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Addis Ababa University College of Business and Economics.

School of Commerce MA in Project Management.

Assessment of Factors Affecting effective implementation of public Projects: The Case of selected public projects financed by Dukem town administration.

A Project thesis submitted to graduate program of Addis Ababa University in partial fulfillment of the requirements for the degree of Masters in Project Management

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Addis Ababa, Ethiopia

Statement of Declaration.

I, Endale Regasa, declare that this thesis entitled: Assessment of Factors Affecting effective implementation of public Projects: The Case of selected public projects financed by Dukem town administration and submitted by me for the award of Degree of Master of Art in **Project Management from** Addis Ababa University is my original work and all sources of materials used for the study have been duly acknowledged. I have carried out this project work independently with the guidance and support of my advisors. This study has not been presented for the award of any other Degree, Diploma and other similar titles of any other university or any other institution.

By: Endale Regasa

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Date _____

This thesis has been submitted with my approval as a university advisor.

Advisor: Abdurezak M. (PhD)

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Addis Ababa University

College of Business and Economics.

School of Commerce MA Program.

Assessment of Factors Affecting effective implementation of public Projects: The
Case of selected public projects financed by Dukem town administration.

By: Endale Regasa.

Approved by Board of Examiners

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Abstract.

This study was about Assessing factors affecting effective implementation of projects in selected public projects of Dukem town administration. The objective was assessing the main factors that hinder the project implementation practice, assessing causes of project delay in public projects of the study area, and finally assessing the reality of project implementation practice in the study area.

Descriptive research design was used in this study. The study population considered as respondent for the study was all concerned parties that have direct involvement in implementation phase of projects in the study area. Primary data was collected using a questionnaire from 28 individuals which includes project directors, project coordinators, project officers, project team members, project overseer and economists that were directly involved in the project implementation of public projects in the study area. Responses were received from the entire sample population. The data was analyzed using SPSS version 20. The study revealed that The major factors identified that hinder effective implementation of public projects in the study area were the frequent changing requirements and specifications, Professional Management support problem in implementation phase of projects, Shortage of resources, unrealistic project time frame, Absence of competency of project team members, plan (scope) change by clients or client initiated variations, underestimation of cost and complexity of projects and lack of cooperation and insufficient communication among different project stake holder.

Though Project cost was managed according to the budget, Project quality was maintained based on the project quality management plan and there is Proper documentation after the accomplishments of each project phase was conducted there is a gap regarding Project Management at implementation stage in general and specially there is a gap regarding project schedule management according to project plan, Management of Changes during the implementation of the project According to project change management plan, management of Project risks based on the project risk management plan, resolving Conflicts and issues aroused during the implementation of the project Based on the plan and appropriateness of communication channels based on the project plan. Finally the researcher forwards appropriate recommendation with respect to identified gaps.

Key words: project implementation, implementation delay.

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Abbreviations.

CSFs: Critical success factors.

PM: Project Manager.

PMBOK: Project management body of knowledge.

PMI: Project management institute.

Chapter One

Introduction.

1.1. Background of the study.

The proper implementation of project is equally important to both societies and organizations and also indirectly to countries.

New and growing organizations are generally well rewarded by the marketing the form of higher stakeholder confidence and share prices when projects are delivered on budget and on schedule. Consequently, organizations place huge emphasis on getting it right the first time and at the publicly disclosed price for completion of projects. Failure to get it right the first time results in rework, cost increases, schedule changes, and severe penalties from shareholders and other stakeholders. For the large organization with deep pockets, much of the cost increase in the short term can be funded from its cash flows and is eventually passed on to the shareholders in the form of reduced earnings and smaller shareholder value. (Lutchman,2011).

Most often, the relative success or failure of any project is linked to/measured in terms of project deliverables in a contractual framework, which involves the cost, time and quality parameters (Atkinson 1999).

Project implementation is the Process whereby “project inputs are converted to project outputs”. May be looked at as putting in action the activities of the project, putting into practice what was proposed in the project document (i.e. transforming the project proposal into the actual project.) or Management of the project or executing the project intentions.

According to Jeffrey K. (1998), to successfully implement a project is usually difficult and complex. The project manager has to devote more time on human, financial and technical variables as key to the realization of project implementation. From available literatures it is apparent that the following determinants are capable of affecting project implementation in the states in review of not handled with care. This in-exhaustive list includes: escalation of project cost due to inflation, contractors performance below standard and expectation, change in the original design, poor planning or shoddy work by architects, specification of costly and imported materials, insufficient budget.

Obviously in the process of project management, the direct project objectives of time, cost, and performance (as generally agreed to by the client and the organization actually doing the project) have been accepted as the primary determinants of project success or failure. (Merd. and Mantel, 2009). Thus, ‘Project implementation and management focuses on three basic parameters: Quality, cost and time. A successfully managed project is one that is completed at the specified level of quality, on or before the deadline, and within the planned budget’

Project implementation delay is a major problem facing public projects financed by Dukem town administration. Hence, assessing the significant factors that hinder effective implementation of public projects financed by the Dukem town administration has paramount importance to tackle the challenges in their respective degree of severity.

The delay in implementation of projects financed by Dukem city administration is associated with various factors and has resulted in negative social and economic results. In view of this, this study seeks to assess the major Factors Affecting effective implementation of selected public Projects in Dukem town administration.

1.2. Statement of the Problem.

The implementation phase is where you and your project team actually do the project work to produce the deliverables. The implementation phase involves putting the project plan into action. It’s here that the project manager will coordinate and direct project resources to meet the objectives of the project plan.

According to David and Michael (2007), personal characteristics of the consultant and of the client (e.g. lack of skills), technical shortcomings (e.g. ineffective project management), and an unstable or bad consultant–client relationship (e.g. lack of communication), and/or sociopolitical aspects of the client organization (e.g. hidden agendas; uneasiness for/resistance to change) etc, hinders proper implementation of projects in general. According to PMI (2014), time and quality were mentioned as main challenges of proper management of projects.

From the very beginning the researcher undertakes personal observation and preliminary assessment regarding considerable delays in completion of different public projects in Dukem town administration and observed gaps related to appropriate implementation of different public projects.

Dukem town administration is one of the known towns in oromia regional state that undertakes many public projects in different time. Many reports of concerned government officials of the area show that there are generally gaps related to public project implementation practices in the area which demands scientific inquiry.

As evidences from annual reports of Dukem town administration in 2009 E.C. and many formal and informal information in the proposed study area indicates many public projects in Dukem town faces delay during implementation and results time and cost overrun which requires scientific study to solve the issue for the future.

The researcher conducted some sort of systematic review of literatures too see the existing studies found on public project implementation practices. Many researches were made on different areas of project management. But research related to project implementation **is still very limited which requires further analysis**. There were very few studies related to the issue in general and there was no such scientific research on the issue yet in the stated area which really made this study demanding. As preliminary review made on implementation phase of different public projects in the study area indicates many projects phase difficulty during implementation which was really needs scientific and systematic information through efficient analysis on the issue there by to make proper decision on the issue and develop policies and strategies to solve the issue in the study area.

1.3. Research Questions.

The study entitled Assessment of Factors Affecting effective implementation of public Projects: The Case of selected public projects financed by Dukem town administration with respect to the aforementioned problems was guided by the following major research questions:

- What are the main factors that hinder the project implementation practice in the study area?
- What are the causes of project delay in public projects of Dukem town administration?
- What is the reality of public project implementation practice in Dukem town administration?

1.4. Objectives of the study.

1.4.1. General Objective of the study.

The general objective of the study was Assessing Factors Affecting effective implementation of public Projects: The Case of selected public projects financed by Dukem town administration.

1.4.2 The Specific Objectives of the study.

In meeting the above general objective the study was focus on the following specific objectives:

- To identify the main factors that hinder the project implementation practice in the study area
- To assess causes of project delay in public projects of Dukem town administration.
- To assess the reality of project implementation practice in the study area.

1.5. Significance of the study.

The findings of this study is expected to have a significant contribution to all project stake holders in the study area in the future. It will provide information to project stake holders (Client, Contractor and Consultant) on the major factors affecting effective implementation of public projects in the study area. The concerned public sector will be benefited by taking appropriate action against factors affecting effective implementation of projects. This study will also help other potential researchers as a reference to make further research in the area.

1.6. Scope/Delimitation of the study.

This research was focused on Assessing Factors Affecting effective implementation of public Projects: The Case of selected public projects financed by Dukem town administration. There were Different public projects undertaken in Dukem town yet. Due to time and other resource limitation the focus of this study was mainly on road construction of Dukem town financed projects and Dukem commercial sector construction projects. Geographically, this study was limited to Public projects undertaken by Dukem town administration. The time scope of the study was only four months; i.e. from March 2019 to July 2019.

1.7. Limitations of the Study.

There was shortcomings in conducting this study. There was limitations of time required for conducting this study. Respondents were so reluctant in responding to the questionnaires thought they provide the necessary information for the thesis due to approach and discussions made by the researcher.

1.8. Organization of the Study

The report of this study was organized in to five chapters. The first chapter is the introduction part in which the background of the study, statement of the problem, objectives of the study, research questions, Significance of the study, Scope of the study and Limitations of the study were described.

In Chapter two review of related literature pertinent to the issue were extensively and briefly described. Chapter three presented description of the research methodology that were used in the study. Chapter four presents the results and discussions on the findings of the study. The last chapter, Chapter five presented the summary, conclusion and recommendation based on the findings of the study. References and appendices and other formal documents such as Acknowledgements, Abstract, Annexes, and any other necessary part that need to be included in thesis report were also included.

Chapter Two: Literature Review.

2.1. Introduction.

This chapter focuses on reviewing different literatures in the area of project implementation and mainly it focuses on factors Affecting effective implementation of Projects. It presents the related literatures on the study, which enable us to have a sort of clear understanding with respect to the research topic.

A project can be defined in a number of ways. Some commonly used definitions of a project is that a project is a temporary endeavor designed to produce a unique product, service or result with a defined beginning and end, usually have time, budget or resources constraints, undertaken to meet unique goals and objectives(PMI, 2012). Wysocki (2014) also defined the project as “a sequence of unique, complex, and connected activities that have one goal or purpose and must be completed by a specific time, within budget, and according to specification.

A project is a complex, non-routine, one-time effort limited by time, budget, resources, and performance specifications design to meet customer needs (Gray, and Larson, 2008.) Project management is a set of tools, techniques, and knowledge that, when applied, helps to achieve the three main constraints of scope, cost and time. However, based on different literatures, 52.7% of projects were not able to complete on time and over cost, and 31.1% not fulfilled the scope [Charvat, J., 2003 and Clancy, T., 2008]. The growth in new knowledge has increased the complexity of projects because projects encompass the latest advances. Today, many companies focus on project management, as it focuses on achieving project objectives. It is important as it applies managerial process and has its tools that give managers a good opportunity to succeed in achieving objectives. A project manager can perform everything right from a project management perspective but the project can still fail depending on its success criteria to help to ensure project success. Project managers can use different techniques and tools that are useful to manage projects efficiently. These include network activity diagram, bar charts, macro and micro cost estimation approaches and resource scheduling techniques. The use of these techniques and tools could lead to better chance of project success.

Today, emphasis on an integrated project management process is the focus of all project effort towards the strategic plan of an organization, and reinforces control of both the project

management techniques and tools, and the interpersonal skills necessary to orchestrate successful project completion (Clancy, 2008).

2.2. The Project Cycle

The process of planning and managing projects follows a logical, continuous cycle. Each phase of the project leads to the next phases. (PMBOK Guide, 2004).

- The identify stage includes a needs assessment process to determine the needs and problems in a community.
- The design phase includes the actual planning and design of a project.
- The implementation stage refers to the implementation of the project, whether it is a single-year or multi-year implementation period.
- The evaluation of project results occurs at the end of a project and involves determining whether the project's goal and objectives were achieved.
- Project monitoring occurs throughout all stages allowing for small adjustments in the project's planning, design, and implementation in order to ensure the project's success.

2.3. An Overview of Project Planning.

Project planning involves a series of steps that determine how to achieve a particular community or organizational goal or set of related goals. This goal can be identified in a community plan or a strategic plan. Project plans can also be based on community goals or action strategies developed through community meetings and gatherings, tribal council or board meetings, or other planning processes.

Project Development steps

When planning for and designing a new project, it is suggested using the following steps of project development for proper implementation:

- ✓ Identify the Long Range Goals and Assess Available Resources.
- ✓ Conduct a Community Assessment to Identify the Problem.
- ✓ Determine the Project Goal
- ✓ Select a Project Approach/Strategy
- ✓ Develop Project Objectives and Activities

- ✓ Identify Potential Challenges and Develop a Contingency Plan
- ✓ Develop a Project Evaluation Plan and Sustainability Strategy
- ✓ Develop a Project Cost Estimate
- ✓ Write the Project Summary (PINTO, 2007).

2.4. Concepts of Project Implementation.

After projects have carefully planned, the project implementation phase will follow, the third phase of the project management life cycle. The implementation phase involves putting the project plan into action. It's here that the project manager will coordinate and direct project resources to meet the objectives of the project plan. As the project unfolds, it's the project manager's job to direct and manage each activity, every step of the way. That's what happens in the implementation phase of the project life cycle: you follow the plan you've put together and handle any problems that come up. The implementation phase is where you and your project team actually do the project work to produce the deliverables.

The implementation phase keeps the project plan on track with careful monitoring and control processes to ensure the final deliverable meets the acceptance criteria set by the customer. This phase is typically where approved changes are implemented.

Most often, changes are identified by looking at performance and quality control data. Routine performance and quality control measurements should be evaluated on a regular basis throughout the implementation phase. Gathering reports on those measurements will help you determine where the problem is and recommend changes to fix it.

The process of project implementation, involving the successful development and introduction of projects in the organization, presents an ongoing challenge for managers. The project implementation process is complex, usually requiring simultaneous attention to a wide variety of human, budgetary, and technical variables. Projects are often initiated in the context of a turbulent, unpredictable, and dynamic environment. Consequently, the project manager would be well served by more information about those ' specific factors critical to project success.

The project manager requires the necessary tools to help him or her focus attention on important areas and set differential priorities across different project elements. If it can be demonstrated that a set of factors under the project manager's control can have a significant impact on project

implementation success, the project manager will be better able to effectively deal with the many demands created by his job, channeling his energy more efficiently in attempting to successfully implement the project under development. (P. Slevin and K. Pinto, 1987).

Implementation as Nutt (1996) puts is a series of steps taken by responsible organizational agents to plan change process to elicit compliance needed to install changes. The purpose of Project Execution and Control is to develop the product or service that the project was commissioned to deliver. Typically, this is the longest phase of the project management lifecycle, where most resources are applied. According to Guy (2009) The activities that are needed to be accomplished includes: Delegating work, Procuring materials and services, Controlling the scope of the project, Monitoring risk events, Monitoring and controlling the project budget, Monitoring and controlling the project schedule, Forecasting final project cost and delivery date, Finding ways to make up time or reduce final cost.

2.5. Project Implementation Process.

The Project Implementation Process details the process for the development and delivery of projects. Key features of the Project implementation phases are:

Ensuring that projects meet service delivery needs consistent with the Government's strategic directions, agency business objectives and the business case agreed under the Strategic Plan.

Requiring the project to have strong leadership from the Top management taking responsibility for its progress from inception to handover and final completion;

Ensuring project has procurement managed by appropriate party and strategic input from different department.

Selecting and assigning appropriate professional expertise to develop the approved concept, undertake design, manage risk, calculate cost and program times during the procurement process and to manage the implementation phase.

Establishing good project governance and clear lines of accountability for all phases of the project with documentation to provide an audit trail;

Adhering to the required gateway approvals process and the relevant legislative and policy framework; and

Providing a holistic approach that rigorously considers ‘whole of life’ costs, ecologically sustainable development initiatives and design options consistent with the triple bottom line of economic, environmental and social outcomes. (Bardach, 1977).

2.6. Project Success

The views on project success have evolved over the years from simple definitions that were limited to the implementation phase of the project life cycle to definitions that reflect an appreciation of success over the entire project and product life cycle (Judge & Muller, 2005).

What is a successful project?

To be successful a project must:

- Deliver the outcomes and benefits required by the organization, its delivery partners and other stakeholder organizations.
- Create and implement deliverables that meet agreed requirements;
- Meet time targets;
- Stay within financial budgets;
- Involve all the right people;
- Make best use of resources in the organization and elsewhere; Take account of changes in the way the organization operates;
- Manage any risks that could jeopardize success;
- Take into account the needs of staff and other stakeholders who will be impacted by the changes brought about by the project. (Guidelines for managing projects, 2010).

2.7. Project Success Criteria

Is a set of principles or standards used to determine project success (Ika et al, 2012). The very famous and well-known “Golden Triangle” or “Iron Triangle” have been traditionally used as criteria to measure project success. This “Golden Triangle” refers to the basic criteria of cost, time and quality. Project success will be accorded if it is completed within the budgeted cost, implemented on time and to quality parameters requested. However, these criteria have received many critics for being inadequate in determining project success (Atkinson, 1999).

According to Kerzner (2009) the definition of project success today has been modified to include completion: Within the allocated time period, within the budgeted cost, at the proper performance

orspecification level, with acceptance by the customer/user, with minimum or mutually agreed Upon scope changes, without disturbing the main work flow of the organization and without changing the corporate culture.

2.8. How to measure success of Projects

Ibrahim M., (2013), indicated that time, cost and quality have their proven importance as a prime measures for project success. Project requirements are commonly assumed to be time, quality and cost of a project. Success and failure of any project will be measured by these three requirements. According to Jason, (2006) project is commonly acknowledged as successful when it is completed on time, within budget, in accordance with specifications. Moreover, ‘Success is determined by how well it performed against the defined objectives and conformed to the management processes outlined in the planning phase.

According to the PMBOK Guide, (2004) since projects are temporary in nature, the success of the project should be measured in terms of completing the project within the constraints of scope, time, cost, quality, resources, and risk as approved between the project managers and senior management. A successful project is one that is delivered on time and managed within the budget. The traditional view of project success is to accomplish.

2.9. Project success factors (CSFs)

Critical success factors are conditions, events and circumstances contributing to project success. They are defined as: ‘factors which, if addressed, significantly improve project implementation chances’ (Pinto & Slevin, 1987)

Based on different literatures, Pinto & Slevin (1987) attempted to present the compiled Success Factors of project implementation that could be applicable to any type of projects these includes:

- Clearly defined goals: Including the general project philosophy and general mission of the project, as well as commitment to those goals on the part of project team members.
- Competent project manager: the importance of initial selection and development of skilled project leader.

- Top management support: top or divisional management support for the project that has been conveyed to all concerned parties.
- Competent project team members: the importance of selecting or if necessary, training project team members
- Sufficient resource allocation: Resource in the form of money, personnel, logistics, etc.
- Adequate communication channels: Sufficient information is available on project Objectives, status change, organizational coordination, client's needs, etc.
- Control mechanism: are in place to deal with initial plans and schedules.
- Feedback capabilities: All parties concerned with project are able to review project status, make suggestions, and correction through formal feedback channels or review meetings.

2.10. Project Time Management

Scheduling project work is an essential element of project management. A project schedule makes it clear to all participants when work is expected to be completed. It also shows the time related dependencies between different project tasks. Schedule management is the process of ensuring that the project schedule is baselined, maintained, and managed accordingly. According to Schwalbe (2014), project time management involves the processes required to ensure timely completion of a project. Seven main processes are involved in project time management:

1. Planning schedule management which involves determining the policies, procedures, and Documentation that will be used for planning, executing, and controlling the project schedule.
2. Defining activities which involve identifying the specific activities that the project team members and stakeholders must perform to produce the project deliverables. An activity or task is an element of work normally found on the work breakdown structure that has expected duration, cost, and resource requirements. Defining activities involves identifying the specific actions that will produce the project deliverables in enough detail to determine resource and schedule estimates. Milestones are significant accomplishments that typically are the culmination of a series of tasks.

A milestone on a project is a significant event that normally has no duration. It often takes several activities and a lot of work to complete a milestone, but the milestone itself is like a marker to help in identifying necessary activities. Milestones are also useful tools for setting schedule goals and monitoring project progress.

3. Sequencing activities involves identifying and documenting the relationships between projects Activities. The sequencing process involves evaluating the reasons for dependencies and the different types of dependencies. A dependency or relationship pertains to the sequencing of project activities or tasks.

4. Estimating activity resources involves estimating how many resources; people, equipment, and materials that a project team should use to perform project activities. Before you can estimate the duration for each activity, you must have a good idea of the quantity and type of resources (people, equipment, and materials) that will be assigned to each activity. The nature of the project and the organization will affect resource estimates.

5. Estimating activity durations involve estimating the number of work periods that are needed to complete individual activities. It is important to note that duration includes the actual amount of time worked on an activity plus elapsed time.

6. Developing the schedule involves analyzing activity sequences, activity resource estimates, and activity duration estimates to create the project schedule. Schedule development uses the results of all the preceding project time management processes to determine the start and end dates of the project and its activities.

The ultimate goal of developing a realistic project schedule is to provide a basis for monitoring project progress for the time dimension of the project. Several tools and techniques assist in schedule development:

- A Gantt chart is a common tool for displaying project schedule information.
- Critical path analysis is a very important tool for developing and controlling projectschedules.
- Critical chain scheduling is a technique that focuses on limited resources when creating aproject schedule.
- PERT analysis is a means for considering schedule risk on projects.

7. The final process in project time management is controlling the schedule. Controlling the schedule involves controlling and managing changes to the project schedule.

The goal of schedule control is to know the status of the schedule, influence the factors that cause schedulechanges, determine that the schedule has changed, and manage changes when they occur. Some of the tools and techniques include:

- Performance reviews, where progress reports are often provided

- Schedule change control system, operated as part of the integrated change control system
- A scheduling tool and/or project management software, such as Project 2010 or similar software
- Variance analysis, such as analyzing float or slack and using earned value
- What-if scenario analysis, which can be done manually or with the aid of software
- Adjusting leads and lags
- Schedule compression, such as crashing and fast tracking
- Resource optimization techniques, such as resource leveling

2.11. Challenges of Project Management

Related literatures shows that, most projects failed due to: increased competition, shorter product and service life cycles, tighter budgets, unfamiliar and more complex applications, globally distributed and multicultural project teams. Lack of feedback from previous projects, miscommunication between members of the project team among themselves and different stakeholders, absence of planning and non-adoption of clear methodology lead to the questionability of project success. In contrast, several trends are making project management easier: better project management training, publication of best practices information, and better software support

Non-participation of concerned stakeholders, weather condition, and absence of transparency during implementation is among the hindering factor for managing projects. Even though it is very difficult to generalize and put project management challenges in common terms due to the fact that each and every obstacle to project management were different according to nature of the project and the application employed to particular project setup. (Getayawkal, 2016)

2.12. Delays in project Implementations.

Project implementation Delay and cost overrun in project could be as a result of scope change. Scope is the term that defines the entire deliverables that is expected at the end of a project.

Therefore, logically, it can be said that all project plans, estimation, schedule, quality and base lines are usually designed based on the initial project scope (Amankwa. 2003).

Delay as an event that causes extended time to complete all or part of a project. Delay may also be defined as the time overrun, either beyond the date for completion specified by the contract or schedule or beyond the extended contract period where an extension of time has been granted. Project implementation delay is a major phenomenon affecting not only the parties involved in the project but also the overall economy of countries as well. (Sambasivan, 2007).

2.13. Empirical Review.

Different researchers have undertaken different types of projects and identified different factors affecting successful implementation of projects of projects. The Factors that affect the projects' performance vary with the various project success dimensions. The sections below presented various factors contributing for project delays and challenges to effective implementation of projects as identified by number of studies made in various areas.

The findings of the study made byTadele (2017) on the title of challenges in project implementation and possible remedial actions: case study of projects under carried by talent youth associationrevealed that lack of top management commitment, uncontrolled change to baseline requirement, lack of communication, inadequate tracking and directing of project activities, lack of Monitoring and Evaluation (M&E) system, high uncertainty, lack of accountability & completion criteria, schedule pressure, being kept uninformed, unclear expectation, none collaborating functional areas, and staff turnover were the serious challenges during project implementation.

The major factors affecting project delays were found to be poor coordination with stakeholders, Delays in administration of right way of obstruction removal, delay in provision of resources and machineries and design and scope changes.Poor coordination between stakeholders resulting Reworks and misalignment and inadequate planning and scope changes.

Besides, the study has revealed that though projects undertaken in the study area are mostly subjected to scope and design changes, there is no strategy towards change management and this resultsin costly way of incorporating changes. (Tena, 2017).

The study of Teferra (2017), on the title of Major causes of project implementation delay: the case of Development Bank of Ethiopia financed projects conclude the top ten influencing factors in causing project delay arranged in descending order of importance as Shortage of foreign currency, Failure to contribute equity contribution in time, Plan (scope) change by clients or client initiated variations, Governments failure to avail the required infrastructures like road, water, power on time, Lack of cooperation and insufficient communication among different stakeholder government organizations), Fluctuation in foreign currency, Fluctuation of prices of materials and increase in total cost of projects, Diversion of funds for unintended purpose by promoters, Existence of missed items & long time taken to incorporate them through additional loan, Underestimation of complexity of projects by promoters.

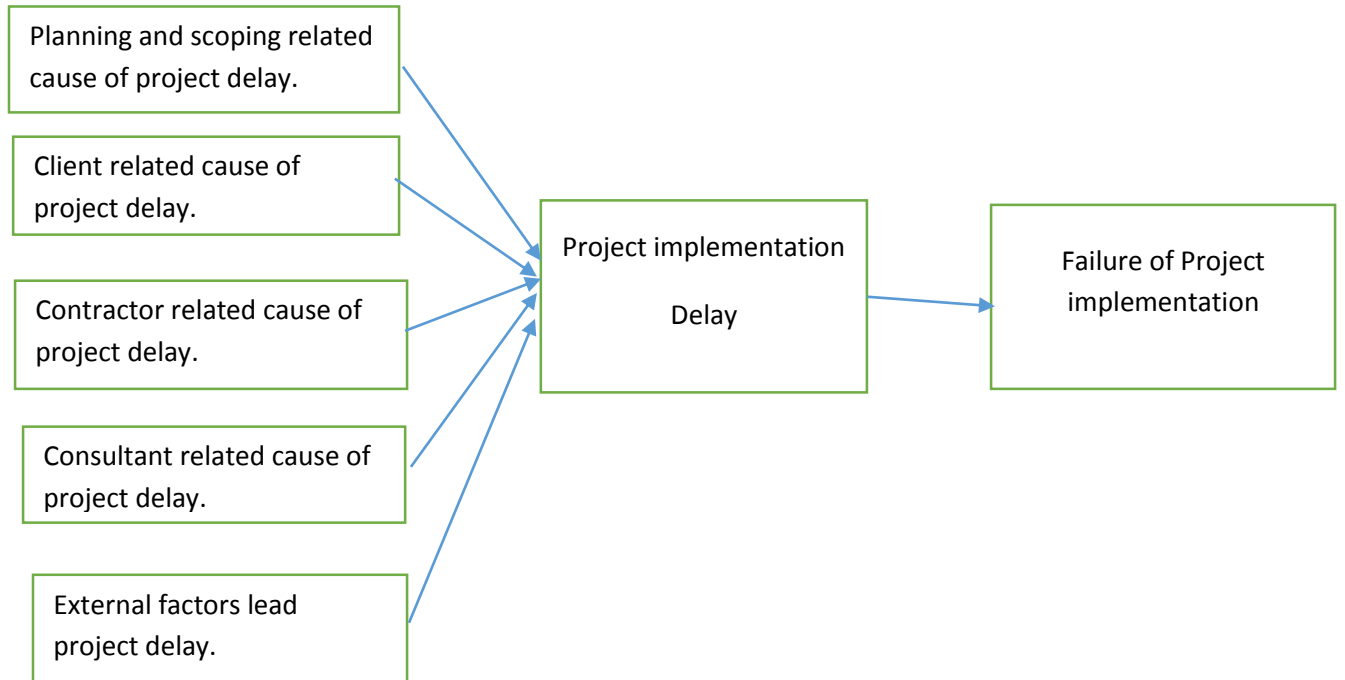
The Project Organizational structure, Project Leadership and Governance and Project Human Resources are noted as the factors affecting effective implementation of project. These factors were not addressed appropriately so that they could significantly contribute to the success of the project implementation. (Tamene, 2017).

According to the study of Bekele (2017), on the title: Assessment of the Challenges and Benefits Associated in the Adoption of E-Banking Technology in Commercial Bank of Ethiopia the major challenges in the study area were, high cost of implementation of E-banking, lack of customer awareness, limitation in network infrastructure and internet related support services, low levels of computer literacy, low level of ICT infrastructure and lack of trust.

According to the study of Demisse (2017), on the title of Assessment on practices and challenges of consultancy project management: the case of Ethiopian management institute Lack of required resources, lack of client commitment, and lack of competency of consultants, weak contractual administration, lack of strong monitoring and evaluation system, client needs fluctuations, poor incentive mechanism and lack of commitment of consultants are the major challenges that faces consultancy project management process.

Figure:1.1. Study Frame work (Researcher, 2019).

For the purpose of this study, the core concept of the above theoretical and empirical literatures were conceptualized as follow.



Chapter Three

3. Research Methodology.

This Chapter describes the methods and procedure used to collect and analyze data in order to assess factors affecting effective implementation of public projects in Dukem town administration.

It covers the research design and methodological procedures that was used in data collection and analysis. The coverage includes the research design, population of the study, sampling procedures and sample size, instrumentation, data collection, and data analysis.

3.1. Research Design and Approach.

The research design refers to the researcher's overall plan for obtaining answers to the research question; it is a road map for achieving the objectives the study.

Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Kothari, 2004). It is the conceptual structure with in which research is conducted.

The researcher applied descriptive research design since application of this design allows description of the study area to have a significant amount of description of the case and detailed assessment of the issue of the enquiry. The descriptive research design is essential research design to describe appropriate situations of persons or events under consideration.

Saunders (2009) explains that descriptive research describes an accurate profile of persons, events or situations. This design offers to the researchers a profile of described relevant aspects of the phenomena of interest from an individual, organizational and industry-oriented perspective. It presents data in a meaningful form that helps the researchers to understand the characteristic of a group in a given situation, to think systematically about aspects in a given situation, offer ideas for further research and helps to make certain simple decisions. Descriptive research is purposed to the description of the state of affairs as it exists. The researcher preferred this method in order to get the best advantage of the design by providing the descriptive feature of the factors affecting effective implementation of public projects in Dukem town administration.

Accordingly, the researcher applied descriptive research for the study entitled Factors Affecting effective implementation of public Projects: The Case of case of selected public projets in Dukema town administration.

Regarding the research approach applied in this inquiry mixed approach was used. In a mixed method the research brings together approaches that included in both the quantitative and qualitative formats (Creswell, 2003). Qualitative method will be used to describe the state affairs, while quantitative method is used to provide numeric presentation and analysis of the study.

3.2. Data Sources.

To conduct this study, the researcher collected data from the primary sources. This primary data were collected from project directors, Project coordinators, project team members, project overseer and Economists that were directly involved in the project implementation of public projects Financed by Dukem town city administration.

3.3. Data collection techniques.

The data collection instruments adopted in this study was a questionnaires. According to Kothari, (2004) the questionnaire method of data collection is the most appropriate and convenient tool for collecting data. Questionnaires relative to other tool are economical in terms of time and cost, it facilitates easy and quick responses within a short period and it give freedom to respondents of any category to express their views or opinion. Accordingly, for this study questionnaires was prepared and used to collect relevant data from the target respondent. Detailed information about the socio-demographic, behavioral and work environment characteristics, the practices of project implementation in the study area, challenges to proper implementation of projects, and causes of project implementation delay were collected.

Before distributing the questionnaires to these parties all important orientation and explanation were given and finally the researcher in collaboration with project coordinators and other concerned parties distribute and also collected the filled questionnaires from the respondents.

3.3.1. Reliability of Research instrument.

Reliability refers to the degree of consistency with which an instrument measures the attribute it designed to measure (Polit and Hungler, 2004). Bias during data collection were reduced because the questionnaires were self-administered by the researcher himself. Questionnaires developed and distributed to the respondent follow a logical pattern and were consistent there by to avoid contradiction among responses.

3.3.2. Validity of research instrument.

With respect to the topic of the study the researcher tried to adopt the instruments from different related literatures there by for the instrument to truly measure what it intends to measure. Before developing them, the researcher links the questions to the objectives of the study.

3.4. Target Population and Sampling techniques.

Target population is the set of all elements that belong to a certain defined group to be studied to which the investigator wants to generalize the results of the entire study. Neuman (2000) defines a research population as a specific pool of cases, individuals or groups(s) of individuals which the researcher wishes to investigate.

The researcher was informed and observed from the concerned governed sector of Dukem administration that 28 individuals including project directors, Project coordinators, project officers, project team members, project overseer and Economists that were directly involved in the project implementation of public projects in the area. This populations were the right concerned party in the area that provides appropriate information with regard to the objective of the study. The target population of this study was all of the aforementioned parties that directly participates on the project implementation phase of public projects in the area.

3.5. Data analysis and Processing Techniques.

The findings of the study was interpreted with different appropriate statistical data analysis techniques on the basis of the nature of the data that was collected for the study.

The data that was collected from the respondents was analyzed both quantitatively and qualitatively. The findings of the research was interpreted by using different important statistical data analysis techniques. The collected data was processed with support SPSS version 20.

3.6. Ethical Clearance of the study.

Ethics relates to moral choices affecting decisions, standards and behavior. So it is hard to lay down a set of clear rules, which covers all moral choices (Greener, 2008). Ethics in research refers to the norms for conduct that distinguish between acceptable and unacceptable behavior (David and Resnik, 2010).

Research ethics helps to protect the rights of respondents. With respect to this study, from the very beginning Permission was obtained from the local administrative bodies (Dukem town administration). During data collection permission was obtained from every study subject after clearly explaining the purpose of the study. All information gotten from the respondents were

treated with confidentiality without disclosure of the respondents' identity. In this research no information was modified or changed, hence information gotten was presented as collected and all the literatures collected for the purpose of this study were appreciated in the reference list. The rights of anonymity and informed consent were considered by the researcher.

Chapter Four

Data analysis and Discussion.

4.1. Introduction.

This chapter covers presentation and discussions of the results in addressing research objectives. It presents views from respondents using questionnaires. With respect to the nature of the study Descriptive statistics was used in analyzing the collected data from target respondents. Frequency distribution tables were presented which contains percentage response of each respondent.

4.2. Response rate

For the purpose of collecting primary data through questionnaires 28 questionnaires were distributed to purposefully selected respondents and all questionnaires were filled and returned to the researcher that represent 100 % response rate which gives the researcher confidence regarding the finding of the study.

4.3. Back ground of respondents.

Table 4.1. Back ground of respondents.

Variables	Categories	Frequency	Percent (%).	Valid %
Gender	Males	22	78.6	78.6
	Female	6	21.4	21.4
Age	25-35	13	46.4	46.4
	35-45	14	50	50
	45-55	1	3.6	3.6
Educational Back ground	Diploma	8	28.6	28.6
	BA/BSc Degree	14	50	50
	MA/MSc Degree	6	21.4	21.4
Marital status	Single	22	78.6	78.6
	Married	6	21.4	21.4
Working Experience	< 3 years	2	7.1	7.1
	3-5 yrs	5	17.9	17.9
	5-8 yrs	15	53.6	53.6
	8-10yrs	6	21.4	21.4
Respondents current job position	Director	1	3.6	7.1
	Project coordinators	2	7.1	10.7
	Project team members	7	25	

	Project overseer	6	21.4	
	Project officer	11	39.3	71.4
	Economist	1	3.6	10.7

Source: Survey result, 2019.

The respondents were asked to indicate their gender in the questionnaires with the purpose of identifying the actual number of respondents in terms of male and female that participate in filling the questionnaires since males and females have sort of differences in attitude and views towards events. With respect to the age of respondents table 4.1. shows that 13 respondents representing 46.4% fall within age of 25-35, 14 respondents representing 50 % fall within age category 35-45 and 1 respondent representing 3.6% fall within age category of 45- 55 . The data shows that majority of the employees in the organization fall within 35–45 Years.

Therefore, from this one can conclude that majority of employees were young , energetic and productive work force that needs efficient application of performance management as one opportunity to increase potential productivity for mutual advantage of employees and employers. The collected data showed the Dukem town administration has young population whose skills and knowledge need to be improved which probably determine success and sustainability of the town administration.

With the purpose of identifying academic qualification of respondents participated in the study the respondents were asked to indicate their educational back ground. From the above table it can be observed that, 8 respondents representing 28.6 % were obtained College Diploma, 14 of respondents representing 50 % were BA/BSC holders, 6 of the respondents representing 21.4 % were MA/MSc degree holders. The data shows that majority of the respondents have attained first degree level of education who are well informed for providing response and views for the study. Moreover, one can also conclude here that more than half of the staffs in the town have sort of knowledge important on job through formal education though the remaining 28.6% who were below first degree needs attention of the concerned part in the city to make them qualified and dynamic for potential job responsibilities in the areas of project management in general and proper management of project implementation in particular.

The collected data here also showed that the largest educational level attained by staff is first degree; MA/MSc education and trainings in the field of project and related professions also needs attention of the concerned party in the future.

With regard to the marital status of respondents 22 of the respondents representing 78.6 % were married individuals, 6 respondents representing 21.4 % were unmarried individuals. It is right to conclude here that majority of the employees get married.

With the purpose of determining the consistency of duration of employees working in the town, the above table also depicts the working experience of employees participated in the study. The collected data in the table 4.1 indicates 2 respondents representing 7.1 % were working less than three years of working experience in the town, 5 respondents representing 17.9 % have worked between 3-5 years, 15 workers representing 53.6 % were worked between 5-8 years and the remaining 6 respondents representing 21.4 % have been working between 8-10 years.

The town administration is advised to implement talent retaining methods, there is no workers that have more than 10 years of working experience relative to other category, because the more workers experienced within the organization, the better it will be.

With respect to current job position of the respondents 1 respondent representing 3.6% was project Directors, 2 of the respondents representing 7.1% were project coordinators, 7 individuals among the total respondents representing 25% were project team members, 6 respondents representing 21.4% were project overseer, 11 respondents representing 39.3% were project officers and the remaining 1 respondent representing 3.6 % was Economists directly involved in project works of Dukem City administration. This shows that most of the respondents were involved on different project works in the town in different time who knows well regarding factors affecting effective implementation of public projects in the town.

4.4. Project implementation challenges.

Table 4.2. Project implementation challenges.

Variables		S. Disagree	Disagree	Neutral	Agree	S. Agree

Changing Requirements and specifications frequently	Frequency	1	8	1	14	4
	Percent	3.6	28.6	3.6	50	14.2
	Valid %	3.6	28.6	3.6	50	14.2
There is management support problem	Frequency	2	4	1	13	8
	Percent	7.1	14.3	3.6	46.4	28.6
	Valid %	7.1	14.3	3.6	46.4	28.6
New technology	Frequency	11	9	1	4	3
	Percent	39.3	32.1	3.6	14.3	10.7
	Valid %	39.3	32.1	3.6	14.3	10.7
Lack of resources	Frequency	-	3	1	19	5
	Percent	-	10.7	3.6	67.8	17.9
	Valid %	-	10.7	3.6	67.8	17.9
Unrealistic expectations of the project output	Frequency	6	12	1	4	5
	Percent	21.4	42.8	3.6	14.3	17.9
	Valid %	21.4	42.8	3.6	14.3	17.9
Unrealistic project time frames(Short implementation period allotted)	Frequency	3	4	1	9	11
	Percent	10.7	14.3	3.6	32.1	39.3
	Valid %	10.7	14.3	3.6	32.1	39.3
Absence competency of project team members	Frequency	1	3	1	16	7
	Percent	3.6	10.7	3.6	57.1	25

	Valid %	3.6	10.7	3.6	57.1	25
Challenges from government rules and regulation	Frequency	10	7	2	5	4
	Percent	35.7	25	7.1	17.9	14.3
	Valid %	35.7	25	7.1	17.9	14.3
Diversion of funds for unintended purpose by promoters	Frequency	9	15	-	3	1
	Percent	32.1	53.6	-	10.7	3.6
	Valid %	32.1	53.6	-	10.7	3.6
Plan (scope) change by clients or clients initiated variations	Frequency	1	6	1	17	3
	Percent	3.6	21.4	3.6	60.7	10.7
	Valid %	3.6	21.4	3.6	60.7	10.7
Delay in appointing project managers	Frequency	7	13	2	5	1
	Percent	25	46.4	7.1	17.9	3.6
	Valid %	25	46.4	7.1	17.9	3.6
Delay in disbursement of project budget from the concerned financial sector	Frequency	11	10	1	4	2
	Percent	39.3	35.7	3.6	14.3	7.1
	Valid %	39.3	35.7	3.6	14.3	7.1
Underestimation of cost of projects	Frequency	-	2	2	19	5
	Percent	-	7.1	7.1	67.9	17.9
	Valid %	-	7.1	7.1	67.9	17.9
	Frequency	2	4	3	12	7

Underestimation of complexity of projects by promoters	Percent	7.1	14.3	10.7	42.9	25
	Valid %	7.1	14.3	10.7	42.9	21.4
Lack of cooperation and insufficient communication among different project stakeholder	Frequency	1	3	1	11	12
	Percent	3.6	10.7	3.6	39.2	42.9
	Valid %	3.6	10.7	3.6	39.2	42.9
Shortage of skilled and unskilled labor	Frequency	22	2	1	2	1
	Percent	78.6	7.1	3.6	7.1	3.6
	Valid %	78.6	7.1	3.6	7.1	3.6

Source: - Own survey, 2019.

Table 4.2. Above deals with the publicProject implementation challenges in the Dukem town administration. To assess Project implementation challenges questions were posed to the respondents, which was analyzed as follows:

Concerning the frequency of changing requirements and specifications as Project implementation challenges 14 and 4 respondents representing 50% and 14.2% of respondents were agree and strongly agree respectively.

8 respondents representing 28.6 % and 1 respondent representing 3.6 % were Disagree and Disagree respectively. The remaining 1 respondent representing 3.6 % was Neutral with the issue. This shows that most of the respondents agree with the issue that changing requirements and specification frequently are project implementation challenges.

The respondents were also asked whether or not there is management support problems in the project implementation phase and 13 and 8 respondents representing 46.4% and 28.6 % were agreed and strongly agreed respectively and said that there is management support problem during implementation in the study area. Insignificant number of respondents that amounts 2 and 4 respondents representing 7.1 % and 14.3% strongly disagreed and disagreed respectively on this issue. The remaining 1 respondent that represent 3.6 % among the total respondent was neutral and indifferent on the issue.

The respondents were also asked to respond the extent of impact of new technology on effective implementation of public projects in the study area among which 11 and 9 of the respondents representing 39.3% and 32.1% were strongly disagreed and agreed and said that new technology is not among the factors that affect effective implementation of public projects in the study area. 4 and 3 of the respondents representing 14.3% and 10.7% were agreed and strongly agreed and said that new technology is among the factors that affect effective implementation of public projects in the study area. The remaining 1 respondent that represent 3.6 % among the total respondent was neutral and indifferent on the issue. With regard to effect of new technology on effective implementation of projects more than 70 of the respondents said that new technology is not a factor that affect proper implementation of projects in the study area. Therefore, it is right conclude here is that new technology is not among a major factor that affect effective implementation of public projects in the study area.

The researcher also asked whether lack of resources are a factor that affect implementation of projects. 19 and 5 respondents that represent 67.9% and 17.9% were agreed and strongly agreed respectively and said that lack a resource is a variable that affects project implementation in the study area.

There is no respondent that strongly disagree on the issue. Insignificant number among respondent that represent only 10.7% said that lack resource is not a factor that affect proper implementation of projects in the study area. From this it can be realized that lack resources is one the major factor that hinders effective implementation of public projects in the study area and the concerned party in the area is expected to work seriously on this issue. The respondents were also asked to answer whether or not unrealistic expectation of the project output is obstacle for effective implementation of public projects in the area. 6 and 12 respondents among the total respondent that represent 21.4% and 42.9% were strongly disagreed and disagreed respectively.

4 and 5 respondents that represent 14.3% and 17.9 % replied that unrealistic expectation of the project output is among the challenge that hinders effective implementation of public projects in the study area. 1 respondent among the total respondent is neutral on the issue. From this it is right to conclude that unrealistic expectation of the project output is not among the major factor that

affect effective implementation of selected public projects in Dukem town administration financed projects.

The researcher also asked the respondents whether unrealistic project time frames (short implementation period allotted) is a challenge of project implementation in the study area. Among the total respondents 9 and 11 of the respondents representing 32.1% and 39.3% agreed and strongly agreed respectively. 3 and 4 respondents that represent 10.7% and 14.3 % were strongly disagreed and agreed respectively on the issue. From this it can realized that unrealistic project time frames (short implementation period allotted) is one among the challenges of project implementation in the study area. With regard to absence competency of project team members the majority of the respondents that constitute more than 75% replied that competency of project team members is among the challenges that hinder effective implementation of projects in the study area and it is right to conclude here is that this factor is among the challenges that hinder effective implementation of projects in the study area.

The respondents were also asked whether or not challenges from government rules and regulations are among factors that hinder project implementation and it can be realized from their response that this is not among the factors that affect effective implementation of projects in the study area.

Regarding diversion of funds for unintended purpose by the promoters as a challenge of project implementation it is right to realize that this is not among the factors that affect effective implementation of projects in the study area.

The researcher also asked the respondents whether or not plan (scope) change by the client or client initiated variation are challenges to project implementation in the study area and it can be concluded from the response of the respondents that this is among the factors that hinder effective implementation of projects in the study area.

With regard to delay in appointing project managers as a challenge of project implementation it can be concluded from response of the respondent that this is not among the factors that hinder effective implementation of projects in Dukem town administration financed public projects.

The respondents were also asked whether there is a delay in disbursement of project budget from the concerned financial sector and the majority of the respondent that constitute 75% replied that this not among the factor that hinder effective implementation of public projects in the study area.

It can also be realized from table 4.1. That underestimation of the cost and complexity of projects were among the factors that affect effective implementation of public projects financed by Dukem town administration.

The researcher also asked the respondents that whether or not there is lack of cooperation and insufficient communication among different project stake holder and it can be inferred from the response of the respondent that lack of cooperation and insufficient communication among different project stake holder is challenge that hinders effective management of projects during implementation phase of a project. More than 80% among the respondent replied that there is lack of cooperation and insufficient communication among different project stake holders in the study area. With respect to shortage of skilled and unskilled labor for a project 22 and 2 respondents that represent 78.6% and 7.1% were strongly disagreed and disagreed respectively. It can be realized here that there is no shortage of skilled and unskilled labor for a project implementation in the study area and this is not among factors that affect effective implementation of public projects in the study area.

4.5. Causes of Project Delay

The following tables, tables 4.3 to table 4.7 describes the major causes of project delay in the study area related to planning and scoping of the project, client related causes, contractor related causes, Consultant and external factor related causes of project delay.

Table 4.3. Planning and Scoping Related causes of project Delay.

Variables		S. Disagree	Disagree	Neutral	Agree	S. Agree
	Frequency	8	14	1	3	2
	Percent	28.6	50	3.6	10.7	7.1

Mistakes with site, soil and foundation conditions investigations	Valid %	28.6	50	3.6	10.7	7.1
Incomplete Requirements and specification	Frequency	1	4	-	10	13
	Percent	3.6	14.3	-	35.7	46.4
	Valid %	3.6	14.3	-	35.7	46.4
Deficiencies in activity sequencing	Frequency	12	10	1	3	2
	Percent	42.9	35.7	3.6	10.7	7.1
	Valid %	42.9	35.7	3.6	10.7	7.1
Changes in scope of the project	Frequency	2	2	1	12	11
	Percent	7.1	7.1	3.6	42.9	39.3
	Valid %	7.1	7.1	3.6	42.9	39.3

Source: Own survey, 2019.

Table 4.3. Above deals with causes of project delay in the study area with respect to Planning and Scoping of the project. The respondents were asked whether or not there are mistakes with site, soil and foundation conditions investigations during Planning and Scoping of the project.

8 and 14 respondents among the total respondents representing 28.6 % and 50% strongly disagreed and disagreed and said that there is no problems related to site, soil and foundation conditions investigations related to public projects financed and implemented by Dukem town municipality. 3 and 2 respondents representing 10.7% and 7.1% agreed and strongly agreed on the issue. Insignificant number among the respondents that is only 1 respondent who is neutral and indifferent on the issue. More than 75% of the respondents replied that site, soil and foundation conditions investigations during Planning and Scoping of the project is no a cause of project delay in the study area. Therefore, it right to conclude here that issues related to site, soil and foundation conditions investigations during Planning and Scoping of the project is not among the major factor that leads to project delay in the study area.

The respondents were asked whether or not Incomplete Requirements and specification during planning and scoping of the project is a cause of project implementation delay in the study area. Only 1 and 4 respondents representing 3.6% and 14.3% strongly disagreed and disagreed respectively on the issue and said that it is not a cause of project implementation delay in the study area. 10 and 13 respondents representing 35.7 % and 46.4% agreed and strongly agreed on the issue and said that it is one among the factors that lead project implementation delay in the study area. There is no respondent who is neutral and indifferent on the issue. With regard to this issue more 80% among the total respondent said that Incomplete Requirements and specification during planning and scoping of the project is a cause of project implementation delay in the study area. Here it can be realized that Incomplete Requirements and specification during planning and scoping of the project is one among factors that cause public project implementation delay in the study area.

The researcher also asked respondents whether Deficiencies in activity sequencing is problem during planning and scoping of the project. Related this issue 12 and 10 respondents that represent 42.9% and 35.7% strongly disagreed and disagreed respectively and said the issue is not among the factor that cause project implementation delay. One respondent among the total respondent is neutral on this issue. The remaining 3 and 2 respondents representing 10.7% and 7.1% respectively agreed and strongly agreed on the issue that was asked. Related to Deficiencies in activity sequencing as a cause of project implementation delay more than 80% of the respondent replied that it is not among the factors that cause public project implementation financed by Dukem municipality. It right for one to conclude from this that Deficiencies in activity sequencing during project planning and scoping is not among factors that cause public project implementation delay in the study area.

Furthermore, in addition to the aforementioned questions related to cause of project delay during project planning and scoping the respondents were also asked whether or not Changes in scope of the project is among factors that contribute to public project implementation delay in the study area. Among the total respondents 14.2% replied that the issue is not among the factors that lead project implementation delay in the study area. Insignificant number that is only one respondent was neutral and indifferent on the issue. Most of the respondents that represent more 80% said that Changes in scope of the project is one of the significant factor that contribute to project implementation delay in the study area. It is right to infer from the response of the respondents that Changes in scope of the project is one among the factors that contribute to project implementation delay in the study area.

Table 4.4. Client related causes of project Delay.

Variables		S. Disagree	Disagree	Neutral	Agree	S. Agree
Delay in transferring(delivering) project site to the contractor	Frequency	8	15	2	3	-
	Percent	28.6	53.6	7.1	10.7	-
	Valid %	28.6	53.6	7.1	10.7	-
Delay in issuance of change orders (Variation orders) by the owner	Frequency	10	12	-	3	3
	Percent	35.7	42.9	-	10.7	10.7
	Valid %	35.7	42.9	-	10.7	10.7
Lack of contractual agreement enforcement, i.e., inability to manage & administer the project on contractual basis.	Frequency	6	15	1	4	2
	Percent	21.4	53.6	3.6	14.3	7.1
	Valid %	21.4	53.6	3.6	14.3	7.1
Slowness in decision making process by clients	Frequency	-	2	1	10	15
	Percent	-	7.1	3.6	35.7	53.6
	Valid %	-	7.1	3.6	35.7	53.6
Poor supervision, follow up and inspection by the concerned party	Frequency	1	2	1	10	14
	Percent	3.6	7.1	3.6	35.7	50
	Valid %	3.6	7.1	3.6	35.7	50
Poor professionals management by promoters at implementation stage	Frequency	1	2	-	10	15
	Percent	3.6	7.1	-	35.7	53.6
	Valid %	3.6	7.1	-	35.7	53.6

Source:Own survey, 2019.

The above table, tables 4.4 describes the major causes of project delay in the study area related to project clients. The respondents were asked client related causes of project implementation delay. Accordingly, It can be observed from the above table that most the respondents disagree (28.6% strongly disagree and 53.6% disagree) with the fact that Delay in transferring (delivering) project site to the contractor is one among the client related cause of project implementation delay in the study area. 2 respondents are indifferent on the issue. 3 respondents representing 10.7% agreed

with the fact that Delay in transferring (delivering) project site to the contractor is one among the client related cause of project implementation delay in the study area. More than 80% of the respondents said that there is no delay in transferring (delivering) project site to the contractor. Keeping other factors constant it can be right to realize and conclude that there is no Delay in transferring (delivering) project site to the contractor related to public projects financed by Dukem town municipality.

It can also be observed from table above that issuance of change orders (Variation orders) by the owner and contractual agreement enforcement, i.e. ability to manage & administer the project on contractual basis are not among the major client related cause of project implementation delay in the study area.

Further, the respondents were also requested to provide information regarding whether or not there is Slowness in decision making process by clients in the implementation phase of project management in the study area. Most the respondents said that there is Slowness in decision making process by clients in the implementation phase of project. 89.3% of the respondents (35.7% agreed and 53.6 strongly agreed) and said that there is Slowness in decision making process by clients in the implementation phase of project. Only 7.1% and 3.6% are disagreed and neutral on the issue.

It is right to realize here that Slowness in decision making process by clients in the implementation phase of project is among the client related factors that contributed to project implementation delay in the study area. For effective implementation of projects the clients should make decisions as immediate as possible there by to complete projects as per the schedule.

It can be further, observed from the above table that, 91.3% of the respondents were agree (35.7% agree and 53.6 strongly agree) on the fact that there is poor supervision, follow up and inspection by the concerned party which contributed to project delay in the study area. Insignificant number from the total respondent which represent around 10% said that supervision, follow up and inspection by the concerned party is not among the client related cause of project implementation delay. No respondent here on the issue is neutral and indifferent on the issue. It is right to conclude here that Poor supervision, follow up and inspection by the concerned party is one among the client related causes of project implementation delay.

The concerned party in area are should conduct appropriate supervision, follow up and inspection in implementation phase of the project in the study area without which effective implantation of project is impossible in general and the concerned party in the study area is advised to work on the issue.

It can be seen from the table 4.4. Above that Poor professionals' management by promoters at implementation stage is one among the client related cause of public project implementation delay in the study area. Therefore, the collected data on this issue showed that the concerned party in the study area should work seriously on the issue.

Table.4.5. Contractor related cause of project Delay.

Variables		S. Disagree	Disagree	Neutral	Agree	S. Agree
Inadequate equipment or construction tools	Frequency	12	10	2	3	1
	Percent	42.9	35.7	7.1	10.7	3.6
	Valid %	42.9	35.7	7.1	10.7	3.6
Poor site supervision and management by contractor	Frequency	2	1	2	12	11
	Percent	7.1	3.6	7.1	42.9	39.3
	Valid %	7.1	3.6	7.1	42.9	39.3
Lack of skilled manpower of contractor.	Frequency	11	7	-	7	3
	Percent	39.3	25	-	25	10.7

	Valid %	39.3	25	-	25	10.7
Inaccurate cost estimation (pricing) of the project activity.	Frequency	-	4	2	12	10
	Percent	-	14.3	7.1	42.9	35.7
	Valid %	-	14.3	7.1	42.9	35.7
Poor schedule management	Frequency	1	2	1	9	15
	Percent	3.6	7.1	3.6	32.1	53.6
	Valid %	3.6	7.1	3.6	32.1	53.6
Inadequate and slow supply of materials	Frequency	8	13	-	4	3
	Percent	28.6	46.4		14.3	10.7
	Valid %	28.6	46.4		14.3	10.7
Lack of experience of the contractor on project works	Frequency	8	12	2	3	3
	Percent	28.6	42.9	7.1	10.7	10.7
	Valid %	28.6	42.9	7.1	10.7	10.7

Source : Own survey, 2019.

It can be observed from the above table that 78.6% of the respondents disagree (42.9% and 35.7% strongly disagree and disagree on the fact that the Inadequate equipment or construction tools during project implementation are among contractor related causes of project Delay. The remaining 10.7% and 3.6% agreed and strongly disagreed on the issue respectively. 2 respondents representing 7.1% are neutral and indifferent on the issue. It is right to infer here that Inadequacy of equipment or construction tools during project implementation is not among the significant contractor related factors responsible for project implementation delay.

Respondents were also asked whether or not Poor site supervision and management by contractor is among the contractor related factors that causes project implementation delay. Most of the respondents that represent 82.2% of the respondent said that this an issue that is responsible for project delay in the study area. 7.1% and 3.6% of the respondents were strongly disagreed and agreed respectively. 2 respondents that represent 7.1% were also neutral and indifferent on the issue.

It is right here to conclude from the respondents' response that poor site supervision and management by contractor is among the contractor related factors that causes project implementation delay in the study area.

Respondents were also requested to provide their view to know whether or not there is Lack of skilled manpower of contractor that contribute for project implementation delay. 7 and 3 of the respondents representing 25% and 10.7% were agreed and strongly agreed on the issue. No respondent is neutral and indifferent here regarding this issue. It can be observed from the table that most of the respondents said that there is no problem regarding skill of contractor in the process of project implementation.

Further, the respondents were also requested to provide information whether or not there is a gap regarding cost estimation (pricing) of the project activity. Most of the respondents more than 75% (42.6% agreed and 35.7 strongly agreed) and said that there is a gap regarding cost estimation (pricing) of the project activity. The remaining 14.3% of the respondent were agreed on the issue. 2 respondents representing 7.1% were neutral and indifferent on the issue. It is right to infer from the response of the respondent that Inaccurate cost estimation (pricing) of the project activity is one among the factors that contributed to project delay in the study area.

Further, the respondents were also requested to provide information whether or not there is Poor schedule management. Most the respondents that represent more than 85% of the total respondent said that there is poor schedule management. Insignificant number of the respondents were disagree and neutral on the issue. Therefore, it is right to conclude here that poor schedule management one among the major contributors of project delay in the study area.

Respondents were also requested to provide their view to know whether or not there is Inadequate and slow supply of materials during project implementation in the study area. 75% of the respondents were disagreed (46.4 strongly disagreed and 28.6 disagreed) and said that this is not among the issue that is responsible for project delay.

Further, the respondents were also requested to provide information whether or not there is Lack of experience of the contractor on project works that will contribute to project delay in the study area. 71.5% of the respondents disagree (28.6% strongly disagree and 42.9 disagree) and said that the issue is

not among the factors that contributed to project delay. 2 respondents among the total respondent were neutral and indifferent on the issue. 6 respondents representing 21.4% were agreed (10.7 agreed and 10.7% strongly agreed) on the issue and said that it is one of the factor that contributed to project delay. Most of the respondents replied that there is no gap regarding the experience of the contractor on project works and it is not among the major factor that contributed to project delay.

Table: 4.6.Consultantrelated cause of project Delay.

Variables		S. Disagree	Dis Agree	Neutral	Agree	Percent
Inadequate site inspection by the consultant.	Frequency	1	4	2	13	8
	Percent	3.6	14.3	7.1	46.4	28.6
	Valid %	3.6	14.3	7.1	46.4	28.6
Late in approving major change in scope of work	Frequency	1	4	2	8	13
	Percent	3.6	14.3	7.1	28.6	46.4
	Valid %	3.6	14.3	7.1	28.6	46.4
poor communication during designing stage	Frequency	1	3	-	10	14
	Percent	3.6	10.7	-	35.7	50
	Valid %	3.6	10.7	-	35.7	50

Source :Own survey, 2019.

Respondents were requested to provide their view to know whether or not there is inadequate site inspection by the consultant. 75% of the respondents agreed (46.4% agreed and 28.6% strongly agreed) and said that this issue one among the factors that contributed to project delay in the study area. 2 respondents representing 7.1% were neutral and indifferent on the issue. 1 and 4 respondents representing 3.6% and 14.3% respectively strongly disagreed and agreed respectively on the issue. One can conclude here that inadequate site inspection by the consultant I one among the major factor that contributed to project delay in the study area.

Most of the respondents that represent more 80% said that there is inadequate site inspection by the consultant which resulted in project implementation delay in the study area. It right to conclude from the respondent that inadequate site inspection by the consultant is among the factor that contributed to project implementation delay in the study area.

The respondents were also requested to provide their view on whether or not Late in approving major change in scope of work is among the factor that contributed to project implementation delay and 75% of the respondents agreed on the issue and said that Late in approving major change in scope of work is among the factor that contributed to project implementation delay.

2 respondents that represent 7.1% were neutral and indifferent on the issue. 1 and 4 respondents that represent 3.6% and 14.3% were strongly disagreed and agreed respectively. From it is right to conclude that there a gap with regard to approving major change in scope of work which contributed to the project implementation delay in the study area.

Further, the respondents were also requested to provide information regarding whether or not there is poor communication during designing stage which contributed to project delay in the study area. Most of the respondents were said that there is poor communication during designing stage which contributed to project implementation delay.

Table 4.7: External Factors Causing project Delay.

Variables		S. Disagree	Dis Agree	Neutral	Agree	S.agree
Price escalation	Frequency	1	2	-	10	15
	Percent	3.6	7.1	-	35.7	53.6
	Valid %	3.6	7.1	-	35.7	53.6
Shortage of construction materials in the market	Frequency	10	12	1	2	3
	Percent	35.7	42.9	3.6	7.1	10.7
	Valid %	35.7	42.9	3.6	7.1	10.7

Facing Unforeseen conditions	Frequency	3	2	-	11	12
	Percent	10.7	7.1	-	39.3	42.9
	Valid %	10.7	7.1	-	39.3	42.9
Political unrest and upheaval	Frequency	4	3	1	11	9
	Percent	14.3	10.7	3.6	39.3	32.1
	Valid %	14.3	10.7	3.6	39.3	32.1
weather conditions	Frequency	24	3	1	-	-
	Percent	85.7	10.7	3.6	-	-
	Valid %	85.7	10.7	3.6	-	-

Source :Own survey, 2019.

The respondents were also requested to provide their view on whether or not price escalation is among the factors that contributed to project implementation delay. 89.3 respondents were agreed (35.7 agreed and 53.6 strongly agreed) on the issue and replied that price escalation is among the major contributor of project implantation delay in the study area.

There is no respondent who was neutral on this issue. 1 and 2 respondents representing 3.6% and 7.1% strongly disagreed and disagreed respectively. From this it is right to infer that, price escalation is among the major contributor to project implementation delay in the study area.

The researcher also asked respondents whether Shortage of construction materials in the market is among factors that contributed to project implementation delay.78.5% of the respondents disagreed (32.1% strongly disagreed and 46.4% disagreed) and replied that Shortage of construction materials in the market is not among the factors that contributed to project implementation delay. Only 1 respondent is neutral and indifferent on the issue. 2 and 3 respondents representing 7.1% and 10.7% agreed and strongly disagreed respectively on the issue. From this response of respondents it is right to conclude that Shortage of construction materials in the market is not among factors that contributed to project implementation delay in the study area.

It can also be observed from the above table that 82.2 % of the respondents were agreed (39.3 agreed and 42.9 strongly agreed) and replied that Facing Unforeseen conditions is among the factors that contributed to project implementation delay in the study area. No respondent here was neutral on the issue. 3 and 2 respondents representing 10.7% and 7.1% strongly disagreed and disagreed respectively and said that the issue is not among the External Factors Causing project Delay in the study area. From this it is right to conclude that unforeseen conditions are among the factors that contributed to project implementation delay in the study area.

The respondents were also requested to provide their view regarding whether or not Political unrest and upheaval are among factors that contributed to project implementation delay in the study area. 4 and 3 respondents representing 14.4% and 10.7 strongly disagreed and agreed respectively and said Political unrest and upheaval is not among the factors that contributed to project implementation delay in the study area. 1 respondent is neutral on this issue. The remaining 11 and 9 respondents representing 39.3% and 32.1% strongly agreed and disagreed and said that Political unrest and upheaval was among the factors that contributed to project implementation delay. Here it is right for one to conclude that Political unrest and upheaval is among the external factor that contributed to project implementation delay.

The researcher also asked respondents whether or not weather conditions are among the external factors that contributed to project implementation delay in the study area. Most of the respondents were disagreed on the fact that weather conditions are among the factors that contributed to project implementation delay in the study area. More than 95% of the respondents were disagreed (85.7% strongly disagreed and 10.7% disagreed) and said that weather conditions was not among the factor that contributed project implementation delay in the study area. Only 1 respondent is neutral on this issue. There is no respondent agreed or strongly agreed on the fact that weather conditions are among the external factors that contributed to project implementation delay in the study area. It is correct and real to conclude that weather conditions are not among the factors that contributed to project implementation delay in the study area.

It can also be observed from the above table that more than 70% of the respondents said that Company did not involve employees in the program reviews.

4.5. The overall implementation practices.

Table4.8: Overall project implementation practices.

Variables		S. Disagree	Dis-agree	Neutral	Agree	S. Agree
Project cost was managed according to the budget.	Frequency	2	4	-	12	10
	Percent	7.1	14.3	-	42.9	35.7
	Valid %	7.1	14.3	-	42.9	35.7
Project schedule was maintained based on the project plan.	Frequency	17	7	1	3	-
	Percent	60.7	25	3.6	10.7	-
	Valid %	60.7	25	3.6	10.7	-
Project quality was maintained based on the project quality management plan.	Frequency	2	3	1	10	12
	Percent	7.1	10.7	3.6	35.7	42.9
	Valid %	7.1	10.7	3.6	35.7	42.9
Changes happened during the implementation of the project were handled According to project change management plan.	Frequency	9	12	1	4	2
	Percent	32.1	42.9	3.6	14.3	7.1
	Valid %	32.1	42.9	3.6	14.3	7.1
Project risks were managed based on the project risk management plan.	Frequency	12	8	2	4	2
	Percent	42.9	28.6	7.1	14.3	7.1
	Valid %	42.9	28.6	7.1	14.3	7.1
Conflicts and issues aroused during the implementation of the project resolved Based on the plan.	Frequency	8	14	-	4	2
	Percent	28.6	50	-	14.3	7.1
	Valid %	28.6	50	-	14.3	7.1
	Frequency	9	12	1	4	2

There is appropriate communication channels based on the project plan.	Percent	32.1	42.9	3.6	14.3	7.1
	Valid %	32.1	42.9	3.6	14.3	7.1
Proper documentation after the accomplishments of each project phase was Conducted.	Frequency	1	3	1	14	9
	Percent	3.6	10.7	3.6	50	32.1
	Valid %	3.6	10.7	3.6	50	32.1
Project Management problem at implementation stage	Frequency	1	4	2	11	10
	Percent	3.6	14.3	7.1	39.3	35.7
	Valid %	3.6	14.3	7.1	39.3	35.7

Source : Own survey, 2019.

With regard to project implementation practices the researcher asked the respondents whether or not Project cost was managed according to the budget. 78.6% of the respondents agreed (42.9% agreed and 35.7% strongly agreed respectively). No respondent here is neutral on the issue. 2 and 4 respondents representing 7.1% and 14.3% strongly disagreed and agreed respectively.

From the response of the respondents it is right to conclude that there is no gap regarding management of project cost according to budget.

The researcher also request respondents to provide their opinion regarding whether or not Project schedule was maintained based on the project plan. 80.7% of the respondents disagreed (60.7% strongly disagreed and 25% disagreed) and said that project schedule was not maintained based on the project plan. one respondent is neutral on the issue. 3 respondents representing 10.7 agreed with the fact that Project schedule was maintained based on the project plan. It is right to conclude from this that there is a gap regarding managing project schedule according to the plan.

The researcher also asked respondents whether or not Project quality was maintained based on the project quality management plan. 9 and 13 respondents representing 32.1% and 46.4% agreed and strongly disagreed respectively and said that Project quality was maintained based on the project quality management plan. 1 respondent that represent 3.6% was neutral and indifferent on the issue. 2 and 3 respondents representing 7.1% and 10.7% strongly disagreed and disagreed respectively and said that it is an issue among the factors that was contributed to project implementation delay in the study area.

From this it is right to conclude that project quality was maintained based on the project quality management plan and is not among the factors that contributed to project implementation delay in the study area.

It can also be observed from the above table that 75 % of the respondents were disagreed (32.1% strongly disagreed and 42.9% strongly disagreed and said that Changes happened during the implementation of the project were not handled According to project change management plan. 1 respondent that represent 3.6% was neutral on the issue. 4 and 2 respondents representing 14.3% and 7.1% were agreed and strongly disagreed on the issue and said that it is one among the factors that contributed to project implementation delay in the study area. From this it possible to conclude that Changes happened during the implementation of the project were not handled According to project change management plan which needs serious attention from the concerned party in the area.

The researcher also request respondents to provide their opinion regarding whether or not Project risks were managed based on the project risk management plan. 11 and 9 respondents representing 39.3% and 32.1% were strongly disagreed and agreed respectively and replied that Project risks were not managed according to project risk management plan. 2 respondents representing 7.1% were neutral on the issue. 4 and 2 respondents representing 14.3% and 7.1% respectively agreed and strongly agreed on the issue and said that Project risks were managed based on the project risk management plan.

Most the respondents that represent more than 70% said that Project risks were not managed based on the project risk management plan and is among the factors that contributed to project implementation delay in the study area.

The respondents were also requested to provide their view on whether or not Conflicts and issues aroused during the implementation of the project were resolved Based on the plan. 8 and 14 respondents representing 28.6% and 50% were strongly disagreed and disagreed respectively and said that Conflicts and issues aroused during the implementation of the project were not resolved Based on the plan.

No respondent is neutral on this issue. 4 and 2 respondents representing 14.3% and 7.1% were agreed and strongly disagreed respectively and said that it is among the factors that contributed to project implementation delay in the study area. From this it is right to conclude that Conflicts and issues aroused during the implementation of the project were not resolved Based on the plan which was among the contributor to public projects implementation delay in the study area.

The researcher also asked respondents whether or not there is appropriate communication channels based on the project plan. 9 and 12 respondents representing 32.1% and 42.9% were strongly disagreed and said that there is no appropriate communication channels based on the project plan which contributes a lot for gaps observed during project implementation practice. One respondent is neutral and indifferent on the

issue asked. 4 and 2 respondents that represent 14.3% and 7.1% agreed and strongly agreed respectively and said that the issue is one among problems during project implementation. From this it is right to infer that there a gap regarding appropriateness of communication channels according to the project plan.

The researcher also asked respondents whether or not Proper documentation after the accomplishments of each project phase was conducted. 1 and 3 respondents representing 3.6% and 10.7% respectively disagreed (3.6% strongly disagreed and 10.7% disagreed) on the fact that Proper documentation after the accomplishments of each project phase was conducted. 1 respondent was neutral and indifferent on the issue related documentation of projects works at each phases of projects. 82.1% of the respondents were agreed (50% agreed and 32.1% strongly agreed and said that there is no problem regarding documentation after the accomplishments of each project phase was conducted.

Most of the respondents believe and assure that there no problem regarding documentation after the accomplishments of each project phase was conducted regarding project managements practices financed by Dukem town municipality. It right and fair for the researcher to conclude here from the response of the respondent that there no problem regarding documentation after the accomplishments of each project phase was conducted regarding project managements practices financed by Dukem town municipality.

Finally the researcher asked the respondents whether or not there Project Management problem at implementation stage in the study area. 75% of the respondents were agreed (46.4 agreed and 28.6 strongly disagreed) and said that there is Project Management problem at implementation stage in the study area which needs attention of the concerned party to change the situation. 2 respondents representing 7.1% were neutral and indifferent on the issue. 2 and 3 respondents representing 7.1% and 10.7% were strongly disagreed and agreed respectively on the issue. Therefore, it is right for researcher to conclude here that there is a gap that needs corrective action regarding management of projects at implementation stages in the study area.

Chapter Five

Summary, Conclusion and Recommendations.

5.1. Introduction.

This chapter presents key summary, Conclusions and recommendations. The key findings developed from data analysis were presented. Based on the finding recommendation have been forwarded on the issue for concerned party. Finally, Conclusions of the entire study were presented.

5.2. Summary of the Major findings.

In line with its objectives the following findings have been developed from the study.

- ✓ The public projects undertaken by Dukem town administration were subjected to frequent changing requirements and specifications and there was management support problem.
- ✓ Public projects financed by Dukem town administration faced shortage of necessary features resources and unrealistic expectation of the project out is another feature of projects implemented in this study area.

- ✓ The Dukem town administration is in short of competent project team members with required technical competency for project implementation phase management.
- ✓ Public projects planned and implemented by Dukem town administration were characterized by dukem town administration were characterized by unrealistic project time frame (short implementation period was allotted), plan (scope) change by client or clients initiated variations and underestimation of project cost and complexity.
- ✓ The public projects undertaken in the study area were also subjected to lack of cooperation and insufficient communication among different project stake holder.
- ✓ Project delays were also the known circumstances regarding public project implementation in the study area. The major causes for the delay were related to incomplete requirements and specifications, changes in the scope of the projects, slowness in decision making process by clients, poor schedule management, late in approving major changes in scope of work and poor communication during designing stage, and price escalations.
- ✓ Poor site supervision, follow up and inspection from the concerned project stake holder and political unrest and upheaval is another factor responsible for project delay in the study area.
- ✓ Regarding overall implementation practices of public projects in the study area the collected showed that gaps with regard to efficiency and effectiveness of project implementation management practices.

5.3. Conclusion.

The summarized findings in the aforementioned section indicates certain facts with regard to objectives of the study. The major factors identified that hinder effective implementation of public projects in the study area were the frequent changing requirements and specifications, Professional Management support problem in implementation phase of projects, Shortage of resources, unrealistic project time frame, Absence of competency of project team members, plan (scope) change by clients or client initiated variations, underestimation of cost and complexity of projects and lack of cooperation and insufficient communication among different project stake holder.

Incomplete requirements and specifications and change in scope of the project were the major planning and scoping related causes of project implementation delay in the study area. The major

client related causes of project implementation delay in the study area were slowness in decision making process by clients, poor supervision, follow and inspection and poor professionals' management by promoters at implementation stage.

Poor site supervision and management by contractor, inaccurate cost estimation of project activity and poor schedule management were found to be the major contractor related causes of project implementation delay in the study area.

Inadequate site inspection by consultant, late in approving major change in scope of project work and poor communication during designing stage were the major consultant related causes of project delay. Price escalation, unforeseen conditions and political unrest and upheaval were the major external factors that caused project implementation delay in the study area.

One major objective of the study was to assess the reality of project implementation practice in the study area. Though Project cost was managed according to the budget, Project quality was maintained based on the project quality management plan and there is Proper documentation after the accomplishments of each project phase was conducted there is a gap regarding Project Management at implementation stage in general and specially there is a gap regarding project schedule management according to project plan, Management of Changes during the implementation of the project According to project change management plan, management of Project risks based on the project risk management plan, resolving Conflicts and issues aroused during the implementation of the project Based on the plan and appropriateness of communication channels based on the project plan.

5.4. Recommendations.

Based on the study findings and the above conclusions the following recommendation is forwarded for the concerned party in the study area.

- The Engineers and technical project officers in the area should work seriously on project planning and scoping in order to minimize problems of frequent changes in requirements and specifications. The Management body in the study area should seriously work on capacitating the skills of workers that work on project works in the area in order to improve their professional project management skill.
- Proper project scoping, site supervision and management, proper cost estimation of projects and management of projects according to the schedule needs serious attention from all project stake holders in the study area.
- The project coordinators and other concerned party in the study area is recommended to apply the Approval changes as immediate as possible is in order to reduce delays in project implementation.
- Appropriate communication and cooperation of different stake holders also needs serious attention of concerned party in the study area.
- Stake holders that participate in the implementation phase of projects are advised to implement the project work as planned standard as possible.

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