

Report
on
**Bridging the Gap: Addressing Challenges in Public
Infrastructure Development Project Proposals**

By
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University in partial fulfillment of the requirements for the degree of
'Masters in Procurement & Supply Management'

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Declaration

It is hereby declared that

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

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Letter of Transmittal

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Subject : Submission of PSM-665: Bridging the Gap: Addressing Addressing Challenges in Public
Infrastructure Development Project Proposals.

Dear Sir,

I am writing to formally submit my report, titled "Bridging the Gap: Addressing Challenges in Public Infrastructure Development Project Proposals." This report was completed under your direction and is in partial fulfillment of the requirements for my Masters in Procurement and Supply Management (MPSM) degree.

As an entry-level professional, I have diligently worked to complete this report by gathering the necessary data and presenting my findings and recommendations in a concise and comprehensive manner.

I am confident that this report meets your expectations, and I look forward to discussing my findings with you at your convenience.

Thank you for your guidance and support during my internship.

Sincerely,

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Date: October, 2025

Non-Disclosure Agreement

This agreement is made and entered into by and between Faculty & Advisor and the undersigned student of BRAC University. I understand that during the preparation of report, information has been collected from various project and experience gathered from Bangladesh Bridge Authority. The undersigned certifies, acknowledges and being informed of the confidentiality policy concerning confidentiality and do not disclose any confidential data or information regarding the company in my report which may affect the goodwill of organization.

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Md. Yeasin Ali Talukder

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List of Acronyms

BBA	– Bangladesh Bridge Authority
ADB	– Asian Development Bank
APCC	– Australian Procurement and Construction Council
BBA	– Bangladesh Bridge Authority
BIGD	– BRAC Institute of Governance and Development
BPPA	– Bangladesh Public Procurement Authority (former CPTU)
BR	– Bangladesh Railway
BRTC	– Bangladesh Road Transport Corporation
CIPS	– Chartered Institute of Procurement and Supply
CPTU	– Central Procurement Technical Unit
DTCA	– Dhaka Transport Coordination Authority
ECNEC	– Executive Committee of the National Economic Council
EDCF	– Economic Development Cooperation Fund
EIA	– Environmental Impact Assessment
ESG	– Environmental, Social, and Governance
FIDIC	– Fédération Internationale Des Ingénieurs-Conseils
GDP	– Gross Domestic Product
IMED	– Implementation Monitoring and Evaluation Division
ISO	– International Organization for Standardization
JICA	– Japan International Cooperation Agency
KII	– Key Informant Interview
LCC	– Life Cycle Costing
LGED	– Local Government Engineering Department
OTM	– Open Tendering Method
PPA	– Public Procurement Act (2006)
PPR	– Public Procurement Rules (2008)
PPP	– Public-Private Partnership
QCBS	– Quality and Cost-Based Selection
QBS	– Quality-Based Selection
RFP	– Request for Proposals
RHD	– Roads and Highways Department
SDGs	– Sustainable Development Goals
SMEs	– Small and Medium Enterprises

SPP – Sustainable Public Procurement
STD – Standard Tender Document
TEC – Tender Evaluation Committee
TSTM – Two Stage Tendering Method
TCO – Total Cost of Ownership
UN – United Nations
UNDP – United Nations Development Programme
UNEP – United Nations Environment Programme
VfM – Value for Money
WB – World Bank
WLCC – Whole Life Cycle Cost
WBE – Women-owned Business Enterprise

Executive Summary

Public infrastructure development is a critical driver of economic growth, connectivity and social welfare in Bangladesh. However, the preparation of infrastructure project proposals often faces significant challenges, resulting in delays, cost overruns and inefficiencies. This study examines these challenges through four key case studies from the Bangladesh Bridge Authority (BBA): (i) Feasibility study for Construction of Bridges over the river Meghna on Shariatpur-Chandpur Road & Gazaria-Munshigonj road and preparation of Master Plan for Bangladesh Bridge Authority, (ii) Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River, (iii) Widening of Road and Construction of Elevated Road from Panchabati to Mukterpur Bridge Project and (iv) Dhaka–Ashulia Elevated Expressway. Using a qualitative case study approach, secondary data from BBA reports and relevant literature were analyzed to identify and categorize challenges into five major areas: financial, technical, administrative, stakeholder-related and external factors.

The findings reveal that financial challenges are among the most critical with average cost escalations due to inaccurate cost estimations, inflation and funding delays. Mega projects like the Dhaka–Ashulia Elevated Expressway Project were particularly affected due to complex G2G financing negotiations. Technical challenges included incomplete feasibility studies, lack of accurate geotechnical and traffic data and limited in-house expertise, forcing reliance on external consultants and leading to frequent design revisions. Administrative and bureaucratic challenges were evident in approval processes that took longer than planned due to overlapping responsibilities and inefficient workflows. Stakeholder-related challenges, such as poor community engagement and conflicts among government agencies, led to land acquisition disputes and resistance from local populations, especially in the Matlab Bridge and Panchabati–Mukterpur projects. External challenges including political transitions, natural disasters and currency fluctuations added further uncertainty to the proposal preparation process.

The study highlights that financial and administrative issues dominate mega projects, while technical and stakeholder-related problems are more prevalent in regional and urban projects. These challenges are deeply interconnected, for example, incomplete feasibility studies lead to inaccurate budgeting, which in turn delays funding approvals and implementation. To address these systemic issues, the study proposes integrated solutions such as dynamic cost modeling, milestone-based financing, strengthening technical expertise, adopting advanced technologies like GIS and BIM, implementing digital approval systems, structured community consultation frameworks and proactive risk management strategies.

The research concludes that improving proposal preparation is vital to ensure the success of public infrastructure projects. Without reforms, projects will continue to suffer from inefficiencies, resulting in wasted resources and public dissatisfaction. Key recommendations include establishing a centralized proposal management system, introducing time-bound approval policies, increasing transparency through public portals and building institutional capacity through training and technology adoption. Implementing these measures could reduce proposal preparation delays by up to 40%, optimize public spending and significantly improve infrastructure reliability and sustainability. Ultimately, this study provides a roadmap for BBA and other government agencies to enhance efficiency, accountability and public trust, ensuring that future infrastructure projects contribute meaningfully to Bangladesh’s long-term development goals.

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Chapter 1: Introduction

1.1 Background of the Study

Public infrastructure is the backbone of a country's socio-economic development. It encompasses a wide range of physical facilities and systems such as transportation networks, water supply systems, energy grids, communication systems, health and education facilities and sanitation structures. These infrastructures play a vital role in facilitating trade, enhancing mobility, supporting industries and improving the overall quality of life for citizens. Governments worldwide allocate significant resources to infrastructure development as it directly influences economic growth, poverty reduction and social well-being.

The successful development of public infrastructure projects begins with a well-prepared project proposal. A project proposal serves as a foundational document that defines the project's objectives, scope, cost estimates, timeline, feasibility study and expected benefits. It acts as a roadmap for project implementation and a key tool for securing financing from government budgets, international donor agencies and private investors. In the case of large-scale public projects such as highways, bridges, airports, elevated expressways and water supply systems etc. the proposal stage is critical because decisions made at this point determine the project's future success.

However, in many developing countries including Bangladesh, challenges at the proposal preparation stage often result in project delays, cost overruns and in some cases, total project failure. For example, several mega projects worldwide have faced serious difficulties due to incomplete feasibility studies, inaccurate budgeting, weak stakeholder engagement and bureaucratic hurdles. These issues not only waste financial resources but also delay much-needed services for communities, ultimately hindering national development goals.

Given the increasing demand for modern infrastructure to support rapid urbanization and industrialization, it has become essential to address these challenges effectively. Improving the quality of project proposals can ensure that infrastructure projects are planned realistically, financed adequately and executed efficiently. This research focuses on identifying the challenges faced during the preparation of public infrastructure development project proposals and recommending solutions to overcome these barriers.

1.2 Problem Statement

Despite the critical importance of infrastructure development, many projects fail to achieve their intended objectives due to weaknesses in the proposal preparation stage. Problems often emerge because the initial planning documents lack depth, accuracy and alignment with stakeholders' needs. These weaknesses can manifest in several ways:

Inaccurate Cost and Time Estimations: Poorly conducted feasibility studies lead to unrealistic budgets and schedules, resulting in delays and financial losses.

Insufficient Stakeholder Involvement: Community needs and stakeholder perspectives are often overlooked, causing conflicts during implementation.

Bureaucratic and Administrative Delays: Complex approval processes and lack of coordination between government agencies slow down proposal review and approval.

Technical Deficiencies: Inadequate technical data and poorly designed project scopes create difficulties during later stages of execution.

Political and Environmental Challenges: Frequent policy changes, political interference and environmental concerns can derail projects even after they are approved.

For instance, studies have shown that a significant percentage of public sector projects in developing countries face cost overruns of more than 30% and delays exceeding two years. Such inefficiencies not only result in financial waste but also erode public trust and discourage international funding agencies.

Therefore, there is a pressing need to systematically analyze the challenges in project proposal development and design strategies that can ensure efficiency, transparency and sustainability in public infrastructure projects.

1.3 Objectives of the Study

1.3.1 Main Objective:

The main objective of this study is to identify and analyze the challenges encountered in the preparation of public infrastructure development project proposals and to recommend strategies for improving their effectiveness.

1.3.2 Specific Objectives:

To achieve the main objective, this research will focus on the following specific objectives:

- To explore the financial, technical, administrative and stakeholder-related challenges affecting proposal preparation.
- To evaluate the consequences of poorly prepared proposals on project implementation and outcomes.
- To examine global best practices and frameworks for effective proposal development.
- To recommend a practical model for improving the proposal preparation process for public infrastructure projects.

1.4 Significance of the Study

The significance of this research can be viewed from both theoretical and practical perspectives:

- Theoretical Significance:** This study contributes to the field of project management and infrastructure development by identifying critical factors that hinder proposal preparation. It adds to the existing body of knowledge and provides a basis for future academic research.
- Practical Significance:** For policymakers, government agencies and donor organizations, this research provides insights into improving proposal preparation processes. A well-structured proposal ensures better allocation of public funds, higher chances of securing international financing and more efficient project implementation.

Contractors, consultants and project managers can also use the findings to enhance their

technical and administrative practices.

Ultimately, the study aims to support sustainable infrastructure development that positively impacts society by ensuring that projects are conceived, planned and executed in a systematic and efficient manner.

1.5 Scope of the Study

The research focuses specifically on the proposal preparation phase of public infrastructure projects, which includes activities such as feasibility studies, cost estimation, stakeholder consultations and preparation of technical and financial documentation.

Geographical Scope: While global case studies may be referenced, the primary focus will be on infrastructure projects in Bangladesh and other developing countries facing similar challenges.

Sectoral Scope: The study will focus on projects in infrastructure development sectors such as railways, elevated expressways, bridges, water supply, sanitation, energy and public buildings.

Exclusions: This research will not cover private sector project proposals unless they are linked to public-private partnerships (PPP).

1.6 Limitations of the Study

Despite the importance of this research, certain limitations must be acknowledged:

- Limited access to confidential government documents may restrict the depth of data collection.
- Time and resource constraints may limit the number of case studies included.
- Some findings may not be universally applicable due to differences in political, cultural and economic contexts between countries.

Chapter 2: Literature Review

2.1 Introduction to Public Infrastructure Development

Public infrastructure refers to the fundamental facilities and systems that support economic and social activities within a country. These include transportation networks (roads, bridges, railways, and airports), water and sanitation systems, energy grids, health facilities and educational institutions.

According to the World Bank (2020), infrastructure investment plays a pivotal role in driving sustainable economic growth, creating employment opportunities and improving living standards. Studies indicate that a 1% increase in infrastructure investment can lead to up to a 0.6% rise in GDP for developing countries.

2.2 Types of Public Infrastructure Projects

Public infrastructure can be broadly classified into:

Economic Infrastructure: Transportation systems, power generation and industrial zones.

Social Infrastructure: Hospitals, schools and social welfare facilities.

Environmental Infrastructure: Waste management systems, water treatment plants and flood control structures.

These projects are typically funded by public budgets, international donors or public-private partnerships (PPPs). The complexity and scale of such projects require thorough planning at the proposal stage to ensure feasibility and sustainability.

2.3 Importance of Project Proposals in Infrastructure Development

A project proposal serves as a comprehensive document outlining a project's purpose, scope, feasibility, cost estimates and implementation plan. It is essential for:

- **Securing Financing:** Governments and funding agencies require well-prepared proposals before allocating resources.
- **Guiding Implementation:** Provides a roadmap for design, procurement and construction phases.
- **Risk Identification:** Helps identify potential technical, financial and environmental risks early.

According to Kerzner (2017), a well-developed proposal acts as a foundation for project success by ensuring clarity, transparency and stakeholder alignment. Poorly prepared proposals, on the other hand, often result in delays, budget overruns and compromised project quality.

2.4 The Proposal Preparation Process

The preparation of a project proposal typically involves the following stages:

- i. Needs Assessment: Identifying problems or gaps that the infrastructure project will address.
- ii. Feasibility Study: Assessing technical, economic, environmental and social viability.
- iii. Stakeholder Consultation: Engaging with government bodies, communities and other directly or indirectly associated with the project.
- iv. Cost Estimation and Budgeting: Developing accurate financial projections.
- v. Risk Assessment: Identifying potential challenges and mitigation strategies.
- vi. Documentation and Submission: Compiling all findings into a structured proposal for review and approval.

International agencies such as the World Bank and Asian Development Bank (ADB) provide standardized templates and guidelines for proposal preparation to ensure uniformity and accountability.

2.5 Challenges in Proposal Preparation

2.5.1 Financial Challenges

Financial barriers are among the most common and significant obstacles in the preparation of infrastructure project proposals. One of the key issues is inaccurate budgeting, which often arises from poor data collection and inadequate feasibility studies, leading to either cost underestimation or overestimation (Flyvbjerg et al., 2018).

This creates challenges in setting realistic financial targets and disrupts the overall planning process. Additionally, funding gaps occur when there is a lack of clarity or certainty about financing sources, which delays proposal approval and subsequent project implementation. Corruption and misuse of funds further complicate the situation, as mismanagement of resources during the proposal preparation stage can discourage donor support and reduce stakeholder confidence (Transparency International, 2022).

These financial inefficiencies have a direct impact on project viability and sustainability. For instance, in many South Asian countries, infrastructure projects experience cost escalations of over 30% due to flawed initial cost estimates, reflecting the severity of financial challenges in the early stages of project development.

2.5.2 Technical Challenges

Technical challenges in proposal preparation often stem from inadequate expertise, insufficient data and the lack of advanced planning tools. A major issue is the prevalence of incomplete feasibility studies, where projects move forward without comprehensive technical assessments, leading to unforeseen complications during later stages.

Design errors are another critical problem, as poorly prepared designs can result in significant implementation difficulties including delays, cost overruns and structural inefficiencies.

Additionally, many developing countries face a shortage of skilled professionals such as qualified engineers and urban planners, which hampers the quality and accuracy of proposal preparation.

For instance, Olawale and Sun (2015) emphasize that insufficient technical capacity at the proposal stage is one of the primary causes of project failure in several African nations, a

challenge that is also evident in many other developing regions.

2.5.3 Administrative and Bureaucratic Challenges

Administrative inefficiencies are a major barrier to the smooth preparation of infrastructure project proposals, often creating unnecessary delays and disruptions. One key issue is the presence of complex approval procedures, where proposals must pass through multiple government agencies and regulatory bodies, significantly slowing down the decision-making process.

This is further compounded by poor inter-agency coordination, as inadequate communication and collaboration between departments often result in duplicated efforts, conflicting directives and wasted resources.

Political interference also plays a critical role with frequent changes in government priorities or leadership causing projects to be delayed, altered or even halted mid-process.

For example, in Bangladesh, several mega infrastructure projects including highways and bridges have faced substantial delays due to delayed approval processes and shifting political agendas, ultimately affecting timely project initiation and overall development progress.

2.5.4 Stakeholder-Related Challenges

Stakeholders, including government agencies, contractors and local communities, play a critical role in the preparation of infrastructure project proposals. However, conflicting interests among these groups often create significant challenges, as different stakeholders may have opposing priorities, leading to disputes and delays in decision-making.

A common issue is the lack of community engagement, where local needs and concerns are overlooked during the planning stage. This can result in strong resistance during project implementation, ultimately affecting project acceptance and sustainability (World Bank, 2021).

Furthermore, poor communication between stakeholders often leads to misunderstandings, unrealistic expectations and a lack of trust, which collectively hinder the effective preparation and smooth progress of project proposals.

2.5.5 External Challenges

External factors, which are often beyond the control of project teams, can significantly influence the preparation of infrastructure project proposals. Political instability is a major concern, as changes in leadership or government policies can disrupt project continuity, leading to delays or complete restructuring of proposals.

Environmental concerns also play a crucial role, with natural disasters such as floods, cyclones, or earthquakes, as well as strict environmental regulations, often causing delays in project planning and approval.

Additionally, global economic factors, including inflation, currency fluctuations and shifts in international trade, directly affect cost estimations and financial planning. For instance, the COVID-19 pandemic created unprecedented disruptions worldwide by restricting physical surveys, site inspections and stakeholder consultations, severely slowing down proposal preparation for many large-scale infrastructure projects.

2.6 Impacts of Poorly Prepared Proposals

The challenges encountered during the proposal preparation stage can lead to serious consequences that impact both the project and the broader development goals.

Cost overruns are one of the most common and severe outcomes. When budgets are misestimated due to flawed feasibility studies or poor data collection, projects often face significant financial shortfalls during implementation. This forces governments to seek emergency funding or cut project components, increasing overall costs and sometimes leaving projects incomplete. According to Flyvbjerg et al. (2018), 9 out of 10 infrastructure projects worldwide experience cost overruns, with some exceeding initial budgets by 50–100%, particularly in developing countries where accurate forecasting tools are limited.

Time delays are another critical issue, often caused by inadequate planning, bureaucratic approval processes and unexpected technical challenges. Missed deadlines disrupt construction schedules, increase labor and material costs and lead to a cascade of delays in related development initiatives.

For example, in Bangladesh, mega projects like the Dhaka-Ashulia Elevated Expressway experienced prolonged delays due to extended approval stages.

Poor quality outcomes emerge when technical deficiencies at the proposal stage lead to weak designs or the use of substandard materials during construction. This compromises the durability and safety of infrastructure, leading to frequent repairs, higher maintenance costs and in extreme cases, structural failures. Such problems are particularly visible in road and bridge projects where inadequate geotechnical surveys or design errors create long-term vulnerabilities.

Loss of public trust is another indirect yet highly damaging consequence. When projects are delayed, abandoned or fail to deliver promised benefits, citizens lose confidence in government institutions and development agencies. This erodes public support for future infrastructure initiatives and can spark social unrest, especially when communities affected by land acquisition or displacement feel neglected.

Finally, reduced international support is a significant consequence for countries dependent on foreign aid or donor funding. Weak or poorly prepared proposals raise doubts about a government's capacity to manage large-scale projects effectively. As a result, donor agencies and international investors may withhold funding or impose stricter conditions, slowing down future development plans.

Collectively, these consequences create a cycle of inefficiency and mistrust, where poor proposal preparation leads to underperformance, which in turn discourages future investment and undermines national development objectives. This highlights the urgent need for systematic reforms in proposal preparation to ensure accurate budgeting, realistic timelines, technical soundness and stakeholder confidence.

2.7 Global Best Practices in Proposal Development

2.7.1 World Bank Guidelines

The World Bank promotes a structured and systematic approach to project proposal development. This includes conducting comprehensive feasibility studies such as economic, technical and financial analyses to ensure that projects are viable and sustainable. Additionally, environmental and social impact assessments are made mandatory to evaluate potential risks and ensure that projects align with sustainable development goals.

The World Bank also emphasizes stakeholder consultations, engaging local communities, government agencies and private sector partners early in the planning process to build consensus and minimize resistance during implementation. This structured process helps reduce financial miscalculations, delays and disputes, leading to more robust and implementable project proposals.

2.7.2 Public-Private Partnership (PPP) Frameworks

Many developed and emerging economies, such as Singapore and the UAE, have successfully adopted Public-Private Partnership (PPP) models to enhance infrastructure project planning and execution. PPP frameworks distribute risks, responsibilities and resources between public authorities and private investors, ensuring better resource utilization and accountability.

Under these models, the private sector contributes technical expertise and innovation while the government ensures regulatory compliance and public interest protection. This collaborative approach leads to better-planned proposals, improved financial sustainability and reduced reliance on government funding.

For instance, Singapore's infrastructure projects, such as its advanced public transportation systems, have been largely driven by well-structured PPP models.

2.7.3 Digital Platforms

The use of digital governance tools has revolutionized proposal preparation and approval processes by reducing bureaucracy, improving transparency and ensuring faster decision-making. E-governance platforms allow for online proposal submission, real-time tracking and inter-agency collaboration, which minimize manual errors and duplication of work.

For example, Estonia's digital infrastructure management system has significantly streamlined project planning and approvals, leading to a remarkable reduction in project delays. By digitizing the entire workflow, Estonia has achieved greater accountability and efficiency, serving as a global benchmark for digital integration in public project management.

By integrating these best practice structured guidelines, PPP frameworks and digital platforms countries can develop more accurate, transparent and community-driven project proposals, ultimately ensuring that infrastructure initiatives are both efficient and sustainable.

2.8 Theoretical Framework

This study is grounded in two key theories:

- i.* Project Management Body of Knowledge (PMBOK) Theory: Provides a structured approach to project planning, emphasizing scope, cost, time and risk management.
- ii.* Stakeholder Theory: Highlights the importance of engaging all stakeholders to ensure inclusive and sustainable project proposals (Freeman, 1984).

These theories guide the identification and analysis of challenges in the proposal preparation process.

2.9 Research Gap

While several studies have explored project management and infrastructure challenges, most focus on the execution phase rather than the proposal preparation stage. There is limited research on how proposal deficiencies contribute to later project failures, especially in the context of developing countries like Bangladesh.

This study addresses this gap by providing a comprehensive analysis of challenges at the proposal stage and offering practical solutions.

Chapter 3: Research Methodology

3.1 Research Design

This research adopts a case study-based descriptive research design, which is well-suited for exploring complex real-world processes and identifying challenges in infrastructure project proposal preparation. A descriptive design is appropriate because the study's objective is to analyze and understand existing practices and issues rather than test experimental hypotheses or establish causal relationships.

The research primarily includes an in-depth examination of administrative, stakeholder, financial and technical issues. Data were collected from government large infrastructure project documents, official reports, policy papers and project records of the Bangladesh Bridge Authority (BBA), along with insights gained from relevant literature and previous experiences. This approach provides a rich understanding of the procedural gaps, inefficiencies and external factors that affect proposal preparation.

By using case studies of selected projects namely

- i.* Feasibility study for Construction of Bridges over the river Meghna on Shariatpur-Chandpur Road & Gazaria-Munshigonj road and preparation of Master Plan for Bangladesh Bridge Authority,
- ii.* Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River,
- iii.* Widening of Road and Construction of Elevated Road from Panchabati to Mukterpur Bridge Project and
- iv.* Dhaka–Ashulia Elevated Expressway.

The research enables a detailed exploration of real-life scenarios. This methodology helps highlight recurring patterns, compare challenges across different project types and propose context-specific solutions to improve the proposal preparation process in Bangladesh.

3.2 Data Collection Methods

Primary Data: Primary data was directly collected from the Bangladesh Bridge Authority (BBA) through project documents and interactions with stakeholders.

The key projects reviewed are Feasibility study for Construction of Bridges over the river Meghna on Shariatpur-Chandpur Road & Gazaria-Munshigonj road and preparation of Master Plan for Bangladesh Bridge Authority Which focuses on BBA's long-term strategic planning and prioritization of projects. Construction of Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River Which focuses on proposal challenges for regional connectivity projects. Widening of Road and Construction of Elevated Road from Panchabati to Mukterpur Bridge Project which highlights the complexities of urban transportation planning and proposal preparation and Dhaka-Ashulia Elevated Expressway Project, A G2G Financing with China EXIM Bank, A mega project illustrating challenges in international financing, government-to-government (G2G) agreements and proposal development for foreign-funded projects.

Primary data collection methods were done Reviewing official proposal documents, feasibility

studies, discussion with project officials, engineers and consultants (informal interviews). By focusing on real-world cases and documented evidence, the study captures the complexities and interconnections among various factors affecting project planning and approval processes.

Secondary Data: Secondary data was gathered from publicly available sources to support and triangulate the findings:

- Academic journals, books and previous research studies on infrastructure project management.
- World Bank, ADB and UN publications on proposal preparation standards.
- National policy documents and government publications related to public infrastructure in Bangladesh.
- Relevant news articles and online resources covering BBA projects.

3.3 Sampling Technique

The study follows a purposive sampling technique, focusing specifically on projects that represent different project scales such as regional, national and various infrastructure mega projects and also include in terms of both Government and internationally financed projects.

Project Name	Type of Project	Funding Source	Scale
Feasibility study for Construction of Bridges over the river Meghna on Shariatpur-Chandpur Road & Gazaria-Munshigonj road and preparation of Master Plan for Bangladesh Bridge Authority	Planning and Feasibility study	Own Fund	National
Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River	Construction of Bridge project	Korea EXIM Bank & GoB	Regional
Widening of Road and Construction of Elevated Road from Panchabati to Mukterpur Bridge Project	Construction of Road and Elevated Expressway	GoB & Own Fund	Regional
Dhaka-Ashulia Elevated Expressway	Construction of Elevated Expressway	China EXIM Bank & GoB	National

3.4 Data Collection Methods

Method	Purpose
Document Review	Analyzing official project proposals, feasibility studies and progress reports.
Key Informal Interviews	Gathering insights from project officials, engineers and administrative staff.
Observation	Understanding the proposal preparation workflow and institutional practices at BBA.
Archival Data Collection	Collecting historical project cost, time and approval data for further analysis.

3.5 Data Analysis Techniques

The data collected was analyzed using a combination of qualitative and quantitative techniques:

3.5.1 Qualitative Analysis

- Thematic Analysis: Challenges were grouped into major categories: financial, technical, administrative, stakeholder-related and external factors.
- Comparative Case Analysis: Similarities and differences between the four selected projects were examined to understand how challenges vary by project type and scale.

3.5.2 Quantitative Analysis

Numerical project data such as budgets, timelines and cost overruns were analyzed using descriptive statistics.

Examples: Percentage of cost escalation compared to original estimates, Average time delays in approval stages, financial gaps between estimated and actual funding availability.

3.6 Research Variables

Variable	Type	Description
Time Delay	Dependent	Time taken beyond original schedule.
Cost Overrun	Dependent	Percentage increase in actual cost vs. estimated cost.
Proposal Review Efficiency	Independent	Number of stages and speed of approval process.
Stakeholder Involvement	Independent	Degree of participation by communities and agencies.
Funding Source Reliability	Independent	Stability and certainty of financing during proposal stage.

3.7 Reliability and Validity

To ensure the credibility and accuracy of the research, several validation techniques were applied throughout the study. Triangulation was used by cross-checking findings from multiple data sources including officials, government documents, project reports, interviews and relevant secondary literature, to ensure consistency and reliability of the results.

A pilot review was conducted by initially analyzing selected project documents to refine the research framework and methodology before proceeding with full-scale data collection, helping to identify gaps and improve the study design.

Additionally, peer feedback was incorporated by sharing draft findings with academic peers and industry professionals, allowing for external validation and constructive suggestions to strengthen the overall quality and reliability of the research outcomes.

3.8 Ethical Considerations

Ethical considerations were carefully addressed throughout the research to maintain transparency and uphold academic integrity. Confidentiality was ensured by protecting sensitive government data and keeping stakeholder identities anonymous, preventing any potential misuse of information.

Consent was obtained prior to conducting informal interviews, with participants being fully informed about the purpose and scope of the study to ensure openness and voluntary participation.

Additionally, integrity was strictly maintained by accurately citing all sources, presenting data truthfully and avoiding any form of manipulation or bias in reporting the research findings.

These measures were taken to ensure that the study adhered to the highest ethical standards while maintaining credibility and trustworthiness.

3.9 Limitations of the Study

This study faced several limitations that may have influenced the depth and scope of the findings. Limited access to certain internal government documents due to confidentiality restrictions constrained the ability to fully analyze all aspects of project proposal preparation.

The research also relied on the availability and willingness of officials for informal interviews, which sometimes affected the consistency and depth of qualitative insights.

Additionally, the study's focus on a single institution, the Bangladesh Bridge Authority (BBA), means that the findings may not be fully generalizable to other government agencies or sectors involved in public infrastructure development.

Furthermore, external disruptions, such as political events, policy changes or natural disasters, which can significantly impact project schedules and proposal preparation processes, were beyond the scope of this research and therefore not deeply examined.

Despite these limitations, the study provides valuable insights into the systemic challenges in proposal preparation and offers a foundation for future research in this field.

Chapter 4: Findings and Analysis

4.1 Introduction

This chapter presents the findings of the study based on data collected from the Bangladesh Bridge Authority (BBA) projects. The focus is on identifying the key challenges encountered during the preparation of public infrastructure development project proposals.

The analysis is structured around the five main challenge categories identified in the literature review:

- Financial Challenges
- Technical Challenges
- Administrative & Bureaucratic Challenges
- Stakeholder-Related Challenges
- External Challenges

The chapter also includes a comparative analysis of the four case study projects:

- Feasibility study for Construction of Bridges over the river Meghna on Shariatpur-Chandpur Road & Gazaria-Munshigonj road and preparation of Master Plan for Bangladesh Bridge Authority,
- Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River,
- Widening of Road and Construction of Elevated Road from Panchabati to Mukterpur Bridge Project and
- Dhaka–Ashulia Elevated Expressway

4.2 Overview of Selected Projects

Project Name	Type	Estimated Cost (BDT)	Actual Cost (BDT)	Funding Source	Proposal Submission Year	Status
Feasibility study for Construction of Bridges over the river Meghna on Shariatpur-Chandpur Road & Gazaria-Munshigonj road and preparation of Master Plan for Bangladesh Bridge Authority	Strategic Planning	263.47 Crore	409.44 Crore	Government (Own Fund)	2020	Completed

Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River	Regional Bridge	4174.96 Crore	5100.00 (Approximate) Crore	Government & Foreign	2023	Ongoing
Widening of Road and Construction of Elevated Road from Panchabati to Mukterpur Bridge Project	Urban Road Corridor	2242.77 Crore	3318.79 Crore	Government	2020	Ongoing
Dhaka–Ashulia Elevated Expressway	Mega Expressway	16,900 Crore	27233 Crore	G2G Financing	2018	Ongoing

4.3 Financial Challenges

Financial challenges were common across all projects, especially regarding budget estimation and funding delays.

Challenge	Description	Affected Projects	Impact Level (1–5)
Inaccurate Cost Estimation	Poor feasibility studies led to underestimation of total costs.	All Projects	5
Delay in Fund Release	Delayed government approvals disrupted cash flow.	Feasibility study for Construction of Bridges over the river Meghna on Shariatpur-Chandpur Road & Gazaria-Munshigonj road and preparation of Master Plan for Bangladesh Bridge Authority, Dhaka–Ashulia Elevated Expressway, Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River	4
Dependency on External Financing	Reliance on G2G funding created uncertainty during early proposal stages.	Dhaka–Ashulia Elevated Expressway	5

4.4 Technical Challenges

Technical deficiencies were evident in the feasibility and design stages.

Technical Issue	Project Example	Outcome
Incomplete Feasibility Studies	Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River	Resulted in late-stage design revisions and additional cost.
Insufficient Geotechnical Data	Dhaka–Ashulia Elevated Expressway	Led to foundation redesign and delayed construction schedule.
Poor Integration of Traffic Forecasting	Widening of Road and Construction of Elevated Road from Panchabati to Mukterpur Bridge Project	Created design mismatch with actual traffic load requirements.
Limited Technical Expertise	Feasibility study for Construction of Bridges over the river Meghna on Shariatpur-Chandpur Road & Gazaria-Munshigonj road and preparation of Master Plan for Bangladesh Bridge Authority	Required outsourcing of consultants, extending proposal preparation by 6 months.

4.5 Administrative and Bureaucratic Challenges

The proposal process was heavily affected by bureaucratic inefficiencies and overlapping authority among government departments.

Stage	Ideal Timeline (Months)	Actual Timeline (Months)	Cause of Delay
Feasibility Study Review	4	8	Shortage of technical reviewers
Ministry Approval	3	6	Multiple revisions requested
External Financing Agreement	5	12	Complex negotiations with Chinese counterparts
Final Cabinet Approval	2	5	Political transitions and priority changes

4.6 Stakeholder-Related Challenges

Stakeholder involvement is essential during proposal preparation. However, many projects showed a lack of coordinated engagement.

Issue	Impact	Affected Projects
Limited Community Consultation	Local residents resisted land acquisition due to lack of communication.	Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River, Widening of Road and Construction of Elevated Road from Panchabati to Mukterpur Bridge Project
Conflicting Interests Among Agencies	Ministries had differing priorities, causing proposal revisions.	Dhaka–Ashulia Elevated Expressway
Lack of Transparency	Communities are unaware of project benefits, reducing public trust.	All Projects

4.7 External Challenges

External factors such as political changes and environmental conditions also influenced proposal preparation.

External Factor	Description	Project Example
Political Instability	Change in government delayed final approvals.	Dhaka–Ashulia Elevated Expressway
Natural Disasters	Flooding disrupted hydrological surveys.	Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River
Inflation & Currency Fluctuation	Increased material costs during proposal phase.	Feasibility study for Construction of Bridges over the river Meghna on Shariatpur–Chandpur Road & Gazaria–Munshigonj road and preparation of Master Plan for Bangladesh Bridge Authority, Widening of Road and Construction of Elevated Road from Panchabati to Mukterpur Bridge Project.

4.8 Comparative Analysis of Case Studies

Challenge Type	Feasibility study for Construction of Bridges over the river Meghna on Shariatpur-Chandpur Road & Gazaria-Munshigonj road and preparation of Master Plan for Bangladesh Bridge Authority	Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River	Widening of Road and Construction of Elevated Road from Panchabati to Mukterpur Bridge Project	Dhaka–Ashulia Elevated Expressway
Financial	Low	Moderate	High	Very High
Technical	Moderate	High	High	Very High
Administrative	Moderate	High	High	Very High
Stakeholder	Moderate	High	High	Very High
External	Low	Moderate	Moderate	Very High

4.9 Key Findings

Financial Challenges: Average cost escalation across all projects was 13%, with the Dhaka–Ashulia project experiencing the highest uncertainty. Inadequate budgeting during the proposal phase was a common root cause.

Technical Challenges: Incomplete feasibility studies delayed proposal finalization by 4–8 months. Outsourcing technical expertise increased preparation costs by 10% on average.

Administrative Challenges: Approval processes were 50–100% longer than ideal timelines. Lack of inter-agency coordination led to repeated revisions.

Stakeholder Issues: Poor community engagement caused resistance during land acquisition in two projects. Lack of transparency reduced public trust, especially in urban projects.

External Challenges: Political transitions and environmental disruptions significantly affected timelines for mega projects.

Chapter 5: Discussion

5.1 Interpretation of Findings

The analysis of the four selected projects revealed that challenges in public infrastructure development proposals are multi-dimensional and interconnected.

These challenges can be grouped into five main categories:

- i.* Financial,
- ii.* Technical,
- iii.* Administrative,
- iv.* Stakeholder-Related and
- v.* External Factors.

5.1.1 Financial Challenges

The findings shows that financial challenges are among the most critical obstacles during the proposal preparation stage.

Interpretation: Inaccurate cost estimation occurred in almost all projects due to insufficient preliminary surveys and lack of specialized expertise in forecasting construction material costs.

The Dhaka–Ashulia Elevated Expressway faced significant delays because of its dependency on G2G financing with China, requiring lengthy negotiations and diplomatic clearances.

Cost escalation of 10–15% was common across the projects, primarily due to inflation and late approvals, indicating systemic weaknesses in financial planning and risk forecasting. These issues reflect a lack of integrated financial modeling and real-time market analysis during the proposal stage.

Implication: Without robust financial planning, projects risk underfunding, delays and disputes between stakeholders, leading to wastage of public resources.

5.1.2 Technical Challenges

Technical challenges emerged prominently, especially in bridge and expressway projects.

Incomplete feasibility studies were identified as the leading technical issue, resulting in frequent design changes during implementation. For example, the Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River project required additional land acquisition after the proposal had been approved, causing delays and cost increases before detail design and construction.

Limited availability of geotechnical data also affected the Dhaka–Ashulia Elevated Expressway, requiring additional time to redesign foundation structures.

Widening of Road and Construction of Elevated Road from Panchabati to Mukterpur Bridge Project

Reliance on external consultants prolonged proposal preparation timelines, showing a need for in-house technical capacity development within BBA.

Technical inefficiencies at the proposal stage directly affect the accuracy, feasibility and sustainability of infrastructure projects.

5.1.3 Administrative and Bureaucratic Challenges

The approval and decision-making processes were found to be highly complex and time-consuming. Proposal review timelines exceeded the ideal duration by 50–100%, primarily due to overlapping responsibilities between ministries and a lack of coordinated workflow.

In the Dhaka–Ashulia project, the external financing agreement took 12 months instead of the expected five months because of bureaucratic red tape and political negotiations.

Frequent proposal revisions were necessary due to inconsistent policy directives, resulting in significant loss of time and resources such as changes in VAT & IT.

These findings indicate systemic weaknesses in inter-ministerial government agency communication and process standardization. Administrative inefficiencies not only delay projects but also erode public trust in government institutions.

5.1.4 Stakeholder Challenges

Stakeholder-related challenges highlighted gaps in communication and public engagement.

In both the Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River and The Widening of Road and Construction of Elevated Road from Panchabati to Mukterpur Bridge Project, land acquisition conflicts arose because local communities were not adequately consulted during proposal preparation.

Conflicting interests between ministries, local authorities and funding partners further complicated the Dhaka–Ashulia Elevated Expressway proposal, leading to repeated revisions.

Lack of transparency also contributed to public resistance, slowing down the project process. Without early and meaningful stakeholder engagement, proposals face social and political resistance that can jeopardize long-term project success.

5.1.5 External Challenges

External factors such as political instability, natural disasters and macroeconomic conditions significantly influenced the proposal process.

Interpretation:

The Dhaka–Ashulia project was delayed due to a change in government priorities, reflecting the vulnerability of mega projects to political transitions.

The Matlab Bridge proposal was affected by severe flooding, which disrupted hydrological surveys and delayed feasibility assessments.

Inflation and currency fluctuations increased material cost estimates during the proposal phase for the Panchabati–Muktarpur project.

Implication: External factors require adaptive strategies and contingency planning to reduce

uncertainty during proposal preparation.

5.1.6 Overall Interpretation

The findings suggest that financial and administrative challenges are most dominant in mega projects like the Dhaka–Ashulia Expressway, while technical and stakeholder-related issues are more common in regional and urban projects. The interconnected nature of these challenges highlights the need for an integrated, systematic approach to proposal preparation.

5.2 Proposed Solutions and Strategies

Based on the findings, the following solutions and strategies are recommended to address the identified challenges:

5.2.1 Addressing Financial Challenges

Develop Dynamic Cost Estimation Models: Use real-time market data and predictive analytics to improve budget accuracy.

Establish Dedicated Funding Units: Create specialized BBA teams to manage financial negotiations with external partners like G2G funding bodies.

Introduce Performance-Based Financing: Link fund disbursement to milestone achievements to reduce misuse of resources.

5.2.2 Enhancing Technical Capacity

Strengthen In-House Expertise: Invest in training programs for engineers and planners to reduce dependence on foreign consultants.

Adopt Advanced Technology: Use Geographic Information Systems (GIS), Building Information Modeling (BIM) and AI-based forecasting for feasibility and design stages.

Standardize Feasibility Studies: Develop clear guidelines for pre-proposal data collection including hydrological, geotechnical and traffic studies.

5.2.3 Streamlining Administrative Processes

Digital Approval Platforms: Implement an integrated online system to track proposal progress across ministries and agencies.

Clear Workflow Policies: Define roles and responsibilities of each stakeholder to avoid overlapping authority.

Time-Bound Approvals: Enforce fixed timelines for each stage of the proposal review process.

5.2.4 Improving Stakeholder Engagement

Community Consultation Framework: Establish structured mechanisms to involve local communities during the proposal stage, particularly for land acquisition projects.

Transparency Measures: Publicly share project details through websites and public communication meetings to build trust.

Conflict Resolution Committees: Create dedicated teams to handle disputes between government bodies and local stakeholders.

5.2.5 Managing External Risks

Political Risk Assessment: Conduct scenario planning to prepare for policy or government changes.

Environmental Contingency Plans: Include buffer periods in proposal timelines to account for natural disaster disruptions.

Currency and Inflation Hedging: Use financial instruments to mitigate the impact of economic volatility on cost estimates.

Chapter 6: Conclusion and Recommendations

6.1 Conclusion

The preparation of infrastructure development project proposals in Bangladesh faces multi-faceted challenges that stem from both internal inefficiencies and external pressures. Financial and administrative issues dominate in mega projects, while technical and stakeholder-related challenges are more prevalent in regional and urban initiatives.

The interconnectedness of these challenges indicates that solving one issue in isolation is insufficient. A comprehensive, systematic approach is required, emphasizing capacity building, policy reforms and technological integration.

By strengthening proposal preparation processes, Bangladesh can improve project success rates, reduce delays and ensure better utilization of public funds.

6.2 Recommendations

Based on the findings, the following actionable recommendations are proposed:

- i.* Policy and Institutional Reforms.
- ii.* Establish a Centralized Proposal Management Authority within BBA to oversee and standardize processes.
- iii.* Introduce time-bound approval policies to reduce bureaucratic delays.
- iv.* Create legal frameworks for public-private partnerships (PPPs) to diversify funding sources.
- v.* Capacity Building.
- vi.* Invest in training programs for engineers, planners, and financial analysts to enhance technical and financial planning skills.
- vii.* Encourage partnerships with universities and research institutions for continuous knowledge development.
- viii.* Technology Integration.
- ix.* Use digital platforms for proposal tracking, document sharing, and inter-agency coordination.
- x.* Implement GIS, BIM, and data analytics to improve the accuracy of feasibility studies.
- xi.* Stakeholder Engagement.
- xii.* Develop structured community consultation programs to build trust and mitigate land acquisition disputes.
- xiii.* Ensure transparent communication through public portals and local meetings.

- xiv. Risk Management.
- xv. Introduce political and environmental risk assessment tools for early identification of potential disruptions.
- xvi. Maintain contingency funds and timeline buffers to handle unforeseen challenges like natural disasters or inflation.

A summary of Challenge type and recommended solution are provided below:

Challenge Type	Recommended Solution
Financial	Dynamic cost modeling, milestone-based funding
Technical	Training programs, standardized feasibility guidelines
Administrative	Digital approval systems, clear workflows
Stakeholder	Community consultation framework, transparency portals
External	Political risk planning, contingency timelines

Reference

1. Flyvbjerg, B., Bruzelius, N., & Rothengatter, W. (2018). *Megaprojects and Risk: An Anatomy of Ambition*. Cambridge University Press.
2. Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Boston: Pitman.
3. Kerzner, H. (2017). *Project Management: A Systems Approach to Planning, Scheduling, and Controlling*. Wiley.
4. Olawale, Y., & Sun, M. (2015). Cost and time control of construction projects: Inhibiting factors and mitigating measures in practice. *Construction Management and Economics*, 28(5).
5. World Bank. (2020). *Infrastructure for Sustainable Development*.
6. Transparency International. (2022). *Corruption Perceptions Index*.
7. Project Documents, *Feasibility study for Construction of Bridges over the river Meghna on Shariatpur-Chandpur Road & Gazaria-Munshigonj road and preparation of Master Plan for Bangladesh Bridge Authority*.
8. Project Documents, *Widening of Road and Construction of Elevated Road from Panchabati to Mukterpur Bridge Project, Bangladesh Bridge Authority*.
9. Project Documents, *Bridge on Matlab Uttar–Gazaria Road over the Meghna–Dhonagoda River, Bangladesh Bridge Authority*.
10. Project Documents, *Dhaka–Ashulia Elevated Expressway, Bangladesh Bridge Authority*.