An Evaluation of Project Management Processes in Public Sector Organizations Like Public Works Department (PWD)

Dissertation submitted in the partial fulfillment of the Requirements for the Degree of Masters in Procurement and Supply Management

Submitted by

HAFSA RAHMAN MOURI
MPSM ID: 15282011
Batch: X

Masters in Procurement and Supply Management

BRAC Institute of Governance and Development

BRAC University

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MOSTA GAUSUL HOQUE

Supervisor

Abstract

Bangladesh is a developing country, where there is large number of development programs and where there is very little success achieved from these programs. Public Works Department (PWD), under the Ministry of Housing and Public Works, is the pioneer in construction arena of Bangladesh. Over about two centuries, PWD could successfully set the trend and standard in the country's infrastructure development. It plays a pivotal role in the implementation of government construction projects. However, using Public funds for Public Works is of great responsibility and accountability for the procurement officials of the government.

In public sector scenario of Bangladesh, most of the construction projects run behind the schedule. Projects without any delay are very rare to find. Delays in works results in increase of cost of the project in many ways. Delays also cause some other management and performance issues. In this scenario, it has become very important to find out the nature, pattern and causes of the delay, so that they can be solved or minimized in order to get efficient performance in the management of construction projects. To be specific, this study aims to find actual amount of time losses in some selected projects and to identify the causes behind it. It was found through the study that the amount of time and monetary loss is significant and there are many vital causes acting behind it. Some of the causes are like insufficient fund flow, improper distribution of fund, changing is scope of the work, change in price etc. But there is always some scope for change, steps like using software, planning tools, centralization and decentralization techniques, contingency plan etc were recommended to improve the scenario.

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Chapter 1: Research Objective

1.1 Introduction

In a country like Bangladesh, where there is large number of development programs and where there is very little success achieved from these programs, it is high time to investigate the core reasons for failure of these programs. Here most of the programs start with huge enthusiasm from all the key stakeholders. In the public projects, the government, the donors, the users all have high expectations from each of the projects but sometimes, either at the end of the project or at the long run, it is found that the project contributed very little to the deserved changes. Ultimately most of the programs and projects end with the failure or become succeeded with lot of difficulties and objections. There are different dimensions of program and project failures. Among all, time failure and cost failure are two very common ones. There are many reasons behind these types of project failure such as, poor project management, poor communication tools, lack of or weak project planning, poor definition of goal and objectives, poor risk management and so on. Poor project management and weak project planning are probably the two reasons that are accountable for maximum project failure and sufferings in Bangladesh especially in PWD.

Public Works Department (PWD), under the Ministry of Housing and Public Works, is the pioneer in construction arena of Bangladesh. Over about two centuries, PWD could successfully set the trend and standard in the country's infrastructure development. It plays a pivotal role in the implementation of government construction projects. Public works Department has highly qualified and experienced professionals forming a multi-disciplinary team of civil, electrical and mechanical engineers who work alongside architects from the Department of Architecture. Besides being the construction agency of the Government, it performs regulatory function in setting the pace and managing projects for the country's

construction industry under the close supervision of the Ministry of Housing and Public Works (http://www.pwd.gov.bd/) .

PWD executes numerous projects of Bangladesh government; many of them are really big. But it is a matter of regret that, most of these government projects are not finished within the projected time and budget. Time and budget extension is very common in public projects. Moreover, within the project time there is several change of design and definition or scope of the project. Very weak governance, indecisions, inability to execute plans, alleged indulgence of some in corruption, fund shortages, and donors' conditions etc affect progress of most of these projects. The core reason for this slow progress is lack of well planned management. It is expected that if all big projects have properly developed management plan, contingency plans for emergency situations, and risk mitigation plan, the rate of progression towards the expected outcomes will be rapid.

Statement of the Problem and Need for the Study

In public sector scenario of Bangladesh, most of the construction projects run behind the schedule. Projects without any delay are very rare to find. Delays in works results in increase of cost of the project in many ways. Delays also cause some other management and performance issues. In this scenario, it has become very important to find out the nature, pattern and causes of the delay, so that they can be solved or minimized in order to get efficient performance in the management of construction projects.

Objective of the study:

1. To find the actual percentage or amount of delay in different projects compared to their originally anticipated time.
2. To find the causes of this delay
3. To find the general consequences of the delay
4. To give some recommendation and / or suggestion about how to avoid the delays and time issues.

Organization of the Study

The organization of this study is summarized below:

i. Chapter 1 discusses about the background, rationale, and objectives of this study. It highlights the problem statement why the writer opts for this study.
ii. Chapter 2 describes the literature review of this study. The chapter in a nutshell tries to give a good picture of what project management is, how the project management in procurement is being practiced internationally, what are the benefits and challenges of formal project management, what are the scopes for improvement of the practice and so on.
iii. Chapter 3 describes the knowledge areas of project management more specifically.
iv. Chapter 4 describes the approach and methodology, data collection and sampling process.
v. Chapter 5 is a chapter outlining the data analysis, forming observations on what categories, types of observations, segregation of observations from various angles to establish hypothesis. It also focuses the trend analysis of observations to form opinion.
vi. Chapter 6 provides conclusion and recommendations of this study based on the analysis.
vii. This study also contains bibliography and annexes to support reference of the study material.

Chapter 2: Project & Project Management

An Overview of the Project Management

What Is A Project?

According to the Association for Project Management, projects are unique, transient endeavors undertaken to achieve a desired outcome.

Meredith and Mantel characterize projects, based on multiple factors. According to them a project is a specific finite task to be accomplished combined with seven factors common to projects: importance, performance, finite due date, interdependencies, uniqueness, resources and conflict (Meredith & Mantel, 2009).

According to Burke, a project is a group of activities that have to be performed in a logical sequence to meet preset objectives outlined by the client.

In short, a project has been defined as a temporary endeavor undertaken to create a unique product or service. Projects are different from business as usual activities by a number of ways.

1. Projects bring about change
2. Projects may offer investment opportunities
3. Projects have unknown elements, and therefore they create risk.

There are familiar policies, processes, procedures, or precedents in ‗business as usual activities‘ which may be followed. There are virtually no risk and the activities are not new but repeated.

What Is Project Management?

The Association for Project Management suggests that, project management is the process by which projects are defined, planned, monitored, controlled and delivered. Projects bring about change and project management is recognized as the most efficient way of bringing about that change.

A project is usually deemed to be a success if it achieves the objectives according to their acceptance criteria, within an agreed timescale and budget.

The core components of project management are:

- Defining the reason why a project is necessary;
- Capturing project requirements, specifying quality of the deliverables, estimating resources and timescales;
- Preparing a business case to justify the investment;
- Securing corporate agreement and funding;
- Developing and implementing a management plan for the project;
- Leading and motivating the project delivery team;
- Managing the risks, issues and changes on the project;
- Monitoring progress against plan;
- Managing the project budget;
- Maintaining communications with stakeholders and the project organization;
- Provider management;
- Closing the project in a controlled fashion when appropriate.

What Is a Project Management Life Cycle?

There are different phases in a project‘s lifecycle. There are different theories on project phases given by different authors. For example, Meredith and Mantel distinguish three phases of a typical project, a startup phase, a middle phase and an ending phase. They argued that in an initial startup phase, the project is just born. In a middle phase it achieves rapid progress and in an ending phase the progress slows down (Meredith & Mantel, 2009).

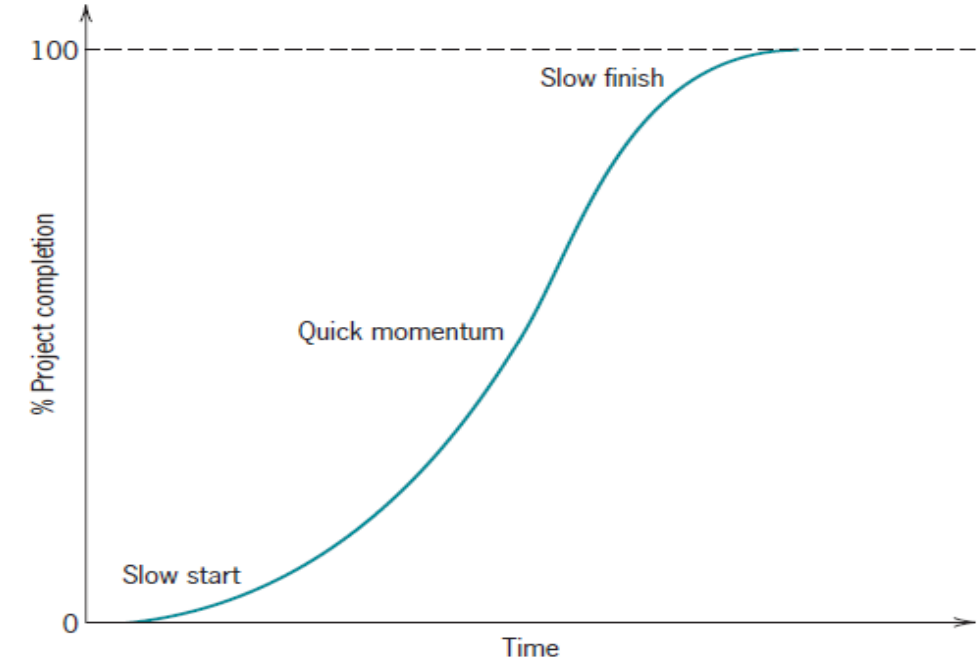

Figure 1: Project Management Lifecycle (Meredith & Mantel, 2009).

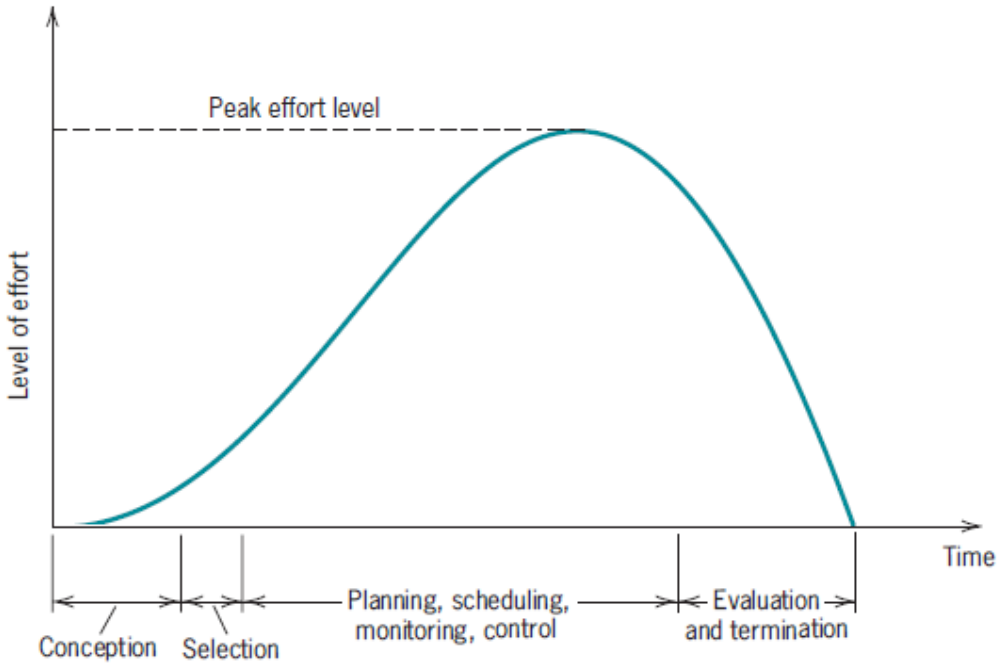

Figure 2: Time distribution of project effort (Meredith & Mantel, 2009).

Although this shape is not concrete and project lifecycle depends on many factors and vary from project to project, generally they remain within two or three typical shapes.

Maylor (2010) presents a different analysis of a project‘s lifecycle which involves four phases. Maylor‘s approach commonly known as Maylor‘s 4D. It includes the following phases.

Defining the project:

Key issues involved at this stage are the project and organizational strategy and goal definition. Fundamental questions involved in this stage are –what is to be done? and –why is it to be done? Conceptualization and analysis is the main purpose here. An explicit statement of need should be generated and what has to be provided to meet those needs should be identified at this stage (Maylor, 2010).

Designing the project:

Key issues involved at this stage are modelling and planning, estimating, resource analysis, conflict resolution and justification. Here the fundamental question would be –How will it be done? , –Who will be involved in each part? , and –When can it start and finish? . This stage should show how the needs identified in the defining stage will be met through the project activities. Financial costs and benefits of the project should be prepared and evaluated and the final and formal agreement should be made during this stage (Maylor, 2010).

Delivering or doing it:

The key issues involved here are the organization of the project, control, leadership, decision making and necessary problem solving. Here the key question may be, –How the project be managed on a day to day basis? This stage involves gathering the resources and assembling the project team, carrying out different activities, reaching to the completion and finally handing over the output of the project to the client or user (Maylor, 2010).

Developing the project:

Key issues involved at this stage are the assessment of processes and outcomes of the project, evaluation and possible changes for the future. –How can 5the process be continually improved? should be the prime question here. Outcome of the projects should be reviewed for all stakeholders, improvements to the procedures should be put in place, gaps in knowledge should be filled out and lessons for the future should be documented at this stage (Maylor, 2010).

Again Weiss and Wysocki describes a model which contains five stages as definition, planning, organizing, controlling and closing phases (CIPS study material, PROFEX Publishing Limited, 2012). This model is quite similar to the Maylor's 4D model except that it divides the delivering stage into two distinct phases as the organizing phase and the controlling phase.

Project management Phases

2.1.4.1. The Initiation Phase

A project should begin with a clear and unambiguous overview that encompasses three aspects, its objective, its scope and its strategy.

2.1.4.2 The Project Planning Phase

At the very initial stage the project plan will contain several errors, ambiguities and misunderstandings. In consequence it will usually need clarification with everyone concerned with the project to ensure that all are working with the same understanding. The outcome of this deliberation should be a written definition of what is required, by when; and this must be agreed by all involved (CIPS study material, PROFEX Publishing Limited, 2012).

The work on the project plan can be seen as the first stage of quality assurance since we are looking for and countering problems at the very foundation of the project. If we consider this perspective,preparing a project plan clearly requires a large amount of time. The plan may change with the progress of the project but deviations should be agreed rather than imposed (CIPS study material, PROFEX Publishing Limited, 2012).

The process of developing the project plan varies from organization to organization, but according to Meredith and Mantel (2009), any project plan must contain the following elements:

• **Overview:** Overview is a short summary of the objectives and scope of the project. It is directed to top management and contains a statement of the goals of the project, a brief explanation of their relationship to the firm‘s objectives, a description of the managerial structure that will be used for the project, and a list of the major milestones in the project schedule (Meredith & Mantel, 2009).

• **Objectives or Scope:** This contains a more detailed statement of the general goals noted in the overview section. The statement should include profit and competitive aims as well as technical goals.

• **General Approach:** This section describes both the managerial and the technical approaches to the work. The technical discussion describes the relationship of the project to available technologies. For example, it might note that this project is an extension of work done by the company for an earlier project. The subsection on the managerial approach takes note of any deviation from routine procedure—for instance, the use of subcontractors for some parts of the work (Meredith & Mantel, 2009).

• **Contractual Aspects**: This critical section of the plan includes a complete list and description of all reporting requirements, customer-supplied resources, liaison arrangements, advisory committees, project review and cancellation procedures, proprietary requirements, any specific management agreements (e.g., use of subcontractors), as well as the technical deliverables and their specifications, delivery schedules, and a specific procedure for changing any of the above. Meredith et al. (2000) also added that completeness is a necessity

in this section. If there is any doubt about whether an item should be included or not, the wise planner will include it (Meredith & Mantel, 2009).

• **Schedules:** This section outlines the various schedules and lists all milestone events. Each task is listed, and the estimated time for each task should be obtained from those who will do the work. The projected baseline schedule is constructed from these inputs. The responsible person or department head should sign off on the final, agreed on schedule (Meredith & Mantel, 2009).

• **Resources:** There are two primary aspects to this section. The first is the budget. Both capital and expense requirements are detailed by task, which makes this a *project budget.* One-time costs are separated from recurring project costs. Second, cost monitoring and control procedures should be described. In addition to the usual routine elements, the monitoring and control procedures must be designed to cover special resource requirements for the project, such as special machines, test equipment, laboratory usage or construction, logistics, field facilities and special materials (Meredith & Mantel, 2009).

• **Personnel:** This section lists the expected personnel requirements of the project. Special skills, types of training needed, possible recruiting problems, legal or policy restrictions on work force composition, and any other special requirements, such as security clearances, should be noted here. (This reference to –security□ includes the need to protect trade secrets and research targets from competitors as well as the need to protect the national security.) It is helpful to time-phase personnel needs to the project schedule. This makes clear when the various types of contributors are needed and in what numbers. These projections are an important element of the budget, so the personnel, schedule, and resources sections can be cross-checked with one another to ensure consistency (Meredith & Mantel, 2009).

• **Risk Management Plans:** This covers potential problems as well as potential lucky breaks that could affect the project. One or more issues such as subcontractor default, unexpected technical breakthroughs, strikes, hurricanes, new markets for our technology, tight deadlines and budgets, and sudden moves by a competitor are certain to occur—the only uncertainties are which, when, and their impact. Plans to deal with favorable or unfavorable contingencies

should be developed early in the project‘s life. No amount of current planning can solve the current crisis, but preplanning may avert or mitigate some. As Zwikael et al. (2007) report, in high-risk projects better project planning improved success on four measures: schedule overrun, cost overrun, technical performance, and customer satisfaction. They conclude that improving the project plan is a more effective risk management approach than using the usual risk management tools (Meredith & Mantel, 2009).

• **Evaluation Methods:** Every project should be evaluated against standards and by methods established at the project‘s inception, allowing for both the direct and ancillary goals of the project. This section contains a brief description of the procedure to be followed in monitoring, collecting, storing, and evaluating the history of the project (Meredith & Mantel, 2009).

These are the elements that constitute the project plan and are the basis for a more detailed planning of the budgets, schedules, work plan, and general management of the project. Once this basic plan is fully developed and approved, it is disseminated to all interested parties.

However, this formal planning process is required for relatively large projects that cannot be classified as ‒routine□ for the organization as the time, effort, and cost of the planning process described earlier is not justified for routine projects, for example, most plant or machine maintenance projects (CIPS study material, PROFEX Publishing Limited, 2012).

Project Organization and Execution Phase

It is said that Project Management is 20% planning and 80% tracking and control. Executing, monitoring and controlling project progress is important to detecting issues, problems and solutions early enough to quickly get the project back on schedule so the objectives are still met. While it is impossible to foresee and plan for every issue, project managers can regulate work as the project progresses, and still deliver a finished product that meets the objectives and requirements laid out in the initiation and planning phases. (Project management

methodology guidelines, 2010)

The emphasis of the Execution and Control Phase is to ensure that each deliverable achieves the desired results, in the designated period, within the designated cost, and using the specified allocated resources. To ensure the accomplishment of that goal, continuous supervision of the project is required. The project manager must ensure that all the plans leading up to this phase are in place, current and can be implemented as soon as the situation warrants (Project management methodology guidelines, 2010)

The main inputs of this phase are the Project Team, Project WBS, Communication Plan, Risk Management Plan, Organization Chart, Responsibility Matrix, Project Notebook, Issues/Action Item Log, Status Reports, Project Schedule etc. and the expected outputs at after this stage are the Current and Updated Project Schedule, Change Management, quality management, phase of sign etc. (Project management methodology guidelines, 2010)

After planning the project will need to be organized. The main activities at this stage is obtaining resources, recruiting project leader, recruiting project team, organizing the project team and assigning the work packages to the team and individuals. The deliverables obtained at this stage is criteria for success, work description, and work assignments (CIPS study material, PROFEX Publishing Limited, 2012).

At this stage a project structure should be fixed.

After fixing the project structure, the project plan and structure are put together. The project planning will have been completed, contracts with contractors will have been approved, project structures put in place and arrangements made for change control (CIPS study material, PROFEX Publishing Limited, 2012).

Project Control Phase

To ensure adequate control over project objectives some key features of the control system are needed to be decided. What factors will be controlled, at what point the control should be exerted, how the factors to be controlled will be measured, how much deviation will be

tolerated and how any deviation can be spotted before they occur etc. are needed to decide for a control system to work.(CIPS study material, PROFEX Publishing Limited, 2012).

Issues arise throughout the project that could cause change in scope to occur. Control of change is very important in overall project control system. Project managers should use the following process steps to control changes in scope (Project management methodology guidelines, 2010):

- Evaluate Scope Change Requests
- Assess Scope Change Impact
- Taking Corrective Action
- Review Status with Owner
- Update Project Plans and Schedule

To maintain quality:

What they are - The primary reason for a review is to detect defects as quickly and economically as possible. It is well documented that it is much faster to correct oversights earlier in development than later (Project management methodology guidelines, 2010).

What they are not - A performance appraisal. A place to bring out your ego.

When to have - Reviews should be conducted as soon as a significant deliverable requires a progress or completion review.

Who should attend - Key stakeholders who are involved in the life cycle of the product, e.g., requirement gatherers to operations people.

Who should not attend - Supervisors. This is not a meeting where politics should be a factor, nor is it to be construed of as a performance appraisal. Participants for each quality review should be free from personal criticism or career implications. If personal performance is an issue, it should be address privately between the individuals involved – not in the quality review session (Project management methodology guidelines, 2010).

Project documentation: Project documentation is required for executive meeting facilitation, monitorinf and controlling project risk, managing and resolving HR conflicts, adjusting schedule etc. (Project management methodology guidelines, 2010).

Project Close-Out Phase

During the Close-out Phase, all project activities are completed and all deliverables are finalized. The project sponsor reviews the project and all testing is completed. Final reviews and documentation are completed and the customer accepts the final project deliverable. The activities of this phase also ensure that best practices are captured and can be shared, and that continuous improvement on both team and personal levels is practiced (Project management methodology guidelines, 2010).

Inputs: Inputs of this phase are,

- Completed, up-to-date project schedules
- All project documentation
- Quality Checklists
- Phase Sign-offs, as appropriate

Outputs: Outputs of this phase is,

- Post Implementation Review
- Performance Evaluations
- Lessons Learned
- Project Evaluation
- Delivery of Final Documentation
- Project Sign-Off
- Customer Satisfaction Survey
- Administrative Closure
- Survey the Project Participants
- Conduct Post Implementation Review
- Develop Lessons Learned

- Communicating the success, both to the client and to the team
- Dissolving the team quickly and allocating them to fresh task
- Hold Project Celebration

Chapter 3: Knowledge Areas of Project Management

Project Integration Management

The *PMBOK® Guide* (PMI, 2013a) states: ―Project Integration Management includes the processes and activities to identify, define, combine, unify and coordinate the various processes and project management activities within the Project Management Process Groups (p. 63). This includes the integration of both the project management and change management processes and activities that are embedded within each of the Knowledge Areas.

Some of the areas under Project Integration Management that can be augmented by adopting a broader change management focus include:

Developing a project charter. This typically comes from the developed business case that is proposed for the project. This should also include incorporating an organizational case for change that goes beyond financial forecasts and includes the benefit of organizational changes. For example, if a component of the project's success depends on building new or reshaping existing elements of the business, such as new supply chains or upgrading key components, then those changes and their implications should be highlighted in the charter (Jarocki, 2014).

Developing the project management plan. This is the document that describes how the project will be executed, monitored and controlled. It integrates and consolidates all of the subsidiary plans which includes the change management elements such as (Jarocki, 2014) :

- A communications management plan
- A risk management plan (that includes organizational and user adoption risks)
- A stakeholder management plan (including the need to manage user adoption needs)
- A project sponsorship plan
- Activities required for assessing organizational readiness

Project Scope Management

The *PMBOK® Guide* (PMI, 2013a) states: ―Project Scope Management includes the processes required to ensure the project includes all the work required, and only the work required, to complete the project successfully‖ (p. 105). One of the key outputs of Project Scope Management is the scope management plan, which ―describes how the scope will be defined, developed, monitored, controlled, and verified‖ (p. 109). When defining and developing the project scope, it is important to include such elements as communication planning, competency development and ongoing stakeholder engagement (Jarocki, 2014).

When a project manager hands the change management portion of an initiative to a separate team who manages their own separate change plan, the project manager loses control of one of the most critical aspects of the project scope. By putting these elements in the project scope statement, it is much more likely these activities will be understood as being necessary for project success and that funding for them will be maintained (Jarocki, 2014).

Within Project Scope Management, there are other processes that also have significant change management elements:

Collect requirements is the process of determining, documenting and managing stakeholder needs and requirements to meet project objectives. It is a critical process when it comes to defining and managing scope. As the *PMBOK® Guide* (PMI, 2013a) states ―Requirements include the quantified and documented needs and expectations of the sponsor, customer and other stakeholders‖ (p. 112). Some of the needs and expectations of the stakeholders may include (Jarocki, 2014):

- Adequate and timely information
- Clear understanding regarding how their roles and responsibilities may be impacted
- Direct engagement and involvement in the change
- Visible support for the change from senior-level leadership
- Emotional support when experiencing change-induced stress
- Reward and recognition systems that reflect the expected new performance requirements

Alternative generation is a technique used to develop as many potential options as possible to identify different approaches to execute and perform the work of the project. Alternative generation is especially common in large and complex projects, and may even be a distinct project phase within a project lifecycle. Change management concerns should play a big role in alternative generation and selection. How various options might impact people in the organization should be a key decision criterion in determining the best option. For example, Option A might be a marginally better technical option than Option B; but, in assessing and considering the impacts that Option A will have on the organization and the workforce, the project team may conclude that Option B is more feasible and the better option because this path would lead to a quicker user adoption rate and a faster return on investment (Jarocki, 2014).

Change requests can come from anyone involved in—or impacted by—the project. The better the project team is in listening to and accommodating (when feasible) requests for changes, the less likely it will be that stakeholders resist the change. For instance, Davis (1989) and others have found that –perceived usefulness□ and –perceived ease of use□ are the two most important factors that facilitate user acceptance when it comes to the acceptance of new technology (Jarocki, 2014).

In most workplace settings, many employees expect their company will continue to change and evolve. Whether or not there is the expectation that change will occur in the workplace, change still needs to be managed and should be part of any scope management efforts (Jarocki, 2014).

Project Time Management

The *PMBOK® Guide* (PMI, 2013a) states: –Project Time Management includes the processes required to manage the timely completion of the project□ (p. 141). The schedule management plan is one of the primary outputs of this Knowledge Area.

Organizational culture can influence project schedule management. Some organizational cultures have a strict 9-5 workday mentality; others bond over late-night work sessions. To gain a better understanding of expectations, a cultural assessment of the organization will help develop a realistic project schedule. This approach is particularly important when projects require virtual team members to participate from different locations, in different time zones and even across different geographies (Jarocki, 2014).

Other processes and deliverables within this Knowledge Area that can influence—or be influenced by—change management activities include (Jarocki, 2014):

Setting milestones: Milestones are a significant point or event in the project. As such, project milestones often serve as triggers for certain change management activities, such as when to release key project announcements to stakeholders. Without knowing the project milestones, it is difficult to determine the optimal timing of certain change management events (Jarocki, 2014).

Determining project task dependencies helps to craft an accurate project schedule. There are many key project activities, such as deployment, that are dependent upon the organization first being ready to accept the change (Jarocki, 2014).

Establishing activity resources and duration helps identify the types and quantities of resources required for each activity in a work package. This includes such activities as training, which can be resource and time intensive (Jarocki, 2014).

Organizational readiness also impacts the project schedule. Organizational readiness generally refers to the organization‘s ability to accept and utilize the final outputs of a project so that they can be adopted by the workforce and utilized to create business value. To assess this, a change or organizational readiness assessment is usually conducted at a set point prior to deployment (Jarocki, 2014). If the organization is not ready to embrace the change due to a lack of understanding, motivation, competency or some other criteria, then the deployment should be delayed while the organization becomes more thoroughly prepared (Combe, 2014).

Project Cost Management

The *PMBOK® Guide* (PMI, 2013a) states: ―Project Cost Management includes the processes involved in planning, estimating, budgeting, financing, funding, managing and controlling costs so that the project can be complete within the approved budget (p. 193).

Key activities associated with this knowledge area include (Jarocki, 2014):

Estimate costs/determine budget. Project costs should factor in expenditures associated with organizational readiness and change adoption activities. Certain project activities that help facilitate organizational readiness, such as having a robust competency development and training plan, can sometimes make up a significant portion of the project budget (Jarocki, 2014).

Control costs. When change management activities are separated out as something external to project planning and execution activities, they often fall victim to ―cost trade-off decisions. For instance, if the project team is behind schedule and more resources need to be applied to hit key milestone dates, funding for certain change management activities such as preparing the organization for change is likely to suffer. If the project fails, there will be no resulting organizational change. Thus, the need to prepare the organization for change becomes unnecessary (Jarocki, 2014).

Project Quality Management

The *PMBOK® Guide* (PMI, 2013a) states: ―Project Quality Management includes the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken (p. 227).

Project team members, whose attention is divided between project deadlines, long hours and rapidly shifting requirements, are often a poor judge of the quality of their work. This is why engaging stakeholders, who can be more objective, is so critical (Jarocki, 2014).

Stakeholders, especially those stakeholders who will be impacted by the change, are in many ways –customers of the project. The International Organization for Standardization quality standards recognizes the importance of customer satisfaction (ISO, 2014). The more you can measure and address customer satisfaction concerns throughout the project lifecycle, the less likely there will be resistance to the changes that the project drives into the business (Jarocki, 2014).

Quality metrics are typically utilized to describe and measure a project or product attribute. However, with an integrated approach, the concept of quality metrics can be expanded to also include stakeholder satisfaction metrics in such areas as (Jarocki, 2014):

- Satisfaction with the amount of information they are receiving about the project
- Level of support for the project (typically measured with a stakeholder analysis assessment)
- User adoption rates
- Training plan effectiveness
- Level of self-sufficiency (for example, number of calls into the support desk for an IT project)

Gathering data on the above can help evaluate and improve on communications plans, training plans, user adoption strategies and, ultimately, the project management plan itself (Jarocki, 2014).

Project Human Resource Management

The *PMBOK® Guide* (PMI, 2013a) states: –Project Human Resource Management includes the processes that organize, manage, and lead the project team (p. 255). This includes identifying project roles and reporting relationships, and has many important implications for change management.

While it is recommended change management activities be seamlessly integrated into the overall project management plan, this does not mean that there should not be specialized change management expertise within the project team. Individuals with that expertise provide expert judgment and augment project management practices by adding a human resource perspective to project activities and tasks(Jarocki, 2014).

Key activities associated with this knowledge area include (Jarocki, 2014):

Acquiring the project team. Avoid using a packaged approach that might not be aligned with specific project needs and objectives.

Developing and managing project teams.

Developing and managing project sponsorship.

Project Communications Management

The *PMBOK® Guide* (PMI, 2013a) states: ‒Project Communications Management includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring and the ultimate disposition of project information (p. 287). Project communications generally fall into two categories:

Internal project communications, where communication activities center on project team members, subject matter experts and other project contributors. Activities typically involve:

- The creation and distribution of project work-related information (i.e., project orientation packages, documentation of roles and responsibilities, communication of key project-related decisions, etc.)
- The collection, storage and retrieval of project documentation (also referred to as Project Information Management)
- Project performance reporting (i.e., status reports, forecasts, project metrics, etc.)

- Maintaining the risk register and issue log

External project communications, where information is crafted and communicated to those external to the immediate project team. Activities typically include:

- The creation and distribution of messages and collateral that helps to build awareness, understanding, knowledge and motivation
- Project updates that are relevant to those outside of the immediate project team
- The creation and execution of communication events (i.e., town hall meetings or –lunch-and-learn□ events)

Key activities associated with this knowledge area include:

. **Communications management plan –** Section 10.1.3.1 of the *PMBOK® Guide* (PMI, 2013a) provides a list of 14 elements included in a comprehensive communications management plan from format, content and detail to timeframe and frequency, to methods for updating and refining the communications management plan. By using the good practices of the *PMBOK® Guide* (PMI, 2013a), communications team members can be assured they will be provided robust guidance on all the elements they need to craft a competent and comprehensive communications management plan.

. **Project document updates** include feedback from stakeholders where stakeholders' concerns regarding project operations is captured and used to modify or improve project performance. This is again why communication needs to be more than simply communicating project benefits to stakeholders. When communication is two-way and regular communication feedback loops are utilized, both the project team and project stakeholders will benefit (Jarocki, 2014).

. **Control communication** which –is the process of monitoring and controlling communications throughout the entire project life cycle to ensure the information needs of the project stakeholders are met□ (PMI, 2013a, p. 303). During this process, it is important that communication is open and transparent with all stakeholders, regardless of where they may sit in the organizational hierarchy. The use of feedback loops will again provide the

necessary opportunities to interact with stakeholders and remove any potential barriers to achieving clear and effective communications (Jarocki, 2014).

Project Risk Management

The *PMBOK® Guide* (PMI, 2013a) states: ―Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project (p. 309).

In keeping with the concept of having an integrated, unified approach between project and change management, it makes little sense to have one risk management plan for technical related risks and a separate risk registry or risk management plan for people and change related risks. Organizational risks that may have an impact on organizational adoption and utilization should also be considered as part of any project risk management process (Jarocki, 2014).

Key activities associated with this knowledge area include (Jarocki, 2014):

Identify risks. By making organization- and people-related risks part of the official project risk registry, change management-related risks gain greater legitimacy and visibility than they otherwise would have if they belonged to a siloed change management team. The identification of organizational and people-related risk will be greatly enhanced by the engagement of stakeholders throughout the project lifecycle. Stakeholders‘ concerns, needs, anxieties, etc. should be interpreted as risks that can derail the attainment of project objectives and value realization. Some example of organizational change management related risks include:

- Lack of middle management support that can make project objectives difficult to achieve.

- The easy availability of workarounds, which may tempt users to circumvent the new processes and results in a lack of adoption and an unattractive project return on investment.
- Lack of active, visible sponsorship that may give the organization the impression that this initiative does not have the full support of leadership; thus, it may be more difficult to impress upon the organization‘s staff the importance of this change.
- Cost-cutting measures that reduce or eliminate the change management activities in the project plan.

Plan risk responses and control risks. In planning the appropriate risk responses to organizational change management-related risks, it is important to draw on the competencies within the team and utilize the recommendations of expert judgment. Developing risk responses and controlling risks often require iterative stakeholder engagement sessions. Once assessed, various interventions can be tried and results evaluated.

Project Procurement Management

The *PMBOK® Guide* (PMI, 2013a) states: ―Project Procurement Management includes the processes necessary to purchase or acquire products, services or results needed from outside the project team (p. 355). For projects that require procuring goods, services or resources from suppliers or vendors outside of the project, change management perspectives should be incorporated into the vendor evaluation process. This is important whether a supplier or vendor provides the organization with new goods (such as new technology that can subsequently impact stakeholders in the organization) or new services and personnel resources (in which case an organization should assess their own capability and readiness to absorb the new knowledge, expertise and capabilities a vendor will be introducing to the organization). Key activities associated with this knowledge area include (Jarocki, 2014):

Plan procurements. Change management needs and concerns should be incorporated into all relevant requests for proposal (RFP) processes. For example, when developing an RFP for a new software system, questions for the vendor should not just focus on technical

capability, but also on how its technology might impact stakeholders and the organization. Some change management related questions that might be asked include (Jarocki, 2014):

- What are the organizational impacts of new software?
- Have customers of your products ever had to deal with issues around organizational resistance or end-user adoption? If so, how was this dealt with?
- What kind of support does your company provide in terms of communication and training when conducting a large-scale deployment?

By gaining a better understanding of the potential organizational impacts and user adoption challenges during the RFP process, a more thorough evaluation of organizational fit can be made. An integrated procurement approach will also allow team members to assess and plan for potential user adoption challenges that may manifest later in the project lifecycle (Jarocki, 2014).

Control procurements. –Control Procurements is the process of managing procurement relationships, monitoring contract performance, and making changes and corrections to contracts as appropriate (PMI, 2013a, p. 379). However, when procuring services and/or resource personnel, it is important to remember suppliers and vendors often introduce new processes, knowledge and expertise into the organization. If the organization is to benefit, then it needs to be prepared to accept and utilize the change that will be introduced by the supplier or vendor (Jarocki, 2014).

Project Stakeholder Management

The *PMBOK® Guide* (PMI, 2013a) states: –Project Stakeholder Management includes the processes required to identify the people, groups or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution (p. 391). Stakeholder Management has been part of the

PMBOK® Guide for several years; but the need to place more emphasis on its importance and value has been highlighted as a distinct Knowledge Area in the fifth edition.

The fifth edition goes on to state: ―Stakeholder satisfaction should be managed as a key project objective‖ and ―[t]he ability of the project manager to correctly identify and manage these stakeholders in an appropriate manner can mean the difference between success and failure‖ (p. 391).

Key activities associated with this knowledge area include (Jarocki, 2014):

Identify stakeholders. Stakeholder identification is a critical first step to developing an effective stakeholder management plan. Since ―[a] stakeholder is an individual, group, or organization who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project‖ (PMI, 2013a, p. 30), it is helpful to further clarify the different types of stakeholder groups and their relationship with the project.

In *The Next Evolution—Enhancing and Unifying Project and Change Management* (Jarocki, 2011), stakeholders are categorized as having one of three types of associations with the project. In order for organizational adoption to occur (which is a prerequisite to value creation), adoption must first occur at each tier starting with the top tier and cascading downwards (Jarocki, 2014).

Tier 1: Project decision makers are the stakeholders who are responsible for funding and providing the material support for the project. Though other stakeholders have influence on the ultimate success of the project, Tier 1 stakeholders essentially have go/no-go authority, especially when it comes to project funding. If these stakeholders do not buy into the vision, mission, purpose and costs associated with the project, it is unlikely the project will proceed and thus project-driven change will not be introduced into the organization (Jarocki, 2014).

Tier 2: Project contributors/collaborators are stakeholders who are responsible for providing the necessary input and support for developing a well-planned and competently executed project. This group would include project team members, subject matter experts and may also include peripheral project resources such as corporate communications, legal, procurement, human resources, help desk/user support and corporate standards departments.

Unless project contributors and collaborators have bought into their role and are willing to expend the time and energy to make the project a success, the project will suffer. This will put the project at even greater risk of being rejected by the organization (Jarocki, 2014).

Tier 3: Recipients are stakeholders who are responsible for utilizing and creating value from the project output. This group may include employees, end users and customers. Unless their needs and expectations are proactively identified and addressed, there is a very high chance that the necessary motivational and competency levels will not be achieved and that minimal value will be realized (Jarocki, 2014).

Stakeholder analysis. A stakeholder analysis (sometimes referred to as a stakeholder assessment) is often a prerequisite to developing a stakeholder management plan. A –Stakeholder Analysis is a technique of systematically gathering and analysing quantitative and qualitative information to determine whose interests should be taken into account throughout the project (PMI, 2013a, p. 395). When assessing stakeholders, it is important to keep in mind those who can support or undermine the project, what their level of influence may be relative to their peers, who might need to be managed closely as opposed to simply be kept informed, etc. Stakeholder analysis can often provide useful information when it comes to understanding the political landscape and can help with not only facilitating change adoption, but on maintaining project funding and support throughout the project lifecycle (Jarocki, 2014).

Plan stakeholder management. A strong stakeholder management plan will account for the needs and expectations of all three of these stakeholder groups, being mindful of whose needs andexpectations are most prominent at each particular phase of the project. For instance, in the beginning of a project lifecycle, providing a strong business case and rationale to those holding the project purse strings will result in continued funding of the project and assistance in securing theproper resources. This senior-level sponsorship and commitment will provide incentive for other stakeholders and corporate departments to provide the necessary inputs to craft a relevant, value-added solution and quality execution, and organizational change readiness process. This will make for an easier change for

employees and end users to accept and utilize in order to create value for the organization (Jarocki, 2014).

People can make or break project success. Having a comprehensive stakeholder map that is integrated with project activities throughout the project lifecycle is essential if project objectives and organizational value is to be achieved (Jarocki, 2014).

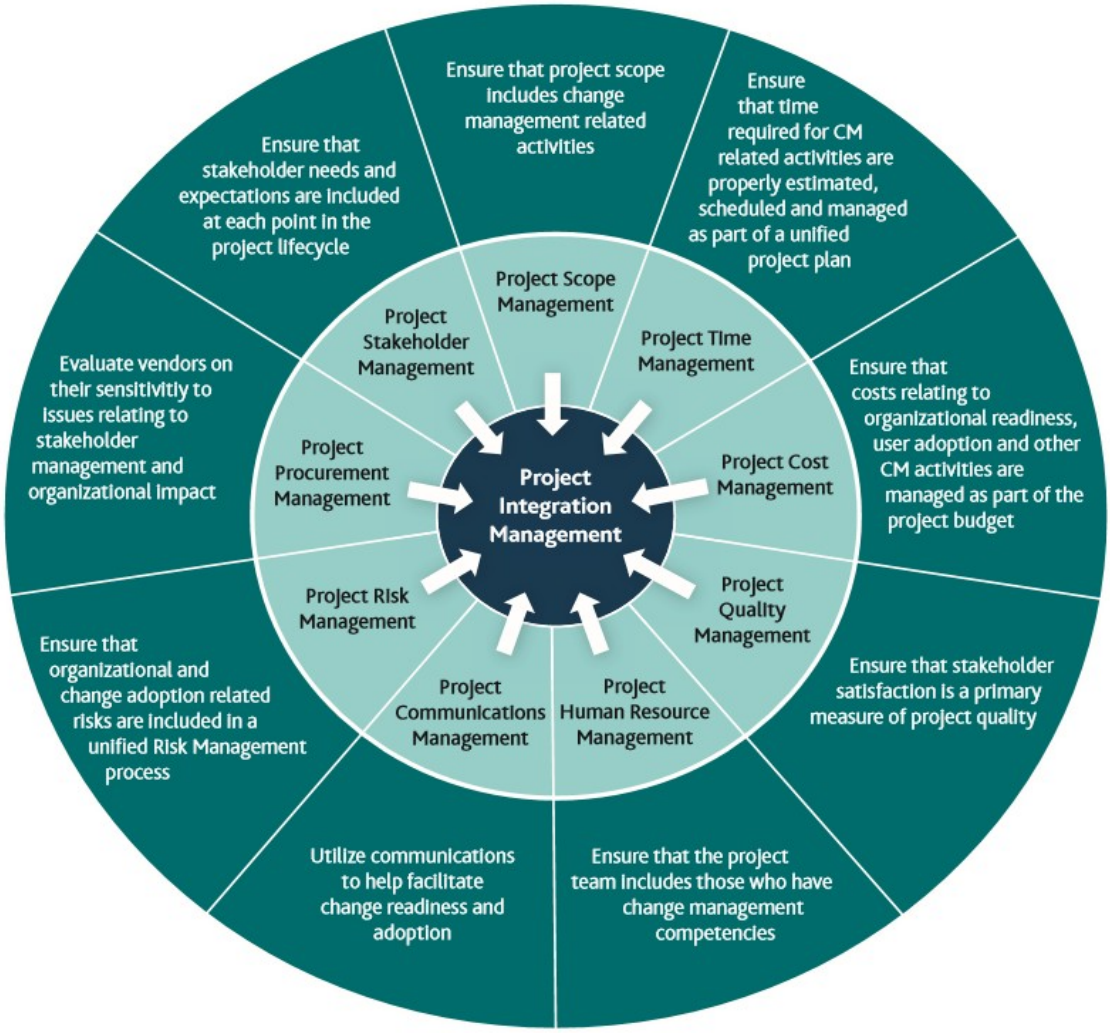

Figure 3: Knowledge areas of project management and their functions (Jarocki, 2014).

Chapter 4: Evaluation of Time Management Processes

Evaluation Objective

The objective of this evaluation is to

1. To find the actual percentage or amount of delay by analyzing the data of selected projects.
2. To find the causes of this delay.
3. To find the general consequences of this delay.
4. To find the actual percentage or amount of cost deviation of those projects.

Work Plan and Methodology

To perform the study only secondary data is used. All data are collected from PWD‘s project divisions and circles. Respective Executive Engineers, Sub-Divisional Engineers and Assistant Engineers of PWD are consulted. All the data collected is analyzed using Excel. Depending on this analysis effectiveness of time management processes in PWD is measured..

The work stages include:

1. Meeting the supervisor and preparation of research plan.
2. Reviewing the existing literature on project management.
3. Consulting with key PWD officials.
4. Collecting data from different divisions.
5. Analyzing the gathered data manually using software (Excel)
6. Writing the complete report showing the results and recommendations.
7. Submission of the report

Final submission after correction

Data Collection Methods and Instruments

Data is collected manually from different project divisions and circles of PWD. Information is gathered by elaborately studying Development Project Proposals (DPPs) and respective Project Completion Report (PCR) of the selected projects. Projects are selected after consulting with the Executive, Sub Divisional and other Engineers concerned with the planning and implementation of those projects. When selecting projects care was taken so that the samples represent quite a good span of budget limit and time duration. All the data collected are random but represent the general trend of project performance in public sector of Bangladesh.

Selection of Projects

Six projects were selected from different categories of cost and time duration to represent a fair distribution along the span. These projects are of different ministry‘s such as Ministry of Jute & Textile, Ministry of Social Affairs, s’elpoeP fo .cte sriaffA emoH fo yrtsiniM dna Republic of Bangladesh.

Chapter 5: Results and Discussions

Description of the Sample

Six projects were selected from different categories of cost and time duration to represent a fair distribution along the span. These projects are of different ministry's such as Ministry of Jute & Textile, Ministry of Social Affairs, s'elpoeP fo .cte sriaffA emoH fo yrtsiniM dna Republic of Bangladesh.

Project 1:

Name: Bangabandhu Textile Engineering College at kalihati in the district of Tangail.
Adminstrative ministry/ division: Ministry of Jute & Textile
Executing Agency: P.W.D. Division, Tangail
Location of the **P**roject: kalihati, Tangail

Project 2:

Name: eht rof noisiviD xis ni retnec gniniarT lanoitacoV.soN)xiS(06 fo tnemhsilbatsE ta)eno(01 slriG dna syoB elbasiD dna nahprOP.ilahkauta
A fo yrtsiniM :noisivid /yrtsinim evitartsnimdSocial Affairs
:ycnegA gnitucexEDepartment of Social Services and PWD
:tcejorp eht fo noitacoLAt Patuakhali near Sharkari Shishu Bhaban

Project 3:

Name: tcirtsiD rupizaG rednu rupmihsaK ta liaJ lartneC akahD fo noitcurtsnoC
A fo yrtsiniM :noisivid /yrtsinim evitartsnimdHome Affairs
:ycnegA gnitucexEDirectorate of prisons and PWD
:tcejorp eht fo noitacoLAt Gazipur

Project 4:

Name: liviC dna ecivreS eriF detadipaliD dna dlO 54 fo noitcurtsnoc-eR dna noitcurtsnoC noitatS ecnefeD
fo yrtsiniM :noisivid /yrtsinim evitartsnimdAHome Affairs
:ycnegA gnitucexEFire Service and Civil Defense Directorate and PWD
:tcejorp eht fo noitacoLAt 54 different places

Project 5:

Name: .tnemtrapeD eciloP rof nalp epyT ni sgnidliuB anahT detadipaliD 50 fo noitcurtsnoC
fo yrtsiniM :noisivid /yrtsinim evitartsnimdAHome Affairs
:ycnegA gnitucexEBangladesh Police Department and PWD
:tcejorp eht fo noitacoLAt 540 different places

Project 6:

Name: Establishment of Fire Service & Civil Defense Station at 76 Important Upazila Sadar/Places of the Country
fo yrtsiniM :noisivid /yrtsinim evitartsnimdAHome Affairs
:ycnegA gnitucexEFire Service and Civil Defense Directorate and PWD
:tcejorp eht fo noitacoLAt 76 different places

Data Analysis

All data are read and examined manually. As only six sample data were used, no data analyzing software was used to analyze the data.

Results

Time overrun of the projects:

Ineffective project management has direct impact on time. The six projects have different time span and have different percentage of time overrun.

Table 1: Time overrun of different projects

Sample Project	**Time overrun %**
Project 1	0
Project 2	167
Project 3	114
Project 4	33
Project 5	20
Project 6	240

In some cases the percentage of time overrun is quite alarming. Three projects out of the six required double or triple time to complete that was actually anticipated at the beginning.

Cost overrun of the examined projects:

The projects have different budget limit and different amount of cost overrun.

Table 2: Cost overrun of different projects

Sample Project	**Cost overrun %**
Project 1	100
Project 2	13.27
Project 3	40
Project 4	0
Project 5	40
Project 6	92

Inefficient project management also has a direct impact on cost of the project. Bad management increases the cost in different ways. Although cost is not the main concern area of this study extended time has huge impact in extending cost.

Relation between cost of project and time overrun:

A fixed or defined relationship between the budget or cost of the project or in other words the size of the project and time overrun could not be established as the sample size was very small. However some random trend can be seen in the data pattern.

Table 3: Relationship between time overrun and cost of the projects

Sample Project	Cost of the project	Time overrun %
Project 1	4971.72	0
Project 2	936.38	167
Project 3	18121.27	114
Project 4	3006.66	33
Project 5	12562.33	20
Project 6	28171.97	240

The most overrun in time is observed at project no 5 which is 240%. Also it is an umbrella project and the most expensive one among the six. Clearly as large as is the project the management of it becomes complicated and gets harder. Also it is difficult to manage 76 centers simultaneously from one center if you have lack of knowledge in this area. Failure in proper management results in such big amount of time overrun.

The lowest time overrun is 0% in case of project 1. It is a single centered project and of medium budget among the samples. This is the only project among the samples that ended on due time. Special care must have been taken to manage the project properly so that it does not exceed the anticipated time limit.

Similarly, attempt could be made to establish a relationship between the percentages of cost deviation and time overrun for those projects. But again because of the sample size a concrete conclusion couldn‘t be made.

Table 4: Relationship between time overrun and cost deviation

Sample Project	Cost deviation %	Time overrun %
Project 1	100	0
Project 2	13.27	167
Project 3	40	114
Project 4	0	33
Project 5	40	20
Project 6	92	240

Here, it can be seen that the highest cost deviation occurred at the lowest time overrun. Though in general concept time overrun in turn should result in higher cost, there may lot other factors that are involved in practical situation which may alter the result. Also, there is the theory of Iron Triangle, in which we see that additional resources may need to be deployed to complete the project in time, specially towards its end.

Highest time overrun occurred in case of project 6, where cost overrun is 92%, which is 2nd maximum. This clearly explains that time overrun as high as 240%, results in such percentage of cost deviation.

In case of project 3 & project 5, same ratio of cost daviation occurred but at a different percentage of time overrun. In case of project 3 time overrun is much more higher than in project 5. The reason may be is that, project 3 is a large project compared to project 5 and it was basically a 7 year project which took more than double time to complete.

Causes of time failure:

Analyzing the collected data the following causes of delay were found:

1. **Non availability of land**

   Non availability of land causes delay at very initial stage of project implimentation. Specially in case of umbrella projects delay in land acquisition at one center may cause the whole project to suffer.

2. **Insufficient fund flow**

   Insufficient fund flow is one of the major causes of delay. Due to resource constraint required fund is not available in most cases according to the project plan. Wait for fund is most common matter in Bangladesh government sector.

3. **Increase and decrease in construction and land cost**

   Generally, a construction project lasts for several years. During this project period construction cost and land cost may increase. Increased cost results in extention of project period as the whole project needed to be revised then.

4. **Due to site condition and location of the center cost of some center, like centers in hilly areas attracts more cost and time.**

   If any site is located in difficult area, such as hilly area or watery area it will require more cost and time to complete the project.

5. **Increase in price of construction material or hence change in schedule of rate.**

   Price of construction material may change over the project period and hence schedule of rate of PWD may also change. Again these changes result in time extension as the whole project will need to be revised.

6. **Dropping physical work at some station**

   Again the project proforma will need to be revised.

7. **Non availability of fund in proper time**

   If the fund is not available at the right or anticipated time the project work will be delayed.

8. **Change in scope of the work**

   If scope of the work changes the project plan will need to be revised, hence required time will increase.

Chapter 6: Summary and Recommendations

Summary

As efficient project management system is vital for achieving the objectives of a project, public sector construction projects require close supervision and intense management. From initiation or planning to the closure of the project, all of the ten basic functions or activities should be properly managed in order the project to be successful. Special emphasize should be given on time management as time overrun is the prime concern for project performance in context of Bangladesh.

The research was aimed to identify the current practice of time and cost overrun in present procurement and project management activity in PWD, and future scopes for improvement of this process. From all the data analysis and results it is evident that most of the PWD projects have to suffer a lot as the amount of time lags occur in practice is very much significant. There are various reasons for which these time lags occur. However, a good project management system and a effective project planning can reduce the time overrun and other adverse effects aroused by it significantly.

Limitations:

Due to time constraint and other unavoidable reasons, there were certain limitations of the study.

- The study has a small sample size compared to the numerous numbers of projects performed by PWD. Data collection of this huge amount of project is difficult; lack of proper documentation makes it harder.
- The study is based mainly on actual project related information. No survey or primary data collection method was adopted.

- As the sample size is small it is hard to arrive at a concrete conclusion or solution from the study.
- The study and analysis is done based only on some cost and time related data. In practice numerous factors and manual errors may exist that may affect the time and cost related result.

However, the research has future scopes for further work on project performance of PWD with more specific parameters.

Challenges:

Major challenges of effective project management in PWD identified during the study are, non availability of land at the right time, insufficient fund flow, increase and decrease in land and material cost, change of PWD schedule of rates, tough site condition, non availability of fund at the right time, changing scope of the work at the middle of the project, lack of use of management software, lack of knowledge about efficient project management, lack of proper training on management, lack of preparation for emergency situation, lack of contingency plan, centralized financial and administrative power, lack of use of technology and lack of team work etc. One of the major challenges is the lack of contingency plan in PWD implemented projects which can result in a disastrous situation if any emergency situation arises.

Recommendations

Based on the analysis of the collected information and on international practice, some practical measures are recommended for better project management system in Bangladesh:

- There are many internationally adopted and recognized software of project planning and project management. To reduce the complexity and hazards of manual project planning and management Bangladesh need to adopt these softwares in practice too.
- PWD should extensively use advanced planning tools such as, critical path analysis (CPA), Program analysis and review technique (PERT), Graphical evaluation and review technique (GERT), Gantt charts etc.
- All engineers, contractors and managers should be trained properly and regularly about the project planning and management.
- PWD should gradually decrease the amount of advanced work to balance the scores. Advance work makes it difficult to follow the project management steps.
- A certain amount of budget and other preparation should be maintained for emergency work so that such situations do not destroy the project plan by making delay to the regular works.
- Motivation and will power are essential tools to ensure best practice in project management of public sector.
- Increasing delegation of financial and administrative power to lower authority such as field level can make the project management process smoother. In that case special care should be taken to ensure the accountability of regarding officers.
- Integration of small amount works to a large amount of work and disintegration of a large amount of work to small amounts, where appropriate, can make the management process easier.
- Centralization and decentralization of work, where required, can make the project management process efficient. Decentralization of management power and authority can be helpful in case of umbrella projects. Again if the umbrella project is too big and contains a large number of sites, decentralization of management power will make the implementation process more haphazard. Centralization and decentralization both have their own pros and cons and selection of any of the system should be made carefully depending on the background scenario.
- Every project should have a back up or contingency plan in case any emergency situation arrives or due to change in any important parameter it is not possible stick to the plan A.

- Making the best use of technology is necessary to make the project management process smooth.
- Team working is the best way to success.

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Appendix

PROJECTS:

Project 1:

Name: Bangabandhu Textile Engineering College at kalihati in the district of Tangail.

Adminstrativeministry/ division: Ministry of Jute & Textile

Executing Agency: P.W.D. Division, Tangail

Location of the Project: kalihati, Tangail

Implementation Period:

Date of commencement:

Original: 03/01/2011

Actual: 03/01/2011

Date of completion:

Original: 30/06/2014

Actual: 30/06/2014

Time overrun % of original time: 0%

Cost:

Original: 2840 lakh Taka

Latest revise: 4976 lakh Taka

Actual expenditure: 4971.72 lakh Taka

Cost overrun % of original cost: 100%

Project 2:

Name: Establishment of 06(Six) Nos. Vocational Training center in six Division for the Orphan and Disable Boys and Girls 01(one) at Patuakhali.

Adminstrative ministry/ division: Ministry of Social Affairs

Executing Agency: Department of Social Services and PWD

Location of the project: At Patuakhali near SharkariShishuBhaban

Implementation Period:

Date of commencement:

Original: July 2005

Latest revise: January 2006

Actual: January 2006

Date of completion

Original: June 2008

Latest revised: June 2011

Actual: June 2013

Time overrun % of original time:167%

Cost:

Original: 1082.16 Lakh Taka

Latest revise: 978.63 lakh Taka

Actual expenditure: 936.38 lakh Taka

cost overrun % of original cost: (-) 13.27%. Tk. 145.78lakh saved.

Project 3:

Name: Construction of Dhaka Central Jail at Kashimpur under Gazipur District

Adminstrative ministry/ division: Ministry of Home Affairs

Executing Agency: Directorate of prisons and PWD

Location of the project: At Gazipur

Implementation Period:

Date of commencement:

Original: July1995

Latest revise: July1995

Actual: July1995

Date of completion

Original: June 2002

Latest revised: June 2010

Actual: June 2010

Time overrun % of original time: 114%

Cost:

Original: 12941.56 Lakh Taka

Latest revise: 18121.27 lakh Taka

Actual expenditure: 18121.27lakh Taka

cost overrun % of original cost: 40%.

[Causes of revision:

1. non availability of fund in proper time. so project period needed to be increased
2. cost increase, Schedule of rate
3. 200 bed hospital would automatically provide prison cell and specialized unit....scope of the work changed.]

Project 4:

Name: Construction and Re-construction of 54 Old and Dilapidated Fire Service and Civil Defence Station

Adminstrative ministry/ division: Ministry of Home Affairs

Executing Agency: Fire Service and Civil Defense Directorate and PWD

Location of the project: At 54 different places

Implementation Period:

Date of commencement:

Original: July 2008

Latest revise: July 2008

Actual: July 2008

Date of completion

Original: June 2011

Latest revised: June 2012

Actual: June 2012

Time overrun % of original time: 33%

Cost:

Original: 3006.66 Lakh Taka

Latest revise: 3006.66 lakh Taka

Actual expenditure: 3006.66lakh Taka

cost overrun % of original cost: 0%

[Causes of revision

1. Price of construction material increased, schedule of rate changed.
2. Physical work of 5 station dropped
3. Inter-component adjustment for successful completion of project]

Project 5:

Name: Construction of 50 Dilapidated Thana Buildings in Type plan for Police Department.

Adminstrative ministry/ division: Ministry of Home Affairs

Executing Agency: Bangladesh Police Department and PWD

Location of the project: At 540 different places

Implementation Period:

Date of commencement:

Original: July 2008

Latest revise: July 2008

Actual: July 2008

Date of completion

Original: June 2013

Latest revised: June 2014

Actual: June 2014

Time overrun % of original time: 20%

Cost:

Original: 8994.04 Lakh Taka

Latest revise: 12562.33 lakh Taka

Actual expenditure: 12562.33 lakh Taka

cost overrun % of original cost: 40%

[Causes of revision

1. Due to site condition and location of the center cost of some center, like centers in hilly areas increased.

2. Dearness allowance included]

Project 6:

Name: Establishment of Fire Service & Civil Defense Station at 76 Important Upazila Sadar/Places of the Country

Adminstrative ministry/ division: Ministry of Home Affairs

Executing Agency: Fire Service and Civil Defense Directorate and PWD

Location of the project: At 76 different places

Implementation Period:

Date of commencement:

Original: July 1998

Latest revise: July 1998

Actual: July 1998

Date of completion

Original: June 2003

Latest revised: June 2015

Actual:June 2015

Time overrun % of original time: 240%

Cost:

Original: 14675.81 Lakh Taka

Latest revise: 28171.97lakh Taka

Actual expenditure: 28171.97 lakh Taka

cost overrun % of original cost: 92%

[Causes of revision

1. Non availability of land and in sufficient fund flow
2. Construction and land cost increased and decreased]