one setting considers adopting a program or idea from another one (Firestone, 1993). Therefore, the findings in the Netherlands and Norway may be applicable in some European countries, and beyond. Similarly, the findings in Ethiopia may work to other African countries too.

11 Conclusion and Recommendations

11. Conclusion and Recommendations

In this concluding chapter, I bring together the most important themes that were discussed in this study. The themes are structured in four sets. The first theme highlights the efforts that are made to improve the project concept choice. The second theme focuses on how information regarding new investment projects develops and decisions are made. The third theme reflects on lessons learned through the comparison process. I then present some recommendations in the final theme.

11.1 Project concept choice

The findings of this research indicate that the Netherlands and Norway have made efforts to improve the effectiveness of their front-end project governance frameworks. Both countries have tried to develop contemporary processes, procedures and project governance structures that aim to develop the right project concepts, or they have defined frameworks to facilitate the project concept selection process. After investigating the project governance frameworks of these countries, the following picture emerges:

- Shifts towards the early stage of problem analysis;
- More attention toward identifying the needs and priorities of stakeholders and evaluating initiatives against those priorities;
- Obligatory requirements have evolved to search for alternative concepts;
- There are shifts towards developing standardized *ex-ante* evaluation requirements to consider the issues of relevance and sustainability; and
- The roles and responsibilities of stakeholders are specified.

In both countries these reforms are under implementation. Of course, it may be early to talk about the effects of the reforms, but if the reforms are implemented fully, the complexity of the preparation process of investment projects could be facilitated and the probability of selecting the right project concept could increase.

I have observed that the project governance frameworks, processes and procedures of these countries have differences too. Different from Norway, in the Netherlands there are requirements to involve as many stakeholders as possible during the problem analysis and solution development processes, and there is an intention to use that as a learning arena and as a source of information for decision-makers. In the Netherlands there is a requirement to search for the maximum number of alternatives, but in Norway the requirement demands searching for at least two alternative concepts; could this indirectly prevent the Norwegian project promoters from searching for more alternative concepts?

In Norway the outsourcing of the quality review of documents to independent consultants is a unique experience that may help to develop project concepts without bias. In contrast, in the Netherlands the quality of information is controlled by the checks and balances within a ministry office (the policy part of the ministry checks the implementation part of the ministry); does the up-front involvement of stakeholders in the Dutch system waive the need for independent review of documents?

11.2 Information and decision-making

The Netherlands and Norway have defined major staged gates and project approvals (go/no go decision points). The stage-gated assurance system has been adopted in both countries and new procedures have been developed in the hope of delivering better information to the decision-makers. Decisions on the availability of problems, the need and usefulness of initiatives, priorities, alternatives, the preferred alternative and funding are made step by step at the predefined approval points based on the information developed at the preceding assurance process. The two governance frameworks have developed a different number of decision gates. In the Netherlands, compared to Norway, the first gate is located in the very early phase. The gate is designed to decide on the legitimacy of the triggering conditions and to reach administrative consensus. In Norway, determining the legitimacy of the triggering conditions is an internal issue within ministry offices. The first gate of the Norway's quality assurance process (QA1) almost coincides with the second gate of the

Dutch system (MIRT 2). In Norway, the decisions on a new project concept and funding are made by the prime minister's office and the Parliament respectively, but in the Netherlands the ministry offices in consultation with the Cabinet make all the decisions.

However, researchers, planners and project managers who were interviewed in the Netherlands and Norway have doubts about the success of these reforms. They believe that the success of the reforms depends on the rationality of the decision-makers, and from experience they doubt the rationality of the decision-makers. Therefore, it may be reasonable to think that the success of the reforms in the project governance frameworks of these countries basically depends on people around the decision-making circle. However, keeping informing and consulting decision makers to influence decisions can be helpful.

11.3 Lessons from differences

The project preparation and decision-making processes of investment projects in Norway, the Netherlands and Ethiopia have some similar features but it is natural that they have differences too. There are good experiences that one can share with the other. The Dutch experience to consult and communicate as many as participants in the early phase; the efforts to integrate different policy issues horizontally and vertically in the project shaping process; and the use of IT infrastructure to get feedback from stakeholders could be a good experience to look into for Norway and Ethiopia, or for any other country in the world. Likewise, the Norwegian experience of outsourcing the review of documents of project initiatives to independent consultants, and the initiative to use independent information as decision basis could be relevant for the Netherlands or may be appropriate to many other nations in the world.

Developing countries such as Ethiopia, which have ambitious investment expansion programs, could learn from the difficulties and experiences of developed countries. They can skip the old trends that the developed countries have passed, and could adopt modern approaches. The results of this study indicate that to address the relevance and sustainability issues of public investment projects in Ethiopia, implementing a new

effective project governance system at the national level would be advantageous, or improving the effectiveness of the current project governance arrangement could be helpful. Experience in Norway and the Netherlands indicates that splitting the process of project selection and preparation stages into a number of distinct phases and testing the suitability of proposals at various stages before proceeding to the next stage of its development could be a good experience. Similarly creating shared set of priorities in the project initiation phase, and assessing initiatives against those priorities can be a good lesson to learn from the Netherlands and Norway project governance. Generally, taking the concept and reengineering it according to the context of a specific country might be useful.

11.4 Recommendations for further research

This research has taken a step in researching the project governance experiences of three different countries. In the path of my research, several questions are emerged that are related to the theme of this study.

I feel that further research is needed in the following areas:

1. In parallel with developing contemporary project preparation processes and decision-making frameworks, studies are important to find ways to develop better institutional culture and capability; particularly regarding shifts in attitude, ideas and the role of the decision-makers. Developing the right institutional culture and capability is key in order to reform project governance frameworks and processes as required. I believe this idea should be among the main issues for further research.
2. In this research, implementing effective project governance framework is considered as useful to facilitate the selection of the right project concept, and for making right decisions, whilst not excluding the difficulties in implementation. In parallel to this, it is also important to study a system to track whether the designed effect has come as planned, and how to make it dynamic to monitor and adjust those procedures and frameworks as needed.

3. Expanding the exploration of various project governance systems, processes and decision-making cultures of other modern countries and sharing their achievements and good experiences— learning from the differences is important direction for further research. Further research should be done in identifying and studying the bad experiences of different project governance systems as part of developing effective project governance system, because it is the first step in learning how to better deal with the problem.
4. Information technology infrastructure and the degree of outsourcing are the two latest project governance elements. Adopting these elements in a project governance frameworks and exercising could have a positive effect in the efforts to implement effective project governance systems. Additional research required in this direction.
5. Further research can also be focused on, "how information from the project governance processes and procedures can be communicated in a better way to the right people", "does the existing system provide meaningful information to the decision-makers", "how this information can be used effectively by the decision-makers", "is there a compelling relationship between governance and sustainability", and "can the goals of sustainability be achieved through reforms to governance of projects".

For those who needs to reform their project governance framework:

1. The reform in the project governance framework of a country may have an impact on the existing project preparation processes and decision-making procedures. Such changes may have unintended consequences. Therefore, identifying major factors that could affect the implementation process could be helpful. Copying a project governance framework of one country and implementing it somewhere with a different context is not recommended—lessons learned should be re-engineered.
2. Political discontinuity is discussed as one of the factors that could affect the effectiveness of project governance frameworks (particularly the Dutch interviewees have stressed on this issue). A new government with a new development agenda may

need a new system of project governance, so it is good to consider such issues and to provide flexibility in designing project governance frameworks.

3. Developing countries like Ethiopia, which have ambitions to invest highly, need to develop effective project governance systems at the top governance level to consider all the relevant requirements that ease the selection of right project concept, and to make right decisions.
4. Describing explicitly the front-end governance requirements for developing new projects may simplify the process of selecting the right project concepts. Therefore, it is very important to specify governance requirements and it should be presented in brief.
5. A balanced approach in the training of students is important. So far academic curricula have given much focus on the project study and implementation phases of a project but the front-end phase of a project (the relevance of the project, the requirements for sustainability, the possible impacts of projects and other similar issues) has not received much attention. Therefore, revising curricula of relevant fields to accommodate more front-end issues could be helpful.

11.5 Contribution

This research idea has given me the chance to investigate the front-end project governance experiences of different countries. I have studied project development processes, structures and decision-making frameworks of three geographically, economically and politically different countries — it gives the research an international perspective. The study is framed on national studies — that makes the research different from the usual project-focused studies. I have identified important front-end requirements that are addressed by those in the public sector responsible for the choice of project concept and for making decisions. The findings of the research that are summarized from chapter six to nine of this thesis are published in nine different peer- reviewed journals and conference papers, due to the significance of the message to the wider community.

In general, I would say this study does contribute specific and identifiable advances in knowledge that could be useful to the profession. The contribution can be seen from two perspectives:

As new knowledge, something to be transferred:

The study contributes knowledge to better understanding the front-end governance of public investment projects by comparing the experiences of three different countries, and I believe the research does further the field, and may have a direct input within the evolving debates on what to do to develop effective governance frameworks. I have discussed important front-end requirements that must be considered in selecting new project concepts. I have discussed important processes and structures needed to make the right decisions reasonably well and have offered lessons from good experiences of the three countries, and lesson learned can be transferred case-by-case. The study also contributes an early indication that developing relevant projects and goals of sustainability can be achieved through reforms in project governance, though additional research is required to prove this.

As areas for further research:

From the beginning, this study has framed a very timely and important question to investigate, and more importantly the results of the study trigger other important hypotheses that deserve further thorough and rigorous study as indicated in the recommendation part of this thesis. Particularly on "what we need to know to be able to design a system that could be useful to track whether the designed effect from a project governance framework reform has come as planned", and "how do we make the model dynamic to monitor and adjust those procedures and frameworks as needed" .

Have I been clear and convincing enough in my argument? You, the reader, will decide!

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Front-End Project Governance

Choice of Project Concept and Decision-Making - An International Perspective

Part 2: Papers

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Paper I

PAPERS

Linking Policies to Projects: The Key to Identifying the Right Public Investment Projects

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ABSTRACT

This article reviews the merits of project governance in linking policies to projects and focuses on public investment projects in African countries. In this region, every year, huge sums of money are spent on public investment projects. It is relevant to ask whether the objectives of these projects are set and fulfilled according to the needs and priorities of the target group, or whether they are consistent with the development policies of governments in the target countries. After examining different conceptual and contextual literatures, the authors provide a project governance model to link policies to projects, a checklist for good project governance, and an outline of factors that could affect the project governance implementation.

KEYWORDS: linking; policy; project governance system; right projects

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INTRODUCTION

Policies determine the environment and the framework within which development takes place (Cusworth & Franks, 1993). Projects are policy implementation tools, and one means by which policies are put in practice. Projects are designed in order to provide economic, institutional, or social development by using limited available resources. At the strategic level, policies should be aligned with public needs and priorities. Objectives of public projects should be aligned with policies. In other words, the objectives of projects should be aligned with the important priorities in the society and the needs of the users (Samset, 2003). Public investment projects should be subjected to questioning along this line, and decision makers should examine the relationship between projects, public needs, and policies before making decisions.

Often, public investment projects are criticized and judged unsuccessful when seen from the society perspective. Many public investment projects are implemented without examining the public needs and priorities. Some projects are implemented with several billions of dollars but do not give a sustainable benefit to the society. Some projects are implemented even though they have negative impacts on the environment, society, or economy. Generally, trying to implement too many projects by too few people is a common problem (Englund & Graham, 1999). A study conducted by the UK Office of Government Commerce (OGC) indicated that lack of clear links between the project and the organization's key strategic priorities is one of the top causes of unsuccessful projects (OGC, 2005). We believe the same is true in African countries. Implementing several public investment projects by only a very few decision makers, with no apparent link to the policies and strategies of countries, is a common problem in many African countries.

This article aims to discuss the project governance system as a linkage between policies and projects to improve success in the public investment projects in developing countries. The article looks at public investment projects in developing countries, particularly in Africa; the project governance system; the importance of the project governance system in selecting the right projects; and factors that could affect the implementation of the project governance system.

The Research

The research is qualitative and is based on conceptual and contextual literatures to present the idea of a project governance system considering

stakeholders, limitations, and mechanisms of identifying the right project. It focuses on the missing link between policies and projects and discusses the importance of change in the project governance system of developing countries.

The proposition of the research is to link development polices with projects through a mandatory project governance system, which will bring changes in the process of selecting the right public investment projects and improve the success of those projects.

Projects in Developing Countries

Public investment projects include projects from small-scale, thousand-dollar projects to high-scale, multibillion-dollar budget works. The main theoretical objectives of the majority of these development projects are poverty reduction and development. Today, several public investment projects are under way throughout the African countries, with the objectives of either eradicating poverty or answering a certain need of the society or for development. However, the number of projects that cannot satisfy the needs and priorities of the public are also increasing. It is a contradiction: the demand for projects increases, but the number of projects that cannot satisfy the public needs also increases (Morris & Hough, 1991; Samset, 2009). Project failure has come as a common phenomenon in the public view. Therefore, people feel that there are "too many unneeded projects" (Englund & Graham, 1999, p. 52) and criticize these projects as white elephants, "something whose cost and subsequent upkeep is much greater to the owner than its value" (Williams & Samset, 2010, p. 38). Billions of dollars have been spent each year on these projects, but very little is known about the impacts of these projects on the public (Baker, 2000; Samset, 1998). Baker and Samset are not talking about failure of projects due to lack of efficiency. They are talking about the failure of projects due to lack of usefulness and sustainability—strategic failure. Williams and Samset (2010, p. 40) explained such projects as "the wrong solution to the problem at hand, or only a partial solution, sometimes creating more new problems than it solves."

Most often, public investment projects in the developing countries have been initiated by different agencies, including national governments, local governments, international organizations, politicians, nongovernmental organizations (NGOs), and others (Baum & Tolbert, 1985). These sources of public investment projects are criticized for lacking methodological arrangement or method of organization. Usually, their approach is unsystematic and follows poor project selection methodology. That means projects are not often developed from development policies or strategies (national plan or other medium- or long-term strategic documents) of countries. Some countries do not even have an organized development policy that could serve as a source of projects. The existence of credible strategic guidance to public investment, which can be meaningfully interpreted at the sector or subsector levels, should be a basic requirement.

When public investment projects are being planned, the task of designing and defining project goals based on the development strategy of the country has not been given sufficient attention. Objectives have been set based on the interests of project initiators, usually decision makers (Shiferaw & Klakegg, 2011). Several projects have no definite objectives. This has affected the relevance of projects. A project is relevant if the objectives of the project correspond to the needs and priorities of the owners, the intended users, and the affected parties (Organisation for Economic Co-operation and Development [OECD], 2006). In this regard, a study conducted by Samset (1998) indicated that projects in developing countries are evaluated as low on relevance and not sustainable, compared to projects of industrialized countries. Most of these unsuccessful projects are found in the majority of the poorest African and some Asian countries.

At different times, different reasons have been given for the low success rates of public investment projects in these countries. For instance, different World Bank reports explained weak implementation and poor governance capacity as obstacles to achieve the desired results (Samset, 1998). Weak implementation means the inability to implement projects efficiently—projects are not completed on time, cost exceeds project budget, and the quality of the output is below the standard. On the other hand, failure due to poor project governance would be seen when projects are not able to give the intended benefits to the target groups. With poor project governance, projects do not achieve their formal goals; projects will not have significant positive impact on beneficiaries; projects will not be relevant in relation to public needs and priorities, and projects will not have long-term positive effects no matter how well the implementation process was performed. The following strategically unsuccessful projects are presented as an illustration of the poor project governance systems of some African countries.

The Chad-Cameroon oil pipeline was the biggest development project in Africa when it was completed in 2003. The project cost was US$4.2 billion. In 2001, the World Bank signed an agreement with the Chad government to finance the project with a specific agreement that substantial oil revenues would be directed to poverty reduction. However, the government of Chad refused to allocate adequate resources critical for poverty reduction in education, health, infrastructure, rural development, and governance, as per the agreement (World Bank, 2008). Surprisingly, in 2005, the Chad government announced that oil money would go toward the general budget and rearming the military, tasks that go completely against the original project objective. This World Bank loan agreement with the government of Chad was

hailed as "groundbreaking" because it channeled revenue to the poor, but it ended up as one of the most disastrous and ambiguous projects of the bank in Africa (Bank Information Center [BIC], 2008) because the poor could not benefit as per the original project objective.

In Ivory Coast, Félix Houphouët-Boigny built the largest church in the world with a cost of US$360 million at Yamoussoukro (Basilica of Our Lady of Peace of Yamoussoukro) (Ayittey, 1992). *The Guinness Book of World Records* lists the project as the largest church in the world. However, it stands empty today.

The government of Uganda, with the help of the World Bank and the African Development Bank, constructed a 200-megawatt dam near Bujagali Falls on the Nile. The dam had a devastating effect on communities in the area. The backflow submerged a huge area of cultivable and settled land, forcing migration and resettlement of large numbers of people (International Rivers, 2012). According to International Rivers, the project will do nothing to help the 95% of Uganda's population who are not connected to the national grid.

Housing development projects in Ethiopia are implemented in different regions of the country with huge amounts of money. The evaluation of the projects by Shiferaw and Klakegg (in press) indicated a shortfall, especially in small towns. In the small towns, the housing projects were not considered by the public to be a priority. The decision to implement similar projects in every town without undertaking a solid proper problem analysis affected the success of projects. According to the evaluation, some towns had completed apartments that did not attract end users, and the project implementation process was stopped before the project objectives were fulfilled. The financial recovery of the projects was not as successful as expected, and the contribution of the projects toward the strategic goal of the program was not significant. This in turn could affect the sustainability and long-term effects of the projects.

In these and many other similar unsuccessful projects, we can see many problems with project development: the need for projects is not well justified; the project's objectives are not clearly specified; alternative solutions are not identified and compared; relevant stakeholders are not asked to participate at the beginning. Indeed, in many cases the project's goals and objectives seem to have been selected as part of a random process.

The responsibility for the failure of projects to achieve the intended effects lies more often with planners and designers (Cusworth & Franks, 1993). But the decision-making processes at the top governance level could be the most important reason for the failure of projects. In this regard, recent studies have indicated most of the reasons for failures of projects are facets of ineffective project governance. For example, the UK Government's Office of Government Commerce (OGC), the developers of PRINCE2, and the OGC Gateway review process, have compiled a list of common causes of project failures. Decision-making failure, lack of clear senior management (ownership and leadership), and lack of effective engagement with stakeholders are high on the list (Garland, 2009). According to Garland, inefficient project governance leads projects to failures.

There is no doubt that relevant and sustainable public investment projects improve the living standards of millions of poor people in nations across the developing world. On the other hand, as we said earlier, nonrelevant and unsustainable projects will waste public resources and cannot provide the intended benefits to the public. Therefore, decision makers in these countries should be sure that they are doing relevant and sustainable projects before making decisions on public investment projects. However, the question is, how do they ensure that they are doing the right projects?

What Links Policies to the Right Projects?

Doing the right projects requires an effective front-end project governance process in order to select and deliver the selected projects in a way that meets the expectation of key stakeholders (Weaver, 2007). Therefore, it is very important to create a project governance model that would help decision makers to anticipate, understand, and take action around the intended and unintended consequences of their choices and decisions (Shaw, 2003). This can be handled by establishing some form of link between projects and development policies of countries. The link would help to check and control the most common challenges of projects, such as unclear goals and objectives, lack of alignment across stakeholders to project goals, commitment from key stakeholders, availability of alternatives, prioritization, and others. This link could be a project governance system, because with a formal governance system it is possible to choose the right projects; allocate scarce resources to the high-priority public needs; and elicit the desired behavior from public enterprises (Baum & Tolbert, 1985).

Garland (2009) defined project governance as "the decision-making framework that guides the development of a project and within which the critical project decisions are made." Project governance develops a basis and implements decisions (Klakegg, Williams, Magnussen, & Glasspool, 2008). Project governance is also a means for organizations to ensure that their projects/programs are aligned to their development objectives; the responsibility of parties and stakeholders is established; objectives of projects are checked; uncertainties are analyzed; alternatives are searched; and cost estimates are evaluated. Effective project governance has mandatory screening sieves. The screening helps to check the quality of the decision basis. According to Weaver (2007), effective

project governance is a key feature of successful investments. Therefore, by establishing effective project governance, it is possible to create a link between development strategy and the objectives of projects, and to control whether objectives of projects are prepared based on the needs and priorities of the public.

Studies by Klakegg, Williams, and Magnussen (2009) indicated that some industrialized countries in the world have executed project governance systems. The objectives of the implementation of governance systems are to build effective and accountable institutions in the public sector and to deploy the best available skills and experience to facilitate investments in the public sector. It includes devising necessary quality assurance systems and governance frameworks. The governments of Norway and the United Kingdom have established governance systems to ensure best practices in planning at the front end. There are indications of success in this regard. To illustrate, the Norwegian project governance system and the UK Gateway review processes are discussed.

The Norwegian project governance system was established in 2000. It was designed to improve the quality of the decision basis of major public investment projects in Norway (Klakegg, 2010). The model for decision-making follows logical and chronological sequences between analysis and decision making. This will later lead to the selection and go-ahead of the preferred alternative (Samset, 2009). As shown in Figure 1, the Norwegian project governance system has two key decision points. These are QA1 (Quality Assurance 1) and QA2 (Quality Assurance 2). The aim of QA1 is to make sure that the choice of project concept is rational. QA1 focuses on need assessment, alternative analysis, strategy document, guidance for the pre-project phase, and overall requirements. On the other hand, the focus of QA2 is checking cost estimates, contract strategy, and an overall project management document (Concept Research Program, n.d.; Samset, Berg, & Klakegg, 2006).

The quality assurance points are fixed at the critical points, and decision makers will be provided advice and guidance from professionals at these critical points before making decisions. In this system, the decision-making process is political, and decision makers will decide whatever they find appropriate. However, good decisions depend on the quality of available information. In the Norwegian project governance regime, decision makers are expected to make democratic decisions based on the information from the analytic process of the assigned independent consultants, the preferences, and political priorities. The regime is a good initiative for informed decision making.

Similarly, the UK Gateway review process examines project or program concepts at the critical decision points at the front end and during the implementation period. According to the OGC (n.d.a), the Gateway review process is a quality assurance system to check the successful progress of programs or projects at the specified key checking points before they progress to the next step. The system uses different techniques in order to effectively deliver the intended benefits to the beneficiaries. In the Gateway review process, programs or projects are examined by independent professionals using their experience and expertise. Interviews, document reviews, and the team's experience are the major techniques used by the independent practitioners in order to provide valuable additional perspective on the process.

The OGC Gateway process is designed to provide independent guidance to important stakeholders around the program or projects on how best to ensure that their programs and projects are successful. During the life cycle of the project, there are five Gateway review processes, as shown in Figure 2. These are: Gateway 0: strategic assessment; Gateway 1: business justification; Gateway 2: delivery strategy; Gateway 3: investment decision; Gateway 4: readiness for service; and Gateway 5: operations review and benefits realization. The first three are review processes at the front end, whereas the last two

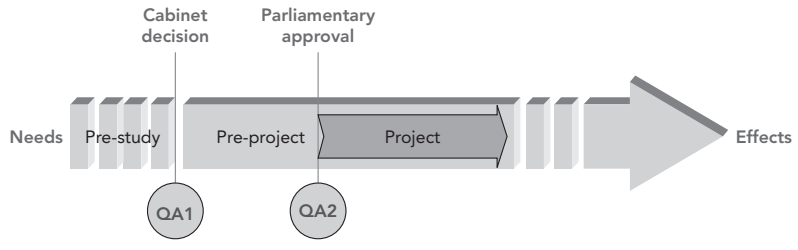

Figure 1: The Norwegian quality-at-entry regime for major public investment projects (Concept Research Program, n.d.).

Linking Policies to Projects

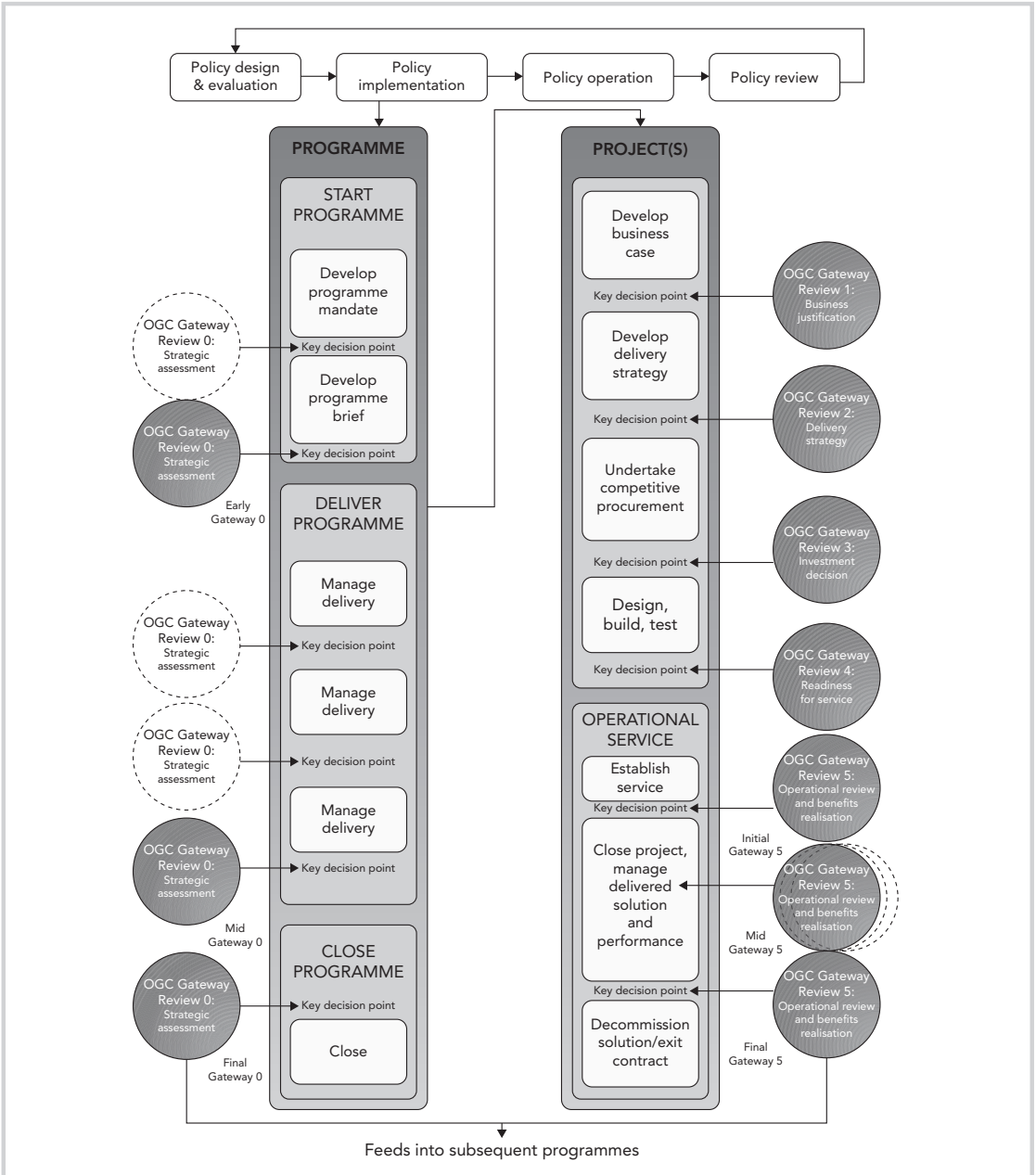

Figure 2: The overall OGC framework (OGC, n.d.b; Klakegg et al., 2009).

are checked during the service implementation.

The OGC Gateway process provides assurance and support for the relevant decision makers with the following points (OGC, 2007):

- The best available expertise and experience are set up on the program or project.
- All the stakeholders are aware of the project/program status and the issues involved.
- There is assurance that the program/project can progress to the next stage of development or implementation.
- More realistic time and cost targets for programs and projects are achieved.
- Improvement of knowledge and skills among government staff occurs through participation in review teams.
- Advice and guidance are provided to program and project teams by fellow practitioners.

Improving Governance of Public Investment Projects in Developing Countries

Developing countries have a scarcity of resources. These scarce resources are mostly committed to projects, since most countries' governing agencies believe that projects are the means for organizing resources to invest in development. Of course, different professionals agree that programs and projects provide an important vehicle for the efficient and timely delivery of governments' aims. However, this argument is often weakened by the low success rate of public investment projects in a number of dimensions, including poor project concept selection, unfair procurement practices, cost and time overrun, incomplete projects, and failure to operate and maintain assets effectively (Rajaram, Le, Biletska, & Brumby, 2010).

Most often, developing countries have no formal project governance systems, or such systems are implemented weakly; different sectors working for the same development strategy have weak coordination; and different projects under the same sector are not processed in coordination and integration (Ministry of Finance and Economic Development [MoFED], 2006). Decisions, actions, or operations have no formal procedure or the procedure is not followed strictly. Efficient procedures save time, money, and human resources. Disorganized procedures and the absence of an effective governance framework are the main causes of project failure and wastage of resources—even in the developed countries.

Moreover, there is no clear system to check the relevance of the sectors' project proposals with the government development strategy; there is no system that checks how public needs and priorities are included in the project objectives and development processes. Various project implementation sectors do not have guidelines for preparation of public investment projects. These issues have created various shortcomings: a failure to map public needs and priorities; a failure to analyze the relationship between policies and projects; and a failure to analyze various levels of planning processes.

Therefore, good and effective management and control of programs and projects is essential to the success of government objectives (OGC, n.d.a). Developing knowledge and expertise at the front end of projects, from the initial visualization until the decision to implement, is very important (Concept Research Program, n.d.). A framework is very important to stakeholders who want to ensure successful investments (Samset et al., 2006). It is therefore desirable to have a well-functioning public investment system to identify the specific weaknesses that would contribute to poor outcomes and to suggest appropriate institutional and technical remedies that could correct such failures (Rajaram et al., 2010). This indicates the importance of a system to link projects with investment guidance or government policies. The main objectives of the system and the process are to give decision makers access to all the information they need and to improve the quality of the decision basis.

Of course, it is very important to have some form of system that works on behalf of the government and the public to ensure that public investment projects are efficient, effective, relevant, and sustainable. In this regard, high-quality processes and procedures for planning investment projects have played a vital role in high-performing countries in East Asia. On the other hand, investment in general in sub-Saharan Africa, where governance is comparatively weak, has had little impact on growth (Devarajan, Easterly, & Pack, 2003; Kenny, 2007). The development experiences of these countries confirmed that governance has a crucial role in promoting and sustaining development.

From the above discussion, we can understand that establishing some form of effective governance system as a link between projects and policies is very important to increasing the success of public investment projects. We have seen two of the most recent project governance systems (the UK OGC Gateway and the Norwegian quality assurance system) and their principles, and we have described the impacts of good governance on fast-growing countries in East Asia. We believe that African countries need to implement some form of effective project governance system. The question is, which type of project governance system will best improve the success of public investment projects in this region?

We suggest establishing a separate project governance system based on the contexts and norms of each country. The governance structures, models, principles, and governance elements are not the same in different contexts. Copying the UK Gateway review or the Norwegian quality assurance system or any other form of governance system from developed countries may not have a significant effect, because in designing the governance and strategic

ideologies of projects, the development ideologies of industrialized countries are taken as the main inspirational tool for the last decades. Experts from different fields have continuously looked for ways to transfer the experiences of developed nations to the developing countries, believing that development follows a common path that all countries have passed through. But in practice it does not work well.

Therefore, establishing a separate project governance system within the context of each country is very important. This helps to create a link between development strategy and projects. It provides a common base for preparing projects financed by the public sector. But wherever it is implemented, project governance must be clear in its objective; it must enable effective and efficient decision making; it must provide clarity of accountability; and it must ensure that the interests of all stakeholders are considered within the decision-making process (Garland, 2009). In order to ensure its effectiveness, any governance system should be based around core principles (Klakegg, 2010). These principles must be used as the basis of the design of governance model. Governance principles include transparency, accountability, rule of law, efficiency and effectiveness, responsiveness, and forward vision (Klakegg, 2010). These are important principles that a project governance system in these developing countries needs to embed in its policies.

Figure 3 illustrates a project governance model for public investment projects. The model shows how public investment projects could develop and who would be responsible for the activities in the project development process. According to this model, projects are initiated from the policy direction of the government through a strategic plan or similar document. The policy direction should address the public needs and government executives are responsible for designing the policy direction of the state. On the other hand, the sectors should disaggregate the strategic plan and could develop concepts of projects. To ensure the alignment of objectives of projects with the policy direction and then to the public needs, some form of quality assurance system is important between the government executives (decision makers) and implementing sectors. The quality assurance system needs to have some form of criteria and checklist to evaluate project proposals. Through the quality assurance system, project concepts will be screened step by step, and then decisions will be made by government executives. The decision makers can decide whatever they like, but in this scenario, they are informed about the costs, consequences, and potential for success of projects.

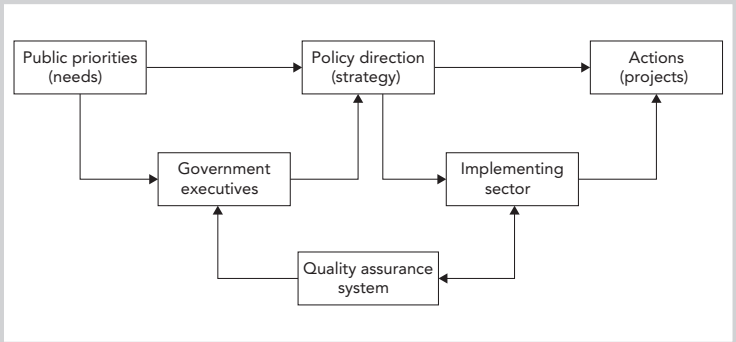

Figure 3: Project governance model for public investment projects.

The quality assurance system in the project governance model, as shown in Figure 3, is designed to deliver the right information to the decision makers. The information from the system could be used as the decision basis. The processes and procedures inside the quality assurance system must be designed based on the contexts of the implementing country, as seen in the cases from Norway and the United Kingdom. However, any type of quality assurance system must be able to give delivery confidence to decision makers and any other relevant stakeholders. According to OGC (n.d.a), this type of quality assurance system is important for delivery of projects and provides decision makers with a wide view of the project portfolio and an agreed view of risk. The system would have an independent examination for each proposed alternative using top independent external professionals or consultants. Alternatives should be examined for any probable risk and all the available relevant (qualitative and quantitative) data should be collected and analyzed. Collecting and analyzing factual information is the most important step in the process because the absence of factual information is often a pretext for not seeking information at the front end (Samset, 2009).

Quality assurance should be continuous, and all major public investment projects should pass through the system. In the same way, other small projects should pass through a similar internal quality assurance system since the ultimate goal is to implement the right projects no matter their size.

In the previous two sections, effective project governance is explained as a system that can be used to select the right public investment projects. It is also explained as an important link between policies and the right projects.

No.	Checkpoints	Remark
1	Is there a real problem that requires initiating a project?	
2	Why is an activity initiative selected? Is it the priority of the public?	
3	Are the objectives of the project consistent with the policy direction of the country?	
4	What is the final objective of the project? Is it possible to achieve?	
5	Are all relevant stakeholders informed and allowed to be involved?	
6	Can resources be used efficiently? Is the funding available?	
7	What are the negative and positive impacts of the proposed project?	
8	Is the net value of the project encouraging?	
9	Are the project estimates accurate?	
10	Is the result of the cost benefit analysis encouraging? Does the cost benefit analysis consider all the relevant costs and benefits?	
11	Can the program or project be better designed to achieve the intended outcomes?	
12	Is all the relevant information collected and analyzed?	
13	What are the associated contextual and operational uncertainties? Are they analyzed? What is the result?	
14	What are the alternatives? How are they compared? How are the results interpreted?	

Table 1: Information quality checklist for decision makers.

The implementation of a project governance system is advised for the long-term success of public investment projects. Quality assurance system is designed in a project governance system in order to analyze all the relevant formation and to give delivery confidence for decision makers. It is expected that decision makers will use the information from the system as a base for the decision. Table 1 illustrates a sample checklist prepared for decision makers and quality assurers that would allow them to check the quality of information before making decisions.

Factors That Could Affect the Implementation of a Project Governance System in Developing Countries

The project governance system implementation process requires proper care toward its acceptance and anchoring (Klakegg, 2010). It also requires true interest from decision makers, commitment from senior management, and support from other relevant stakeholders. The implementation process has challenges of cultural issues, policy issues, structural issues, and resourcing and skill issues (Garland, 2009). Taking into consideration the contexts of developing countries, the following factors are selected and discussed as factors that could affect the implementation process of a project governance system.

Commitment From the Government Executives

Englund and Graham (1999) and Graham and Englund (1997), in their study of project strategy, explained the commitment of executives as critical to creating a conducive environment for project success. Similarly, even though there are many contextual factors that could affect the successful implementation of a project governance system, the need and commitment of top management is critical. There are indications that could support this argument. For example, planning for public investment projects has been widely accepted (at least theoretically) in the developing world for a long time. It also has been a requirement from financing parties like the World Bank. In this regard, developing countries have implemented project preparation guidelines for public sector projects. However, the actual formulation of the guidelines has been slow, and the divergence between the guidelines and their implementation has frequently been noticed (Islam, 2003). This indicates that unless there is a commitment from the government executives, the implementation of project governance systems could be difficult.

Executives in developing countries may lack commitment to a mandatory project governance system for many different reasons. Some governments are not democratic and it is obvious

that they do not want to have a democratic decision-making process. That means they might not be committed to the consistent and coherent execution of project governance rules and responsibilities. On the other hand, some countries may have project governance systems that are not functioning properly or practically. Others may not have a project governance system and allow decisions on projects to appear almost randomly. As illustrated previously, politicians in undemocratic developing countries like to build big projects. Building big projects in these countries is part of a "big-man syndrome," in which public needs and priorities and the net effects of the projects might not be criteria for decisions. They could make decisions on multimillion-dollar projects overnight because they do not have a framework for a decision-making process. They are often committed to fulfill their political, individual, or group interests.

Therefore, support from top government executives is very important for the successful implementation of a project governance system. The project governance system could function according to the guideline of the authority if and only if there is genuine support from the top government executives. If government executives are not committed for a specific project governance system, change will not come, because the project governance system cannot function according to the guideline. During our recent survey on the project governance system of Ethiopia, we saw several multimillion-dollar projects decided directly by the top executives. According to the project governance system of Ethiopia, a project concept should develop by sectors. Then the Ministry of Finance and Economic Development (MoFED) checks the proposal, and then the Council of Ministries will debate the proposal before the Parliament makes a final decision. However, there are projects that are approved out of this procedure; the Grand Ethiopian Renaissance Dam (project cost US$4.8 billion) is one example. In this case, the project governance framework of Ethiopia is static; it has not been brought to life because the system of governance that includes the activities of executives in the governance model is not dynamic through the system.

On the other hand, the low commitment of executives toward the new project governance model can affect the attitudes of other subordinates in the governance system. When people feel that the executives do not commit to the governance system, they are hesitant to follow with enthusiasm (Englund & Graham, 1999).

Cultural Issues

Any government or organization has its own culture (values, beliefs, and norms). The implementation of a project governance system may require changes in the government's culture of project handling. Quality assurance steps, gateway review processes, project appraisals, and other processes that are associated with project governance systems are important new arrangements in the governance of public investment projects. The new arrangement prioritizes the usefulness and sustainability of projects, public participation, transparency, discussion, and constructive criticism. As Graham and Englund (1997) said, during change the existing culture may causes problems to the new arrangements. Politicians and decision makers of some undemocratic countries want to be known for implementing big projects. In these countries, big projects are political weapons and are implemented as a means to achieving glory, greatness, and, more important, the accumulation of wealth for themselves and their partners. The implementation of a project governance system in these countries may be perceived by politicians as a loss of power. Therefore, the process of implementation or the exercise of the project governance system could face resistance from politicians or any other stakeholder trained within an undemocratic system. Any attempt at leading change in the linkage of projects with strategy is bound to meet resistance from top management (Englund & Graham, 1999).

Therefore, the idea of linking projects with policies needs proper care and implementation procedures. Taking a copy of the Western project governance system and implementing it in a developing country may not fit the political or social system therein. Therefore, it is very important to design a link (a project governance system) between governance structure and project structures, taking into consideration the government's nature and cultural norms.

Policy Issues

Linking policies with the right projects is possible only if there is a clear development policy and strategy. Without a clear development policy and strategy, projects will be free to fill the vacuum. Often policy or some form of strategic plan is a source of projects, but without a clear policy, different parties could design different strategies and could have different projects with different ultimate goals and purposes. On the other hand, it is obvious that different governments have different political systems, and these political systems have different policies and strategies. Some political systems have good development policies, and it is possible to implement and exercise project governance systems within those policies. There are also, however, political systems that do not have good development policies; in those countries, it will be difficult to implement an effective project governance system and successful public projects.

Interests of Donors and Financial Institutions

Donors and financial institutions, such as the World Bank, the International Monetary Fund (IMF), the African Development Bank (AfDB), and others

are the major stakeholders in the development of major public investment projects in Africa. Development assistance and loans from these sources have been used to implement public investment projects for several years. The support may be bilateral (support from one country directly to another) or it could be multilateral, given by the donor country to an international organization such as the World Bank or the United Nations Agencies (UNDP, UNICEF, UNAIDS, etc.) However, these bodies have their own agendas and often project solutions onto other societies and cultures. They have their own modalities to support projects. Designing a project governance system in one of the aid recipient countries may consider the interests of these parties. Therefore, the interests of these parties could affect the implementation of the project governance system in one way or another.

On the other hand, the structure of the government; lack of expertise and experience; shortage of reliable factual information, concepts, and methods of measurement in collecting data; and great pressure from decision makers to make immediate decisions can also affect project governance implementation and its effectiveness.

How Are the Right Projects Identified Through a Project Governance System?

From the previous sections, it is clear that decisions on public investment projects should consider the long-term realization of public needs and sustainable development. We also understand that in order to make the right decisions, development policies should be linked to projects by some form of governance system. A mandatory project governance system checks the link between projects and policies to enable the right decisions to be made at the top level. It also helps to establish a framework at the sector level, where sector investment strategies, priorities, and supporting policies are elaborated.

In a properly implemented front-end project governance system, the real problem and the subsequent selection of a particular initiative will be analyzed; the project's relation to the whole development policy will be identified; and alternative solutions will be identified, evaluated, and compared. The front-end project governance system ends by making a preferential decision on the most promising alternative. Then, the preferred alternative will be subject to a detailed project study. In order to do this, there are some important steps that any form of governance system should follow. The following section will discuss these steps.

Important Steps of a Project Governance System to Select a Right Project

Conduct Needs Assessment
A needs assessment is the process used for determining how to close the gap between the present and the desired (Gupta, 2007). This process includes comparing the present condition with the desired condition; defining the problem; identifying what can be contributed to the current condition; identifying if and how the current condition could be improved; and developing solution strategies. It could be a discussion between the central government, local authorities, municipalities, and the public.

Set Goals and Objectives
After a needs assessment is completed, the next step is to set achievable objectives or goals based on the identified needs and the overall strategy of the country. It is an improved situation in which a project or a program is expected to contribute, and it is expressed in terms of benefits to be achieved by the target group. According to Englund and Graham (1999), it is a vivid description of the future state.

Find Alternatives
After identifying needs and setting goals, the next step is to find the alternative solutions. Alternative project concepts should be searched, evaluated, and screened through predefined criteria to come up with a short list.

Estimate Benefits of Alternatives
The benefits, opportunity costs, and impacts of each alternative must be identified and qualified. At this point, it is very important to take care to avoid exaggerated benefits, because it might affect the process of choosing the right project.

Estimate Costs of Alternatives
After screening possible alternatives, it is desirable to select a few critical possibilities. The next step is to prepare preliminary cost estimates for these alternatives. At this stage, it is important to check and avoid tactical underestimation and overestimation because it might affect the selection of the right project.

Evaluate Cost Benefit for Each Alternative
The next step is calculating the cost benefit for all alternatives. Cost-benefit analysis of each alternative must consider social, environmental, and economic perspectives of the project.

Prioritize Projects
Before making the final decision, a credible governance system helps to set policy priorities and establishes a basis for decision. It also checks whether a proposed project is within the scope of identified priorities. It is not possible to address all identified needs in one project. Therefore, priorities have to be set. This has to be done by including the opinions of the relevant stakeholders and political interests of the decision makers.

Decision
The last step is the decision. This can be a decision on the preferred solution, a decision to reject unconvincing projects, or a decision to return for improvement.

Process Tools

The steps previously outlined in a project governance system need process

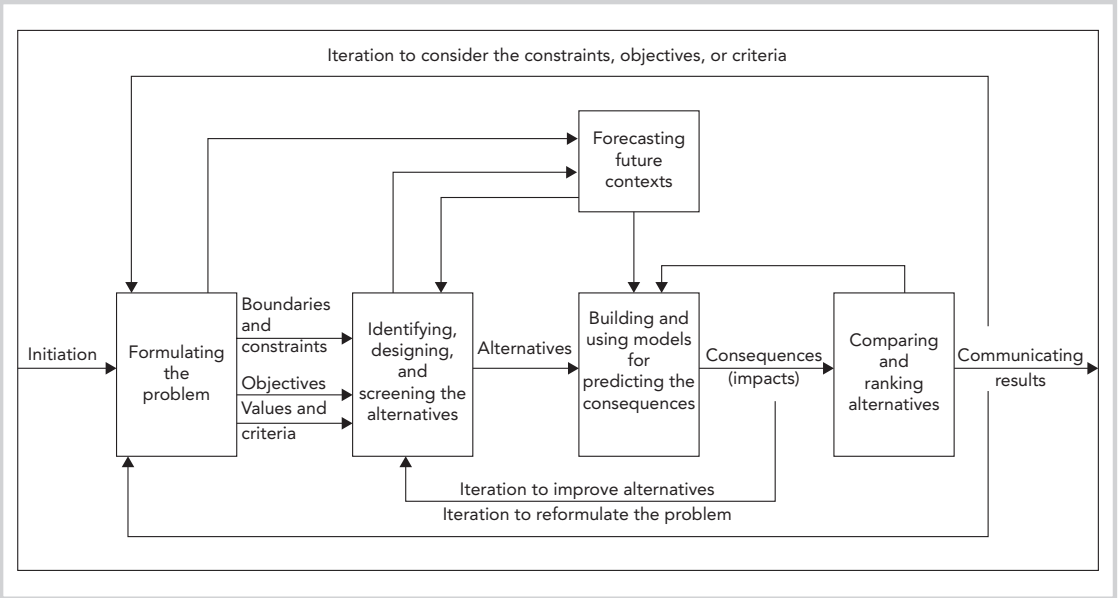

Figure 4: Systems analysis procedures with iteration loop (Priemus, 2008).

tools. System analysis, Logical Framework Approach (LFA), the Organisation for Economic Co-operation and Development (OECD) investment evaluation criteria, Sustainability Impact Assessment (SIA), and other project assessment methodologies have been used for a long time to support the decision-making process. Figure 4 illustrates a system analysis procedure that is developed to help the selection of the right project.

In this system, formulating the problem; identifying, designing, and screening alternatives; predicting consequences, and comparing and ranking alternatives are basic steps. It is an iteration loop that reforms problems and alternatives to select the right project.

In this process, the first step is formulating specific problems. Problems are identified from public need assessments and policy reviews. The next step is to set objectives and devise solutions that could satisfy the objectives, values, and requirements of the public, the decision makers, and other stakeholders. In parallel, contextual and operational uncertainties are assessed and analyzed. Alternative solutions, including zero alternatives, are identified and then evaluated.

LFA could be used for defining and establishing a sound basis for goals and objectives of alternatives and as an evaluation tool to organize the planned action (Klakegg & Haavaldsen, 2009). On the other hand, OECD (2006) investment evaluation criteria (efficiency, effectiveness, impact, relevance, and sustainability), along with the six cross-cutting issues (economic and financial issues, institutional issues, socioeconomic issues, technological aspects, environmental aspects, and policy issues), could be used as assessment criteria for selecting the right project. SIA, a tool for informed decision making used to predict the consequences of decisions at the front-end (OECD, 2008), is an important criterion to be considered. Using SIA, the short- and long-term impacts of each alternative project on the economy, the society, and the environment could be assessed.

Finally, alternatives are compared and ranked according to their merit, and the most promising project alternative is communicated to the decision makers for their choice.

Conclusion

A project governance system is used to check the consistency of public needs with the objectives of a proposed project and then the potential effects of the project with development policies and strategies. In this regard, the implementation of an effective project governance system at the top governance level helps to select the right public investment projects and to ensure their successful development. Effective project governance systems are designed with mandatory screening sieves, where problems are identified, stakeholders' opinions are collected and analyzed,

alternative solutions are evaluated, consequences of each alternative are predicted, and the most promising solution is selected and communicated for decision.

In this article, the implementation of a mandatory project governance system in African countries is advised to improve the success rate of public investment projects. Within a mandatory project governance system, executives in African countries are expected to decide according to the rules and procedures of the project governance system, based on the information provided through the project governance system, and according to the policy direction of the government.

For the successful implementation of an effective project governance system, governments in Africa should create an enabling environment. The quality assurance system in a project governance system should operate effectively to create an effective link between projects and policies.

However, the implantation of a mandatory project governance system in Africa could have different challenges. The commitment of decision makers, development policies, the political culture, and other issues are identified as important challenges. Relevant other challenges have to be identified, and important precautionary measures must be taken for the successful implementation of a project governance system and for the selection of the right public investment projects. ■

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Paper II

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Front-End Project Governance: As a Critical Success Factor for Developing Successful Public Investment Projects

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Abstract. Front-end project governance has gained increased recognition as a framework for effective decision-making in the process of selecting the right project concept alternative. In this regard, some industrialized countries have established formal front-end project governance systems in order to improve the quality of information provided for decision-makers and to make sure that the usefulness and the long term impacts of projects are checked at the front-end. This paper provides a compressive overview of our understanding of the front-end project governance system and demonstrates the front-end project governance systems of the Netherlands and Norway. The paper also discusses front-end project governance system as a critical must-have feature for the successful development of public investment projects.

Keywords: Critical success factor, Project governance, Project success, Public investment project

1. Introduction

The preparation of public investment projects presents many practical challenges: the planning process is unstructured and undirected; problems are often defined narrowly; the public participation is very low; the political commitment is low or limited, fundamental discussion about the usefulness and the long term effects of projects is lacking, and the decision-making process is unclear [1]. Similarly [2] gives several examples of front-end systematic flaws and decision-making pitfalls that affects the success of public investment projects. These include, under estimating project costs and over estimating project benefits, existence of contested information and misinformation, a general tendency to jump to premature conclusions and lack of clear go/no-go decision gates. A study conducted by the UK Office of Government Commerce (OGC) indicated decision-making failure as one of the top causes for the low success rate of projects. Referring the OGC findings, [3] expressed the above challenges as facets of ineffective project governance and recommends the implementation of effective project governance system for effective and efficient project decision-making and to position projects for success.

From the public perspective, success is implementing useful projects that have sustainable positive impacts in the years ahead [4, 5]. This means, a project is successful if the social welfare of the society is increased by implementing the project, the environmental impacts of the project are minimum and the net economic value of the project is positive. The need for ensuring project success or the need to ensure the relevance and sustainability of public investment projects at the projects' preparation stage has challenged the traditional policy making and the project development processes. Understanding the nature of these challenges and putting in place the most effective form of governance in response has emerged as a new paradigm for developing successful public investment projects. In this regard, some industrialized countries have changed their planning and decision-making procedure of public investment projects. They have established formal front-end project governance systems in order to provide the right information to decision-makers. This paper aims to discuss front-end project governance system as a critical success factor for developing successful public investment

projects. It begins with discussing front-end project governance system. Then the second part discusses the success of public investment projects and finally it discusses front-end project governance system as a success factor for developing successful public investment projects.

2. Front-End Project Governance System

Project governance is "the decision-making framework that guides the development of a project and within which the critical project decisions are made" [3]. The front-end project governance system extends from the project initiative until a decision on the preferential solution. Within a properly designed front-end project governance system, the relation of the project with the whole development policy of the government will be identified; the real problem and why an activity initiative is selected will be analyzed; stakeholders will be informed and allowed to be involved, and cost-benefit analysis will be conducted in a better way. Analysis of what the people and the politicians want will be done. Moreover, there will be an investigation to check whether the proposed project is really possible. Finally, the availability of the fund will be checked, and if the fund is available, then the study will end up with a recommendation for detail project study.

Effective front-end project governance system can be organized as a staged-gated process to scrutinize project initiatives and to deliver the right information to the decision makers. The right information is delivered to the decision makers at the specified critical decision points based on the results of investigations. At these critical decision points decisions will be made on the legitimacy of the project, priorities, alternatives and others. On the other hand, according to [3], inefficient project governance system often leads to project failures. Hence, establishing an effective governance framework is a significant factor in order to reach high quality, functional projects that are useful and sustainable.

[6] indicates that some industrialised countries have implemented front-end project governance systems to ensure the success of major public investment projects. For instance, the Norwegian quality assurance (QA) system is designed to embrace a decision-making system and process that the government needs to secure successful investments [7]. The UK OGC gateway is a stage-gated process that is designed to examine projects and programs at a key decision points in their life. Similarly, the Dutch Ministry of Infrastructure and the Environment has designed project assessment and implementation procedure, MIRT (Multi-year Programme for Infrastructure, Spatial Planning and Transport) to deal with how project proposals are submitted, assessed, prioritized and selected. The objective of the MIRT process is to improve the success of infrastructure projects in the Netherlands. These are efforts to look ahead project initiatives and to provide assurance that projects could progress successfully to the next stage. As an illustration the MIRT front-end planning process is presented as shown in Figure 1.

In the MIRT project planning process, the front-end phase starts with a process of discussion and negotiations in which problems and proposals are discussed between the national government, regions, local authorities and municipalities. Then the discussion will be followed by an intake decision (MIRT 1). By (MIRT 1) decision, the participants recognize the presence of a problem and give permission for the investigation of the problem and possible solutions [8]. In the MIRT front-end project study, there are four phases (starting, analytical, evaluation and decision phases). In the starting phase, problems will be analyzed in detail, in the analytical phase, a qualitative comparison between relevant alternatives will be conducted using sieve 1. Then the first three alternatives will be identified and allowed to proceed to the next stage. In the evaluation phase, the three alternative solutions will be evaluated carefully step by step through sieve 2. At this stage, general quantitative analysis of impacts of the selected three alternatives will be conducted. After comparing the results of the three alternatives, one alternative will be selected as a preferential solution. The front-end project study phase ends by making a clear and committed political decision (MIRT 2) on the selected preferential solution. [8] describes (MIRT 2) as a decision by which the Ministry explains what it wants to achieve. The decision (MIRT 2) ensures that the preferential solution can meet legal, environmental and financial requirements by allocating sufficient means (capacity and budget) for the subsequent project stages. The decision (MIRT 2) is made based on the information from MIRT 1 and based on the results of the investigations at different phases of the front-end project study. In these phases, strategic environmental assessment (SEA), focused impact assessment, cost

benefit analysis (CBA), standardized rules of thumb, and feedbacks from the broad participation of stakeholders (the public, market parties, and government agencies) are used as criteria for evaluation of alternative solutions.

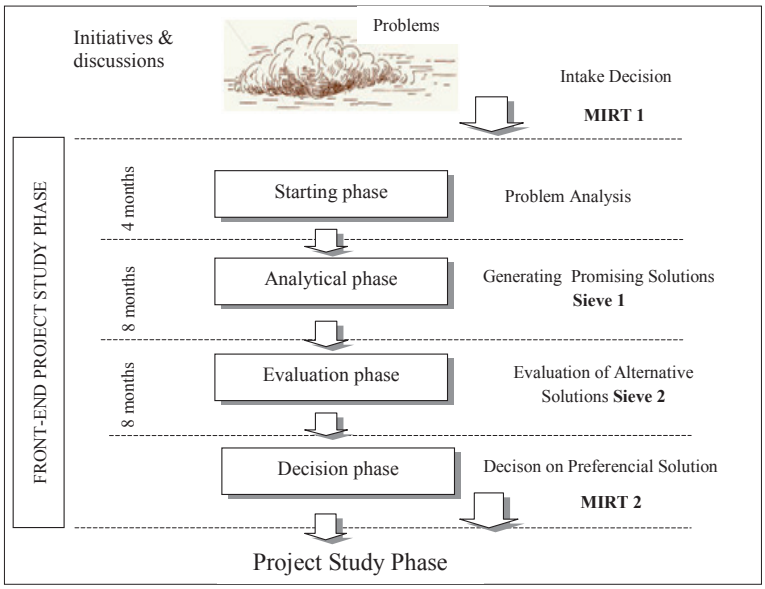

Figure 1: The MIRT front-end process [9]

3. The Success of Public Investment Projects

Traditionally, success is evaluated based on the delivery of projects on triple constraints (time, within budget, and to specification). However, the traditional metaphor of a triangle of time, cost and quality holds good only up to a point. Hence [4] explains project success as performance relative to ambition in terms of the operational, tactical, and strategic objectives of projects. OECD (Organization for Economic Co-operation and Development) has recommended efficiency, effectiveness, impact, relevance, and sustainability as a measure of project success [10]. [5] defines success as any perceived benefit from a given party position and perspective. These interpretations of success indicate that success is a wide, multifaceted and context dependent concept. From the owner's perspective, success is part of a large process. The degree to which the project objectives are achieved, client acceptance and the long term effects of a project are important success criteria. Therefore, we could say the success of a public investment project results from choosing a relevant alternative that has sustainable positive impacts in the long term perspective [4].

A project is relevant if its objectives correspond to the needs and priorities of the owners, the intended users and the affected parties [4]. The broad participation of stakeholders, a broad scope of alternatives and robust political commitment are important criteria to ensure the relevance of public investment projects [1]. On the other hand, sustainability is the measure of the positive impacts of a project in the long-term perspective [4]. The need for ensuring the relevance and sustainability of projects at the front-end and the rise of the concept of sustainable development in the recent years has challenged the traditional project planning and decision-making processes and procedures. More effort is needed at the front-end project preparation and selection stage. This has influenced several countries to change their planning and decision-making processes and procedures. Understanding the nature of these challenges and putting in place the most effective forms of governance in response is being considered as an important success factor for developing public investment projects. In this regard, there are different efforts in different countries to ensure the success of public investment projects. For instance, in the MIRT process, there is a shift of attention to the front-end phase of projects [1]. The following improvements are observed in the Dutch (MIRT) process,

- Open and participatory project planning procedure
- Democratic decision-making culture in the political arena
- A combination of top-down project initiative and bottom-up interactive activities
- Negotiations between stakeholders
- Tendency towards long term planning and programmatic approach
- Staged-gated filtering of project proposals and decision-making

Similarly,

- The establishment of a mandatory quality assurance system,
- Stage-gated decision procedure to decide on (priorities, alternative solutions, uncertainties, cost benefit analysis) and
- Better investigation on the environmental impacts and social values of a project proposal are significant improvements in the Norwegian project governance system.

4. Front-End Project Governance as a Critical Success Factor

Critical success factors are factors that are essential for successful targets to be reached and maintained. Critical success factors are one of the few areas where things must go right for the successful accomplishment of objectives. In the case of public investment projects, these factors could serve as a primary integrating mechanism between strategies and the channeling of resources and executive attention [11]. It is an area that needs careful attention from management. Identifying and use of such critical success factors in the front-end project selection, preparation and decision-making stages of public investment projects will have a significant contribution for the success of projects. In this regard, the investigation of Klakegg [5] in England and Norway, and Shiferaw in the Netherlands indicated a trend towards establishing a formal front-end project governance system to improve the efficiency of decision-making and the success of public investment projects. In these countries, front-end project governance system is considered as one of a few things that must function effectively to ensure success in public investment projects. The Dutch MIRT project governance system is organized as a mandatory institutional arrangement to ensure that problems are analyzed, alternatives are screened and prioritized, public opinions are included, and the right information is made available for the decision-makers. Similarly, the Norwegian quality assurance regime introduced two key decision points and employed independent quality assurance consultants to check the quality of information that are used as decision basis. The following front-end requirements are identified from the Dutch and Norway project governance systems which are set to ensure the relevance and sustainability of public investment projects. The requirements are important criteria that would help decision makers to weigh up competing interests and use judgment in arriving a right decision in their effort to implement successful projects.

- Is there a real problem to initiate a project?
- Are the objectives of a project proposal consistent with the policy direction of the country?
- Is it possible to achieve the objectives of the project?
- Is the project proposed according to the needs and priorities of the public?
- What are the possible impacts of the proposed project?
- Will the welfare of the society be improved by implementing the project?
- What are the alternatives?
- Does the cost-benefit analysis consider social, environmental and economic perspectives of the project?
- Can the program or project be better designed to achieve the intended outcomes?

A project proposal that fails to meet these and other similar front-end requirements is supposed be rejected or returned for improvement. Only project proposals that meet these and other similar front-end requirements will proceed for further development - project study. Within such properly designed front-end project governance systems, planners are supposed to shape successful public projects according to the pre-defined procedures and decision-makers are expected to make democratic decision based on the information provided

through the governance system. Generally, as Millner and Lessard [12] describes, the success of a project is shaped through the established front-end governance system.

5. Conclusion

From the above discussion, it is possible to understand that effective front-end project governance positions a project for success and ineffective front-end project governance may lead projects to failure. Therefore, it is reasonable to conclude that effective front-end project governance system is a critical must-have feature for the successful development of public investment projects. Some industrialized countries have considered front-end project governance system as an input to their general governance system to improve the success of public investment projects and for sustainable development. In this regard, there are indications of success. This implies that, front-end project governance system is a critical success factor and it is important to implement some form of front-end project governance system at the top governance level to ensure the successful development of public investment projects.

6. Acknowledgements

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Paper III

PAPERS

Governance of Public Investment Projects in Ethiopia

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ABSTRACT

The purpose of this article is to map and review the governance of public investment projects in Ethiopia and to identify the most important front-end challenges of public investment projects in the country. The research focuses on the front-end governance of major construction projects. The findings of the research indicate that the top-down project approach, lack of mandatory control gateways at the front-end project preparation and decision-making stages, and weak links between project stakeholders affected the effectiveness of the project governance system. In additon to this, the most important factors that could affect the relevance and sustainability of public investment projects are identified.

KEYWORDS: decision making; project governance; public investment projects; relevance; sustainability

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INTRODUCTION

Demand for public services in sub-Saharan African countries is increasing continuously due to the improvement in governance and awareness in the region. However, poverty, lack of basic infrastructure, and poor industrial development are continuously hindering the ability of the nations to meet this demand. This is exacerbated by a lack of transparency, lack of legal and financial frameworks, and poor capacity in managerial and technical expertise (Gidado, 2010).

Ethiopia is located in this region with fast population growth and high public service demand. In Ethiopia, private sector services are not developed enough to satisfy the needs and the demand for public services. To meet these high demands of the public, the Ethiopian government has been planning and implementing public investment projects. During the last ten years, several public investment projects were implemented. Many others are planned for the next five years. The Ethiopian government has set medium-term development plans, and the strategic objectives are economic development and poverty reduction. Using these plans, different sectors have prepared detailed plans and programs in different themes, including infrastructure development (Ministry of Finance and Economic Development of Ethiopia [MoFED], 2006a).

A grand housing development program, road sector development programs, health sector development programs, power sector programs, and education sector development programs are some of the programs implemented by different sectors to improve the public welfare. Under these programs, many public projects have been designed and implemented. However, the preparation and implementation of these public investment projects present many practical challenges. Different studies at the Ministry of Finance and Economic Development indicated the lack of systems to check the links between the project objectives and the government strategies, and wastage of resources and redundancy of projects (MoFED, 2006b). To minimize the wastage of resources and to eliminate redundant projects, MoFED has tried to revise the system and adopted tools to appraise, monitor, and evaluate public investment projects. However, these public investment projects are criticized for not being the priority of the public and for not generating enough additional government revenues to cover their running and maintenance costs.

This article will map and review the project governance system in Ethiopia and will try to find the most important front-end challenges of public investment projects in the country. Particularly, the article looks at the most important problems that lead to lack of relevance and sustainability, and reviews the effectiveness of the project governance system in the country.

Context and Economic Development in Ethiopia

Ethiopia has a total land area of 1.1 million km^2 with a population of about 85 million. It has a federal system of government. It comprises the federal government, nine administrative regions, and two chartered city administrations. The government is composed of two tiers of parliament: the House of People's Representatives and the House of Federation, where political leaders are elected every five years. The executive branch includes a president, Council of State, and Council of Ministers.

The economy of Ethiopia is based on agriculture, which contributes 42% to GDP and more than 80% of exports, and employs 80% of the population. The major agricultural export crop is coffee, providing approximately 26% of Ethiopia's foreign exchange earnings (US Department of State Bureau of African Affairs, 2011). The Ethiopian economy has shown a healthy growth over the last seven years, and on average 10% growth rates are registered between 2003–2004 and 2009–2010 (MoFED, 2011). In 2010, the annual growth rate was 10.4% (US Department of State Bureau of African Affairs, 2011). This recent growth lifted the GDP per capita to US$390 in 2009–2010 (World Economic Forum, 2010). According to the Ethiopian Economic Association (ECA, 2008) and the International Monetary Fund (IMF, 2011) reports, the Ethiopian economy has, therefore, been relatively in a robust growth trajectory. However, several economists have criticized the premises upon which Ethiopia's economic growth assessments were made.

In the last 10 years, the government has prepared and implemented two macroeconomic programs and the third one is in progress. The programs are the Sustainable Development and Poverty Reduction Program (SDPRP) from 2002–2003 to 2004–2005, the Plan for Accelerated and Sustained Development to End Poverty (PASDEP) from 2005–2006 to 2009–2010, and the ongoing Growth and Transformation Plan (GTP) from 2010–2011 to 2014–2015. During SDPRP and PASDEP, the country has implemented different major public investment projects (MoFED, 2006c). These include the construction of 23 new universities and the expansion of 10 others, thousands of kilometers of road construction projects, water supply projects, extensive housing development projects, large and medium hydropower projects, and others. The number and the type of projects are extraordinary, and significant achievements have been recorded. However, considerable weaknesses have also been observed in both the project concept selection and project implementation processes.

Literature Review

Public Investment Projects in Ethiopia

Projects are policy implementation tools using limited available resources (finance, workforce, and materials) for accomplishing development programs (Cusworth & Franks, 1993). How to select the right projects, how to prepare and complete them, and how to operate and maintain them afterward are important issues to be considered for using a country's resources for development (Baum & Tolbert, 1985). In Ethiopia, the concepts of public investment projects have been initiated by different parties. These include the national government, sectors, private investors, civil society, aid agencies, donors, banks, nongovernmental organizations, and others (MoFED, 2006a).

According to MoFED (2006a), public investment projects in Ethiopia have been developed from the government's medium-term development plans of SDPRP, PASDEP, and GTP. The majority of projects in different sectors have objectives consistent with the development strategy of the country. However, the objectives of these projects are stated ambitiously, and the achievements are believed to be below the initial plan. As Klakegg (2010) describes, objectives of public investment projects are often exaggerated, and planners and decision makers put the project objectives without potentially investigating how the objectives of the projects could be achieved.

Overambitious planning favored launching large public sector projects, and these biases proved costly and unsuccessful (Klakegg, 2010). For instance, the construction of 23 university projects in Ethiopia is a good example of ambitious public investment projects that have been implemented by the government in the last 10 years. The government has allocated billions of dollars for the implementation of the projects. It is part of the government's policy to build demand-driven technical and vocational education, training, and higher education programs. However, these projects have no feasibility study that justifies the necessity of the projects. The link created between education development and private sector development and service delivery is weak (Development Assistant Group Ethiopia [DAG], 2006). The number and quality of teachers, the economy of the country to carry out tens of thousands of graduates per year, and the shortage of budget for maintenance and operation are critical sustainability issues. Many graduates from these universities could not find jobs easily. This implies that the plan for expanding higher education should have been supported by an analysis of labor market demand and must have been better linked to plans for private sector development, growth, and service delivery (DAG, 2006).

The Ethiopian Roads Authority (ERA) has constructed several kilometers of federal road projects in the period of 1997–2007 under the Road Sector Development Program (RSDP). The investment size in this period was estimated to be more than US$3 billion (World Bank, 2004). At the end of the road sector development programs (RSDP I and II), the government declared these to be a "success." In fact, it is a big achievement and the government has no doubt made infrastructural advances that are visible across the country. Roads have been built and expanded; however, it is not always a success story. There are critics that challenge the successes of these projects. Some federal road projects are constructed in the remote areas where the traffic volume is far below the minimum average. One can easily understand that these projects could not generate sufficient additional revenues for the government, nor could they cover their running and maintenance costs. On the other hand, the government has no financial capacity and is not allocating sufficient funds for maintenance and operation. The government might have political or social objectives to invest in those areas, but unless these investment projects have adequate economic return, their positive effects could not be sustainable.

Similarly, housing development projects are implemented in different regions of the country that cost a lot of money. The evaluation of the projects by Shiferaw and Klakegg (in press) indicated a shortfall, especially in small towns. In small towns, the housing projects were not considered by the public to be a priority. The decision to implement similar projects in every town without undertaking a solid proper problem analysis affected the success of projects. According to the evaluation, some towns had completed apartments that did not attract end users, and the project implementation process was stopped before the project objectives were fulfilled. The financial recovery of the projects was not as expected and the contribution of the projects toward the strategic goal of the program was not significant. This in turn could affect the sustainability and long-term effects of the projects.

On the other hand, the development of large- and medium-scale hydropower projects has received priority, and the government is investing a large amount of money on these projects. The government believes that economic progress in Ethiopia depends principally on the development of large hydropower projects. Most development analysts believe smaller-scale water projects are more suited to meeting the immediate needs of the poor nation (International Rivers, n.d.). In the last couple of years, Ethiopia has developed large and medium-sized dams. For instance, Gibe I and II projects have been implemented and have started operation. Gibe III is under construction but it has raised the most concern among environmentalists. Similarly, the Grand Ethiopian Renaissance Dam is now being developed and it is expected to cost US$4.8 billion. However, the Grand Ethiopian Renaissance Dam has raised questions about environmental and social impacts the project will bring (International Rivers, n.d.). Hydropower projects are expensive and need huge investments. The size of the investment and the environmental and social impacts of the investment underline the need to choose projects wisely. Generally, the appraisal of energy investments requires a long-time perspective. Misjudgment can result in financial as well as economic disaster (Baum & Tolbert, 1985).

Project Governance

Different researchers have defined project governance in different ways. In these definitions, project governance deals with processes, models, structures, principles, and systems to achieve project objectives. The Project Management Institute defines project governance by three levels (i.e., at the project, program, and portfolio management level) (PMI, 2008a, 2008b, 2008c). Similarly, Müller (2009) defines project governance with the perspectives of portfolio, programs, projects, and project management focusing on achieving organizational objectives. Garland (2009) defined project governance as "the process of decision-making and the framework, models or structures that are established to enable this" (p. 1).

According to these definitions, project governance is a decision-making framework that guides the development of a project and within which the critical project decisions are made. This implies that within a properly designed project governance system, the relation of the project with the whole development policy of the government will be identified, the real problem and why an activity initiative is selected will be analyzed, stakeholders will be informed and allowed to be involved, cost-benefit analysis will be conducted in a better way, and an analysis of what the people and politicians want will be done. Moreover, there will be an investigation to check whether the proposed project is possible.

Effective front-end project governance positions a project for success, and ineffective front-end project governance leads to project failure (Garland, 2009). Without an effective project governance system, projects could run with risk of conflicts and inconsistencies between the various means of achieving its objectives, and the products will not be efficient and the impacts of projects will be negative (Müller, 2009). However, the implementation of a project governance system is not a guarantee to have good projects. Commitment and interest from the decision makers and planners are key factors. Today, several governments are developing project governance systems for regular reviews of major public investment projects

(Klakegg, 2009). The United Kingdom's Office of Government Commerce's (OGC's) Gateway review process, the Norwegian quality assurance system, and the Dutch MIRT rules of the game are examples of project governance systems that are established by governments to improve the success of public investment projects. If implemented well, such project governance systems will have significant positive effects on the quality and speed of decision making (Klakegg & Haavaldsen, 2009).

The objective of an effective project governance system is elimination of project failure and doing the right projects and doing them often. With effective project governance, no project that is exhibiting commonly accepted characteristics of project failure should be allowed to proceed to the next phase. Doing the right projects requires that some steps need to be followed. It includes prioritization, selection, and alignment of projects with the strategic objectives (Weaver, 2007). Weaver (2005) described effective project governance as tools for success. However, achieving effective project governance and control remains difficult. The degree to which the effective governance of public investment projects is actually being achieved varies, but there should at least be an intention for improvement and change.

The Research

In this research, the front-end challenges of public investment projects in Ethiopia and the project governance system of the country are examined.

Front-End Challenges of Public Investment Projects in Ethiopia

Due to the recent sustained economic development and financing from bilateral sources, Ethiopia has implemented several public investment projects. However, this economic development and the expansion of public investment projects are criticized for not benefiting the public. It is believed that some of these public investments are not generating enough additional revenues, and the government is not capable of allocating sufficient funds for operation and maintenance to get the services for a long time. That means the relevance and sustainability of these projects are in question. According to Samset (2009), if a project is not relevant and sustainable, it is a failed project and it should have been terminated or rejected at the beginning. This article will look at the front-end challenges of public investment projects in Ethiopia. A particular emphasis is given on the most important challenges that could affect the relevance and sustainability of projects.

Project Governance System in Ethiopia

Today, different countries in the world have designed project governance systems to make sure that the society's interest is getting value and to check the net value of projects and their sustainability for a long period. Many other countries, even though they do not have an independent project governance system, have some form of project governance that is embedded somewhere in the government's regulatory system. There is no known standard or commonly accepted project governance system, but Klakegg, Williams, and Magnussen (2009) set a systematic checklist to map and review a project governance system in a country. Klakegg, Williams, Magnussen, and Glasspool (2008) identified elements that are important to characterize the governance framework of a country. These are: the process of development, the structure of the framework, the embedded governance principles, and detailed governance elements. In this article, the project governance system of Ethiopia is discussed based on these characteristics.

Research Design and Procedure

The research is qualitative, and the data were collected in two phases. In the first phase, data were collected using a formal survey based on questionnaires and interviews. Questionnaires were personally distributed to the relevant professionals—62 questionnaires were sent and 45 were returned. The respondents were as follows: 9 project planners (20%); 10 project evaluators (22.2%); 5 decision makers (11.1%); 14 program/project managers (31.11%); and 7 others (15.56%). The response rate was medium (72.6%). The number of respondents was low, but we accepted the results because the questionnaire requires a high level of competence and there are shortages of expertise in the area. Follow-up interviews were executed with respondents to give better insight.

The second phase of data collection involved direct interviews (in groups and individuals) using a systematic questioning approach. Documents from different ministry offices were collected and used as a source of evidence. The purpose of this part of the survey was to map and review the project governance system in Ethiopia. During focus-group interviews, references were made about the results of the front-end challenges of public investment projects. The interviews were executed with 35 professionals who are public officials, domestic contractors, researchers, and domestic consultants who have been actively participating in public construction works.

Data and Analysis

Front-End Challenges of Public Investment Projects in Ethiopia

This research focuses on the challenges that could affect the relevance and sustainability of public investment projects in Ethiopia. Relevance refers to the usefulness of the project, and it concerns to what degree the objectives of projects are set in keeping with valid needs and priorities of the owners, the intended users, and other affected parties (Organisation for Economic Co-operation and Development [OECD], 2002; Samset, 2003). On the other hand, sustainability refers to what degree the positive effects of the chosen public investment

#	Alternatives	1	2	3	4	WS
2.1	The users' needs are unknown, misunderstood, or ignored	8	7	11	19	2.91
2.2	The users' needs change before the project is executed	13	18	6	8	2.2
2.3	The society's priorities are unknown, misunderstood, or ignored	5	5	10	25	3.22
2.4	The society's priorities change before the project is executed	13	21	6	5	2.07
2.5	The objectives of the project are unknown or misunderstood	12	9	8	16	2.62
2.6	The objectives of the project do not change according to changed needs/priorities over time	9	10	13	13	2.67

Note. $N = 45$. Scale ranges from 1 to 4 (1 stands for *least important* and 4 for *most important* problem).

Table 1: Results of the survey for lack of relevance in public investment projects of Ethiopia.

project would be maintained and continued after the project has been concluded (OECD, 2002; Samset, 2003).

The Most Important Problem That Leads to Lack of Relevance

Six predefined alternative problems were prepared based on a previous similar research conducted by Klakegg (2010) in Anglo-American and Nordic countries. Then the most important problem that leads to lack of relevance for public investment projects in Ethiopia is identified based on a questionnaire as shown in Table 1. For the full questionnaire, see the Appendix. The respondents were asked to select the most important problem that affects the relevance of projects from the listed six alternatives. Then for each of the most important problems selected, the respondents were asked to indicate the reasons from the given five alternatives as shown in Table 2.

The numbers in Table 1 indicate the number of respondents who agreed with the statement with respective scales. The last column indicates the weighted score (WS). WS indicates the relative importance of the alternatives. It is calculated by taking the scores multiplied by the corresponding character, adding them, and dividing by the number of respondents.

From the listed predefined alternative problems leading to lack of relevance in the major public investments of Ethiopia, 55% of the respondents indicated the society's priorities are unknown, misunderstood, or ignored, with a WS of 3.22, as the most important problem as shown in Table 1.

#	Alternatives	Responses
2.3.1	The society's priorities have not been investigated	20
2.3.2	The society's priorities are very complex—it is impossible for planners to grasp/get the whole picture	6
2.3.3	The society's priorities are deliberately formulated unclearly by decision makers/politicians to give room for alternative courses of action	7
2.3.4	Society's priorities are ignored by planners and decision makers due to political or personal reasons	20
2.3.5	The society's priorities are impossible to express clearly	2

Table 2: The most important reasons why the society priorities are unknown, misunderstood, or ignored.

The respondents were further asked to indicate the most important reason from the alternatives given in Table 2. They selected two reasons as equally important for the question of why the priorities of the society are unknown, misunderstood, or ignored. Each of the two alternatives received 45% of the total response. The two reasons are:

- The society's priorities have not been investigated, and
- The society's priorities are ignored by planners and decision makers due to political or personal reasons.

The Most Important Problem That Leads to Lack of Sustainability

The most important problem that leads to a lack of sustainability for public investment projects in Ethiopia is identified based on a questionnaire as shown in Table 3. The respondents were asked to select the most important problem that affects the sustainability of projects from the listed seven alternatives. For each of the most important problems selected, the respondents were asked to indicate the reason from the given alternatives, as shown in Table 4.

Lack of commitment to the project from key stakeholders was selected by a majority of the respondents as the most important problem for a lack of sustainability in public investment projects of Ethiopia, with a weighted score of 3.31, as shown in Table 3.

#	Alternatives	1	2	3	4	WS
3.1	Lack of commitment to the project from key stakeholders	6	4	5	30	3.31
3.2	The chosen technological solution is not viable under the prevailing conditions	11	11	11	12	2.53
3.3	Conflict over objectives and/or strategies concerning the project	10	10	14	11	2.58
3.4	Economic and financial benefits are low compared to investment and operational costs	15	7	10	13	2.47
3.5	Lack of conformity with prevailing policy or by legislation	23	12	6	4	1.8
3.6	There are negative ethical issues connected to the project	18	13	10	4	2.0
3.7	Business or other conditions change between concept stage and final delivery	11	13	11	10	2.44

Note. $N = 45$. Scale ranges from 1 to 4 (1 stands for *least important* and 4 for *most important* problem).

Table 3: Results of the survey for lack of sustainability in public investment projects of Ethiopia.

#	Alternatives	Responses
3.1.1	Neglecting that users do not approve/do not like the outcome of the project	12
3.1.2	Not identifying that the project outcome has weak support in its owner-and-financing organizations	9
3.1.3	Neglecting that the project outcome has weak support in management or accepting weak leadership	16
3.1.4	Neglecting weak support in interacting institutions, or opposition by other institutions	17

Table 4: The most important reason why lack of commitment from the key stakeholders is selected as the most important reason for lack of sustainability in the public investment project of Ethiopia.

Lack of commitment to the project from the key stakeholders is the most important reason for lack of sustainability of public projects in Ethiopia. This implies that key stakeholders' support for a project is an essential ingredient for success and sustainability of the positive effects of projects. Conversely, lack of support from key stakeholders is likely to result in project failure (Garland, 2009). In this case, the respondents were asked to indicate their most important reason from the given alternatives as shown in Table 4. They selected neglecting weak support in interacting institutions or opposition by other institutions as the most important reason for lack of commitment from the stakeholders.

Project Governance System in Ethiopia

In order to map and review the project governance system, we have collected data using formal interviews (in groups and individuals) and document reviews from different ministry offices. The collected data are analyzed and presented based on the four governance framework characteristics.

The Process of Development

Ethiopia has long experienced public investment projects as means for development. Project planning was started during the Imperial era in 1945 (MoFED, 2008). It was started after the Ethio-Italian war and was used for the reconstruction of infrastructures and the revival of the economy. However, programs and projects were not initiated from development plans, and there was no coordination between them. After being convinced of the importance of development plans, Emperor Haile Selassie I established a planning board in 1955 for planning and leading development works, and he was the chair of the board (MoFED, 2008). After the Imperial era, the Derge regime (1974–1991) established the Ministry of Planning and used a socialist central planning framework for developing public projects. Recognizing the importance of project planning work and having a basis for project preparation, the regime had established the Development Project Study Authority (DPSA). DPSA had prepared a project planning guideline in 1984, and the guideline was revised in 1990 (MoFED, 2006a). This guideline was a very important document and used for project planning and preparation. However, the

number and type of public investment projects during that period was very low. The number and type of public investment projects increased after the current government (EPRDF) came to power in 1991. Ethiopia used its Ministry of Economic Development and Cooperation (now it is MoFED), for planning and administration of public investment projects. Between 1991 and 2006, the Ministry of Economic Development and Cooperation prepared and used checklists for project appraisal.

In 2006, MoFED developed a new system and different tools for preparation, appraisal, monitoring, and evaluation of public sector projects. The purpose of the system and tools was to help practitioners in designing viable projects that meet the development needs and priorities of the government and to provide sufficient information for decision makers (MoFED, 2004, 2006a, 2006b). Theoretically, it is an interesting system for informed decision making and value for money. If sectors have a budget, the project concept is selected by the sectors, and they would send it to MoFED. Once MoFED approves the project concept, sectors will prepare a detailed project study and submit it to MoFED. After checking the project proposal, the ministry either approves the project, returns it for amendment, or rejects it altogether. On the other hand, if the source of finance is assistance or loan, the proposal comes to MoFED and the ministry will check the proposal with the government development strategies. After checking the project proposal, MoFED will send it to the Council of Ministries and further to the House of People's Representatives. However, this is a theoretical framework, and in practice, there are deviations.

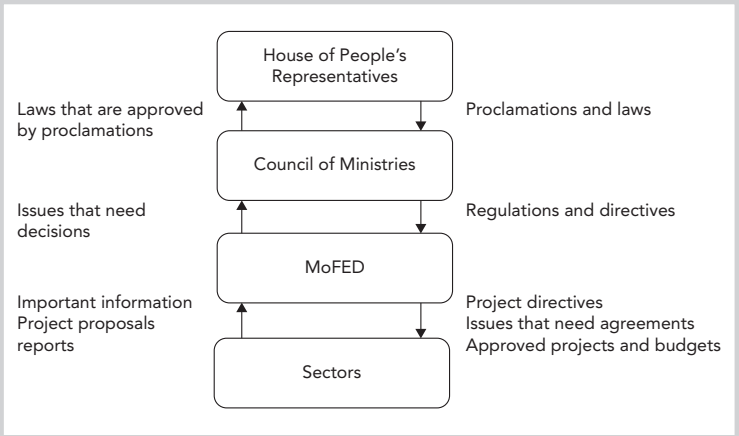

Figure 1: Project governance structure in Ethiopia (adapted from MoFED, 2006a).

Structure of the Framework

Proper structuring of involved parties and indicating clear indication of their duties and responsibilities is one of the basic issues in the project development process. The recent system for the preparation of public sector projects in Ethiopia identifies the House of People's Representatives, the Council of Ministries, MoFED, and sectors as the main parties involved in the governance of public investment projects as shown in Figure 1.

The structure describes the duties and responsibilities of each party in the process of preparing and implementing the short-, medium-, and long-term economic development strategies using programs and projects. According to this structure, the House of People's Representatives issues proclamations and laws and approves issues related to public projects that come from the Council of Ministries. The Council of Ministries issues regulations and directives and makes decisions based on information from MoFED. MoFED issues project directives, makes decisions on important issues from sectors, appraises project proposals of sectors, and finds funds for approved projects. According to this framework, planning and programming units of sectors play a key role in defining and designing public investment projects. But this framework does not work always. According to the informants, there are projects that are implemented but do not follow this framework. Some projects that are tagged "urgent" are implemented by direct decision of the politicians. Decision makers used to make quick decisions to start projects, and have used the "urgent" tag and sometimes "just do it" orders to start projects.

Governance Principles

There are no special principles expressed in the project preparation, appraisal, and evaluation documents of MoFED. Based on suggestions from the interviewees and our personal judgment, we have found it relevant to consider the good governance principles of civil servants as principles of project governance, because the government has explicitly defined good governance, and most civil servants in the country are aware of good governance principles. We believe that it could influence all the stakeholders around the project governance framework of the country. Transparency, accountability, serving the public interest, impartiality, responsiveness, participation, and respecting the law are identified as embedded governance principles in the project governance framework of Ethiopia. But the

question is, are these elements actually working?

Detailed Governance Elements

The project governance system in Ethiopia has elements of governing cost and time. MoFED has prepared and used national economic parameters and conversion factors to acquire the true pictures of economic impacts of a project due to market imperfections, external effects, and government controls. The ministry is conducting economic analyses of projects in order to ensure that public investment funds are used for viable projects. The documents at MoFED also recommend financial analysis in order to determine the long-term budgetary implications and to provide an adequate financing plan for a proposed project. However, the rampant inflation in the country and the continuity of massive public spending to develop public investment projects are the concerns for stakeholders.

Another important project governance element is procurement and contract. MoFED is responsible for procurement and contract issues of public investment projects. The Public Procurement Agency (PPA) is organized under the MoFED to administer procurement and contract issues of public investment projects. However, having good rules and regulations in addition to the availability of institutions is not sufficient. The important question is whether these institutions operate in accordance with the rules and regulations without any influence to ensure that the government is selecting and implementing the right public projects.

Results and Discussion

The Most Important Front-End Challenges of Public Investment Projects in Ethiopia

Society's priorities are unknown, misunderstood, or ignored was selected as the most important problem for lack of relevance in the public investment projects of Ethiopia.

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.

From interviews and reviews of documents, lack of the relevance of projects is associated with the project approach of the government. The Ethiopian government has experienced a top-down project approach especially for major public investment projects. In the top-down project approach, the majority of the projects are defined and planned at the top level without active participation of the public and other stakeholders. Decisions on major public investment projects are made without consulting the users, and the users are often neglected in this approach. There is no visible system that is established to identify the effective demands of the public and to prioritize public projects. Public priorities are not used as criteria for project selection. This could be because either public priorities are ignored or changed to other politically prioritized projects or misunderstood due to lack of competence of the planning experts.

The interviewees (in the second phase of data collection) pointed out the influence of politicians/decision makers as a root cause for failing to identify key priorities of the public. The planning experts do not define projects based on the priorities of the public; they define projects based on the priorities of decision makers. To implement relevant public investment projects, project initiators should identify the effective demands of the public, and there should be clear prioritizing criteria.

In this research, interesting differences are observed compared to a previous similar study conducted in Western countries by Klakegg (2009). According to Klakegg, society's priorities do not seem to be the problem, and decisions made at the high level are not the most important problem for lack of relevance in the Western countries. The most important factor for lack of relevance for public projects in Western countries is that the user's needs are unknown, misunderstood, or ignored (Klakegg, 2009). It is possible to see interesting differences. We will not look at the differences, but it is an important topic for further research. On the other hand, lack of commitment to the project from the key stakeholders is identified as the most important problem that affects the sustainability of public investment projects in Ethiopia.

According to the interviewees, relevant stakeholders are not involved in the planning and decision-making processes of public investment projects. However, the main stakeholders must be included in the decision-making forum (Garland, 2009), because the participation of beneficiaries and stakeholders in a project's planning and decision-making process, and a consensus of the stakeholders have a significant sustainability dimension.

In Ethiopia, decisions on the concepts of public investment projects are made from the top and other stakeholders are expected to participate in the implementation process. In this case, some important project stakeholders could not have an ownership feeling for projects, and they are not committed to the project's success because decision makers did not consider them as important partners in the front-end decision-making process. As the respondents pointed out, the most important reason for the lack of commitment is neglecting weak support in interacting institutions or opposition. This has a significant negative effect on the sustainability of projects' positive effects. In addition to this, the commitment of political stakeholders who are in most cases considered the projects' initiators and decision makers is not consistent throughout the process. In the beginning of projects, they are very

ambitious, but their commitment decreases as the project progresses and after projects are completed.

Conflicts over objectives and strategies concerning projects are selected as the second most important reason for lack of sustainability. It is true that there are conflicts regarding the objectives of projects between stakeholders, but the conflicts are not explicit due to the power imbalance between the stakeholders. These internal conflicts over the objectives of projects have a negative impact on the sustainability of the project effects. To succeed in the long-term perspective, there should be a consensus of the stakeholders and all stakeholders must commit themselves toward the success of agreed project objectives.

The result of this question differs from a similar research conducted by Klakegg (2009) in Western countries. Conflicts over objectives and strategies concerning the project are selected as the most important reason for lack of sustainability in the public investment projects of the Western countries. Lack of commitment from the project stakeholders is the second most important reason.

Governance of Public Investment Projects in Ethiopia

Ethiopia has a project governance system, but the project governance system is not effective.

In the previous sections of this article, we have discussed the most important challenges of public investment projects in Ethiopia. The results of the survey indicated problems within the project governance system of the country. In order to make the findings of the survey more explicit and to understand more about the project governance system of the country, interviews were conducted with 35 key professionals who have relevant experience in the public sectors. Based on the information from the interviewees and documents from different ministry offices, mainly from the MoFED, the project governance system of Ethiopia is mapped and reviewed. Then front-end decision-making problems and pitfalls that are attached with the project governance system of the country are identified.

The results of the investigation indicate that the government of Ethiopia might have been overambitious in defining major public investment projects, and enough time has not been given for front-end project planning and preparation. Coverage and equity between regions have received more emphasis than the usefulness and the net value of the projects. Several projects have been implemented due to coverage and equity reasons of the government. Some of these projects could not provide sustainable services, and they do not have a reasonable economic return rate compared to the investment. Similarly, for the next five years—the Growth and Transformation Plan (GTP) period—the government has designed a highly ambitious development plan. Several public investment projects are planned as part of this strategy, but these projects are highly dependent on foreign capital (loan and development aid). This in turn could make the plan and the strategy unsustainable. The size and the number of projects that are in progress and that are planned for the five-year period might exceed the country's capacity, both technically and financially.

MoFED, which is theoretically responsible for appraisal of projects and evaluation of project concepts, seems powerless to control the project preparation and development process. The ministry has a shortage of experts, and there is a lack of coordination between its different units. The ministry project appraisal system lacks mandatory control gateways for project concept selection, public needs assessment, evaluation of project alternatives, uncertainty analysis, and for other important decisions. The input of MoFED at the front-end, project preparation, and decision-making stages are not significant. However, according to the proclamation No. 642/2009, MoFED had to play a gatekeeper role in the project preparation and implementation process (Ethiopian Federal Democratic Republic [EFDR], 2009).

On the other hand, sectors of important stakeholders in the project selection and decision-making process have a high shortage of qualified experts and baseline data. When sectors define new projects, most often they communicate with the government's top decision makers. They could get a go decision from decision makers, probably without the consent of MoFED and other important stakeholders. Once sectors have the green light from the top decision makers, the duty of MoFED is limited to budget issues, and other stakeholders are expected to participate in the implementation process. Figure 2 summarizes the results of the analysis.

There are also problems with the links that connect these parties. For example, the government has not established any visible system to trap public needs and priorities. Discussion with the public and other stakeholders about the problem and priorities is lacking. The communication between the national government and MoFED is one-way. The national government decides and MoFED implements the decisions. The information from MoFED that could have been used as a basis for decisions is either not used or not influential. On the other hand, the link between MoFED and the sectors is weak. For the last couple of years, from all locally financed public investment projects, only a very small number of projects from sectors is reviewed by MoFED. The majority of projects are selected and evaluated by the sectors themselves. This implies that coordination between MoFED and the sectors is very weak. This is not according to Proclamation No. 642/2009, which gives complete authority to

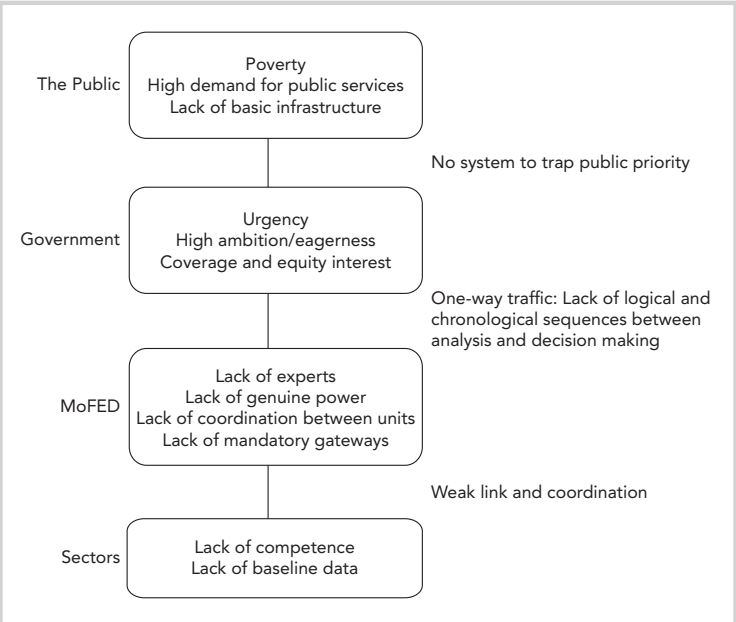

Figure 2: Review of the project governance system of Ethiopia.

MoFED to conduct project appraisals for any public investment project in the country. In general, in this process, there are no clear and unambiguous (go/no-go) decison gates.

In this section, we have discussed the two interrelated points of the research: the front-end challenges of public investment projects in Ethiopia and the project governance system of the country. Lack of prioritization and the low commitment of stakeholders are identified as the most important problems that lead to lack of relevance and sustainability of public investment projects in Ethiopia. On the other hand, the review of the project governance system of the country has shown lack of effectiveness.

Relevant public investment projects will provide sustainable benefits to the society when their positive effects justify the investment in the long-term perspective. This could be achieved by establishing control gateways and mandatory systems and procedures (effective project governance system) at the front end of the project development process. The relevance and sustainability issues of projects in Ethiopia could be addressed by implementing a new effective project governance system or by improving the effectiveness of the current project governance system of the country. The project governance system in the country could be improved by splitting the process of project selection and preparation stages into a number of distinct phases. Each phase should be designed with highly explicit go/no-go stages to decide on: the needs and priorities of the public (relevance); the long-term benefits of the project (sustainability); the impacts of projects on the public, environment, and economy; and on other issues. Moreover, the role of all parties in the project governance system, particularly the House of People's Representatives, has to be strengthened. Public participation, transparency in decision making, constructive criticism, and discussions and negotiations about the problem and the solution could also improve the quality of decision basis and the decision-making process, ultimately improving the success of projects.

Conclusion

Ethiopia has experienced relatively medium-term planning and has developed better strategies, policies, and plans that could be used as the source of public investment projects. In the last 10 years, the government has implemented several public investment projects. However, the preparation and the decision-making process of public investment projects presents many practical challenges. Too often, the results fall short of expectations. Particularly, the relevance and sustainability of projects are affected by the front-end project selection and decision-making processes.

The most important problem for lack of the relevance of public investment projects in Ethiopia is identified as lack of prioritization. The society's priorities are not investigated properly due to political and personal reasons. Similarly the low commitment of stakeholders is identified as the most important problem that affects the sustainability of projects. The commitment of stakeholders is low because important stakeholders are ignored in the project selection and decision-making processes.

The relevance and sustainability of public investment projects in Ethiopia could be improved by implementing a better project selection and decision-making process and procedures or by improving the effectiveness of the project governance system. We believe there is wide room for improvement in the project selection and decision-making process of public investment projects or in the front-end project governance system of the country. The needs and priorities of the public; the long-term viability of the projects; and

the impacts of the projects on the environment, public, and economy should be investigated at the front end before making decisions.

The top-down project initiative of the national government should be combined with the bottom-up interactive activities of the public and other stakeholders. Open discussion with relevant stakeholders about the problem and the possible solutions and a transparent decision-making process could improve the relevance and sustainability of projects. In order to do this, the effectiveness of the current project governance system has to be improved. To improve the effectiveness of the project governance system of the country, the current project selection and preparation system should be revised to accommodate more detailed front-end project study, broad participation of stakeholders, broad scope of alternatives, clear prioritization criteria, high political commitment, clear choice of alternatives, and a stage-gated democratic decision-making framework. ■

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Appendix

07/02/2011

A Survey: Front-End Challenges of Public Investment Projects in Ethiopia

This survey is part of a PhD research project, which aims comparing the project governance of major public investment projects in different countries. In this research work, we will map the project governance system and process of Ethiopia, and by this particular questionnaire, we intend to identify the front-end challenges of public investment projects in the country.

This PhD project is supported by the Norwegian University of Science and Technology (NTNU), Trondheim, Norway.

The results of this survey will be used in several studies and published internationally. By answering these questions, you also accept that we may use your answers in the scientific analyses and that we also reserve the right to publish the findings. All respondents will be kept anonymous.

Introductory texts and questions follow on the next pages.

The survey will take approximately 20 to 30 minutes to answer.

Thank you for your time.

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General Information

Information about the respondent (Check the relevant box—only one in each category, except 1.6):

1.1	Gender	Male
		Female
1.2	Age	Below 35
		35–55
		Over 55
1.3	Main sector of experience	Public
		Private
		Non-governmental organizations
1.4	Your expertise/profession/role	Programme/project manager
		Project evaluator
		Project planner
		Decision maker
		Researcher
		Others
1.5	Number of years experience in your expertise/profession/role	Below 5
		Between 5 and 10
		More than 10
1.6	Main experience from what type of projects	Building projects
		Road projects
		Hydropower projects
		Development aid projects
		Research
		Others

What are the most important front-end challenges of public investment projects in Ethiopia?

Major public investment projects are often large and complex compared to other projects. This survey covers the early (front-end) planning and decision-making processes of major public investment projects. By focusing on the most important problems in the front-end phase, it is hoped that we will be able to identify the most important reasons behind unsuccessful projects.

From the start, every public project should be based on the needs of the users and the society at large, and should aim at gaining intended benefits or effects after completion. In order to cast light on this, the present survey is investigating important aspects of the decision-making process. The survey is not aimed at management issues in the operational phase. This survey focuses on two key issues: *Relevance and Sustainability.*

Relevance

Relevance refers to whether the chosen public investment project is the most appropriate one judged from the owner/financing party's viewpoint, given there are alternative projects and that no investment is included among the alternatives.

Relevance refers to the objectives of the project, and is a matter of to what degree the objectives are in keeping with valid priorities and the users' needs. Relevance is a question of usefulness. Obviously, if the project is not useful it should be rejected or terminated.

Please indicate which alternatives are, in your opinion, the* most important problems *leading to* lack of relevance *in major public investment projects in Ethiopia.

Check the appropriate boxes and indicate your opinion on degree of importance. The scale ranges from 1 (least important) to 4 (most important). Please indicate importance for all alternatives. At least one alternative should be "most important."

	Alternative	1	2	3	4
2.1	The users' needs are unknown, misunderstood, or ignored				
2.2	The users' needs change before the project is executed				
2.3	The society's priorities are unknown, misunderstood, or ignored				
2.4	The society's priorities change before the project is executed				
2.5	The objectives of the project are unknown or misunderstood				
2.6	The objectives of the project do not change according to changed needs/priorities over time				

In the next section, you will be asked to elaborate more on the alternative(s) you have pointed out to be most important ones, that is, *only those you rated as 4 on the scale.*

2.1 You indicated the users' needs are unknown, misunderstood, or ignored. Please elaborate on the most important reasons why this happens.

(Check the appropriate boxes—you can indicate as many alternatives as you find appropriate. Remember that "important" implies *occurs often* and leads to *wrong choice of project.*)

2.1.1	The users have not been asked
2.1.2	The way the users are asked/participate in the planning process gives the wrong answers/does not unveil the needs
2.1.3	The users do not know/cannot express what they need
2.1.4	The planners are not competent enough in understanding the users' needs/answers
2.1.5	Users' needs are ignored by planners and decision makers due to political or personal reasons
2.1.6	Other (please indicate the reason in your own words)

2.2 You indicated the users' needs change before the project is executed. Please elaborate on the most important reasons why this happens.

(Check the appropriate boxes—you can indicate as many alternatives as you find appropriate. Remember that "important" implies *occurs often* and leads to *wrong choice of project.*)

2.2.1	The users' needs change very fast by nature
2.2.2	The users change their minds due to changes in society or other external influence
2.2.3	The users change their minds because the decision to execute the project opens for new possibilities
2.2.4	The users learn more about their needs as time passes
2.2.5	Other (please indicate the reason in your own words):

2.3 You indicated the society's priorities are unknown, misunderstood, or ignored. Please elaborate on the most important reasons why this happens.

(Check the appropriate boxes—you can indicate as many alternatives as you find appropriate. Remember that "important" implies *occurs often* and leads to *wrong choice of project.*)

2.3.1	The society's priorities have not been investigated
2.3.2	The society's priorities are very complex—it is impossible for planners to grasp/get the whole picture
2.3.3	The society's priorities are deliberately formulated unclearly by decision makers/politicians to give room for alternative courses of action
2.3.4	Society's priorities are ignored by planners and decision makers due to political or personal reasons
2.3.5	The society's priorities are impossible to express clearly
2.3.6	Other (please indicate the reason in your own words):

2.4 You indicated the society's priorities change before the project is executed. Please elaborate on the most important reasons why this happens.

(Check the appropriate boxes—you can indicate as many alternatives as you find appropriate. Remember that "important" implies *occurs often* and leads to *wrong choice of project.*)

2.4.1	The society's priorities change very fast by nature/because of the dynamics of politics
2.4.2	The society's priorities are very complex—different aspects dominate at different points in time
2.4.3	The society's priorities are often/regularly changed to give room for alternative causes of action
2.4.4	The society's perception of priority changes over time according to who is in power
2.4.5	Other (please indicate the reason in your own words).

2.5 You indicated the objectives of the project are unknown or misunderstood. Please elaborate on the most important reasons why this happens.

(Check the appropriate boxes—you can indicate as many alternatives as you find appropriate. Remember that "important" implies *occurs often* and leads to *wrong choice of project.*)

2.5.1	The objectives of the project are not stated at all or expressed in a very unclear manner
2.5.2	The objectives of the project are not available to decision makers
2.5.3	The objectives of the project are deliberately formulated to mislead the decision makers
2.5.4	The decision makers do not understand the planners' formulation of goals and objectives
2.5.5	Other (please indicate the reason in your own words):

2.6 You indicated the objectives of the project do not change according to changed needs/priorities over time. Please elaborate on the most important reasons why this happens.

(Check the appropriate boxes—you can indicate as many alternatives as you find appropriate. Remember that "important" implies *occurs often* and leads to *wrong choice of project*.)

2.6.1	The objectives of the project are perceived as a locked position/should not be changed
2.6.2	The priorities of the decision makers are not known/available to the project management/planners
2.6.3	The needs of the users are not known/available to the project management/planners
2.6.4	The project management is not allowed to change the objective of the project
2.6.5	Other (please indicate the reason in your own words):

Sustainability

Sustainability refers to whether the positive effects of the chosen public investment project will be maintained after the project has been concluded.

The definition of sustainability goes beyond the project itself. It is a matter of economic, institutional, social, and environmental effects in a longer-term perspective. It depends on whether (to what degree) the positive impact justifies investment, whether future revenue exceeds costs, whether users' support and ability will continue the intended process after the investment, and whether authorities provide policy support and resources to continue the process. If the project is not viable—if it is not supported by society and users in the future—it should be rejected or terminated.

Please indicate which alternatives are, in your opinion, the* most important *problems leading to* lack of sustainability *in major public investment projects.

Check the appropriate boxes and indicate your opinion on degree of importance. The scale ranges from 1 (least important) to 4 (most important). Please indicate importance for all alternatives. At least one alternative should be "most important."

	Alternative	1	2	3	4
3.1	Lack of commitment to the project from key stakeholders				
3.2	The chosen technological solution is not viable under the prevailing conditions				
3.3	Conflict over objectives and/or strategies concerning the project				
3.4	Economic and financial benefits are low, compared to investment and operational costs				
3.5	Lack of conformity with prevailing policy or by legislation				
3.6	There are negative ethical issues connected to the project				
3.7	Business or other conditions change between concept stage and final delivery				

In the next section you will be asked to elaborate more on the alternative(s) you have pointed out to be most important ones, that is, *only those you rated as 4 on the scale.*

3.1 You indicated lack of commitment to the project from key stakeholders is an important problem. Please elaborate on the most important reasons why this happens.

(Check the appropriate boxes—you can indicate as many alternatives as you find appropriate. Remember that "important" implies *occurs often* and leads to *wrong choice of project*.)

3.1.1	Neglecting that users do not approve/do not like the outcome of the project
3.1.2	Not identifying that the project outcome has weak support in its owner and financing organizations
3.1.3	Neglecting that the project outcome has weak support in management or accepting weak leadership
3.1.4	Neglecting weak support in interacting institutions, or opposition by other institutions
3.1.5	Other (please indicate the reason in your own words):

3.2 You indicated that the chosen technological solution is not viable under the prevailing conditions is an important problem. Please elaborate on the most important reasons why this happens.

(Check the appropriate boxes—you can indicate as many alternatives as you find appropriate. Remember that "important" implies *occurs often* and leads to *wrong choice of project.*)

3.2.1	Not identifying that the chosen technology is more expensive to maintain than the value of benefits gained
3.2.2	Neglecting that the chosen technology is not able to produce within satisfactory health, safety, and environmental standards
3.2.3	Not identifying that the chosen technology will not work under the prevailing physical conditions, climate, etc.
3.2.4	Neglecting that the users do not have the competence/experience to operate the outcome of the project
3.2.5	Other (please indicate the reason in your words)

3.3 You indicated conflict over objectives and/or strategies concerning the project are an important problem. Please elaborate on the most important reasons why this happens.

(Check the appropriate boxes—you can indicate as many alternatives as you find appropriate. Remember that "important" implies *occurs often* and leads to *wrong choice of project.*)

3.3.1	Neglecting/not solving conflict over priorities among key stakeholders
3.3.2	Neglecting powerful interacting organizations/individuals in opposition to the project
3.3.3	Objectives/strategies are too complex/unclear to avoid conflict
3.3.4	The project design lacks conformity with key stakeholders' interests and priorities
3.3.5	Other (please indicate the reason in your own words):

3.4 You indicated economic and financial benefits are low, compared to investment and operational costs are an important problem. Please elaborate on the most important reason why this happens.

(Check the appropriate boxes—you can indicate as many alternatives as you find appropriate. Remember that "important" implies *occurs often* and leads to *wrong choice of project.*)

3.4.1	Planning optimism (overestimated benefits) misleads the decision makers, deliberately or not
3.4.2	Bad cost effectiveness is accepted
3.4.3	There is no (not sufficient) market or willingness to pay for the use/outcome
3.4.4	Alternative use of the money is not analyzed
3.4.5	Other (please indicate the reason in your own words):

3.5 You indicated that lack of conformity with prevailing policy or by legislation is an important problem. Please elaborate on the most important reasons why this happens.

(Check the appropriate boxes—you can indicate as many alternatives as you find appropriate. Remember that "important" implies *occurs often* and leads to *wrong choice of project.*)

3.5.1	Policy on important issues (environmental, economic, social, etc.) is not known to project planners/project management
3.5.2	Incentives and regulatory measures concerning environmental effects are too complex (and thus misunderstood)
3.5.3	Laws and regulations not respected by project planners/project management
3.5.4	Policy and legislation changes between the concept stage and final delivery
3.5.5	Pressure groups and/or coalitions influencing single decisions (on investment projects)
3.5.6	Other (please indicate the reason in your own words):

3.6 You indicated that negative ethical issues connected to the project are an important problem. Please elaborate on the most important reasons why this happens.

(Check the appropriate boxes—you can indicate as many alternatives as you find appropriate. Remember that "important" implies *occurs often* and leads to *wrong choice of project*.)

3.6.1	Negative social impact on individuals, groups, or society are not taken into account
3.6.2	Future possibilities for employment and income for certain groups are not taken into account
3.6.3	The rights and benefits of certain groups are not represented in the planning process
3.6.4	Corruption or other forms of hidden and/or unethical practices influence decisions
3.6.5	Planners and project promoters deliberately misguide the decision makers
3.6.6	Other (please indicate the reason in your own words):

3.7 You indicated that business or other conditions change between concept stage and final delivery is an important problem. Please elaborate on the most important reasons why this happens.

(Check the appropriate boxes—you can indicate as many alternatives as you find appropriate. Remember that "important" implies *occurs often* and leads to *wrong choice of project*.)

3.7.1	Planning optimism (underestimated costs) mislead the decision makers, deliberately or not
3.7.2	Business changes very fast by nature
3.7.3	The political and administrative setting is changing regularly
3.7.4	Learning occurs, new possibilities arise—changing the priorities of decision makers and users
3.7.5	Other (please indicate the reason in your own words):

Paper IV

GOVERNANCE OF PUBLIC INVESTMENT PROJECTS IN ETHIOPIA

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In the recent years, Ethiopia has experienced relatively high level of economic growth and the government is implementing large number of public investment projects. However, there are concerns about the benefits and long term effects of these projects. This paper aims to map and review the front-end project governance system of Ethiopia, and to identify the most important front-end challenges of public investment project in the country and to suggest improvement options for future projects in the country. Data are collected in person through interviews, questionnaires and review of documentation. The findings indicate that the top-down project approach, lack of mandatory control gateways, weak links between project stakeholders, problems related to identifying the key priorities of the society, and lack of commitment from key stakeholders are important front-end challenges of public investment projects in Ethiopia. These challenges might have affected the effectiveness of the project governance system in the country.

1.0 INTRODUCTION

Demand for public services in sub-Saharan African countries is increasing continuously due to the improvement in governance and awareness in the region. However, poverty, lack of basic infrastructure, and poor industrial development are continuously hindering the ability of the nations to meet this demand. This is exacerbated by lack of transparency, lack of legal and financial frameworks, and poor capacity in managerial and technical expertise (Gidado, 2010).

Ethiopia is located in this region with fast population growth and high public service demands. In Ethiopia, private sector services are not developed enough to satisfy the needs and the demands for public services. To reach these high demands of the public, the Ethiopian government has been planning and implementing several public investment projects. During the last ten years, many public investment projects have been implemented and some are in progress. Many others are also planned for the next five years. The Ethiopian government is used to set medium term development plans and the strategic objectives are economic development and poverty reduction. Different sectors in the country have prepared detailed plans and programs in the theme of economic growth, agriculture and rural development, human development, infrastructure development and governance (MoFED, 2006).

Road sector development program, power development program, health sector development program, housing development program and education sector development program are some of the programs implemented by different sectors to improve the public welfare. Under these programs many projects are designed and implemented in order to provide goods and services to the public. However, project development in Ethiopia has experienced problems both in the planning and implementation stages. Different reports at the Ministry of Finance and Economic Development (MoFED) indicated that there was lack of system to ensure the alignment of the project objectives and the government strategies. Wastage of resources and redundancy of projects were common (MoFED, 2006). To minimize such wastage of resources and eliminate redundant projects, MoFED

has made reforms in the project governance system of the country and a new project governance guideline and tools are adopted to appraise, monitor and evaluate public investment projects. However, the project development process in the country still has problems related to the usefulness and sustainability of the projects effects.

This paper examines the project governance system of Ethiopia and investigates the most important front-end challenges of public investment projects in the country: What are the most important problems that affect the relevance and sustainability of public investment projects in Ethiopia? What are the major factors that could affect the effectiveness of the front-end governance system in the country?

2.0 CONTEXTUAL REVIEW AND ECONOMIC DEVELOPMENT IN ETHIOPIA

Ethiopia has total land area of 1.1 million square km and the population is estimated around 82 million. The government is composed of two tiers of parliament: the House of People's Representatives and the House of Federation. The executive branch includes a President, Council of State, and Council of Ministers. It comprises the federal government, nine administration regions and two chartered city administrations. The government is made up of two tiers of parliament: The House of People's Representative and House of Federation where political leaders are elected every five years.

The Ethiopian economy is based on agriculture, which contributes 42% to GDP and more than 80% of exports, and employs 80% of the population. The major agricultural export crop is coffee, providing approximately 26% of Ethiopia's foreign exchange earnings (US Department of State Bureau of African Affairs, 2011). According to the Ministry of Finance and Economic Development of Ethiopia (MoFED) reports, the Ethiopian economic is growing fast over the last fifteen years. On average 10 percent growth rates are registered between 1996 and 2008/2009. In 2010 the annual growth rate was 10.4 (US Department of State Bureau of African Affairs, 2011). This recent growth translated the GDP per capita from US $102 in 2000/2001 (MoFED web site, 2011) to US $ 390 in 2009/2010 (World Economic Forum, 2010). The economy has, therefore, been relatively in robust growth trajectory in these years.

During these periods, the government has prepared and implemented two macroeconomic programs and the third one is on progress. The programs are Sustainable Development and Poverty Reduction Program (SDPRP) from 2002/2003 to 2004/2005, Plan for Accelerated and Sustained Development to End Poverty (PASDEP) from 2005/2006 to 2009/2010 and the ongoing Growth and Transformation Plan (GTP) from 2010/2011 to 2014/2015. Different major projects are implemented under the programs of SDPRP and PASDEP. The construction of 23 new universities and the expansions of 10 others, the construction of major hydropower projects, the construction of thousands of health centers, thousands kilometers of road construction projects, water supply projects, and extensive housing development projects. The number and the types of projects are extraordinary and significant achievements have been recorded. But there are considerable doubts over the achievement of these projects: Weaknesses in the project concept choice and project implementation, pitfalls in decision-making, and benefit shortfalls.

3.0 PUBLIC INVESTMENT PROJECTS IN ETHIOPIA

Projects are policy implementation tools using limited available resources (finance, manpower and materials) for accomplishing development programs (Cusworth &Franks, 1993). How to select the right project concepts, how to prepare and implement them in the right way, and how to operate and maintain them afterwards is an important issue to be considered for organizing a countries

resource's for development are important questions to implement successful projects. In Ethiopia, public investment projects have been initiated from different parties. These include the government, sectors, private investors, civil society, aid agencies, donors, banks, NGO, and others (MoFED, 2006). These sources of projects can be grouped as systematic and non-systematic. Systematic sources are sources with predictable contents and formal documents. Development strategies, sector strategies, long and medium term development plans, development programs are examples of systematic project ideas. On the other hand, unsystematic sources of project ideas include influential individuals and urgent circumstances.

According to MoFED (2006), most public investment projects in Ethiopia are developed from the government medium term development plans of SDPRP and PASDEP (systematic sources). According to the interviewees of this research at MoFED, projects in Ethiopia are implemented if they have objectives consistent with the development strategy of the country. On the other hand, interviewees (consultants, researchers and individual experts) of this study have explained that the objectives of projects are often exaggerated and planners and decision makers put the project objectives without considering the real situation on the ground. For example the housing development program is the country is started with integrated and ambitious objectives. Although the housing program has achieved many encouraging results, evaluation of the projects results against its objectives indicated that the program is not successful both in operational, strategic perspectives.

The construction of 23 new universities is another typical example of public investment project that could demonstrate shortfalls in the preparation of public investment projects is the country. The government has allocated a large sum of money for the successful implementation of these projects. The projects are implemented in two phases. The first phase includes the construction of 13 universities, and it was part of the education sector development program under (SDPRP). The second phase of the program includes the construction of 10 universities and it was part of (PASDEP). The projects are political decisions of the government. It is part of the government's policy to build demand–driven technical and vocational education, training and higher education in the programs of (PASDEP). However, during this investigation I have not found any feasibility study that justifies the university projects. The government plan for the fast enrolment expansion, particularly at higher education level, should have been supported by the analysis of demand. The link created between education development and private sector development and service delivery are weak (DAG, 2006). The number and quality of teachers, the economy of the country to create jobs for thousands of graduates per year, and the availability of budget for maintenance and operation are critical issues. Many argue that the plan for expanding higher education must be supported by an analysis of labour market demand and must be better linked to plans for private sector development, growth and service delivery.

It is also possible to find other projects at the federal or regional levels that have similar problems related to the project preparation and decision-making stages. There is often urgency from the government side to start projects without solid problem analysis, alternative assessment and without analyzing the consequences. The project shaping process has no gates to control the information. This allows project initiatives to proceed without clarity around objectives, resources and timescale. However, projects should be shaped through continues reviews of the information about the initiative and the possible effects and negative impacts. Therefore starting point should be checking the availability of the problem, preparation of macroeconomic forecasts and checking the availability of budget. This should be followed by identification of public investment needs in individual sectors, along with an assessment of the consistency among the various sector programs.

Then, projects should be developed or decisions should be made if it is confirmed that the benefits of projects are really significant to facilitate the identified problems.

In Ethiopia, MoFED is authorized to conduct professional evaluation on proposals of public investment projects from sectors, Proclamation No. 642/2009 (EFDR, 2009). In this regard, MoFED prepared a guideline, which adopted from World Bank project management manuals, to evaluate project initiatives. However, the MoFED guideline is practiced basically for donor driven projects. If the finance source is local, (demand driven projects), the ministry skips some of key steps in the evaluation process, or the mandate is transferred to sectors. A study conducted in 2009 by MoFED indicated that of all projects financed by the local financing scheme, only 10% of the projects are evaluated through a formal front-end appraisal system of MoFED. The rest 90% of the projects are implemented without a quality assurance test at MoFED. Sectors prepare projects and the Ministry only checks the budget. The objectives, the relevance and the sustainability of the projects are not evaluated according to the guideline.

4.0 RESEARCH METHODS

To identify the most important front-end challenges of public investment projects in Ethiopia, a survey is performed. 62 questionnaires are distributed for the relevant professionals who are experienced in public sector projects. From these 62 questionnaires 45 of them, 9 Project planners (20%), 10 project evaluators (22.2%), 5 decision makers (11.1%), 14 program/project managers (31.11%), and 7 others (15.56%) responded. The response rate is medium (72.6 %). The number of respondents is low, but we accepted the results because the questionnaire requires high level of competence and there are shortages of expertise in the area. To supplement this low number of respondents interviews are conducted with key professionals working in the public investment projects.

On the other hand, in order to get the full picture of the project governance system in the country, interviews are conducted with selected groups of stakeholders namely public employers, domestic contractors, and domestic consultants who have been actively participating in the development of public investment projects in the country, and extensive documents are reviewed. In addition to this secondary data sources: several publications, journals and, internet sources, as well as related archival documents at the MoFED and other sectors are reviewed and used as evidence. These different methods of data are triangulated and used in order that the data or information obtained from one can be supplemented by the others.

5.0 DATA , ANALYSIS AND DISCUSSIONS

5.1 FRONT-END CHALLENGES OF PUBLIC INVESTMENT PROJECTS IN ETHIOPIA

According to Klakegg (2009), ensuring the relevance and sustainability of projects is the most important challenge in the project development process. Relevance refers to the objectives of projects, and it is a matter of to what extent the objectives of the project initiative are aligned with the public needs and priorities. On the other hand sustainability refers to the continuity of the positive effects of the chosen public investment project after the project completed (Samset 2003, Klakegg 2010). This implies that these two criteria are important for the success of projects. According to Samset (2003) if a project is not relevant and sustainable, it is a failed project and it should have never been implemented.

The search for the challenges of public investment projects in Ethiopia started based on this suggestion. We used questioners to identify problems that are related to projects relevance and sustainability.

Relevance

The analysis of the survey indicated that from the listed alternative reasons leading to lack of relevance, majority of the respondents indicated that *society priorities are unknown, misunderstood or ignored* as the most important one as shown in Table 1 below. The main reason given by the respondents: *the society's priorities have not been investigated and society's priorities are ignored by planners and decision makers due to political or personality reasons*.

The numbers in Table 1 indicates the number of respondents with respective scales. The last column indicates the weighted score (WS). The weighted score indicates the relative importance of the alternatives. The society priorities are unknown, misunderstood or ignored are selected as the most important reason for the lack of relevance in the public sector investment projects of Ethiopia with a WS of 3.22.

Table 1: Result for the most important problem for the lack of relevance in public investment projects of Ethiopia, N= 45, the scale ranges from 1 to 4. 1 is for least important and 4 is for most important reason.

	Alternative	1	2	3	4	WS
2.1	The users' needs are unknown, misunderstood or ignored	8	7	11	19	2.91
2.2	The users' needs change before the project is executed	13	18	6	8	2.2
2.3	The society's priorities are unknown, misunderstood or ignored	5	5	10	25	3.22
2.4	The society's priorities change before the project is executed	13	21	6	5	2.07
2.5	The objectives of the project are unknown or misunderstood	12	9	8	16	2.62
2.6	The objectives of the project do not change according to changed needs/priorities over time	9	10	13	13	2.67

The results indicate problems that are related to the project approach of the country. Ethiopia has experienced top-down project approach for major public investment projects. In this approach, majority of the projects in Ethiopia are defined and decided at the top level. In the top down approach, most often users are neglected. In our investigation we have not found a clear system that is used to consult and identify the effective demands of the public. Most decisions might have political objectives. Decisions are made by the name of the public but project initiatives may not be prioritized according to the public needs and priorities. This could be either public priority deliberately ignored and changed to other politically prioritized projects or misunderstood due to lack of competence. But as most contemporary literatures recommend, before starting a project, the project initiators should identify the effective demands of the public and there should be clear prioritizing criteria.

Sustainability

The same respondents indicated that *lack of commitment from key stakeholders* as the most important reason for the lack sustainability in public investment projects of Ethiopia. As shown in Table 2, the main reason for the lack of commitment from the key stakeholders is: *Neglecting weak support in interacting institutions, or opposition by other institutions*.

Table2: Results of the survey for the lack of sustainability in public investment projects of Ethiopia, N= 45, the scale ranges from 1 to 4. 1 is for least important and 4 is for most important reason.

#	Alternatives	1	2	3	4	WS
3.1	Lack of commitment to the project from key stakeholders	6	4	5	30	3.31
3.2	The chosen technological solution is not viable under the prevailing conditions	11	11	11	12	2.53
3.3	Conflict over objectives and/or strategies concerning the project	10	10	14	11	2.58
3.4	Economic and financial benefits are low, compared to investment and operational costs	15	7	10	13	2.47
3.5	Lack of conformity with prevailing policy or by legislation	23	12	6	4	1.8
3.6	There are negative ethical issues connected to the project	18	13	10	4	2.0
3.7	Business or other conditions change between concept stage and final delivery	11	13	11	10	2.44

Lack of commitment to the project from key stakeholders is selected by quite a large number of respondents with WS of (3.31) as the most important reason for lack of sustainability in the public sector investment projects of Ethiopia. Key stakeholders support is an essential ingredient for the success of projects. Conversely, lack of support from key stakeholders is likely to result in the project failing (Garland, 2009). Therefore, the main stakeholders of a project must be included in the decision making forum (Garland, 2009). Experience shows projects run into problems when the decision making forum does not involve the relevant stakeholders. Often decisions on major public investment projects of Ethiopia are made from the top, and stakeholders are expected to participate only in the process of project implementation. It is not a problem but decisions at the top level need to consider issues and concerns of other stakeholders. Our interviewees have made clear that the government of Ethiopia has shown high level of commitment in expanding public investment projects. However, the commitment is not consistent throughout the process. In the beginning of the projects the authorities are ambitious but their commitment decreases as the project progresses and that is not good for the success of projects. Conflict over objectives and strategies concerning the project is selected as the second most important reason WS of (2.58) for lack of sustainability.

To strengthen the results of the questionnaire from the other information, we made interviews with 35 key professionals. According to the majority of the interviewees, the issues of relevance and sustainability of projects might have not got much attention. One of our interviewees, who are working as head for one government office, told us that the government does not need to do all these studies, because the country is poor and the people need all the projects the government implements. We agree that the country is poor and there are a lot of demands from the public. But it is important to evaluate which initiative the government should spend the money, and prioritize in order to optimize the strategy of the country's development. Projects will have sustainable benefits to the society if they are the need and priority to the public and if their net value is encouraging. This could be achieved by establishing mandatory systems and procedures (effective project governance system). Effective project governance includes a decision making framework that guides a project development process, and other processes and procedures associated with that

(Garland, 2009). Effective project governance is recognized as a key feature of successful investments. We suggest that Ethiopia needs to improve its project governance system. The lack of effective governance framework can be the reason for the problems that are associated with the relevance and sustainable effects of public investment projects in Ethiopia.

5.2 PROJECT GOVERNANCE FRAMEWORK IN ETHIOPIA

Project governance framework is defined as ''*an organized structure established as authoritative within the institution, comprising processes and rules established to ensure projects meet their purpose*'' (Klakegg 2010). According to Klakegg (2010), project governance framework characteristics are divided in to four different categories. These are: the process of development, the structure of the framework, the embedded governance principles and detailed governance elements. In the following sections, we will map, review and analyze the project governance framework of Ethiopia based on these characteristics of project governance frameworks.

Project Governance System in Ethiopia and the Process of Development

Ethiopia has experienced public investment projects as means for development for long time. Project planning was started during the Imperial era in 1945 (MoFED 2008). It was started after the Ethio-Italian war and used for the reconstruction of infrastructures and revival of the economy. However, programs and projects were not initiated from development plans and there was no coordination between them. After being convinced of the importance of development plans, Emperor Hailesilase I, established a planning board in 1955 for planning and leading development works and he was the chairman of the board (MoFED 2008). After the Imperial era, the Derge regime (1974-1991) had established Ministry of Planning and used central planning framework for public projects. Recognizing the importance of project planning work the then regime established the Development Project Study Authority (DPSA). DPSA had prepared a project planning guideline in 1984 and the guideline was revised 1990 (MoFED, 2006). This guideline had served for project preparation for few years but the number and the volume of projects at that time was not significant. The number and type of public investment projects have increased after 1991, following the change of the government. After 1991 the state adopted the following changes: A federal system of political governance based on decentralization and devolution of power to regional governments in 1993, a free economic policy with vigorous privatization of public companies in 1992, and structural adjustment of public executive organs. Ministry of Economic Development and Cooperation, now it is MoFED has been the main institution to coordinate public investment projects. In between 1991 and 2006, the Ministry of Economic Development and Cooperation prepared and used checklists for project appraisal.

In 2006, MoFED developed a new guideline and different tools for the preparation, appraisal, monitoring and evaluation of public sector projects. The purpose of the guideline is described as: to help practitioners in designing viable projects that meet the development needs and priorities of the government and to provide sufficient information for decision makers (MoFED, 2006). It is a good initiative for informed decision making and value for money. According to this guideline, public investment projects in Ethiopia should be aligned with the Government development programs and plans, which are derived from the prevailing development policies. If sectors have budget source from the government treasury, sectors can prepare project concepts but they must send the proposal to MoFED for appraisal. Once the project concept is approved by MoFED, sectors can start the project study but they must resubmit the project document to MoFED. After checking the project proposal, MoFED either approves the project or returns for amendment or rejects. On the other hand, if the source of finance is assistance or loan, the proposal comes to MoFED and the ministry

will check the proposal against the government development strategies. After checking the project proposal, MoFED will send it to Council of Ministries and further to the House of People's Representatives. However, according to our interviewees, the MoFED guideline are not practical, it is a theoretical framework and in practice there are several deviations, as we explained in section three, only a few percent of project initiatives are evaluated by MoFED.

In section five, we have analyzed the most important challenges of public investment projects in Ethiopia. The results of the assessment indicated problems that are associated with the project governance system of the country. Majority of the interviewees believe that the link between sectors and MoFED is not strong. Similarly the link between MoFED and other government and non-government stakeholders might not have been strong as it should be.

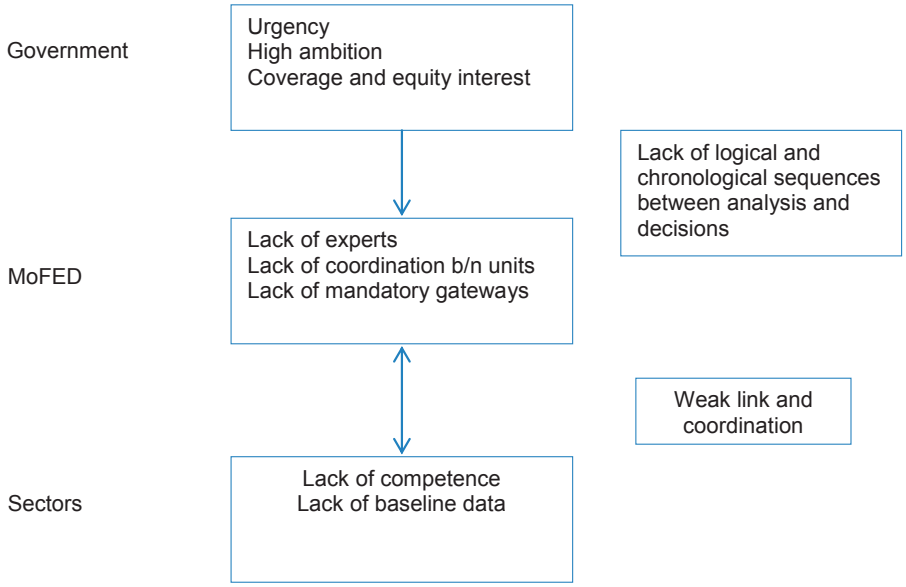

Figure 1: Analysis of problems in the project governance system of Ethiopia

Figure 1 shows the results of the survey. The results of the survey indicated that the government of Ethiopia might have been ambitious in the planning and implementing of public sector projects. Enough time is not given for the planning phase of projects. Coverage and equity between regions may have got more emphasis than the project benefits. This could have worsened the problems that are related to the usefulness and sustainability of projects. MoFED which is theoretically responsible for coordinating and evaluation of public sector projects does not look in control of the process. The Ministry has shortage of experts and the coordination between the different units of MoFED is not strong. The project appraisal system has no mandatory stage gates to check the appropriateness of project concepts, alternatives, uncertainties, and to assess the needs of the public and to prioritize. Sectors have shortage of experts and there is high shortage of baseline data for assessment of problems and to develop solutions. There are also coordination problems between potential stakeholders. For example the link between the Cabinet and MoFED is a one way traffic.

The Cabinet decides and the Ministry implements the decisions. The professional analysis and inputs of MoFED that could be used as basis for decisions are either not prepared, or not used, or not influential, or do not wanted at all. On the other hand, the link between MoFED and sectors might have been weak. For the last couple of years, from all locally financed projects only very few projects are evaluated by MoFED. However, the majority of project initiatives are evaluated by the sectors themselves.

Structure of the Framework

Proper structuring of involved parties and indicating clearly their duties and responsibilities are basic issues in the project development process. As shown in Figure 2, the guideline for the preparation of public sector projects identifies the House of People's Representatives, the Council of Ministries, MoFED and sectors as the main parties involved in the development of public sector projects. The guideline describes the duties and responsibilities of each party. The House of Peoples Representatives issues proclamations and laws and approves issues that are related to public projects that come from the Council of Ministries. The Council of Ministries issues regulations and directives and makes decisions based on analysis from MoFED. MoFED issues project directives, makes decisions on important issues from sectors, appraises project proposals of sectors and arranges budget for approved projects. MoFED also has a mandate to evaluate and monitor approved projects. According to this guideline, the planning and programming units of sectors play a key role in defining and designing public projects.

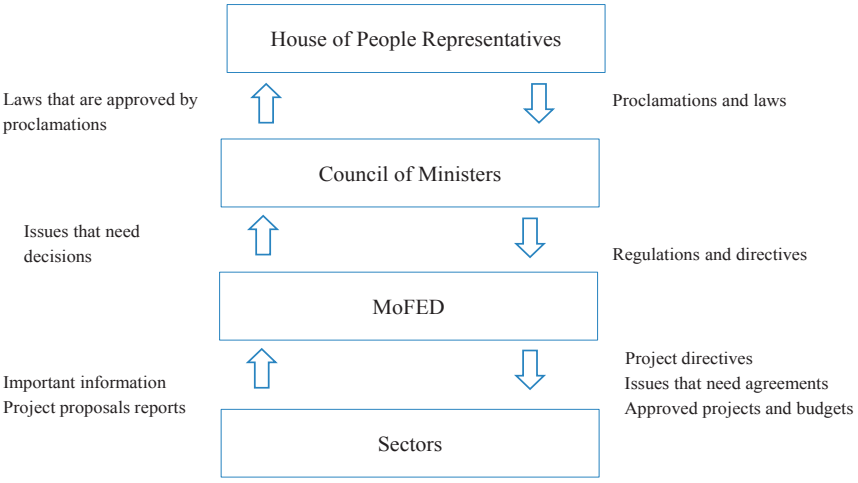

Figure 2: Structure of public investment projects workflow in Ethiopia

Governance Principles

There are no special principles expressed in the project preparation, appraisal and evaluation documents of Ethiopia. But it is relevant to consider the good governance principles of the country as principles of project governance because the government has defined the good governance principles and the principles are stated as guiding principles in every ministry office. Therefore, it is reasonable to consider that individuals working in relation to the project governance framework of the country are also governed by the good governance principles. Based on several project governance documents of the MoFED, and suggestions from the interviewees of our recent survey; 1) transparency, 2) accountability, 3) serving the public interest, 4) impartiality, 4) responsiveness and 5) respecting the law are identified as embedded governance principles in the project governance framework of Ethiopia. But the question is: do these elements actually practical?

Detailed Governance Elements

The project governance system in Ethiopia has two basic concerns: cost and time. MoFED has prepared and used national economic parameters and conversion factors to know the true pictures of economic impacts of a project. The economic analysis of projects is conducted in order to ensure that public investment funds are used for viable projects. The financial analysis are also conducted in order to determine the long term budgetary implications and to provide an adequate financing plan for a proposed project. Procurement and contract are also governance element. MoFED is responsible for procurement and contract issues of public investment projects in the country. Public Procurement Agency (PPA) is the responsible institution in the ministry. It is good that these institutions are found in the same ministry. But to have the documents and the institutions is not sufficient. The question is do they operate in coordination to ensure that the government is implementing the right public projects?

6.0 CONCLUSIONS AND IMPLICATIONS

At the present Ethiopia has experienced relatively medium term planning and have developed better strategies, policies and plans which can be used as the source of public investment projects. However, like many other countries in the world, considerable weaknesses are observed in the preparation and implementation of public investment projects. In this research several problems that could affect the country's project governance system are identified. Lack of commitment from key stakeholders, weak links (lack of communication) between project stakeholders, unable to identify the key priorities of the society, urgency, and lack of project planning expertise are some of them. From these factors misunderstanding or unable to identify the key priorities of the society is identified as the most important factor that could affect the relevance of public investment projects. On the other hand, lack of commitment from key stakeholders is identified as the most important challenge that could affect the sustainability of the project effects. Based on these findings we can conclude that even though the project governance system in Ethiopia has a good theoretical background, and the country has developed better strategies, which can be used as a source of projects, the system is not working effectively. Sectors are weak in planning and programming, the communication and coordination between potential stakeholders of the project system is not as per the requirements of the guideline. Looking at all these factors, it is reasonable to conclude that the project governance system in Ethiopia is not effective, and reforms are required to improve the effectiveness of the country.

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Paper V

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Paper VI

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Paper VII

THE DUTCH PROJECT GOVERNANCE SYSTEM: WEAKNESSES AND IMPROVEMENTS

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Abstract. *This article studies the projects approach in the Netherlands and reviews the recent efforts of the Dutch Government that are made to improve the country's project governance system. Evidence from different sources indicates that there have been changes in the Dutch public project approach and decision-making process, particularly in the early stages of the project development process. Discussions, negotiations and consensus between relevant stakeholders are becoming more important as decision-making criteria; a disciplined and stage-gated decision-making framework is placed in the political arena; cost-benefit analysis and other ex-ante project evaluation criteria are standardized to reduce the complexity of the evaluation process.*

KEYWORDS: Amsterdam Airport Schiphol, decision-making; Delta Program; project governance; project planning approach; public participation; Second Maas Area

1. INTRODUCTION

The Netherlands is often described as a "consensual" democratic state (Lijphart, 1999) and the Dutch politics and governance are known for broad consensus on important issues within the political community and society as a whole (Marshall, 2009). In this regard, the evaluation of the Dutch culture through the lens of Hofstede's 5 –D mode indicates that in the Netherlands consultation is common; communication is direct and participative; decisions are supposed to be made by importance and punctuality, and precision are the norm (The Hofstede center, undated). Similarly, involving different stakeholders in the project planning and project governance system is being a widely accepted approach. For instance, the new transport infrastructure projects governance framework involves different levels of administration in the projects planning and decision-making processes. In this framework, provinces, municipalities and other interested groups have got possibilities to influence the planning and decision-making process through meetings and consultations. This is an important reform that is being developed over the years in the Dutch transport infrastructure projects governance system. As Woltjer (2009) describes this type of consensus-oriented project planning and decision-making reform helps to establish a project governance framework which takes public participation and consultation as an anchor.

In common with many other countries worldwide, the project preparation and decision-making systems in the Netherlands had problems and experienced several decision-making pitfalls that affected the success of public investment projects (Priemus, 2007). Using contested and misinformation, low participation in the early phase, limited political commitment, lack of clear go/no-go stages, lack of solid problem analysis, and premature decisions were common causes of why projects run into difficulties in the Netherlands (Dais 2011, Commissie-Elverding 2008, Priemus 2007). Marshall (2010) describes similar project front-end problems, particularly in the key zones of infrastructure and housing. Most of these are concerned with front-end project governance system of the country. Therefore, improving

the front-end project governance system of the country was recommended to improve those aspects of governance related inefficiencies (Priemus, 2007).

In this contribution, the author aims to investigate the most recent efforts of the Dutch government that are made to improve the front-end governance of major infrastructure projects (project concept selection and the decision-making processes and procedures). First, the study investigates how public investment projects are approached in the Netherlands? Secondly, it discusses the Elverding committee and the Parliamentary Commission for Infrastructure Projects (TCI) recommendations. Finally, it will discuss the Faster and Better Program—a program established to improve the planning and decision-making processes of major infrastructure projects in the Netherlands.

2. RESEARCH METHODOLOGY

The research methodologies employed in this research are interpretive in nature, relying on one-on-one interviews with planning actors and officials, as well as academic scholars. Interviews were conducted in the Netherlands from November 14 to 16, 2011 with nine experts. Four interviewees were selected from the Ministry of Infrastructure and the Environment (I & M), who are active in the design and implementation of the Faster and Better program. A senior researcher at Delft University of Technology and two researchers from the University of Rotterdam are also interviewed. A researcher from the University of Oxford Brooks, England and a researcher from Radbound University Nijmegen, the Netherlands were contacted by email and they responded giving answers based on their earlier publications in the subject. The interviewees were selected based on either their active role in the reform of the Dutch project planning system or their earlier research related to the theme. Face-to-face interviews were conducted at the interviewees' offices. In addition to the interviews, several publications related to the Dutch project planning process were studied. These different sources of evidence were then cross-checked, analyzed and used as input.

3. LITERATURE REVIEW

Governance is an essential ingredient to achieving success and to fulfilling the goals of sustainable development (Brownill and Carpenter, 2009). UK treasury (2007) defines project governance based on those aspects of governance that are related to ensuring the success of projects. Those aspects of project governance that are required to ensure the success of projects include: defining a strategic decision-making framework, defining rules and procedures, and specifying the rights and responsibilities of different participants. According to O'Leary (2012), the implementation of those aspects of governance is important to ensure (a) the selection of the right project alternative that supports the strategy; (b) the alignment of project objective with strategy; (c) the implementation process of projects managed with the objectives and expectations of the project promoters. Therefore, we can say that project governance is an important coordinating mechanism to ensure the selection of the right project concept and for making the right decisions according to the rules and procedures that are established in the framework.

In a properly implemented project governance framework, the selection of the right projects includes stages of problem analysis, evaluation of project alternatives, prioritization, and aligning the project objectives with strategic objectives (Shiferaw and Klakegg, 2012). Problems are identified and analyzed by owners or other stakeholders. The rules and procedures of a project governance framework and, ex ante project evaluation requirements therein are used to evaluate the users' needs and priorities, to evaluate project alternatives, and to check the alignment of the project objectives with Government policies and strategies.

In order to keep the effectiveness of a project governance framework, it is recommended to design a system for quality control of the processes and procedures, and to ensure accountability within the authority. In this regard, Williams et al. (2009) and Flyvbjerg (2012) recommend high quality front-end quality control system to getting decisions right and to ensure the success of projects, or avoiding failure.

In addition to quality control system, systematic understanding of the wider environment (for instance stakeholders' interest) is important for the effectiveness of a project governance system. That means, as Renz (2007) describes, project governance should able to establish strategic influence from the stakeholders. In the other way, the preparation process of public investment projects must be participatory (Flyvbjerg, Bruzelius & Rothengatter 2003), because mutuality is important to facilitate the utilization of all the available information. In general, the co-operation between stakeholders who deal with the environment, social and economic issues, and the active participation of the public, particularly in the early stages of the planning process is required for informed decision making. The proposal here is that in designing a project governance system, participation of relevant stakeholders should be considered as an important requirement.

Participation must be collaborative and it should include all the relevant parties in a common framework where all are interacting and influencing one another (Innes and Booher, 2004). According to Innes and Booher, participation should not be one way communication from government to the public, rather it must be multidimensional where communication, learning and action joined together and where the polity, interests and citizenry co-evolve. Here it is possible to argue that the top-down project approach (from government to the citizens) which excludes the participation of stakeholders in the early phase no longer fits within the social-related planning practice. Therefore, as Alden *et al*. (2001) suggested, the top-down project approach should be replaced with a more democratic approach involving broad participation of the public and other relevant stakeholders. The interactive and dynamic approach to project preparation and decision-making between the top-down and bottom-up thinkers allows a better balance between goals where we are in the project preparation process and where one wants to be at the end of the project.

In order to challenge the problems that are related to public projects success, public sector bodies must put in place a better project governance arrangement. The arrangement should address the key issues that are related to the project preparation and decision-making: it needs to provide better information to the decision-makers; it should find a way to balance the top-down and bottom-up project approaches, and an effective information quality control system should be prepared at the outset. Similarly, Jänicke *et al*., (2001) categorizes the required changes in the public investment projects governance system into four main issues: the coherent integration of policies and strategies; a strategic role for public authorities such as Parliament, the broad participation of civil society in the planning and decision-making processes; and a long-term view of problems and resulting strategies. These are important points to be considered in order to improve the effectiveness of project governance system and ultimately, to improve the success of projects.

4. HOW PUBLIC INVESTMENT PROJECTS ARE APPROACHED IN THE NETHERLANDS?

Woltjer (2009) describes the project planning system in the Netherlands as 'highly organized and a collective activity'. Similarly Marshall (2009) describes some of the efforts that are made to bring different stakeholders from various areas and to make them coherent in the planning and decision-making processes. These efforts indicated that the Dutch project

planning approach has a certain tradition to link up project planning with a system of co-ordination across sectors and different government administration levels (Ministries, provinces, and municipalities). There are also evidences indicating that co-operation between different ministry offices, agencies, research institutions and planning bureaus has been a common practice.

For instance in 2005, the Dutch planning law made it obligatory for sectoral strategies or major projects to be part of the national spatial planning. In 2003, the Interdepartmental Commission on Strengthening the Economic Structure (ICES), which advised the Cabinet on decisions about how to spend money from the Fund for Strengthening the Economic Structure (FES) and thus on setting priorities for alternative investments, changed to become the ICRE as a result of integrating spatial issues with infrastructure development (Marshall, 2009). In 2007, the MIT (Multi-annual plan for Infrastructure and Transportation) program became the MIRT (Multi-year Program for Infrastructure, Spatial Planning and Transport) by combining transport planning with spatial planning. In 2010, the Ministry of Housing, Spatial Planning and the Environment merged with the Ministry of Transport, Public Works and Water Management into a new Ministry of (I & M) to integrate the planning process and for sustainable development of the Netherlands (I & M, undated). These are indications of cooperation between sectors horizontally.

There is also a trend to involve different levels of the government vertically. Provinces, regional authorities, municipalities and interest groups have the chance to influence the project preparation and decision-making through meetings and consultation. However, it does not mean that they are working like this always. There are variations, because history and experiences differ from project to project. However, as most of the interviewees of this research agreed, and as the long-term planning culture of the Dutch indicates, in most cases project ideas are initiated from the top, namely from the Government or authorities. Nonetheless, the bottom-up interactive activities of stakeholders are also used to be equally important in a project's decision-making and planning process. Therefore, in most cases, the project planning approach in the Netherlands is a combination of the top-down project initiative and the bottom-up interactive activities of stakeholders. Decisions on new projects are made based on the results of the negotiations and consensus between top-down initiators and bottom-up stakeholders. However, the negotiations processes takes long time and as a result of that the project realization time in the Netherlands has been very long. According to Donné Slangen, director of the 'Faster & Better' program, the implementation of major public investment projects (motorways and railways) takes fourteen years on average. To reduce the project realization time to seven years and to fix a standardized procedure for project development, the Ministry of Infrastructure and the Environment is implementing programs called 'Faster and Better'—a program that demands a broad participation of stakeholders with a fast and better decision-making framework.

The following three cases are presented to strengthen the argument about the Dutch project approach, where projects typically started as top-down initiative but all ended up with debates and negotiations with bottom-up activists. The second Maas Area expansion of the new port of Rotterdam and the expansion of the port of Amsterdam were started in the middle of 1990s but the projects were delayed until the middle of 2000s. My interview with a professor at Delft University of Technology indicated that the outcomes of the negotiations in these projects were win-win for important parties, but the projects realization time was too long. The third case, the Second Delta program was started in 2012, i.e., after the implementation of MIRT and 'Faster and Better' programs. This implies that projects in the Second Delta Program will be developed based on the rules and the framework of MIRT. In

this framework, it is required—maximum participation of stakeholders in the early phase of projects and relatively short project realization time.

The research methodology employed in these case studies relies on an interview with a researcher (a professor at Delft University of Technology) who did a similar work before, and scholarly literature on the cases. The interview was open ended and it bases on the following questions: Does the project preparation process participatory? How decisions on project initiatives are made at the initial stage? Who initiates a project idea?

The Second Maas Area Expansion of the New Port of Rotterdam

The second Maas area expansion of the new port of Rotterdam in the North Sea started in the mid-1990s due to the increase in trade envisaged by the port authorities and the national Government. When the issue was initially discussed, environmental groups opposed the project due to the North Sea being an important and vulnerable area with high ecological value. Their views were considered important and after some time negotiations started between the port authorities and the environmental groups. After successive debates and negotiations, the port authorities and the environmental campaigners reached an agreement to build the port in the North Sea and to compensate for the loss of nature on the land. As a result, a substantial amount of agricultural land has been transformed into nature reserves. By taking this approach the nature is changing but not diminishing. The only losers are the farmers, but slowly reducing agriculture can be economically positive for the Netherlands and there are many countries in the world where agriculture can be more effective than in urban countries like the Netherlands. The actual decision in this process was not made based on the information from the research results and the top-down Government-centered planning process, as the results of the research and the top-down project approach lacked the necessary support from the bottom-up lobby (Deelstra *et al*. 2003). Instead, the final decision was the result of the successful debate between top-down project initiators (port's lobby) and bottom-up activists (environmental lobby). In the discussions, several misunderstandings about the proposed measures were cleared up after long negotiations and compromises, which was essential for the ratification and the realization of the expansion.

Amsterdam Airport – Schiphol Expansion

Schiphol airport is vital to the Dutch economy. Based on the fast development of air transport at Schiphol and the passenger figures, it was clear that the capacity was insufficient and that expansion would be necessary. Using this prediction, in the 1990s the airport authority and the national Government initiated a project for the expansion of Schiphol in the style of a top-down project initiative. However, environmental problems, including the issues of noise, air quality and safety as well as residents' complaints led to the decision-making and project development processes being challenged. These are bottom-up activities, often considered to be a NIMBY issue – 'Not in my back yard'. The bottom-up activists could see the need to increase Schiphol but did not want it where they were living and wanted to preserve the qualities of their area. The data and project studies presented by the Government and the airport authorities did not convince the bottom-up activists; rather bottom-up thinkers challenged the Government's assumptions and calculations. Then at the end of the day, it was a matter of confrontation and dialogue between the different stakeholders. This dialogue was crucial for reducing the differences between these parties. Typical of many Dutch infrastructure projects preparation, everyone was given an opportunity to express their opinion on the key planning stages and decisions (Woltjer, 2009). Finally, the discussions reached a compromise and they made a decision that was acceptable for both the bottom-up

and top-down stakeholders. The decision-making process in this case was partly due to the learning process between parties, and partly due to the development of demand for airport capacity (Deelstra *et al*. 2003).

The Second Delta Program

In 1953, the Netherlands flooded as a result of a storm and tidal surges breaking the sea defenses, causing many casualties. As a solution, the First Delta Program was implemented to make the country a lot more protected against the sea. Since then, the Netherlands has had to deal with rising sea levels with several attempts to change the characteristics of the Meuse and Rhine rivers, which start in France and Switzerland respectively, and cross the Netherlands before they flow into the sea. The capacity of the water in these rivers fluctuates much stronger than in the past. A few years ago, the Netherlands was affected by flooding in the areas along the inland rivers. As a long-term solution to such problems, the Second Delta Program was prepared by the Dutch Authorities and the Delta act became effective from January 2012. The main objectives of the program are to protect the Netherlands against flooding and to keep the fresh water supply balanced (Ministerie van Infrastructure en Milieu, 2011). It is a national program that is due to run until the year 2100, with assumptions made about the rise in sea level, differences in how water in the river will behave and precipitation changes. It is not a reactionary program in response to a disaster but is proactively prepared in advance to avoid it.

The program has many uncertainties due to its reliance on basic forecasting and predictions. Therefore, the Dutch Authorities have to think about no-regret measures for the short term, with debates between the Delta commissioner and providences, local governments and the public to make concrete plans for dikes along the rivers and about other sub-programs. The idea behind the Second Delta Program is well-founded but the program demands a lot of money. Consequently a Delta Fund has been created because it is obvious that the country will spend more in the future to increase protection against water and to strengthen dikes and other river-based infrastructure. To get the Delta fund, all projects must meet the conditions set for MIRT (rules and frameworks). The idea is moving closer towards a kind of adaptive management — an iterative feedback and learning-based strategy to cope with uncertainty in decision-making. It seeks to maximize flexibility, keeping options open and avoiding a 'lock in'. In the Second Delta Program, the authorities have made very large plans, simulating how things will be in the future and monitoring the changes to see how things will develop and in the meantime anticipating changes and creating smaller projects which will be useful in the future. It is a kind of project approach basically looking the problems and developing strategies ahead from top-down level. Although finding solutions that combine the ideas of bottom-up stakeholders with the top-down approach is considered to be the right procedure.

5. EFFORTS AIMED AT IMPROVING THE DUTCH PROJECT GOVERNANCE SYSTEM

The project governance system in the Netherlands is under continuous scrutiny and has been developed over time. In this section, we discuss the most recent efforts of the Dutch government that are made to improve the project governance system of the country. These include the TCI and the Elverding committees' proposals and the Faster and Better program. The TCI and Elverding committees' proposals are concepts, but the Faster and Better program is a program that is developed based on these concepts by the ministry of I& N, and it is under implementation.

5.1 The TCI proposal

TCI was assigned by the Dutch Parliament in 2004 and conducted an investigation on the decision-making and implementation control of two major infrastructure projects (Betuweroute— a 160 km long double track freight railway line between the port of Rotterdam and the German border at Zevenaar-Emmerich, and HSL-Zuid— a two-track high-speed railway line, 85 km of which is newly built and 40 km is upgraded existing track, which connects Amsterdam to the Belgian border incorporating a shuttle connection between the Hague, Breda, Brussels and Paris). The immediate reason for this investigation was the high cost overrun of the projects. However, the committee was also able to identify major problems associated with the approaches and decision-making procedures of these mega projects.

Poor predictions of actual values and viability of projects at the front-end; misinformation or using inaccurate information as decision bases; a tendency to jump to premature conclusions without solid problem analysis; lack of clear go/no-go decision points; lack of alternative analysis; and marginalizing the role of Parliament are identified by TCI as problems for the development of public investment projects in the Netherlands (Priemus, 2007). Then, based on the investigation results, TCI proposed a new project assessment and decision-making framework. The proposed stage gate approval process has four decision stages. As shown in Figure 1, the process starts with a decision on the legitimacy of the project initiative, D1, looking at the relevance of the project.

If the project is accepted as relevant at decision gate 1, then the authorities will issue a GO decision and the prioritization of the proposal will follow. Projects are prioritized in the prioritization phase, which must be conducted by the Government (the Cabinet and Lower House), and the decision should be made based on the results of problem analysis and predefined prioritization criteria. The project prioritization phase ends by making an admission decision, D2. At this decision gate, the project with the highest net value is admitted to the elaboration phase for further investigation. The elaboration phase extends from the admission decision to the implementation decision. In this phase, the project fund is searched and secured, spatial and environmental assimilation measures are identified, alternatives are generated and compared, and public support is collected. The elaboration phase is used as a joint open learning process between relevant stakeholders in which alternatives are not all rejected; the Cabinet and Lower House are not under any commitment during the elaboration phase (Priemus, 2007). If the project is not supported by the bottom-up actors, if there are no funds, if the costs rise beyond acceptable bounds, or if a project has huge uncertainties, the project could be rejected. However, if the net benefit of the best alternative is positive, if an alternative gets sufficient public support, and if both the budgetary and spatial requirements are met, the Parliament will decide to implement the project, D3. The implementation decision represents the commitment of authorities at the end of the elaboration phase. Finally, if the project is completed according to the requirements, then the final decision to operate will be made, D4.

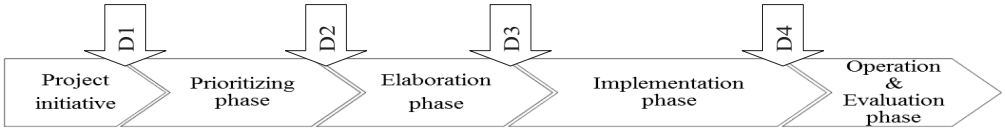

Figure 1: Consideration of large potential projects according to the TCI proposal

TCI's proposal was accepted in principle by the main actors of the process, particularly by the Parliament. However, it was not implemented. But during this investigation, the author was able to see that, most of the recommendations of the TCI have been included within the rule and framework of MIRT.

5.2 The Elverding Committee Proposal

The Elverding committee was assigned in 2008 by the Dutch Cabinet to propose a solution that helps to speed up the process for infrastructure projects realization time. The committee presented a proposal that helps to improve the project preparation and decision-making procedures. The committee also presented the causes of the delay of project realization time in the different phases of a project development process (explorative, project study, construction and management). In this article, we will only discuss the factors specified in the front-end phase (the exploration phase) of the projects.

As shown in Figure 2, most of the problems raised by the Elverding committee have similarities with the problems described by TCI, though they have differences too. Lack of solid problem analysis, a shortage of explicit go/no-go decision points, a low degree of public participation, various alternatives but an unclear decision-making process, and a lack of political commitment were identified as problems by the Elverding committee (Arts, 2010). Based on these shortfalls, the Elverding committee recommended a more balanced approach in terms of attention for, and effort put into, the different planning phases (Arts, 2010). According to the Elverding committee proposal, more attention and effort should be given towards the front-end (explorative phase) of a project planning and decision-making process. To support its argument, the committee prepared and presented the present and desired situations of the different stages of the project development process. Figure 2 shows the present and the desired situations in the front-end (explorative) phase.

For the successful development of infrastructure projects, the Elverding committee has demanded a more robust, clear and broad foundation at the front-end phase. These demands include a broad participation of stakeholders, broad scope of alternatives, clear financial scope, program budgeting and prioritization, robust political commitment, environmental research and a clear choice of alternatives. At this stage, the committee also recommends a strong linkage between the project concept and spatial potential/benefits. As Dais et al (2011) describes such link is important in order to achieve synergistic effects.

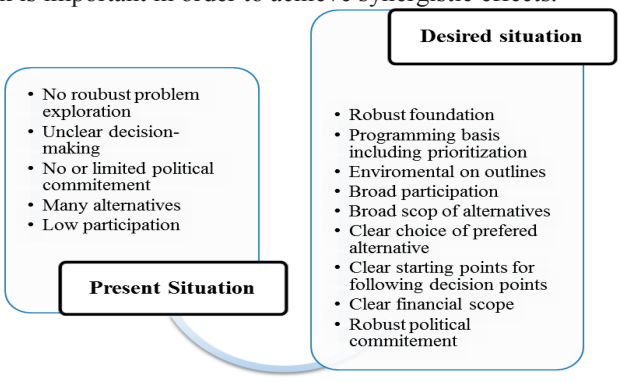

Figure 2: Present and desired situation according to the Elverding committee (Front-end phase)

The recommendations of committee Elverding were officially accepted by the Cabinet, and the Ministry of (I & M) has taken the recommendations seriously. To elaborate the recommendations of the committee and to make it practical, a new system is being developed at the Ministry of (I & M). In the new system there are: shifts towards a stage gate approval process, new processes towards the front-end, and there are requirements demanding the broad participation of the public, market parties and other stakeholders. These new guidelines, new regulations and laws, changes in organizations, extra steps in checking and balancing and rethinking the rules for funding are organized as a new program at the Ministry of Infrastructure and the Environment —the Faster and Better Program.

5.3 The Faster and Better Program

The recommendations of TCI and the committee Elverding are full of concepts and require basic changes in legislation, decision-making procedures and high degree of participation. As a result, the Ministry of (I & M) is developing a new system, which could be seen as a combination of the TCI and Elverding committee proposals. New ideas and innovations from these proposals, such as structural improvement of legislation, stage gate approval process, broad participation at the front-end phase, administrative procedures and others, are organized in the form of a program.

In this program, collaboration between stakeholders is set as a primary requirement to start a project development process. Discussions and negotiations will be held on the identified problems. If the availability of the problem is confirmed, then the idea for a project will be discussed between stakeholders. After the discussions and debates, there is an important decision point: Go or No-go. If the decision is 'Go', then the project front-end investigation will follow. The project front-end investigation is designed as an open, broad and participatory process with political influences, and focuses on 'will shaping' (Dais *et al*., 2011). In other words, the needs and usefulness of the project are determined by open participation of relevant stakeholders. At the explorative stage, discussions and negotiations between stakeholders, and the alignment of the project's objective with the policies and strategies of the Government are important decision criteria.

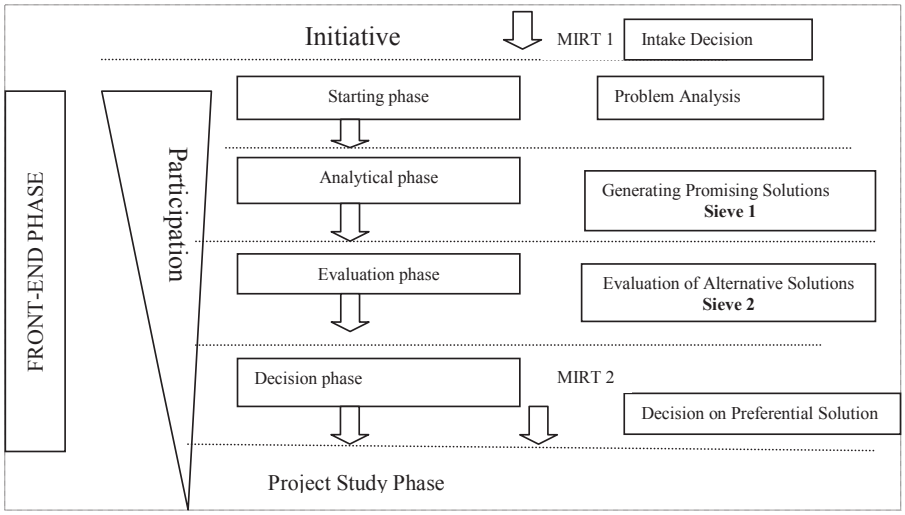

Figure 3: Project governance framework at the front-end according to the Faster and Better Program

As shown in Figure 3, an explorative study of a transport infrastructure project starts with an intake decision (MIRT 1). The intake decision is made based on the results of discussions and negotiations between national Government, regional authorities, provinces, and municipalities. After MIRT 1, problems are analyzed in detail, the relevance of the projects are checked, alternative solutions are evaluated and prioritized, then a decision will be made on the preferred alternative (MIRT 2). In the explorative phase, project proposals are evaluated and compared based on the results of cost-benefit analysis. To improve the decision basis and the quality of information used by the decision-makers, the ministry standardized the cost-benefit analysis. The ministry has also prepared a formal procedure guiding how this assessment should be done. The objectives of the new arrangement is clear: seeking to ensure the relevance of project proposals at the front-end through discussions and negotiations; evaluating project proposals through standardized ex ante evaluation criteria considering sustainability of the project's effects; prioritizing projects based on the national policies, strategies and public priorities; and making democratic decisions through the stage gate approval process.

6. DISCUSSION

Although growth management and planning have a long-standing tradition in the Netherlands, the Dutch project governance system has been criticized for different reasons and there have been several requests for reforms. There were also different initiatives to improve the project preparation and decision-making procedures. As the result of that, the Dutch project governance system is shifting more to towards co-operative planning involving relevant stakeholders from the early phase. By this approach, project concepts are initiated from the top based on the long-term national policies and strategies of the Dutch Government. Then, discussions and negotiations between project initiators and bottom-up thinkers are used as a learning process and as the source of evidence for choosing project concepts and for making decisions. This approach has been developed through time. In this article, three case studies are discussed to show the project approach in the Netherlands. The expansion of Schiphol and the new port of Rotterdam were initiated by the government and the port authorities, but the projects planning and decision making processes were disputed, and the projects were delayed due to strong resistance from bottom up activities. Finally, the projects were implemented but it was after long discussions and negotiations between stakeholders. On the other hand, the 2nd Delta program, which started after the implementation of the MIRT and Faster and Better programs, is being implemented based on the rules and frameworks of MIRT. In the 2nd Delta program, discussions and negotiations between the bottom up and top down thinkers are pulled towards the front end of the planning process, so projects in the 2nd Delta program are expected to be developed smoothly.

In this arrangement, there are ample legal means to involve stakeholders up front and account for their interest. There might be also occasions where policy-makers and planners have tried to cut corners (within the legal framework) but there are also instances where more attention was paid to stakeholders' interest than was required by law. However, the reform in the Dutch project development process has brought changes that would help to ensure the relevance of projects by involving stakeholders at the early stages of project preparation and decision-making.

'Faster and Better' and the MIRT rules and frameworks are new arrangements that are developed based on the recommendations of the TCI and Elverding committees, particularly based on the Elverding committee proposal. In these new arrangements, there are efforts to integrate different policies and strategies both horizontally and vertically; requirements and

procedures are set to involve the stakeholders upfront; and long term planning is encouraged. However, the quality of information to the decision makers is not controlled by third party. Often information quality is controlled within the ministry check and balance system. In Norway information quality is controlled by independent consultants and it makes the Norwegian system more reliable, because independent consults evaluate project initiatives based on independent evidence and they criticize project proposals through logical stand; and normally they are expected not to be enthusiastic.

According to the Faster and Better program, once the availability problems are checked and the relevant stakeholders reached on consensus on the development need, alternative solutions will be proposed, and then evaluated step by step using predefined evaluation criteria. Project evaluation criteria are predefined to facilitate the evaluation process. This standardization has helped to reduce the complexity of the evaluation process. For instance, in the ex-ante project evaluation process, each concrete project proposal needs to have a CBA and EIA, as per national and EU legislation. There is a scoring technique that determines whether the outcomes of CBA and EIA are positive enough to go ahead. In the case of large projects, both ex-ante evaluations should be discussed in Parliament, who will give the go-ahead to the Minister, or not.

Generally, the decision-making process for projects is reformed to a fairly democratic process. A stage gate approval process is established in the political arena, and checks and balances are set at the different stages of the framework to make sure that no rash decisions are taken. Decisions are made at the predefined decision gates. Every year, the Parliament has the possibility to scrutinize the development of projects. The Dutch media, the public reaction, and other stakeholders play a gatekeeper role in the process. Formally, a certain discipline is established in the Dutch project decision-making procedures although in reality, sometimes decisions are made quickly and certain steps are skipped.

7. CONCLUSION

Based on this study, it is possible to see that the project approach in the Netherlands is developed through time to a consensus-oriented well-established system with stakeholders' participation and consultation in the early phase —a top down initiative but a specific project approach is selected based on discussions and consensus with stakeholders, and it is a good lesson to deliver successful outcomes.

In the Dutch project governance system, a strategic project governance framework is placed in the political arena. A requirement is set to invest more efforts towards the front-end. Rules and procedures are defined for developing and delivering the right information to the decision makers. If the reform completes, project planners will deliver better information to the decision makers, and decision makers can get meaningful answers for their questions regarding projects and the probable future consequences; the availability of better information will help to get decisions right and ultimately to implement successful projects; the complexity of project preparation process and project failure will reduce significantly; and the chance of implementing irrelevant and unsustainable projects will reduce. The potential treat for the success of this reform could be the political culture of governance (Dais et al. 2011). That means if the political culture of politicians is not changed, it might be difficult to keep the effectiveness of the new arrangement and to select the right project concept.

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Paper VIII

THE NORWEGIAN PROJECT GOVERNANCE SYSTEM: WEAKNESSES AND IMPROVEMENTS

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Abstract. *Norway introduced a new project governance system in 2000. The system was introduced in response to the huge cost overrun of large public investment projects in the country. In 2005 the system was developed further to include a new quality assurance procedure with several goals: to ensure the selection of the right project concept, to consider the relevance of new project initiatives, and to consider the value of the money that will be invested on public projects. In this regard, there is evidence from different sources to indicate there have been improvements in project concept selection and decision-making procedures for public investment projects in Norway. Stage gate approval processes and procedures have been established in the political arena; checks and balances are fixed at the different stages of the project development process; and independent consultants are employed at two critical decision gates to ensure the quality of the decision basis. The Ministry of Finance is set as a quality gatekeeper in the processes of project concept selection and cost control. The role of the Government and Parliament is clearly indicated in the decision-making process. On the other hand, there are indications that might show the weaknesses of this project governance system. The system has not set requirements that demand participation of the public and other stakeholders in the early stages of problem identification; rather the demand for the participation of these parties comes late—in the project study phase. Discussions and negotiations between top-down project initiators (national government, provinces, and municipalities) and bottom-up thinkers (public, environmental groups, and others) about the problem and the impacts of the project initiative are not set as important decision criteria in the project concept selection process. Instead, results of the planning process and the national government interests are used as the criteria for decision-making on project initiatives.*

Key words: Effective project governance, participation, relevance, sustainability, stage gate approval process, Quality assurance system

1. INTRODUCTION

According to Peder Berg, Deputy Director General of the Ministry of Finance, 'Poor engineering and management, unrealistic budgets, scope changes at late stages, cost overruns and critical delays have been characteristic features of many big investment projects in a number of countries. Historically, there have been quite a few examples in Norway too', (DNV, 2007). Similarly, Professor Knut Samset, research director on the Concept research program, outlined some major public investment projects in Norway that are controversial and less successful. According to Samset, the Oslo Opera House is not a successful project

because it has no strategic perspective; the regional aviation control center is a redundant project, and the Northern onshore torpedo battery project is useless (Samset, 2006). These projects have been implemented, but according to Samset they are not relevant and have no sustainable positive effects, and they should have never been implemented.

In order to avoid similar problems happening in future and to improve the success of public investment projects in Norway, the Norwegian front-end project governance system was established. Initially, the main objective of the quality assurance was cost control, but in 2005 the scope of the system expanded to include the early-stage project concept selection process. Since then the governance of major public investment projects in Norway has developed to a stage gate quality approval process which specifies key decision points and decision-makers along the project development process, and the criteria to be met in order to proceed from one step to the other. This stage gate approval process extends from the choice of project concept to the final decision to finance the project. The Cabinet and the Parliament controls the decision-making process.

Klakegg (2009) presents the Norwegian project governance system as a control system. It is organized with rules, structure, and processes in which information about the project is developed, the quality of information is evaluated, and then decisions are made considering the information from the evaluation. The system has been active since that time and all major public investment projects that demand funding from the Ministry of Finance are developed according to those rules and procedures. The problem considered in this paper is: What kind of effects does this project governance system bring in the public investment projects development process of Norway? The paper reviews different findings of the researchers on the Norwegian project system and discusses: Does the quality assurance (QA) system help to improve the project concept selection process? Do decision-makers, at the higher level, receive relevant and reliable information about the problems and alternative solutions? Does the arrangement of the QA system address the issues of relevance and sustainability of projects?

2. METHODOLOGY

This paper is prepared based on a qualitative conceptual review and one-on-one interviews with key researchers of the Norwegian quality assurance system (QA). The interviewees are few but they were informative. I believe that I have got enough information regarding the questions which I need to address in this paper. Various publications relating to the Norwegian quality assurance system and the author's similar research in the Netherlands and Ethiopia are used as an input for the research. Different publications of the Concept research program and several works of different authors on the theme are reviewed and used to answer the research questions when it is appropriate. In addition, several conceptual literatures on the governance requirements for relevance and sustainability of projects are reviewed and used as a background to discuss the Norwegian quality assurance system.

3. EFFECTIVE PROJECT GOVERNANCE

In recent years, effective project governance—setting the right objectives, asking the right questions, choosing the right project concept, and making the right decisions—has been described as the most important requirement for developing successful public investment projects (Mosaic undated, O'Leary, 2012). In this regard, considerable research have been made in different countries and various problems that are related to project preparation and decision-making processes are identified as causes for low success rate of projects. For instance, in UK, NAO and OGC have conducted research and listed eight common causes of

projects running into difficulties. Absence of a clear link between the project and key strategies/policies, lack of political commitment and ownership from senior management, lack of participation of stakeholders, and inadequate resources and skills are at the top of the list (UK treasury, 2007). One way or the other these factors are facets of project governance (Garland, 2009). According to Garland, even though it is difficult to know the exact extent to which ineffective project governance can be said to be the cause for a project failure, but it is possible to understand that project governance might be a significant contributing factor.

There are also other problems that result in failure of projects where project governance might be the underlying cause. Some of the problems could be managed by implementing a project governance framework that addresses those problems. The extent to which the project governance framework could solve those problems is one of the measures of its effectiveness (Garland, 2009). According to Mosaic (undated), Klakegg (2010) and Garland (2009), to be effective, a project governance framework must be clear in its objective; it must facilitate the process of decision-making; there must be accountability and clarity of accountability; there must be a clear difference between the governance structure and the organization structure; it must ensure that the relevant stakeholders are part of the process; and it must support efficient and effective project initiation.

According to Garland (2009), with an effective project governance system, a project initiative could be implemented successfully, and ineffective project governance could predispose a project to failure. Therefore, it is important to know the key elements of effective project governance. The key elements of effective project governance that are required to select and implement the right projects include: stage gate approval process, collective decision-making, quality assurance system, stakeholders' representation, formal roles and responsibilities among different stakeholders, and contracts and sign-offs (O'Leary, 2012, Narayanan and Robert, 2012). Mosaic (undated) adds the rules and procedures for making decisions, strategic framework needed to select the 'right' projects, and building the right set of skills as key elements for an effective governance system. Today, several governments are reforming their project governance systems to encompass regular reviews of major public investment projects. However, achieving effective project governance and control remains difficult (Weaver, 2005). Therefore, increasing understanding of the different project governance systems could be helpful for all stakeholders in the process of project development and to learn from best practice (Samset, 2008).

4. GOVERNANCE REQUIREMENTS FOR THE RELEVANCE OF PROJECTS

4.1 Problem identification

A clearly specified list of problems is the most suitable basis for identifying potential solutions, and a valid problem analysis is essential in order to determine whether the proposed alternative is legitimate. Priemus (2007) underlines the general need for problem analysis at the outset of a solution development process. According to Priemus, the first question that should be asked at the start of the process is: What is/are the problem/s? And then what is the problem now and in the short term and in the long run? Who is affected by the problem? This should be done by broad participation of stakeholders and take account of their interests. A generally shared problem analysis enhances the possibility that the selected alternative will still be endorsed by everyone at a later stage.

4.2 Participation

The active involvement of stakeholders (national government, regional authorities,

municipalities, lobby groups, statutory bodies, and the public) could be either information provision, consultation, deciding together, or acting together. Participation of relevant stakeholders is important to identify the problem, improve the relevance of the plan, develop a common understanding, raise awareness, and overcome future conflicts (Innes and Booher, 2004). It is also important in determining the objectives of the project, searching and evaluating alternatives, choosing the preferred alternative, and implementation.

4.3 Aligning needs and priorities of the public with project objectives

The alignment of the project purpose/objective with the needs and priorities of the public is an important governance requirement to ensure the relevance of the project. 'Relevance of the project' refers to the objectives of the project, and concerns the extent to which objectives are aligned with the needs and priorities of the users (Samset and Volden 2012, Klakegg, 2010). In the case of public investment projects, to ensure the relevance of the project initiative, objectives of projects should be consistent with the needs and priorities of the society (Samset, 2003), and it should be consistent, realistic and verifiable based on the needs of the society (Christensen, 2011). Through participation, the needs and priorities of the society can be identified and the objectives of the proposal agreed.

4.4 Aligning project objective with strategy

It is important that the project purpose is aligned with the organizational strategy (O'Leary, 2012). Projects are policy implementation tools, and one means by which policies are put into practice. Therefore, objectives of public projects should be aligned with policies. To ensure the relevance of the project, public investment project initiatives should be subjected to questioning along this line and decision makers should examine the relationship between projects, public needs and policies before making decisions (Shiferaw and Klakegg, 2012).

4.5 Alternative analysis

Identifying, designing and screening options are crucial steps in the project development process. However, it has been indicated that alternatives are seldom generated and worked out at the early phase of the project development process (Priemus, 2007). According to Priemus, often the solution or final project precedes the problem analysis and this was the source of project failure. In order to keep the relevance of the project and succeed in the future, various alternatives must be prepared in the early phase to create plenty of scope based on the formulated problem, and according to the objectives, values, criteria, boundaries, and constraints set by relevant stakeholder.

5. GOVERNANCE REQUIREMENTS FOR SUSTAINABILITY

Kemp et al. (2005) discuss governance requirements for sustainability based on the following four key features.

5.1 Policy integration

The integration of policies at the national or regional level might work by bringing sectoral policy fields into some sort of coherence. Integration of the policies of stakeholders at different levels is important for sustainability, because sustainability requires policy integration, good communication and consensus between stakeholders (OECD, 2002). Individual policy responses for the challenges of sustainability at different levels are not

effective; rather it is useful to have more vertical integration of policies at the national and sub-national levels of government, and horizontally between different sectors.

5.2 Common objectives, criteria, trade-off rules, and indicators

Structural changes that accommodate mandatory requirements to impose a sustainability-oriented framework are important. These include revising the arrangement of different sectoral offices that have common objectives, revising the planning and decision-making processes; engaging multiple governance institutions and local communities to meet the needs of the present and future society; implementing process-oriented tools such as long-term shared sustainability objectives; developing common criteria for planning and decision-making. Specifying rules for making trade-offs and compromises, and developing widely accepted indicators of needs for action and progress towards sustainability, are beneficial in the long run.

5.3 Information

There are several policy instruments such as regulations, rules, laws and processes that address the issues of sustainability. There are also different assessment tools and processes to evaluate the project initiatives based on these policy instruments. The aim of the evaluation process should be to deliver the right information to the decision-makers regarding the social, ecological and economic values of projects and their associated impacts. Often, in the initial phase of project development process, uncertainty is high and the amount of reliable information is small (Samset and Volden, 2012). To ensure the reliability and quality of the information on which the decision will be based at the front end, carefully integrated, monitored and adjusted applications of multiple tools are necessary. Further, there should be a system to determine whether the information is meaningful to the decision-makers. However, as Deelstra et al. (2003) elaborate, there is a weak link between the available information and decision-making. To overcome this problem, a governance framework should be developed with a system to link the right information to the decision-makers, and the decision makers should look at the information before making their decisions.

5.4 Programs for system innovation

Governance for sustainability has to be more proactive, future-oriented towards the long term using visions of sustainability, and be concerned with learning, innovation and adaptation (Kemp et al., 2005). In this regard, project governance for sustainability should evolve new linkages, new knowledge, new rules and procedures, and new organizations to identify, nature, and coordinate actions for more sustainable solutions.

6. REVIEW OF THE NORWEGIAN PROJECT GOVERNANCE SYSTEM

In Norway, most often major public investment projects are initiated by different sectors of the national government or provinces, and they are implemented if the Parliament approves the proposals. However, as explained in the introduction, in some cases there were problems in addressing the key needs and priorities of the public and in selecting projects that have sustainable effects. As the solution to the identified problems, and to attain a structured and effective front-end project governance system, the Norwegian project governance system was established at the higher political level. Figure 1 indicates the summary of problems in hand and the expected desired situation when the project governance system was established in Norway.

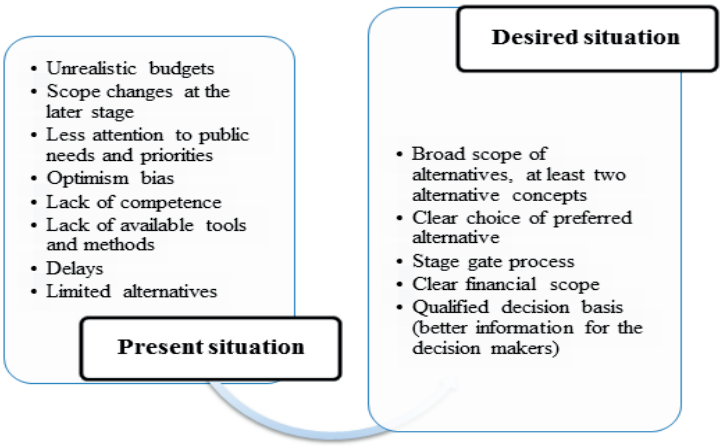

Figure 1: Present situation and desired situation

To achieve the desired situation shown in Figure 1, a new front-end project governance framework was established. The framework contains elements of a stage gate approval process, a quality assurance system, and details of duties and responsibilities of important parties (project initiators, independent consultants, Ministry of Finance, the Cabinet and Parliament). The framework is structured with two decision gates where documents from the project initiators are checked and decisions could be made regarding the project concept and the project study documents. According to this project governance system, responsible ministries are expected to provide a particular emphasis towards the front end of the project development process, particularly on project concept development, identifying and testing alternatives, and preparing project cost estimates, and evaluating uncertainties that are related to the identified project concept alternatives. In the process, documentation from the project initiators will be scrutinized by independent consultants that are employed by the Ministry of Finance (Concept, undated). These consultants are crucial elements of the quality assurance system (Christensen, 2011); but decisions on the preferred project concept and on the project budget are political priorities for the Cabinet and Parliament respectively.

Klakegg (2010) describes the Norwegian project governance system as a top-down initiative that aims to reform the government's projects preparation processes. The objective is to improve the quality of information of the project documents and to keep the consistency between the information and decisions (Samset et al., 2006, Christensen, 2011). It also aims to improve the classic unrealistic technocratic model and complex processes (Samset, 2008, Klakegg, 2009). This new project governance system does not interfere with the existing project preparation procedures and process of the project initiators (Ministry offices); rather it is a new initiative that focuses on refining the quality of the information for the choice project concept and project study documents. The most important rationale of the initiative is increasing political control on key decision points, developing a better basis for decisions, focusing on relevant issues not on details, and anchoring the stage gate approval process (Samset et al., 2006).

7. QUALITY ASSURANCE SYSTEM (QA) AS A GOVERNANCE SYSTEM

This section presents the Norwegian QA system as a project governance system. How the QA system works as a decision-making system; and it presents the processes and procedures that are developed to enable that.

Klakegg (2009) describes the Norwegian QA system as a control measure, because it is established to avoid wrong projects—projects that are not relevant, do not have sustainable effects, and have high cost overrun. To accomplish these tasks, as shown in Figure 2, the Norwegian quality assurance system is organized with two quality decision gates (QA1 and QA2), and two front-end phases (pre-study and pre-project study phases).

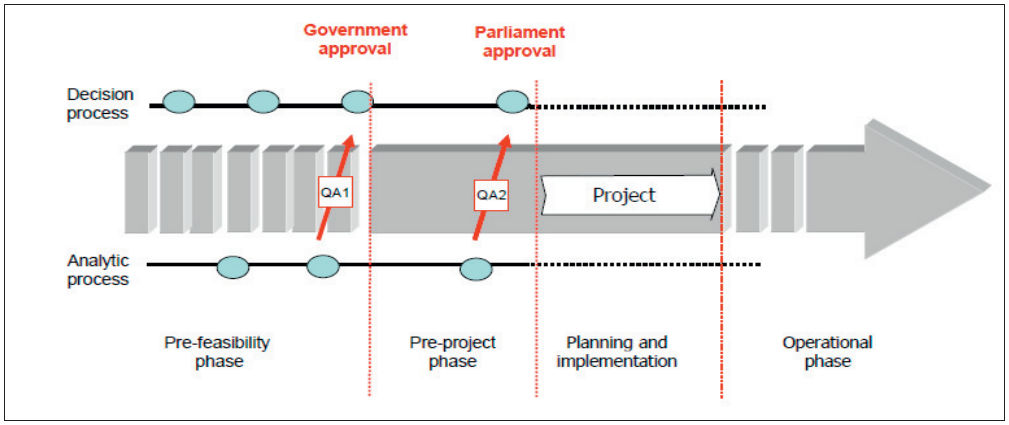

Figure 2: The Norwegian QA system (Concept undated, Samset et.al 2006, Christensen, 2011)

The QA system has also mandatory requirements that all ministry offices have to fulfill when they submit project proposals and project documents to one of the independent consultants under the supervision of Ministry of Finance. It is also important to note that the consultants' role is limited in this process. Consultants are required to review only the quality of the project documents based on the pre-defined requirements (Samset et al., 2006).

7.1 Quality assurance gate 1 (QA1)

QA1 focuses on the choice of project concept. QA1 is performed before the Cabinet makes a decision on the preferred project concept, i.e. before the start of a pre-project or the feasibility phase (Christensen, 2011). According to Concept (undated), the purpose of QA1 is to ensure that the chosen project concept alternative is the one with the highest economic return. After the assessment, a decision will be made on the preferred project concept. According to Samset (2008), the choice of the project concept is the most important decision in the project life cycle and it should be made with due diligence, because this decision will determine viability and utility of a project, and the extent to which the public funds are being used effectively.

The QA1 assessment includes the project's relevance in relation to needs and priorities of the public and the affected stakeholders; checking that the project's objective is well defined; checking whether the requirements are aligned with the project's goal/purpose; and the availability of at least two alternative concepts (Concept, undated).

7.2 Quality assurance gate 2 (QA2)

QA2 is performed at the end of the pre-project phase. The main objective of the assessment is improving the quality of the decision bases, most importantly cost estimates and uncertainties before the parliamentary decision to finance the preferred alternative (Concept, undated). Samset et al. (2006) describes QA2 as a final checking point to test the appropriateness of the project budget, and partly a skimming system to predict the future managerial uncertainties. It is also used as a control during the project implementation phase.

According to Samset (2008), the bases for QA2 decisions include the documents of QA1, the overall project management document, a complete base estimate for costs, and an assessment of at least two alternative contract strategies. After the assessment of QA2, the independent consultants of QA2 are expected to come up with recommendations on the cost frame including necessary contingency reserves, and the direction on how the project should be managed and organized to ensure the successful implementation (Concept, undated).

8. DISCUSSION

Does the QA system help to improve the project concept selection process?

The Norwegian project governance system is not started specifically to improve the project concept selection process of sectors, and there is no intention of interfering with the existing project preparation processes of the ministry offices. Rather, the system is developed as a mandatory controlling framework and anchored at the higher political level. After the implementation of the system, it is believed that expectations are developed among the stakeholders and that could improve the performance. For instance, stakeholders' expectations rise from the fact that the project is analyzed and decision to plan is made, and actors expect to be scrutinized and they improve their performance.

The process of a new public investment project development starts from the ministry offices or provinces. In most cases, the triggering conditions to start a new project are problems and the need for solutions. However, as it was before the QA system, after the implementation of QA system the ministry offices and provinces are in full control of the project starting phase, particularly the problem definition and the assessment of the triggering conditions. The only other party that might be involved at this stage is the project promoters. Then, based on the problem analysis of the ministry offices, the need for a new project will be developed to project concept by agencies—government organizations for developing and implementing projects. The agencies develop the project concept with possible alternatives, and the suggestions of regulators (local and central) are expected to be taken into account.

The developed project concept alternatives are then sent to the third party, independent consultants (QA1 consultants), for quality review. The QA1 consultants review the concept alternatives based on predefined quality assessment requirements. Essentially the consultants review the relevance of the project initiative based on the needs of society, and review the purpose and goal of the initiative. The uncertainties and the cost–benefit analyses of alternatives are also part of the evaluation. Finally, the consultants give their recommendation and the Cabinet makes a decision on the preferred project concept.

If a project concept does not satisfy the requirements, however, the documents will be returned to the project initiator for further review. If the Cabinet decides to proceed, the project detail study will be done by the agencies under the supervision of the project initiators. This implies that the mandatory requirements and expectations of the QA system place project initiators under an obligation to take into consideration the requirements of the QA system when preparing projects.

There are still few points that might prove to be the weakness of the system. For instance, in the starting of the process, when the problems are discussed or when the triggering

conditions are assessed, the requirements are not clear. At the start phase (when the problems and the triggering conditions discussed), participation of stakeholders (discussion, negotiations and consensus) is very important to keep the relevance and sustainability of the project, but it is not set as a requirement in the QA system. Of course, the Norwegian planning legislation does require participation but it is practiced late in project study phase. Each ministry identifies the problems (the triggering conditions). In this scenario, there is a probability that ministry offices may try to have their projects placed on the government's agenda while looking at the problems (triggering conditions) only from their own perspective. As problems are often perceived differently by different parties, the solution should not be a one way communication, from government to citizens. As Innes and Booher (2004) describes it should be a multi-dimensional model where dialog, learning and action are joined together and where the polity, interests and citizenry co-evolve. When relevant parties are invited for discussion and when they are involved in the problem definition phase, the process for project development begins from a common basis. However, this shared definition of the problems is lacking in the Norwegian QA system.

A generally participatory problem analysis enhances the possibility that the selected alternative will still be endorsed by everyone at a later stage. Therefore, an additional gate at the front, maybe gate QA0, and some regulatory requirements are essential to ensure the legitimacy of the triggering conditions. That will refine more the project concept selection process, and ultimately the success of projects in Norway.

Do decision-makers at the higher level receive relevant information about the problems and alternative solutions?

In the qualifying process of project concept documents, the four most important parties involved in the process (as shown in Figure 3) are: ministry offices, independent consultants, Ministry of Finance and the Cabinet. Often ministry offices are interested in implementing projects, and they keep pushing to get a 'Go' decision for their project proposals. On the other hand, the Ministry of Finance is responsible for financial issues and is concerned about the value of the money they are investing, and they will agree on project initiatives only if these are valuable in relation to the predefined requirements. The consultants are independent institutions and they recommend a project proposal after assessing whether it is well-thought-out in terms of the evaluation requirements. Consulting offices evaluate project initiatives based on independent evidence and they criticize project proposals through logical stand; and normally they are expected not to be enthusiastic. These are important suggestions in the project development process.

Finally the Cabinet will decide 'Go' or 'No go' to the project study phase. The Cabinet is expected to make decisions after considering the information from independent consultants (looking at the relevance of the project, the cost–benefit analysis and legitimacy, and the alignment of project purpose with strategy). Of course it is good to note here that the decision on project concept may be influenced by the political priorities, because in the development of public investment projects the government strategies and policies play a major role.

As shown in Figure 3, after the Cabinet makes a decision on the preferred project concept alternative, the project study will start. At the project study phase, the responsible ministry and the agency will prepare the project documents. Costs, benefits, and contract strategies and other requirements will be fulfilled and the project document will be sent to the independent consultants. The independent consultants will review the project documents on the basis of predefined requirements. They review project costs and recommend a cost framework, provisions for uncertainties, project organization and management, contract

strategy, and proposals regarding simplifications and reductions to the Parliament. Finally, the Parliament will make a Go/No go decision—an implementation decision.

Therefore, after the establishment of the QA system, decision makers are getting relatively relevant processed information on board about the problems and the proposed solutions; there is also expectation for processed information from the decision makers; and there is a high probability that the information can be used as an input in the decision-making process.

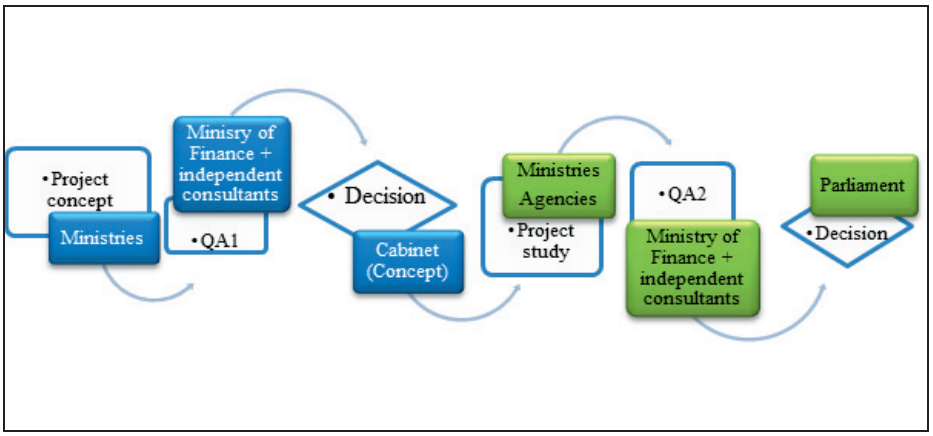

Figure 3: Project development process according to the Norwegian QA system

Does the arrangement of the QA system address the issues of relevance and sustainability of projects?

Within the Norwegian QA system, there are checks and balances between the ministry offices and the consultants and the decision-makers. Important requirements that are used to select a new project concept are predefined, and it has been decided that every ministry should prepare project concept alternatives taking into consideration the predefined requirements. When a new project is initiated, it has become mandatory to check whether the project is needed by the stakeholders and the affected parties, the project goal and purpose are clearly specified, the reliability of the project is checked, and the costs and benefits of alternatives are prepared (Concept, undated). These are known requirements of governance that are used to ensure the relevance of a project.

To ensure the relevance of projects, the involvement of relevant stakeholders in the early phase is important but as we discussed in the first question, the need for the active participation of stakeholders at the outset is not set as a requirement in the QA system. How could the general public and the affected parties have a say in the early phase of problem identification and solution development processes? This is a question that needs more requirements in the QA system. Of course, the public and other affected parties are to be invited for comment during the project study phase, and there are involvements between QA1 and QA2, but I believe that is too late because they are invited to participate in an already defined project.

Traditionally it is common that stakeholders such as public institutions, the public, regulators, and other parties depending on the project type are involved in the project study phase, in which the national government already has a certain preferred alternative. However,

because of problems that are associated with the relevance of projects, a more contemporary view is that stakeholders should be actively consulted at an earlier stage.

This implies that effective participation of the public, and other stakeholders, and the administration in the early stage of problem definition will have a positive effect in ensuring the relevance of the project. In addition, it helps to reduce the occurrence of the possible potential conflicts at the later stage. Amado et al. (2010) recommends the participation of relevant stakeholders at the outset, because participation is a major factor in the efficiency of the planning process and ultimately for the sustainability of the project positive effects.

In particular, open public involvement in the early phase leads to a better basis for decisions, as it will allow for local knowledge to be used in the preparation of plans, projects, and decisions. This kind of knowledge and additional information provides a broader opportunity to discover and consider alternative solutions. Lack of participation requirements in the early phase of the QA system, might reduce the relevance of the project, and there will be information that would not be considered in decision-making. The proposal here is that participation of important stakeholders should be called in the early phase, and the problem definition and the project concept selection process should be inclusive.

On the other hand, in the QA system, the front-end cost–benefit analysis is made to focus on economic issues. Concept Research program (undated) describes the purpose of QA1 only in relation to economic issues—ensuring the higher economic return. However, the early phase assessments of social and environmental issues are not presented equivalently as requirement. Unless all three dimensions of sustainability are treated from the beginning, the sustainability of the positive effects of the solution could be affected. The social and environmental values of a project, and its cost and impact, should be addressed qualitatively and/or quantitatively from the early phase. Therefore, for better assessment of project initiatives, the QA system needs more requirements on social and environmental issues as well as on the economic return.

As discussed above, public discourse and other stakeholder discussions are also important requirements at the very outset, to get the commitment of stakeholders. The more the participation, the more use of knowledge and information from a wide variety of sources and experiences, the more likely it is that innovative ideas from the participants will be mobilized (Woltjer, 2009). In this regard, the Norwegian quality assurance system needs more attention directed towards the social and environmental dimensions of sustainability. Involving the public and other stakeholders from problem identification to the solution development, and then in the decision-making and implementation processes, could help to improve the sustainability of a project's positive effects. The environmental and social costs and benefits that are related to the project in question need to be included either qualitatively or quantitatively in the cost–benefit analysis.

Integration of policies and strategies between different ministries and the cooperation between different governance levels (central government, provinces and municipalities) are also important requirements for sustainability. Similarly important is the cooperation of other stakeholders who are concerned about social and environmental issues in project preparation and decision-making between different sectors and between different levels of administration.

9. CONCLUSION

The new project governance system in Norway has brought changes in the preparation and decision-making process for the country's major public investment projects. In the new approach, more effort is put towards the front end of the project development process, and emphasis has been given to the development of better information for the decision makers. A

broad scope of alternatives, new processes and rules for project development, clear financial scope, better strategies for the implementation of the preferred alternative, and independent review of documents are important additions. Generally, some key elements of an effective project governance system have been adopted. However, requirements to involve stakeholders, particularly the public, regional and local authorities, and organized interests during the early stage of problem definition and decision-making are key elements that are omitted from the QA system. This might affect the effectiveness of the project governance system, and consequently the project concept selection process.

The effectiveness of a project governance system also depends on the relevance and sustainability of projects' positive effects. In this regard, the Norwegian project governance system has included certain up-front requirements that could help to ensure the relevance of projects. These include alternative analysis and efforts to align project objectives with strategies and then to public needs. In general, in the new system there are significant efforts to ensure the relevance of project initiatives, but the requirements for sustainability are not detailed enough. Of course, sustainability of project effects is a long-term phenomenon and it might be difficult to assess at the front end, but it is possible to implement useful governance requirements up front and that could help the sustainability of the projects' positive effects.

Overall the Norwegian project governance system has created a strategy to produce better project preparation and more informed political steering. However, the system lacks prior participation of important stakeholders; rather it focuses on consultation of these parties later in the project study phase.

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Paper IX

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LIKELY BUT UNINTENDED CONSEQUENCES OF BUDGET MARGINS ACCORDING TO THE QUALITY SCHEME FOR LARGE PUBLIC PROJECTS IN NORWAY

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Abstract. *Budget is an organizational plan stated in monetary terms to provide norms for cost control and measurement of cost performance. In projects budgets estimation, it is accustomed to add a certain percentage of the base estimate as contingency. The sum of base estimate and its contingency is considered as the cost frame of the project. On top of this the Norwegian quality at entry regime (a regime established in order to improve the success of public investment projects in Norway) introduced to the system the practice of using budget margins. According to QA system, the budget margin is created to offset the effects of unforeseen events that could make the initial budgets inaccurate and meaningless. This paper studies the likely but unintended consequences of budget margins based on the Norwegian quality at entry regime. The untended consequences are studied based on literature study. Opinions of different project management professionals from different publications and documents from the Concept research program are used as an input. The availability of budget margin may have the following unintended consequences: The risk of mismanagement of budget margins for scope changes; the conflicts between stakeholders for this high reserve money; the chance for unnecessary flexibility in the implementation process; and the project planning team members may not be active in search for cost efficient alternatives.*

1 INTRODUCTION

In many countries, including Norway, public investment projects often exceed their budget, or they do not meet the requirements of the client or the project objectives are not aligned with the needs and priorities of the public, and in some case there were benefit shortfalls. To assure that large public projects in Norway will fulfil the expected requirements, the Norwegian Ministry of Finance introduced a new controlling system. This has later developed to a quality at the entry regime (QA system).

The Norwegian quality at the entry regime was designed to improve the performance of major public projects in project concept selection, efficient use of resources and ultimately to achieve effectiveness and sustainability in government funded projects[1]. The system was started to control cost overruns in large public investment projects and to establish realistic budgets for large government projects[2]. Klakegg et al. view the whole frame work of quality at the entry regime as a control measure[3].

As shown in Figure 1, the Norwegian quality at the entry regime has two gateways [2,3]. QA2, which is the focus of this study, was introduced in 2000 and it aims to improve cost overrun and budget compliance of projects [2,3]. Later in 2005 the regime widened to include QA1. QA1 aims to generate information regarding: the needs and priorities of stakeholders, project strategy, alternative analysis and choice of the project concept[4].

QA2 analyses costs of project initiatives prepared by the project initiators (Ministry offices or agencies). Based on the analyses (QA2) the decision makers will make the final decision on the project budget. QA2 uses as a final checking point to make sure that the budget is designed according to the requirements that are established by the Ministry of Finance.

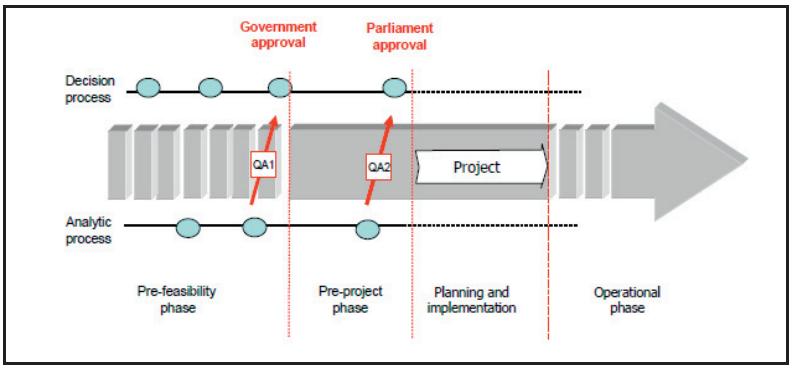

Figure 1: The Norwegian quality at the entry regime for major public investment projects [4,5,6,7]

2 COST OVERRUN AND PUBLIC PROJECTS

Cost performance and the management of cost overruns is an important topic in many countries and the construction field. However, there has been no convincing research particularly in understanding the root causes, and on tackling mechanisms[8]. Cost overrun is the amount by which actual costs exceed the baseline or approved costs. Some common sources for cost overruns include poor project management, design changes, unexpected ground conditions, inflation, shortages of materials, change in exchange rates, poor performance of contractors, funding problems and force majeure[9]. In addition to these, deliberate underestimating, inadequate information basis and methodology of estimation, changes caused by unforeseen circumstances and inadequate cost management are also identified as among the causes of cost overrun [10,11].

The control gate (QA2) of the Norwegian quality at the entry regime used to control cost overrun. It starts with verification of estimates of projects and analysis of the probable risks of the project. At this stage there are requirements that are used as a reference to evaluate a proposed cost. The evaluation is conducted by independent consulting companies and aimed to give an independent assessment of the project cost. The analysis of the independent

consultants will be source of evidence for the decision makers. The assigned consultants are responsible to verify the project cost estimates, and asses the uncertainty distribution of the project cost estimate. The result of this assessment is the base to calculate the budget reserve[10, 12, 13]. The consultants also give an advice on how the budget reserves should be managed.

The centralized project cost estimation quality check using some selected consulting companies could help to control wrong estimates, for instance deliberate under estimation or over estimation. In addition to this, the consultants prepare reduction lists. The reduction lists are lists of activities which are originally parts of the project but set to be reduced in case if the project cost is turned out[10]. The purpose of preparing the reduction lists is to control the cost of a project under the cost frame during project implementation phase.

However, a qualitative research conducted by Cui and Olsson indicated that most project managers vowed against the reduction lists[10]. This implies that it is likely that there may be differences among potential stakeholders of a project on how and which activities of the project will be reduced. Such dispute and inconsistency between potential stakeholders may have a consequence on the efforts to keep project cost under the cost frame.

3 PROJECT BUDJET AND BUDGET MARGIN

Projects require budget to provide basis for cost control and measurement of cost performance. Preparing a project is a challenge due to many risks associated with the project. Budget sets the standard against which the future expenditures will be monitored. The project budget according to the Norwegian QA system includes basic cost, contingency fund, and reserves[11].

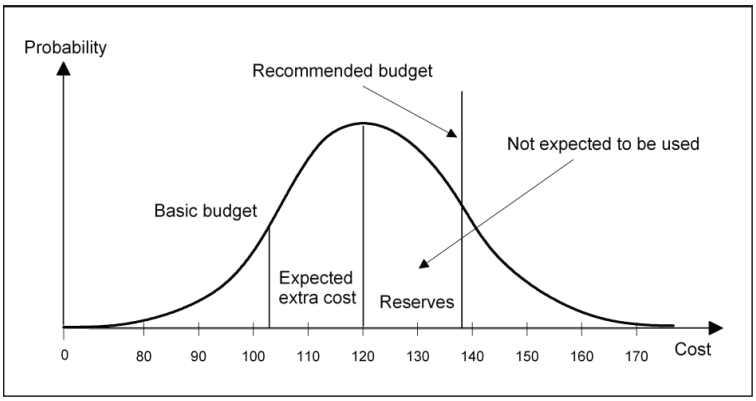

Figure 2: Project budget and reserves[11]

Often the project cost frame was the sum of basic budget and statistically expected extra cost as illustrated in Figure 2. On top of this the Norwegian QA system added some amount of money as project budget margin. The project budget margin is indicated as “reserves”, as illustrated in Figure 2. It was created to offset the effects of project uncertainties that could

make the initial budgets inaccurate and meaningless. Cost overrun is a critical problem in construction projects, and assigning contingency fund has been used as one way of dealing the problem and it has been also practised for years. Contingency fund has been used to cover up additional expenses that appear due to poor control and mismanagement of the original project budget. But contingency means different to different people. To fill this gap, the Association for the Advancement of Cost Engineering[8,9] defines contingency as "an amount added to an estimate to allow for items, conditions, or event for which the state, occurrence, or effect is uncertain and that experience shows will likely result, in aggregate, in additional costs".

What makes the Norwegian cost frame different from the other is that, budget reserves come in addition to the usual project cost contingency. The Norwegian quality regime introduced budget margin with the intention to avoid project cost overrun, considering the margin as a buffer for the project owner to gain project cost control. However, the idea of putting some money as margin is debatable and it could have unintended consequences.

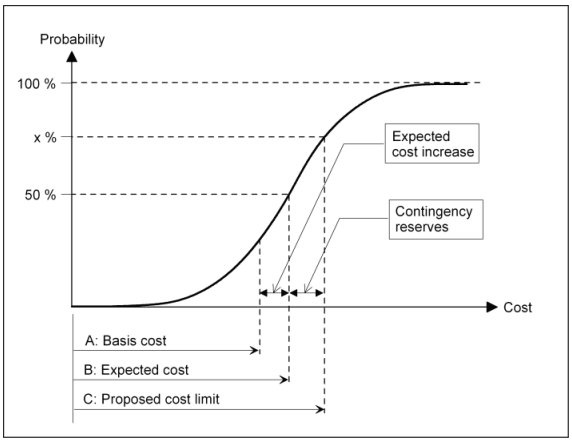

Figure 3: Budget terms and expected probability[1]

Figure 3 illustrates the Norwegian quality-at-entry regime budget terms and the expected probability. The quality scheme sets the proposed cost limit (x %) to lie between 75% and 85% of probability[11, 14]. Prior to the introduction of the Norwegian quality scheme, it was accustomed that the project budget was assigned based on 50% probability. The total cost of the project against this 50% probability is the sum of basic cost and contingency money.

However, the new approach to add a reserve on a project budget pushes the probability of finishing the project cost up to (75% - 85%). The main reason for the introduction of the project reserve fund is in order to avoid the repetitive requests for additional funding[11].

Of course the budget reserve has intended consequences, but this paper does not look into the intended consequences. The presence of budget reserves may allow project management team to relax more and this may have an effect on the effort to keep the project cost under the

cost frame. A project management team knowing that they have budget reserve may be less active in search of alternatives and cost efficient methodologies. That means the existence of reserve budget may reduce efforts of project management team to search for better solutions. The idea is that if the budget would have been made more tight than relaxed, the project management team would develop ways of monitoring to keep the budget under the cost frame.

4 CHANGES, FLEXIBILITY, UNCERTAINTIES AND BUDGET MARGIN

Most scholars of project management agree on the cost escalating effects of changes in projects, and some believe that changes are the main causes of project cost overrun[15,16,17]. Comprehensive front end preparation and better prediction of uncertainties supported by competent and qualified project organization and project manager are very important to limit the needs for changes. The users and other actors need changes, but it should be controlled by the project manager in order to avoid unforeseen cost escalation[18].

Repetitive scope deviation and changes of mind combined with force majeure have a portfolio type of effect and that could enlarge the project cost above the cost frame[19]. There are also scholars who support changes in projects[20, 21]. According to these scholars, changes are important to keep the relevance of projects through time. They argue that the intended outcomes of a project will not necessarily remained relevant through time, the conception of the needs, desires, and requirements that the project is meant to meet, may change in response to time.

Kreiner in his search of relevance of the project outcome underlines the necessity of changes[20]. Even though the early design and planning of the project were correct and the interests of the client have been fully encompassed, environmental drift can be a real challenge, because the picture of the environment which was in fact true at the design stage may not be true at the point of delivery or at any particular point between. On the other side Eikeland challenges Kreiner and discussed the basic challenge between balancing the needs for change and the need for cost control[18]. According to Eikeland, if changes are made in order to improve relevance of a project, and if it caused a major cost overrun, the intended profit can turn to loss for project owner, considering the cost consequences.

Olsson has discussed both scenarios and concluded that it is unrealistic to eliminate flexibility in projects. According to Olsson, changes are inevitable and can lead to cost overrun. However, he recommended to set limits for changes and flexibility[21,22]. That means, there should be sufficient room for manoeuvring but decisions and solutions should not violate the consequences of previous decisions, particularly the cost frame. This leads to conclusion flexibility and changes should be allowed only if the cost and time consequences can be met without exceeding the cost frame.

The Norwegian quality at entry regime predicts changes and flexibilities of projects and added reserves on project budgets, and budget reserves are designed to be used if the cost of the project is increased through time. This is the point where arguments against this budget reserve get a point. According to Eikeland, making available such budget reserves may reduce the efforts of the project management team to withstand changes and unnecessary flexibility.

Control is a key issue in the Norwegian quality at entry regime and the main intention is to reduce and control flexibility[23]. But the decision to add reserve money on top of the cost frame may not always have a positive effect as it is designed. The availability of the budget reserve may reduce the efficiency of the project management team to keep project cost under the original cost frame. The project stakeholders have different aspirations and needs. The availability of slack (budget margin) on top of cost frame will initiate stakeholders to twist the environment into their aspiration looking forward to use the available budget margin. Samset in his study of project uncertainty also confirmed that buffers of time and cost introduce flexibility[24]. This may have a consequence, and it could be cost overrun.

5 BUDGET MARGIN AND UNINTENDED CONSEQUENCES

In major public projects budget contingencies are frequently misused for purposes other than the mitigation of potential risk and it is a basis of criticism of many projects. The addition of budget reserves on top of the project cost frame by the Norwegian QA system of course has several intended consequences, but it also important to discuss the likely unintended consequences of this decision. Budget reserves could have different meaning depending on the perspective from which it is viewed. The various parties to a project contract do not necessarily have the same project goals, and therefore are apt to utilize the reserve in several different ways.

From the contractors' point of view, reserve budget is the amount which, when added to the estimate of the most likely cost, balances the seller's risk of overrunning costs against his probability of winning a contract.

Buyers regard budget reserves as money, they hope will not be expended, but instead returned as profit at the end of the project. The project owners needed that the project managers should never exceed their authorized budgets.

To the planning team of engineers and architects, budget reserve is a savings account which can be drawn upon to cover changes, the additional costs of underestimated or omitted project costs, additional costs caused by longer schedules, construction problems, lower productivity, and any overrun due to a lack of definition in the construction contract.

Stakeholders have their own interest from the project. They come to the contract terms with their own agenda to fulfil their own aspiration. When their performance falls below their aspiration, search will be stimulated. Budget reserves can be the target for such searches. The project planning team may want to add some new ideas; the project manager may want to use the reserve budget for scope changes, enhancements and other elements. Contractors who are "gamblers and claims artists" may predominate the situation creating different cases of unforeseeable cases. All these searches of stakeholders may target the available reserve budget or slack. Even though the reserve was originally created to offset the possible effects of uncertainties, but it may be possible to be misused by late aspiration of stakeholders.

Budget reserves could be the first project fire alarm. According to Eikeland, allowing budget reserves to be applied to a project cost is a preliminary step in gaining approval for budget increases. That means allowing budget reserves is recognizing that the future contains unknowns, and problems that arise are likely to have a direct effect on the project budget.

A budget reserve together with the reduction lists set by the selected consulting companies creates a buffer zone in the project cost. Such buffers are slack[25]. This slack has the effect of smoothing the performance of both the planning and project management team relative to their potential. For example, project planning team members may not be active in search of cost efficient alternatives. Cost efficient searches are active in the face of adversity. According to March, most often substantial improvements from individuals are obtained in the face of adversity[25].

Therefore, it is better to keep the project team with less percentage of probability to pass the cost frame. Keeping the project managers (project management team) under a tight frame helps them to introduce new systems to achieve the target and restricts them from repetitive changes. However, the availability of the reserve money may decrease the performance of the project management team to keep the cost under the cost frame, and may lower the endeavour to use unexploited strategies and methodologies.

Because of reserves, decision makers of the project may feel free to pursue idiosyncratic, local preferences. This may produce inefficiencies and unproductive searches for changes. Such type of searches produces more risky alternatives and could introduce bigger changes. These late changes can turn out to be both expensive and disruptive.

Different stakeholders of a project have different interests for project budget reserves. The demands of one party or individual are conflicting with the demands of another. Conflicts arise whenever interests collide. This inconsistency in aspiration of different parts and individuals in the project may create struggle, competing, trying to satisfy their individual preferences. This will have clear effect on the output of the project. The study conducted by Olsson has shown that the conflicting interests or values of parties have the capacity to reduce efficiency[26]. Therefore, to have unmarked money like 'reserves' on the project budget can make the decision making process of the project open for the effects of power and politics among the stakeholders.

6 CONCLUSION

The construction industry used to consider construction process as uncertain and made the normal costing practice to include an extra element to provide "insurance" against cost overruns. Often basic cost together with some contingency amount create expected cost frame or the project budget. As discussed in this paper, the QA system in Norway introduces additional money on top of this cost frame as budget margin (reserve). The main reason stated for this decision is to make sure that the government projects do not require additional funding. Of course this has an advantage for the government financing system and I believe that the decision has intended consequences; but it is also important to consider unintended consequences. This paper has discussed and identified some likely but unintended consequences of the introduction of budget reserve. I do not conclude that the addition of budget reserve as a serious problem. But I suggest that it is important to investigate and evaluate the intended and unintended consequences of this decision based on case studies.

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