

**Report On
Improving Risk Management Strategy for PWD Projects and
Public Procurement**

By

**Naimur Rahaman
21382013**

An internship report submitted to the BRAC Institute of Governance and Development (BIGD) in partial fulfillment of the requirements for the degree of
MASTERS IN PROCUREMENT AND SUPPLY MANAGEMENT (MPSM)

**BRAC Institute of Governance and Development (BIGD)
BRAC University
June,2023**

© 2023. Brac University
All rights reserved.

Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at BRAC University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

Student's Full Name & Signature:

Naimur Rahaman

21382013

Academic Supervisor's Full Name & Signature:

Mir Mehbubur Rahman, MCIPS, FIEB

Faculty (Adjunct), BRAC Institute of Governance and Development (BIGD)

Brac University

Letter of Transmittal

Mir Mehbubur Rahman, MCIPS, FIEB
Faculty (Adjunct),
BRAC Institute of Governance and Development (BIGD)
BRAC University
66 Mohakhali, Dhaka-1212

Subject: Submission of report on “Improving Risk Management Strategy for PWD Projects and Public Procurement”

Dear Sir,

It is immense pleasure to present my project report. This report was prepared through analyzing the major risks PWD officials are facing during the tender preparation and contract management phases. During this period, I learned a lot of things and applied my knowledge and skills for generating the report. I did my best to gather information for this report in order to provide in-depth knowledge. I hope that this report meets the requirements and provides insight from an organizational standpoint. Hopefully, you will find my work and effort, informative approach, and well-researched report useful.

Sincerely yours,

Naimur Rahaman
21382013
BRAC Institute of Governance and Development (BIGD)
BRAC University
Date: June 30, 2023.

Non-Disclosure Agreement

This agreement has made and entered into by and between Public Works Department as the First Party and the undersigned student at BRAC Institute of Governance and Development, BRAC University as the Second Party. The First Party has allowed the Second Party to prepare a report on Improving Risk Management Strategy in Public Procurement and Supply Chain of PWD in partial fulfillment of the requirements for the degree of Masters of Procurement and Supply Management. The Second Party will have the opportunity to work closely with the officials of the organization and have access to official data and information. Based on work experience, data, and information collected the Second Party will prepare a report. The Second Party will use all sorts of data and information for academic purposes and will not disclose to any party against the interests of the First Party.

Student's Full Name & Signature:

Naimur Rahaman
21382013

Work place Supervisor's Full Name & Signature:

Mohammad Adnan Rahman
Executive Engineer,
Public Works Department

Acknowledgement

At first, I would like to express my sincere thankfulness to God for granting me the ability to successfully complete this project study.

I owe my supervisor a huge debt of **appreciation** and I'd like to express my heartfelt gratitude to my academic **supervisor** Mir Mehbubur Rahman, MCIPS, FIEB, Faculty (Adjunct), BRAC Institute of Governance and Development (BIGD), BRAC University and workplace supervisor Mohammad Adnan Rahman, Executive Engineer, Public Works Department for his unwavering support, generous assistance, constructive comments, and invaluable suggestions all through the work's progress.

I would really like to thank the officers and staff of BIGD, BRAC University, particularly Tanzina Mizan, Training Officer, BIGD, BRAC University, for her unwavering support throughout the study period.

I also would like to express my heartfelt gratitude to the respondents of the Public Works Department (PWD), notably Executive Engineers, Sub-divisional Engineers, and Assistant Engineers from various PWD offices who assisted me at various phases of the data collection and provided numerous official supports.

Finally, I'd like to thank my parents, wife and colleagues for their constant encouragement and support throughout the study.

Executive Summary

The Public Works Department (PWD) is responsible for managing public procurement and supply chain operations in the construction and maintenance of public infrastructure in various parts of the country. The efficient management of these processes is critical to ensure the quality, safety, and timely completion of public works projects. This report presents a strategy to improve risk management in the procurement and supply chain processes of the PWD. The strategy focuses on identifying and managing risks throughout the procurement and supply chain processes, enhancing transparency and accountability, and promoting collaboration with stakeholders. The strategy recommends the adoption of a risk management framework that involves the identification, assessment, and mitigation of risks in the procurement and supply chain processes. This framework includes the development of a risk register, risk assessment tools, and risk management plans.

Transparency and accountability are key to effective risk management. To this end, the strategy recommends the establishment of clear guidelines and procedures for procurement and supply chain operations, the use of digital platforms for tracking and reporting, and the training of staff and stakeholders on risk management principles. Collaboration with stakeholders, including contractors, suppliers, and community representatives, is also important for effective risk management. The strategy recommends the establishment of stakeholder engagement programs to encourage participation and feedback from all stakeholders in the procurement and supply chain processes. Finally, the strategy recommends the establishment of a monitoring and evaluation system to assess the effectiveness of the risk management strategy and to identify areas for continuous improvement. Overall, the proposed strategy provides a comprehensive approach to improving risk management in the procurement and supply chain processes of the PWD, which can ultimately lead to better quality, safety, and timely completion of public works projects.

Table of Contents

Declaration.....	ii
Letter of Transmittal	iii
Non-Disclosure Agreement	iv
Acknowledgement	v
Executive Summary	vi
List of Figures.....	ix
List of Acronyms	x
Chapter 1 Introduction.....	1
1.1 Supply chain and Risk Management.....	1
1.2 Risk in Construction Projects	1
1.3 Risk Management in Public Works Department (PWD)	2
1.4 Objective of the Report.....	3
Chapter 2 Background	4
2.1 Literature Review.....	4
2.2 Infrastructure Projects and Risk	5
2.3 Risk Management Process.....	5
2.4 Risk Register.....	8
2.5 Procurement Risk.....	8
Chapter 3 Methodology	10
Chapter 4 Data Collection.....	11
4.1 Questionnaire design	11
4.2 Selections of the individuals.....	12
4.3 Data Collection Procedure.....	13
Chapter 5 Findings and Results	134
5.1 Managing Risk through preparation of tender to the submission stage.....	14
5.2 Managing Risk through processing of Tender.....	15
5.3 Managing risk through insurance coverage	17
5.4 Managing risk through timely payment.....	18
5.5 Risk Management in timely project completion.....	18
5.6 Socio-Political Interference on Managing risk of PWD	19
5.7 Auditing and risk.....	20
5.8 Managing Risk with risk analysis & training.....	21
5.9 Risk Management through e-GP.....	21
5.10 Major terms and clauses for risk management in Tender Document.....	22
Chapter 6 Conclusion & Recommendation.....	23

References	24
Appendix A	25

List of Figures

Figure 1 Process of Risk Management	4
Figure 2 Process of Risk Management overview	6
Figure 3 Risk Mitigation Process.....	7
Figure 4 Methodology.....	10
Figure 5 Data Collection Procedure.....	13
Figure 6 Pre-Bid Meetings.....	14
Figure 7 Corrupt Practices in PWD	15
Figure 8 Fraudulent Practices in PWD.....	15
Figure 9 Collusive Practices in PWD	16
Figure 10 Coercive Practice in PWD.....	16
Figure 11 Insurance Coverage in Contracts of PWD.....	17
Figure 12 Imposing of Liquidated Damage on Default Contractors	18
Figure 13 Major causes for the delay of Projects in recent years	19
Figure 14 Risk Management Through Auditing.....	20
Figure 15 Risk Management Strategies in PWD	21
Figure 16 Major Terms and clauses for risk management in Tender Document.....	22

List of Acronyms

SCRM	Supply Chain Risk Management
PWD	Public Works Department
MEAT	Most Economically Advantageous Tender
CPTU	Central Procurement Technical Unit
STD	Standard Tender Document
PCC	Particular Conditions of Contract
CFCC	Corrupt, Fraudulent, Collusive and Coercive Practice.

Keywords

Risk Management Process

Risk Mitigation Strategies

Insurance

Risk Register

Risk Analysis

Risk Management Plan

Chapter 1

Introduction

1.1 Supply Chain and Risk Management

Supply chain management and risk management are closely related concepts that are critical to the success of any organization. Supply chain management involves the coordination and management of activities involved in the production and delivery of goods and services to customers. This includes activities such as procurement, inventory management, logistics, and distribution. Effective supply chain management requires a focus on efficiency, cost-effectiveness, and customer satisfaction.

Risk management, on the other hand, involves the identification, assessment, and mitigation of risks that may affect an organization's ability to achieve its goals. In the context of supply chain management, risks may include supply chain disruptions, quality issues, security concerns, and regulatory compliance issues.

Effective risk management in supply chain management requires a proactive approach to identifying and addressing potential risks. This may involve the development of risk management plans, the establishment of risk management processes and procedures, and the implementation of risk mitigation strategies.

Supply chain risk management involves a range of activities, including risk identification, risk assessment, risk mitigation, and risk monitoring and control. It is important to note that supply chain risk management is an ongoing process that requires regular evaluation and adjustment to ensure that risks are effectively managed.

Overall, effective supply chain management and risk management are essential for organizations to achieve their goals and maintain a competitive edge in the marketplace. By managing risks in the supply chain, organizations can reduce the likelihood of disruptions, improve the quality of goods and services, and increase customer satisfaction.

1.2 Risk in Construction Projects

Risk is inherent in all construction projects, and effective risk management is critical to ensure successful project completion. Construction projects are complex, involving multiple stakeholders, materials, equipment, and often taking place in dynamic and uncertain environments. As a result, risks can arise from a wide range of sources, including project design, site conditions, regulatory compliance, weather, and economic factors.

Some common risks associated with construction projects include:

Design risks: These risks are related to the design of the project, including issues such as errors, omissions, or changes to design specifications.

Site risks: These risks are related to the physical conditions of the construction site, such as soil instability, geotechnical conditions, and weather-related risks.

Financial risks: These risks are related to the financial viability of the project, including issues such as project financing, cost overruns, and delays in payment.

Legal and regulatory risks: These risks are related to legal and regulatory compliance, including issues such as environmental regulations, zoning restrictions, and permits.

Schedule risks: These risks are related to project timelines and include issues such as delays, disruptions, and unexpected events.

Effective risk management in construction projects involves a proactive approach to identify, assess, and manage risks throughout the project lifecycle. This may include the development of risk management plans, risk assessments, risk registers, and the implementation of risk mitigation strategies. Communication and collaboration among project stakeholders, including owners, contractors, designers, and subcontractors, are essential for effective risk management in construction projects.

Overall, effective risk management in construction projects can help to minimize potential risks and ensure the successful completion of the project on time, within budget, and to the required quality standards.

1.3 Risk Management in Public Works Department (PWD)

The Public Works Department (PWD) is responsible for managing public procurement and supply chain operation in the construction and maintenance of public infrastructure. Effective risk management is critical for the PWD to ensure the quality, safety and timely completion of public works projects.

Effective risk management in the PWD involves a proactive approach to identify, assess, and manage risks throughout the project lifecycle. This may include the development of risk management plans, risk assessments, risk registers, and the implementation of risk mitigation strategies. Communication and collaboration among project stakeholders, including owners, contractors, designers, and subcontractors, are essential for effective risk management in the PWD.

Transparency and accountability are also key to effective risk management in the PWD. To this end, the PWD can establish clear guidelines and procedures for procurement and supply chain operations, use digital platforms for tracking and reporting, and train staff and stakeholders on risk management principles.

Collaboration with stakeholders, including contractors, suppliers, and community representatives, is also important for effective risk management in the PWD. The establishment of stakeholder engagement programs to encourage participation and feedback from all stakeholders in the procurement and supply chain processes can help to identify potential risks and facilitate timely risk mitigation.

Overall, effective risk management in the PWD can help to minimize potential risks and ensure the successful completion of public works projects on time, within budget, and to the required quality standards.

1.4 Objective of the Report

- To determine the primary causes of risk occurrence in PWD construction projects.
- Establishing risk management procedures based on best practices.
- Improving risk management procedures in government agencies like PWD.
- To provide a resource for evaluating existing risk management techniques that can be tailored to the specifics of projects run by the Public Works Department.

Chapter 2 Background

2.1 Literature Review

Risk is a nuanced idea that is often unrelated to unfavorable results, according to Wang et al. (2004). It is defined as the possibility that something bad may happen to the project and undermine its objectives. Because the majority of risks have unfavorable results, individuals frequently focus only on the negative aspects of risk (Baloi and Price, 2003). However, risk may also present opportunities. One of the most difficult jobs in risk management nowadays is figuring out which risks are related to a project and how to prioritize them. Managers are aware that successful project management depends on good risk management (Baloi and Price, 2003). Risk management is the act of identifying and evaluating risk and employing techniques to bring it down to a tolerable level (Touhidi, 2011).

Therefore, the main objective of risk management is to detect, evaluate, and manage the risk to the project's success. The main steps in the risk management process are as follows:

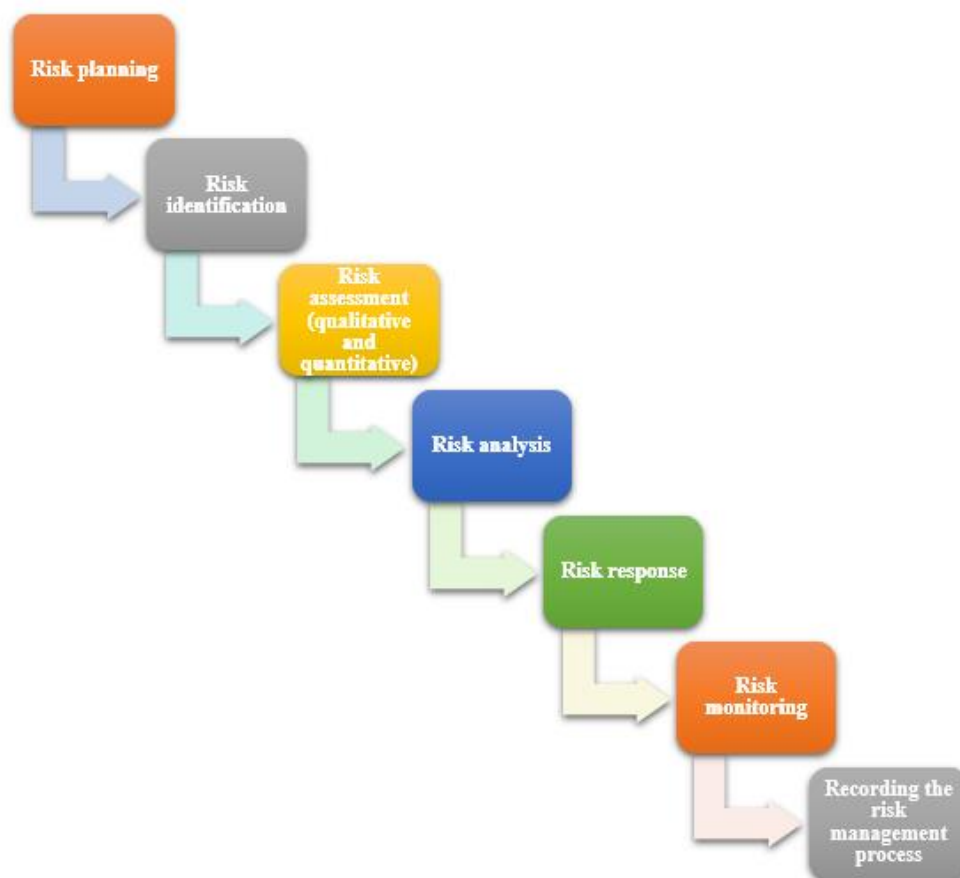


Figure 1 Process of Risk Management

2.2 Infrastructure Projects and Risk

Major infrastructure projects have had issues in the past. Cost overruns, delays, failed purchases, and a lack of money are all very common. For instance, the much awaited Eurotunnel between the United Kingdom and France ended up costing substantially more than expected, while the Betuwe cargo railway between the Netherlands and Germany ended up costing €2.3 billion, or double what was first estimated. These problems don't simply pertain to the past, though. For instance, due to several design changes, the building of the new airport terminal in Kuala Lumpur is now facing significant cost overruns and delays.

Most overruns are foreseeable and controllable. Poor risk management that is proactive and skilled is to blame for a significant share of the problems we observe. In the next five years, the direct value losses brought on by insufficient risk management for the current pipeline of large-scale projects may exceed \$1.5 trillion, not to include the effects on GDP growth, reputation, and societal outcomes. Throughout the course of their entire life cycles and at nearly every point of the value chain, major infrastructure projects endure significant undermanagement of hazard. Poor risk assessment and risk distribution, such as through agreements with financiers and builders early in the idea and design stage, leads to greater manifested risks and subsequent shortages of private finance.

2.3 Risk Management Process

Finding and tracking project-related risks has various benefits, including the following:

- Transparency on previously unrecognized expenses enables better resource management.
- More accurate forecasts of return on investment and enhanced project cost tracking.
- A clearer awareness of legal requirements.
- Better protection against illness and physical harm.
- Flexibility is better than panic when changes or obstacles do arise. Process steps for risk management.

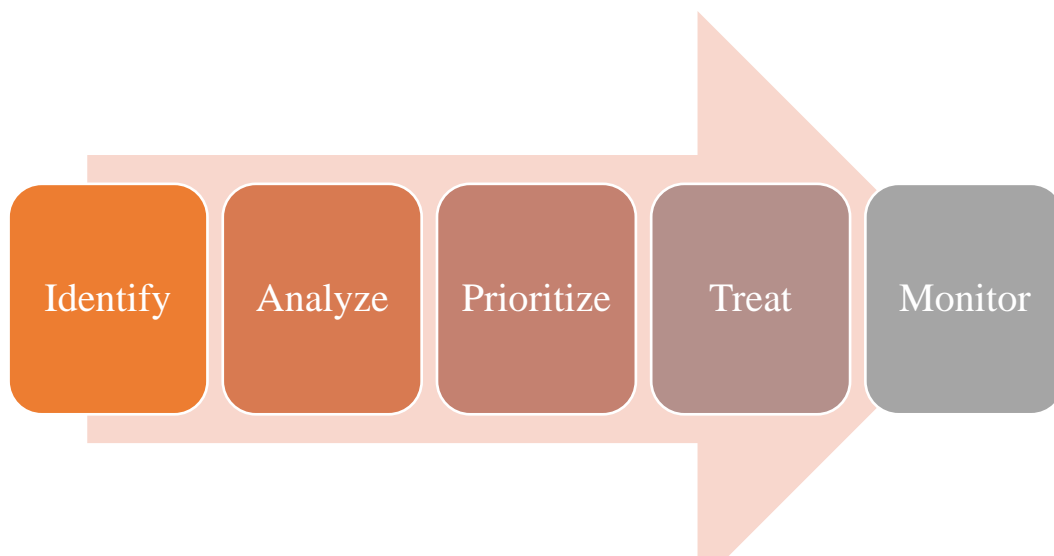


Figure 2 Process of Risk Management overview

In 2012, Banaitiene and Banaitis listed four (four) critical measures for managing risk.

1. Identification of Risk
2. Assessment of Risk
3. Mitigation of Risk
4. Monitoring of Risk

2.3.1. Identification of Risk:

The process of identifying risk entails identifying the numerous risks that may develop during a certain project and describing the risks' characteristics. in 2010 (Ehsan et al).

2.3.2. Assessment of Risk:

The second stage of managing risk in the process of risk analysis is risk assessment. This comprises an examination of the data on the possible danger that was received. Here, it is possible to evaluate a specific risk using both quantitative and qualitative methodologies.

A straightforward formula is often utilized to determine risk.

Risk = Likelihood x Impact.

The likelihood is the probability of a frequent event occurring. Impact refers to the possible outcomes—both good and bad—of the risk. This is expressed as a number between 0 and 1, where 0 denotes the absence of chance and 1 denotes certainty. Additionally, it is expressed as a percentage (certainty = 100%).

2.3.3. Mitigation of Risk

Banaitiene and Banaitis recommend four distinct risk-reduction methods in 2012.

The Chartered Institute of Procurement and Supply classifies risk mitigation measures into 4 (Four) T's.

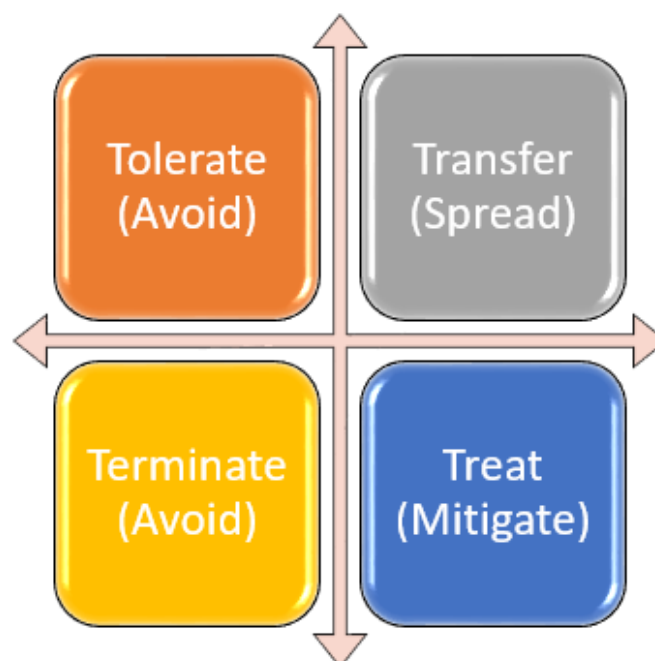


Figure 3 Risk Mitigation Process

2.3.4. Monitoring of Risk

Ehsan et al. (2010) advise tracking both preventable and unavoidable risk and putting backup plans in place for managing risk on construction projects. As the project nears a critical point, predictive indicators should be employed to evaluate risk. Before the risk event happens, contingency plans should be created as alternatives to the current course of action.

2.4 Risk Register

A risk register is a piece of paper used in risk management to keep track of potential project failures. This plan intends to jointly identify, assess, and deal with risks before problems develop. Although manufacturing and product launches can also benefit from risk management, it is most frequently used in project-related contexts. It can be used in the future as a fallback method of risk management.

2.5 Procurement Risk

Risks associated with procurement arise when sourcing products, services, or resources becomes unreliable. There are five typical dangers in procurement. If they are not addressed and planned for with a thorough risk assessment and management strategy, any of these possible hazards may and will have a detrimental impact on your company.

1. **Inaccurate Needs Analysis:** Forecasting is one of the tools and approaches used to aid firms in creating a better procurement plan, and it may help prevent challenges brought on by supply chain problems.
2. **Poor Vendor Management & Sourcing:** Choosing the wrong vendor and making poor sourcing decisions can both prove to be expensive. The existence of a contract does not ensure that everything will proceed according to plan.
3. **Lack of Supply Chain Risk Management:** It goes without saying that organizations must manage supply chain risk since suppliers depend on it.
4. **Undeveloped Contract Management Processes:** An ordinary procurement risk is having undeveloped contract management processes. You run the risk of accidentally breaking the law, stepping into a gray area of the law, or drafting a contract with insufficient or ambiguous KPIs and review procedures if you lack specified contract management processes and subject matter knowledge.
5. **Poor Procurement Planning:** Poor procurement planning has a number of negative effects. According to the adage, "If you fail to plan, you are planning to fail." If your company runs out of supplies, it affects your capacity to compete in the market and can result in expensive errors like lost profits and reputational harm. Because of this, implementing procurement risk solutions is crucial to maximizing business performance as your company grows.

In order to enable the contractual party to award the contract based on considerations other than only price, the Most Economically Advantageous Tender (MEAT) method of assessment can be used as the selection procedure.

'Alternative' criteria that can be applied in a MEAT evaluation include:

- Quality.
- Price or cost using a cost-effectiveness approach.
- Technical merit.
- Aesthetic and functional characteristics.
- Accessibility.
- Social characteristics.
- Environmental characteristics.
- Innovative characteristics.
- After-sales service and technical assistance.
- Delivery conditions such as date, process and period.

Chapter 3 Methodology

The questionnaire survey approach was used as the primary method for producing the report's conclusions. A questionnaire is a list of questions distributed to research project participants. It may be a part of a bigger investigation. The goal of a questionnaire is to gather data from a target audience. To collect information from diverse respondents who work at different PWD offices, a questionnaire was developed which has been annexed with the report (Appendix-A). Numerous sorts of questions are included in the questionnaire, ranging from those regarding the risk of contract management to that of bidding preparation. The respondents were asked to provide yes-or-no responses and to offer their opinions on how to reduce risk in the PWD supply chain and procurement process.



Figure 4 Methodology

Chapter 4

Data Collection

The method for gathering data is detailed in this chapter. To detect risk reactions in procurement operations, PWD's procurement officers were given a questionnaire containing open- and closed-ended questions.

4.1 Questionnaire design

Since the goal of this study is to analyse various risk management strategies used in PWD's procurement, a questionnaire survey is conducted to gauge procurement risk.

The first danger is incorrect tender circulation. It is necessary to circulate the tender widely under the Open Tendering Method and other methods. The number of participants in the tender can be decreased by using the CPTU website instead of publishing the tender in the media. Transparency therefore carries some risk.

The provision of inadequate time for pre-tender meetings is a risk that can be detected in PWD and other governmental organizations. The pre-tender meeting is crucial because it allows the tenderer to address any irregularities in the tendering process. Frequently, appropriate time is not provided in tenders. As a result, the questionnaire includes a question about determining the time specified by the procurement body. It is necessary to allow adequate time for tender submission. If adequate time is not granted for the tender submission, there is a possibility of corruption and collusive behaviours.

It is important to identify the potential for corrupt, fraudulent, coercive, and collusive behaviours throughout the whole procurement process. Because of this, a yes/no question is included in the questionnaire to see whether PWD's supply chain and procurement processes involve any such activities. The first need for PE is the most economically advantageous bids. There is a potential that the contract management phase may cost more money and take longer if the bid is not commercially feasible. Therefore, the questionnaire contains questions on lowest assessed tenders and most economically favourable tenders.

An important concern during the contract management phases is insurance coverage. Insurance coverage is a critical component of effective contract management, which includes minimizing risk across the supply chain stages of contract management. Insurance may cover any risk, including the danger of worker mortality, disruptions in the supply of raw materials, and the

risk of material losses. A query is therefore posed to clarify the insurance provisions in contracts.

The main risk of managing a contract through a competent PWD supply chain is underpaying the contractors. On-time payment guarantees the danger of time overrun being reduced. Contractors slow down their building projects if payments are not made on schedule because they lack sufficient liquid funds. Therefore, it is a major project risk that has to be acknowledged. One of the causes of delays is the underperformance of the contractors, and this has to be recognized. So, a query is posed in relation to that matter.

Contractors may be subject to liquidated damages in the event of a time overrun, which might lessen the risk of a time and cost overrun. Therefore, a questionnaire with questions concerning liquidated damage is attached.

In any project, auditing is crucial for preserving financial discipline. In order to learn more about the PWD's proper auditing system, questions have been set up.

In the majority of situations, the project manager of PWD fails to conduct a thorough risk analysis and create a risk register. The likelihood of a danger happening as a result may rise. In the event that a threat arises during the building process, a risk register can decrease the effects. As a result, this questionnaire also generates concerns about adequate risk analysis.

The Public Works Department's risk management tactics might be improved by sharing the opinions of respondents, according to several queries. Generally speaking, the questions are designed to elicit the best responses that will enhance PWD's supply chain and risk management methods.

4.2 Selections of the individuals

Selected PWD employees, ranging from Assistant Engineers to Executive Engineers, who are directly involved in the organization's supply chain and procurement processes were asked to complete the questionnaire. The ongoing development initiatives of PWD were highlighted, particularly those that were in the midst of execution. A few completed projects were also taken into account for data collecting.

4.3 Procedure of Data Collection

The study's data is acquired in such a way that the results accurately represent the situation as it actually is. The questionnaire survey was carried out on 21 officials, and the subjects included 13 assistant engineers, 5 SDEs (Sub Divisional Engineers), and 3 EEs (Executive Engineers) of PWD who were involved in various field divisions and related to the entire procurement functions (i.e., from project starting to project hand over to the ministry) of their offices. They were respectfully asked to respond to the survey based on their knowledge of the activities that were handled under their authority. The analysis and integration of the acquired survey data were merged in order to define the risk management process and backup plan for the procurement of PWD.

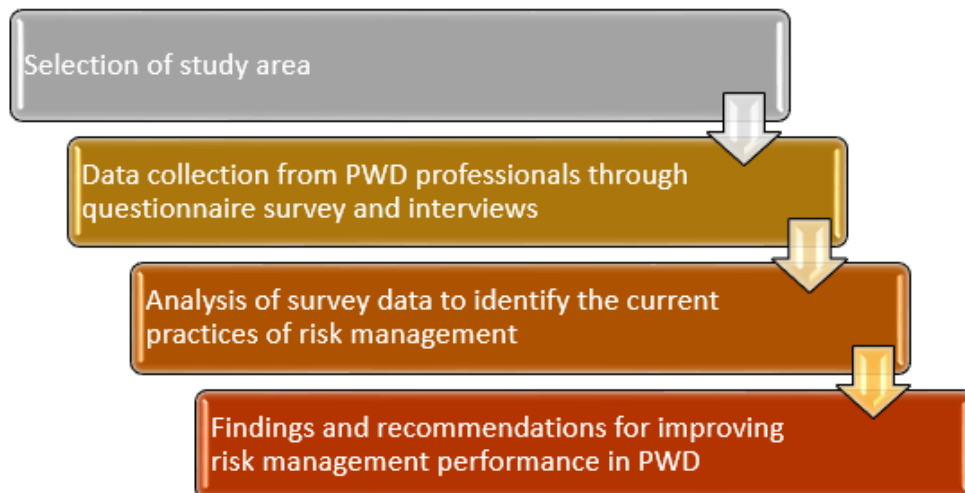


Figure 5 Data Collection Procedure

Chapter 5

FINDINGS AND RESULTS

This chapter examines and presents the data acquired on the management of current procurement risks. When comparing and displaying the outcomes of data analysis, pie and bar charts were employed. The responders were required to answer a total of twenty-eight (28) questions about the procurement operations that were within his purview. 21 respondents who work in Public Works Departments provided responses.

5.1 Managing Risk through preparation of tender to the submission stage

The stages of tender preparation involve two different forms of risk. First, the tender is not extensively disseminated, and second, the pre-tender meeting does not have enough time. Pre-bid meetings are done as a risk-mitigation strategy to address any tenderer uncertainty. Additionally, it is a questioning tool that prospective tenderers may use to get their questions answered prior to submitting their bid. Consequently, this conference is crucial. According to the survey's findings, 100% of respondents said that bids and proposals adhered to PPR advertising guidelines, such as publishing tenders with values greater than \$1.00 billion on the CPTU website so that interested bidders could easily access them. 95.2 percent of respondents said that all prospective bidders were given prompt and clear clarifications to the bidding/proposal materials. Regarding the pre-bid meeting, there is considerable ambiguity. The majority of respondents think pre-bid meetings are not conducted effectively. The replies from responders are displayed below.

Are pre bid meetings properly held after publishing of tenders?
21 responses

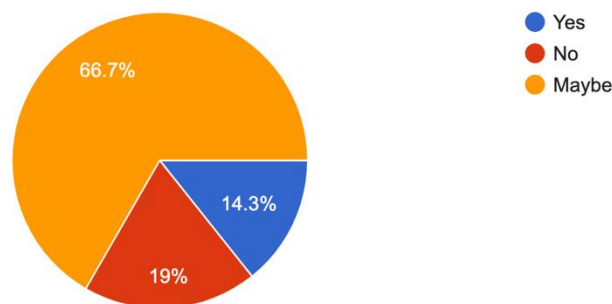


Figure 6 Pre-Bid Meetings

The amount of time that the purchasing organization allots for the pre-bid differs between offices. Only 11.1% of replies indicated that the procurement organization gave the pre-bid meeting a full day, with other responses indicating that they gave it less time. Three to five days should be allotted for the pre-bid meeting with the tenderers. In that situation, it is thus substantially lower.

In comparison to the number of bidding materials purchased and the number of pre-qualified offers, the number of bids received is appropriate, according to 90.5 percent of respondents. The majority of PWD offices give ample time for the drafting of bids or proposals.

5.2 Managing Risk through processing of Tender

Regarding tender selection, 100 percent respondent responses that tenders are evaluated and qualified on the basis of the requirements specified in the tender documents, such as previous experience, liquid asset, turnover, and an updated license in each PWD office. PPR compliance in procurement practices,

Did you face any kind of corrupt practice in the tendering process of your project?

21 responses

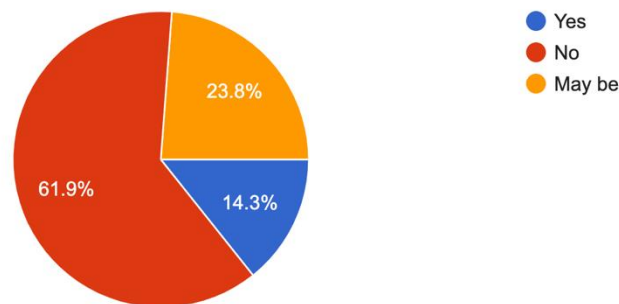


Figure 7 Corrupt Practice in PWD

Did you face any kind of fraudulent practice in the tendering process of your project?

21 responses

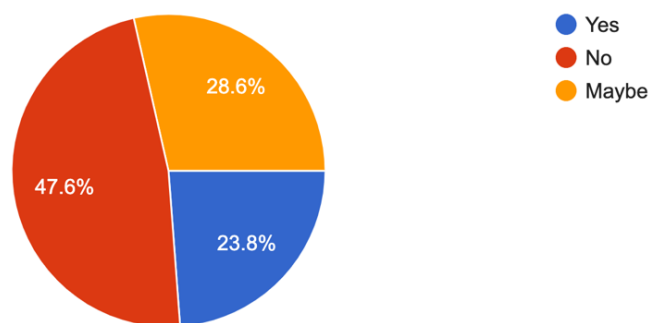


Figure 8 Fraudulent Practices in PWD

according to respondents, helped reduce procurement risks in the early stages. Furthermore, responses to questions about corrupt, fraudulent, collusive, and coercive practices are mixed based on the respondents' personal experiences.

Did you face any kind of collusive practice in the tendering process of your project?

21 responses

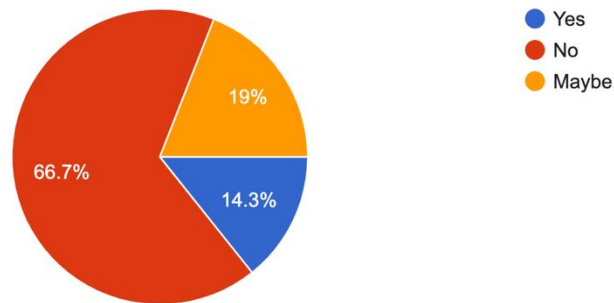


Figure 8 Collusive Practices in PWD

Did you face any kind of coercive practice in the tendering process of your project?

21 responses

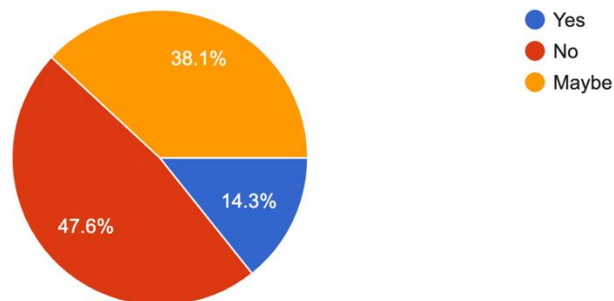


Figure 9 Coercive Practice in PWD

In the instance of affirmative CFCC replies, 71.1 percent of respondents said that the PE moved on to the next stage in accordance with PPR, either by declaring the tenderer technically non-responsive or banning the tenderer from future PWD bids.

In every case, the lowest responsive bid price is always selected by the division/approving authority, according to 100% of respondents.

85.7 percent of respondents who were asked if they would pick the Most Economically Advantageous Tender (MEAT) over the lowest response tender said so. But PPR does not allow such type of action.

5.3 Managing risk through insurance coverage

Insurance is the key precondition for risk transmission. Regarding project insurance on contract management, 47.6% of respondents stated that PWD projects were frequently not protected by insurance against crashes and other development risks. The tender documentation has specific insurance terms; however, tenderers frequently omit certain information. This part of the tender specifications is ignored while evaluating bids. Records of insurance claims from the past are not common. The PWD risk management plan suffers from a serious shortcoming as a result. The respondents in this case suggested that the tender should be revoked if the insurance condition is not strictly maintained.

Are your contracts properly insured according to insurance clause stated in the tender documents?

21 responses

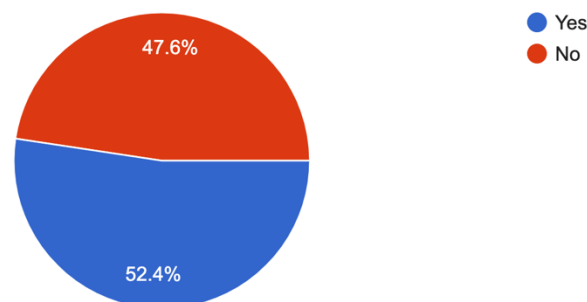


Figure 10 Insurance Coverage in Contracts of PWD

5.4 Managing risk through timely payment

79% of respondents said that payments made to contractors for finished work were made in accordance with the terms of the contract. Perhaps there are records of payments that were made late as a result of a shortage of funding, particularly for umbrella and revenue initiatives. But generally, always, compensation is dependent on the volume of work accomplished, which is advantageous for risk analysis in PWD.

5.5 Managing Risk in timely project completion

It was shown that there is still an 85% likelihood that a project would be delayed because of poor contractor performance. Other causes for missing project deadlines and finishing projects late include difficulties with land acquisition, difficulties on the job site, delays in getting structural and architectural designs, improbable completion schedules specified in tender papers, and so forth. The results show that 81 percent of Public Work department officials penalized the contractors with liquidated damages when there was a delay from the scheduled completion time.

If yes, did you or will you apply liquidated damage in accordance with contract documents?

21 responses

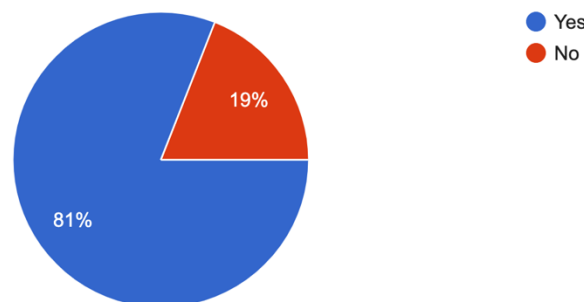


Figure 11 Imposing of Liquidated Damage on Default Contractors

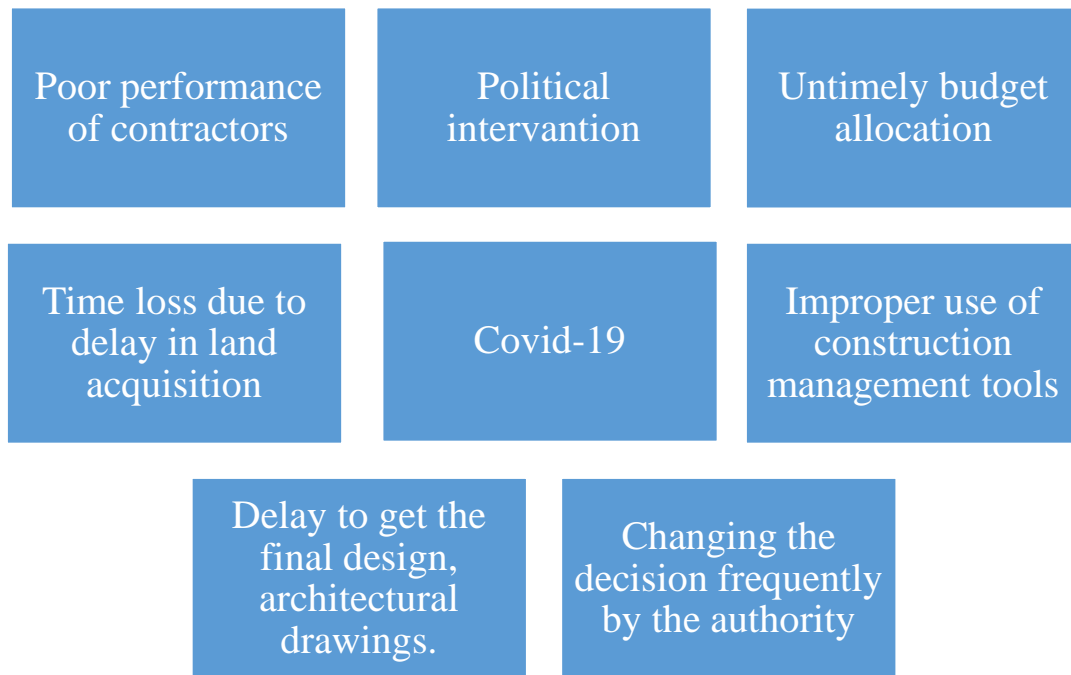


Figure 12 Major causes for the delay of Projects in recent years

The majority of respondents claimed that most projects are not finished within the allotted budget, due to variance.

Following are the main factors that influence variation above allocated budget:

- Change in finished schedule due to the demand of consumers.
- Even though the tender has been called, most plans have not yet been finalized, thus there may be changes to the architecture or structural design.
- At the estimating step, estimation was improperly performed.
- Issu proper coordination

5.6 Socio-Political Interference on Managing risk of PWD

Political interference also impacts on the timely project completion. Instability of politics is the bindings of total infrastructure development. Due to the instability like political movement, collisions between political parties, war between the countries impact on the total supply chain process. So that raw material prices can go higher which will impact on the construction process. Contractor wants to delay the work for this price hiking so that materials prices can be reduced. So, time overrun occurs and projects get delayed.

5.7 Auditing and risk

A crucial document for gauging financial success is the audit. Effective auditing across all divisions helps reduce risk. 90.5% of respondents said that C&AG and the Ministry of Housing and Public Works conduct adequate audits in each division and timely report issues.

Are audit reports issued in a timely manner and are recommendations related to procurement generally implemented promptly?

21 responses

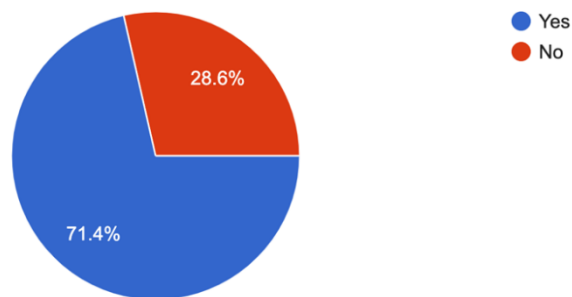


Figure 13 Risk Management Through Auditing

5.8 Managing risk through risk analysis & training

Solid risk management practices, including as risk identification, appraisal, mitigation, and monitoring, are not used in PWD projects, according to 71.4% of respondents. In order to address people's needs, PWD projects are occasionally undertaken. Inappropriate feasibility studies can occur with projects. Due to the problems this creates, project activity is slowed down and project completion is delayed. If projects are appropriately prioritized and managed for risk, these problems could be lessened. Nearly all respondents recommended completing a risk analysis before commencing any project and investing some cash for ongoing risk management in order to effectively handle any difficulties. Everyone who responded concurred that risk management education is essential for identifying and managing procurement risks. Considering the fact that the PPR & PWD procurement techniques provide certain principles, further training is still necessary for adequate risk management in PWD procurement.

Do you think proper risk management strategies are taken for the contracts in projects of PWD?
21 responses

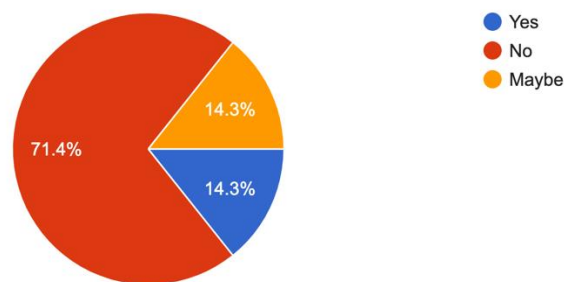


Figure 14 Risk Management Strategies in PWD

5.9 Managing Risk Through e-GP

The main instrument for efficient risk management against CFCC is electronic government procurement. It is the online-based procurement system that allows qualified tenderers from all around the nation to take part in a particular tender without any concern. Transparency and accountability are brought to the procurement process by E-GP. The overwhelming majority of respondents assert that using e-GP may be a highly effective strategy to prevent any form of corruption or other similar behaviors that were frequently used when manual tendering was the only option.

5.10 Major Terms and Clauses for Risk Management in Tender Document

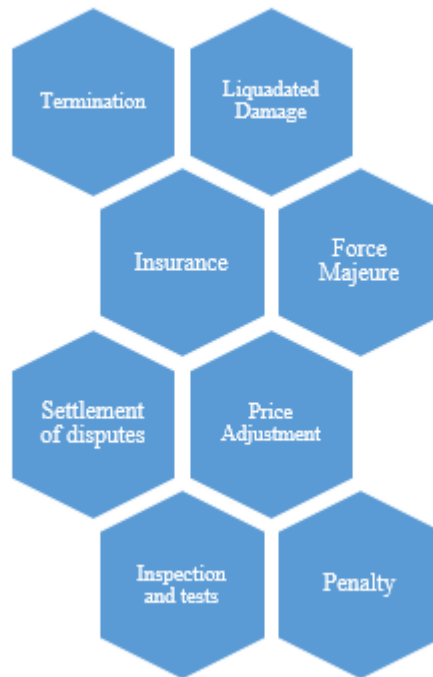


Figure 15 Major Terms and clauses for risk management in Tender Document

During the buying procedure a significant change in risk management tactics in public procurement is brought about by the Public Procurement Act of 2006 and the Public Procurement Rules of 2008. The CPTU created a standard tender document that incorporates a strategic risk management tool with clauses and terms, along with PPA-2006 and PPR-2008. The following are the key terms and conditions for strategic risk management in the procurement process as used by PWD.

Strong risk management is not well incorporated into PWD public procurement. The process of evaluation takes litigation history into account. To control financial risk, a credit promise from the supplier is required in the manner outlined in the standard tender document published in CPTU. The contractor should offer performance security to minimize risk throughout the construction period. Retention money is subtracted from each payment of the bill in order to ensure quality once the service is completed.

Chapter 6

Conclusion & Recommendation

In order to better manage risk, the study outlined the main hazards that PWD authorities had to deal with during the procurement and construction phases. The following are some of them:

1. In order for potential tenderers to address any issues with the tender, each Procuring Entity (PE) should allow enough time for a pre-tender meeting.
2. All bids should be submitted through e-GP for efficient risk management against CFCC.
3. In order to reduce the project's finance risk, money should be accessible during construction.
4. Appropriate audits must be carried out to reduce financial risk against payment.
5. The PE shall impose liquidated damages in the event that the project is not completed on schedule.
6. According to PCC, insurance must be supplied.

The department should start using the essential techniques listed below in order to improve overall risk management.

1. Before starting a project, a proper feasibility assessment must be carried out.
2. The creation of an effective project management strategy should occur early on.
3. Every project should have a risk management strategy during execution and additional risk management funding, whether in the form of price increases or risk management funds, should be granted.
4. Before estimating, the market should be adequately analyzed to determine the price. This will reduce the possibility of variation in the future.
5. The contract should include KPIs and ensure that they are appropriately tracked.
6. Contractor's ought to be viewed as significant stakeholders rather than as competitors or enemies.
7. Contractors that perform well should receive incentives.
8. All engineers involved in the implementation of projects should have advanced project management and procurement-related training.
9. According to instruction and specification, safety concerns must be guaranteed.
10. A risk registry must be created before a project can be started in order to conduct an adequate risk analysis.

It is anticipated that this study will contribute to strengthening the Public Works Department's risk management tactics. The study could have inspired academics to look at risk management procedures in other government agencies. Researchers that are examining private sector risk

management tactics can also contrast the effectiveness of risk management in the two sectors. Overall, this study will help any firm become more effective at managing risks.

References

- [1] S.Q.Wang, M.F.Dulami and M.Y.Aguria, " Risk management framework for construction projects in developing countries.," in *Construction Management and Economics Volume 22, 2004 - Issue 3*
- [2] D. Baloi and A.D.F.Price, Modelling Global Risk Factors Affecting Construction Cost Performance. *International Journal of Project Management*, Volume 11, 2004-Issue 33-40.
- [3] A.D. Cano and M.P De La cruz, "Integrated Methodology for Project Risk Management," *Journal of Construction Engineering and Management Volume 128*),2002-Issue-06.
- [4] H.Touhidi " The Role of Risk Management in IT systems of organizations" *I Procedia Computer Science, Volume 03,2011-Issue 881-887..*
- [5] ISO 31000:2009,Risk management — Principles and guidelines
- [6] Banaitiene N, Banaitis A. Risk management in construction projects. Risk management-current issues and challenges. 2012, p.42-48.
- [7] Managing risks in supply chains, hartered Institute of Procurement & Supply, 2012; p.2,-
-C

Appendix- A

QUESTIONNAIR

1. Are bids/proposals consistently advertised in media of wide circulation, easily accessible to potential bidders, in line with the advertising principles of PPR? (Yes/No)
2. Are timely and non-ambiguous clarifications to bidding/proposal documents provided to all potential bidders? (Yes/No)
3. Are pre bid meetings properly held after publishing of tenders? (Yes/No/Maybe)
4. How long time is allowed to conduct the Pre-bid Meeting?
5. Is the number of bids received reasonable as compared to the number of bidding document purchased/number of pre-qualified bids? (Yes/No)
6. Is sufficient time allowed for bid or proposal preparation, appropriate to the complexity of the bid? (Yes/No)
7. Are evaluations and qualification carried out thoroughly and on the basis of the criteria specified in the documents? (Yes/No)
8. Did you face any kind of corrupt practice in the tendering process of your project? (Yes/No/Maybe)
9. Did you face any kind of fraudulent practice in the tendering process of your project? (Yes/No/Maybe)
10. Did you face any kind of collusive practice in the tendering process of your project? (Yes/No/Maybe)
11. Did you face any kind of coercive practice in the tendering process of your project? (Yes/No/Maybe)
12. Any positive response in case of CFCC Is the PE move forward to the next step as per PPR? (Yes/No)
13. Do you/ your division/approving authority select the tender of lowest responsive bidding price for any project? (Yes/No)
14. Do you think tender of a contract should be selected on MEAT (Most Economically Advantageous Tender) basis rather than lowest bidding price? (Yes/No)
15. Are your contracts properly insured according to insurance clause stated in the tender documents? (Yes/No)
16. Are bills of contractors against their work done paid within the contractual terms? (Yes/No)
17. Did your project delayed or is there any possibility of delays because of contractor's poor performance? (Yes/No)
18. If yes, did you or will you apply liquidated damage in accordance with contract documents? (Yes/No)
19. Does political interference impact contracts under your jurisdiction? (Yes/No)
20. Are procurement operations subjected to regular internal & external audits? (Yes/No)
21. Are audit reports issued in a timely manner and are recommendations related to procurement generally implemented promptly? (Yes/No)
22. Do you think proper risk management strategies are taken for the contracts in projects of PWD? (Yes/No)
23. Do you think risk analysis should be done before taking any project and some cost should be allocated for ongoing risk management? (Yes/No)

24. Do you think risk management training is necessary to identify and coping with procurement and project risk? (Yes/No)
25. Do you think E-GP can help in effective risk management against corrupt, fraudulent, collusive and coercive practice? (Yes/No)
26. What is the percentage of projects under your division has been completed in time mentioned in tender documents in last three financial years? If not 100%, Please mention the reasons.
27. What is the percentage of contracts under your division has been completed in budget allocated without making any variation in last three financial years? If not 100%, Please mention the reasons.
28. For implementation of proper risk management strategies in project procurement, please mention your suggestions.