Report On

Works Contract Management Practice of ADB Funded Project in Bangladesh
A case study of Roads & Highways Department (RHD)

By

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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

February, 2024

DECLARATION

It is at this moment declared that

1. The internship report submitted is my/our original work while completing my 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 that 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:

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Masud Akhter Khan, MCIPS, PMP
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Letter of Transmittal

Masud Akhter Khan
Faculty,
MPSM
BRAC University
66 Mohakhali, Dhaka-1212

Subject: **Letter of transmittal.**

Dear Sir,

This is my pleasure to report to you that, I have collected the primary data from essential resources as you suggested and completed the analysis based on the best practices available in the modern research methodology.

I have attempted my best to finish the report with the essential data and recommended proposition in a significant compact and comprehensive manner as possible.

I trust that the report will meet the standard as expected.

Sincerely yours,

_____

(Asik Kadir)
ID: 21382031
BIGD, BRAC University

February, 2024

Non-Disclosure Agreement

To,
Md. Mahbubur Rahamn
[ID:]
Executive Engineer and Project Manager
SASEC Road Connectivity Project-2,
Sarak Bhabon, Tejgaon
Dhaka-1208

Subject: **Non-disclosure agreement.**

Dear Sir,

This is my pleasure to report to you that, I have collected the primary data from essential resources as you suggested and completed the analysis based on the best practices available in the modern research methodology.

I hereby give my sincere words that neither I nor BRAC University will disclose this company information collected for the sake of this research to any other medium or entity. It will be kept safe under the university's authority.

I trust that the report will meet the standard as expected.

Sincerely yours,

_____
(Asik Kadir)
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BIGD, BRAC University
February, 2024

ACKNOWLEDGEMENT

After an intensive period, today is the day: writing this note of thanks is the finishing touch on my dissertation. Writing this dissertation has had an important impact on me. I would like to reflect on the people who have supported and helped me so much throughout this period.

I would particularly like to express gratitude to my supervisor Masud Akhter Khan, MCIPS PMP, Additional Secretary and National Trainer, Bangladesh Public Procurement Authority (BPPA); for his constant supervision, guidance, suggestions, and constructive criticism. You provided me with the tools that I needed to choose the right direction and complete my dissertation. I would like to thank my colleagues and senior officials of RHD for their wonderful support and cooperation.

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Finally, I express my deepest gratitude to my family, relatives, and friends for their support and encouragement.

Executive Summary

Contract management has become an integral part of development in the context of Bangladesh. It includes various parts from planning to closing of the project. In every stage management of quality, time and cost is very crucial. For smooth completion, a contract document can help in every aspect like planning, design, implementation, and evaluation. The Roads and Highways department is engaged in implementing roads, bridges, culverts, underpasses, and flyovers in all over Bangladesh. RHD practices these developments through the procurement of works, goods, and services. This case study encompasses RHD officials to perform a contract perfectly so that; any conflict situation can be mitigated earlier to make the contract successful. Furthermore, the study will help the field-level officers of RHD to execute contracts in a better way who are engaged in a lot of extra activities resulting in inappropriate knowledge about contract management. There are different types of projects being implemented by RHD. The mega projects which are aided by foreign funds mostly have individual project implementation units. The mega or international projects must follow FIDIC rules and regulations. On the other hand, the GoB projects must follow PPR-2008 and instructions from CPTU. RHD has a draft contract document format that provides information about contract management for the GoB projects. There are several training programs conducted for internal, connected, and external stakeholders to run a project through proper knowledge and guidance. Finally, a lot of scopes for further study have been associated with this study.

Keywords: *Contract Management*, *mega Project, quality management*, *value for money; time and cost overruns; contract documents, procurement of Works*

LIST OF ACRONYMS

BBS	Bangladesh Bureau of Statistics
BPPA	Bangladesh Public Procurement Authority
BOQ	Bill of Quantities
CPTU	Central Procurement Technical Unit
DLP	Defect Liability Period
DoFP	Delegation of Financial Power
DPM	Direct Procurement Method
EWO	Extra Work Order
GCC	General Conditions of Contract
GoB	Government of Bangladesh
HOPE	Head of Procuring Entity
ITT	Instructions to Tenderers
JV	Joint Venture
KPI	Key Performance Indicators
RHD	Roads and Highways Department
LGED	Local Government Engineering Department
LTM	Limited Tendering Method
NCT	National Competitive Tender
NOA	Notification of Award
PCC	Particular Conditions of Contract
PE	Procuring Entity
PPR	Public Procurement Rules
PM	Project Manager
PW	Procurement of Works
QCBS	Quality and Cost-Based Selection
OSTETM	One Stage Two Envelop Tendering Method
OTM	Open Tendering Method
QS	Quantity Survey
RVQ	Request for Variation Quotation
RIMS	Risk Identification and Management System
STD	Standard Tender Document
TSTM	Two-Stage Tendering Method
RFQM	Request for Quotation Method
UE	Upazila Engineer
TDS	Tender Data Sheet
TEC	Tender Evaluation Committee
VO	Variation Order
FIDIC	The International Federation of Consulting Engineers

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1. Introduction

A contract is an arrangement between two or more parties that is enforceable by law as a binding legal agreement. A business model is formed with employees and vendors through a contract document. A contract document is written which obligates to perform a work, service, or provide a good in terms of payment. Mindful to perform a contract the business leaders have to keep an eye always as they must maintain the relationship with the various types of stakeholders internal, connected, and external. So, contract management is a very important part of any project which involves so many tasks before and after the notification of award (NOA) giving. Furthermore, contract management needs to make instant decisions and, an efficient flow of information to enable the successful completion of the contract. In every state planning, designing, modification, implementation, monitoring, and evaluation of this contract management is mandatory. Contract administration includes establishing proper and accurate contract documents with proper specifications, inclusion of national and international rules and regulations; ensuring quality assurance by timely inspecting and reviewing, sampling, and testing of all raw materials associated with work; making sure that the works are done within the agreed timeframe and contracted price; preserving accurate records; recording, verifying the physical and financial progress reports; negotiating for change request, supplemental agreements and other contract modifications promptly; promoting good relations with stakeholders and setting and maintaining a high professional standard etc.

1.1. Background of the study

The Roads and Highways Department is fully responsible for the safe and uninterrupted movement of traffic through highways, bridges, flyovers, and underpasses in Bangladesh. Every year RHD successfully spends the whole allocation for infrastructures which is known as the Annual Development Program. RHD does not use only the GoB fund, rather it is also responsible for the utilization of foreign aid from the World Bank, JICA, ADB, IDB, and AIIB. Infrastructure development is the main part of a country's development in this world. So, without proper contract management, a project cannot be successful and it will make the whole contract faulty. Infect, there are a few research in this contract management area in the context of Bangladesh. Contract management starts with contract preparation, and bidding procedure and ends with implementation, quality control, and post-evaluation. So, contract management is a vital part of this huge investment all over Bangladesh. Without proper management, the whole public or foreign aid fund will be void and meaningless.

1.2. Problem Statement

The public procurement process is a policy for any Government to meet the development process in any country and it has become a tool for the Government to change the economy as well as the environment. Most of the people know the contract is legal documentation between the contracting agency and the supplier. The contract act has a wide range of management such as planning, bidding procedure, implementation, stakeholder analysis, quality control, and evaluation. But due to lack of knowledge almost everywhere these parts are being neglected.

As a result, the always contract fails and there is a hue and cry between the contractor and the employer.

In Bangladesh every year there is a huge allocation in different sectors. Most of them are from GoB funds. For specialized infrastructures, the foreign fund is allocated to maintain economic growth and technology transfer. So many building works, widening of lanes of highways, and construction of bridges or flyovers are common in Bangladesh nowadays. The problem is common in every sector of Bangladesh due to improper management of contracts. Furthermore, land acquisition and requisition are a great problem in this sub-continent. Without proper knowledge about contract management proactive measures always lead a contract to cost overrun.

So, considering all the statements discussed above, research in this contract management is very much important. The limited research in this field plays very pivotal role in the failure of contracts in many areas. So, hopefully, this report will help the procurement entity to perform any contract in a better way than ever before all over Bangladesh.

1.3. Aim of the Study

This study aims to examine the current practice of contract management of a foreign aid project under the Roads and Highways Department. In Bangladesh, there are a lot of challenges. So, the implementation of a project in this country is a very critical issue. However, in this study, anyone can find the contract management process by using FIDIC, Public Procurement Act 2006, and Public Procurement Rules 2008.

1.4. Objective of the Study

1.4.1. General Objective

To assess the performance of contract management of SASEC Road Connectivity Project II under ADB finance in the Roads and Highways Department in Bangladesh.

1.4.2. Specific Objectives

a. Identify the process and practice of contract management which comply with FIDIC contract management in Roads and Highways Department

b. To measure the objectives that are achieved through this contract management.

c. Assess the importance of contract management in the Roads and Highways Department.

d. To find out the challenges and stakeholder contribution in the Roads and Highways Department.

1.4.3. Research Questions

a. What is the present practicing condition of contract management in RHD

b. How does the present practicing condition comply with the FIDIC and public Procurement Rules in Bangladesh

c. How much capable are the Engineers of Roads and Highways Department to manage contract management

d. To what extent the contracts are successful when implementation

e. Do the contracts achieve the goals that are set before contracting

f. How to do change requirements to fulfill the contracts

1.5. Research Methodology

There are two types of research methodology: qualitative and quantitative. In my study qualitative study has been taken including some questionnaires to the project personnel. FIDIC guidelines for procurement of works are taken under consideration maintaining the PPR 2008 and PPA 2006 also. The tender method is a single-stage two envelope where the technical specification of the bidders was evaluated first. Then financial proposal was evaluated considering the lowest and finally, the contract was awarded. Different type of data was calculated through Microsoft Excel and was presented in tabular form for better presentation and understanding.

1.6. Target group for Surveying

From Client's End:

1. Project Director, SASEC II Project
2. Additional Project Director-3, SASEC II Project
3. Deputy Project Director, SASEC II Project
4. Project Manager-6, SASEC II Project
5. Deputy Project Manager-6, SASEC II Project
6. Assistant Engineer, SASEC II Project

From Consultant's End:

1. Team Leader, SASEC II Project
2. Deputy Team Leaser, SASEC II Project
3. Resident Engineer-10, SASEC II Project
4. Surveyor

From Contractor's End:

1. Project Manager, CSCEC-7
2. Planning Engineer, CSCEC-7

From Implementing Site:

1. The Upazilla Chairman, Govindogonj Upazilla
2. The Upazilla Nirbahi Officer, Govindogonj Upazilla
3. Officer in Charge, Govindogonj Highway Thana.

2. Literature Review

A contract, in its simplest definition, is a legally enforceable promise. This promise can involve undertaking an action or refraining from doing something. Creating a contract involves the mutual agreement of two or more parties, typically with one party making an offer and another accepting it. If one party fails to uphold the promise, the other has the right to seek legal remedies. Contract law deals with determining the existence of a contract, its meaning, whether it has been breached, and the appropriate compensation for the injured party.

The foundation of contract law is rooted in business civilization and is not prevalent in noncommercial societies to a significant extent. Primitive societies often rely on alternative methods, such as kinship ties or religious authority, to enforce commitments. In barter-based economies, transactions are generally self-enforcing, as both parties complete the exchange simultaneously. Issues that may arise, like defective goods, are typically addressed through property law, which imposes penalties for taking or damaging another's property, rather than through contract law. (https://www.britannica.com/money/topic/contract-law)

Contract management involves overseeing the creation, execution, and analysis of contracts to optimize operational and financial performance while mitigating financial risks for an organization. In the face of increasing pressure to cut costs and enhance company performance, the need for an efficient and automated contract management system becomes evident.

The contract management process comprises five key stages: creation, collaboration, signing, tracking, and renewal. Each stage involves critical steps to ensure comprehensive contract management, spanning from the initial request and authoring of contracts to approval, execution, tracking obligations, handling revisions, and finally, renewal.

2.1. Creation

Initial Requests: Identify contracts and relevant documents supporting the contract's purpose.

Authoring Contracts: Streamline the time-consuming process of writing contracts by leveraging automated contract management systems.

2.2. Collaboration

Negotiating the Contract: Enable employees to compare contract versions efficiently, reducing negotiation time.

2.3. Signing

Approving the Contract: Overcome bottlenecks by creating tailored approval workflows, ensuring rapid decision-making.

Execution of the Contract: Control and expedite the signature process through electronic signatures and fax support.

2.4. Tracking:

Obligation Management: Project management is crucial to ensure stakeholders meet deliverables and maintain the contract's value.

Revisions and Amendments: Implement systems to amend the original contract when overlooked items are identified.

Auditing and Reporting: Regular contract audits are vital to assess organizational compliance and address any emerging issues.

2.5. Renewal

Renewing: Automate the identification of renewal opportunities and the creation of new contracts to avoid missed chances and revenue loss. Throughout the contract lifecycle, vigilant monitoring is essential for detecting changes or breaches. Vendor performance and risk management play critical roles in contract management. If a vendor fails to meet obligations, contract reevaluation or enforcement of disciplinary measures may be necessary. Similarly, if dissatisfaction arises, alterations to the contract should be considered, ensuring compliance with obligations while maintaining mutual satisfaction between the parties involved (https://www.businessnewsdaily.com/4813-contract-management.html)

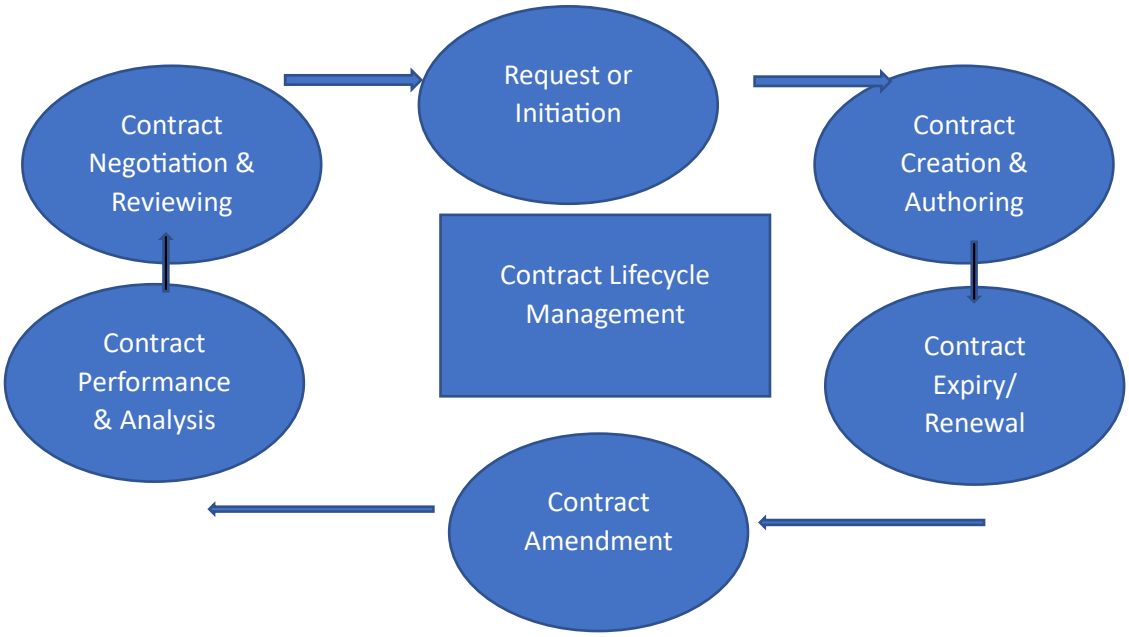

Fig.1: Contract Management Process

As per the guidelines outlined in FIDIC and the Public Procurement Rule 2008, the responsibilities of the contract authority and management team encompass a comprehensive range of tasks, including administrative, financial, managerial, and technical aspects. These tasks are to be executed by the Procurement Entity (PE) from the award of the contract to its successful completion. The PE is mandated to uphold professional ethics in the adoption of contract administration and management techniques to ensure the proper execution of signed contracts, adhering to agreed-upon conditions that cover aspects such as delivery, payments, quality control, contract implementation, liquidated damages, and other related matters. It is incumbent upon the PE to verify that the goods slated for procurement align with the technical requirements specified in the contract. To fulfill this obligation, the PE may establish inspection and testing facilities, create inspection teams, engage in collaborative arrangements for the shared use of laboratories and inspection facilities, and contract with external entities for necessary inspection or testing work.

3. Importance of Contract Management

Both Public and Private Organizations have their contract management tools for implementing the procurement of goods, works, and services. Due to globalization, organizations feel the necessity to improve quality and reduce costs. So, to value organizations must save their time to engage their efforts in other activities. Procurement and its management are vital parts of upgrading a company's profile. However, the public procurement method practiced in RHD is praiseworthy but the importance of this Contract Management knows no bounds.

- To maintain the supply chain smoothly contract management plays a pivotal role in any organization.
- The expected business profit and value for money can be achieved.
- To expand various suppliers to maintain economic growth.
- Job opportunities can be created.
- Suppliers can become more computable in the International Market.
- Disputes can be resolved through good contract management.
- The organization can recognize its strengths and weaknesses.
- Organizations can add value to their services through good contract management procedures.

4. Lessons learned from Procurement Management for SASEC-2

The Elenga-Hatikamrul-Rangpur Road is an important part of SASEC corridor (Corridor 4 & 9), Asian Highway (AH2), BIMSTEC-2 and SAARC Highway Corridor (SHC)-4. The development of the road will enhance the facilitation of faster and safer movements of passengers and cargo as well as establish more economic links among the neighboring countries as well as within different places within the country.

The objectives of the project are to:

- Upgrade the existing 190.40 km Elenga-Hatikamrul-Rangpur Road to a 4-lane Highway to enhance the Subregional connectivity among the South Asian nations by providing accessibility to land ports, sea ports, export processing zones (EPZ), and economic zones (EZ)
- Smooth catering of traffic including passenger, goods, and cargo vehicles as forecasted in the feasibility level; AADT of 12000 to 29000 (present), expected AADT 43000 in 2020, and 60000 to 135000 AADT in 2040.
- To construct a Slow-Moving Vehicular Traffic (SMVT) Lane on both sides of the 190.4 km project road to reduce the safety hazard.
- To construct 6 Flyovers (3090 m), 2 railway overpasses (447m), 32 Bridges (1724 m), 180 Culverts, 46 Kilometers of Rigid Pavement, 11 Pedestrian Overpasses (397 m), Underpass (2189m) and 1 interchange (1500 m) at Hatikamrul..
- Institutional Strengthening of RHD including establishment of (i) Road Research and Training Centre (RRTC) as RHD Center of Excellence for quality research and Human Resource Development and (ii) Road Operation Unit for Overload Control, Road Asset Management, and Safety operations.
- To enhance some potential activities like promoting new investments in the project areas and the EPZ, EZ, etc.; promoting economic growth; opening avenues for the development of new tourism zones; providing access to better health care and education institutions.

Table 1: Timeline of DPP

Type of DPP	Date of Commencement	Date of Completion
Original	01-09-2016	31-08-2021
1st Revised (Approved)	01-09-2016	31-12-2024
Special Revised (Approved)	01-09-2016	31-12-2024
Inter-Component Cost Adjustment	01-09-2016	31-12-2024

Table 2: Cost of DPP

Total (In Lac BDT)	GoB (In Lac BDT)	PA (In Lac BDT)
1,867,961.63	705,388.68	1,162,572.95

4.1. Time length in the Bidding process

Bidding has followed one stage and two envelopes of the International Bidding System based on the ADB guideline. It took time from Bid invitation to Notice to Commence about 1.42 years to 1.67 years which is quite a long time. Bid includes Bid invitation, circulation, addendum, obtaining ADB's NOC, Bid document receiving with Bid security, verification of Contractor's submitted bid documents, technical evaluation of documents with clarification through some meetings of the TEC (Tender Evaluation Committee), informing the result of the evaluation to all Bidders, selection of time for opening financial offers and inform it to the responsive Bidders, opening financial offers of responsive Bidders, scrutiny BOQ (Bill of Quantities) rates of all financial offers in details, arithmetic corrections, inform arithmetic corrections to the respective Bidders and obtain their acceptance, evaluation of corrected financial offers of responsive Bidders, identify financially lowest responsive Bidder, preparation of evaluation detail report and submit to the Chief Engineer. Then MRTB (Ministry of Road Transport and Bridges) scrutinizes the evaluation report and submits it to the CCGP (Cabinet Committee for Government Purchase). CCGP scrutinizes it and accords approval. Then finally issue a Notice to Commence after observing some formalities.

In the SASEC II project WP-10, WP-11, and WP-12 are separate contracts. Notice for tender was issued in April 2018 after getting approval from different agencies like RHD, NBR, and the Ministry of Law. Then the notice was published in several newspapers including local and international. It was also published on the market website, RHD website, and MoRTB website. After that pre-bid meeting was held and almost 23 bidders participated in that meeting and raised several issues. After that meeting, a minute was published resolving all the raised issues by the bidders. Finally, 8 bidders submitted their bids. As this procedure was a single stage two envelop method their bids were technically evaluated first considering the criteria that were set earlier. Six bidders were responsive and 2 were nonresponsive. Then the evaluation report was duly signed and sent to ADB for a no-objection letter. ADB quarried the said report and gave NoC to the procurement authority.

After getting the approval from the Chief Engineer (CE), RHD the SASEC II authority opened the financial bid in the presence of the responsive bidders and declared the total value separately. Then the bids were checked thoroughly to find any type of arithmetic errors and sent again to ADB for final concurrence. After getting the NoC from ADB the final report was sent to the line ministry through CE, RHD. Then again ministry thoroughly checked and sent it to the Cabinet Committee for Government Purchase (CCGP) which is chaired by the Honorable Prime Minister. Finally, the Roads and Highways Department signed the contract with China Seventh Engineering Corporation Group in June 2019 which was awarded to implement almost 80 km of Highways including bridges, culverts, underpasses, and flyovers. The whole process took almost 1 year and 2 months. The Authority tried a lot to reduce the time losses to start the contract at its earliest possible time.

4.2.Negative Rate in Tender

Negative rates in the tender should not be allowed. Sometimes, the Contractor quotes abnormal negative rates on certain items to get the work. During execution, they try not to execute or try to execute partially the concerned item causing loss to the Govt.

In the Wp-10 contract (Mokamtola, Bogra to Polashbari, Gaibandha) there was no negative rate quoting in the Bill of Quantity or the Contract document. The project management team first visited the whole area to determine the events in various sections. Then the specification and design were set in a manner; so that the Bangladesh Government could get the maximum benefit without any loss.

4.3.Land Acquisition (LA)

It is a very complicated and time-consuming process. The original contract period was 3 years, which is already over and LA of some portions could not be completed till now. Land rate is different for different mouzas which is affecting the LA process as local people demand the highest rate within the adjacent mouzas.

In the SASEC II project especially in the WP-10 contract, this scenario has become a nightmare for the project personnel. This phenomenon is directly done under the guidance and supervision of the Deputy Commissioner of the district. If the amount of desired land that will be acquired is more than a certain limit then it goes to the Land Ministry for approval. To reduce the time, the desired land was divided into piece mills. So, for the WP-10 contract, there were 10 LA cases. Every time the Project Management Authority kept in touch with the DC office to get the lands as soon as possible. Already, contractor deployed their manpower, equipment, and materials in the field. In the contract, it is written clearly that the employer must hand over the land within 270 days of the contract. Except for Gaibandha and Rangpur all other districts related to the SASEC II project completed the LA activities and contractors of those segments started the work in full phase. The status of LA cases of WP-10 has been stated below:

LA Proposal	Name of Mouza	Admin approved land (Acres)	Actual land (Acres)
Bogura LAP-14 (LA Case No. 09/SASEC/2019)	1. kashipur 2.Shongkarpur 3.Loskarpur 4. Voria	14.0200	12.9725
Bogura LAP-15 (LA Case No. 18/SASEC/2019)	1.Kaisnopur 2. Rohobol	15.1075	13.9575
Gaibandha LAP-1 (LA Case No. 01/2017-18)	1.Ovirampur 2. Dorbosto 3. Durgapur	16.2290	16.2290
Gaibandha LAP-2 (LA Case No. 05/2017-18)	1.Shingjani 2. Gopinathpur 3. Chak Singhodanga 4. Chak Shibpur	16.1230	16.1226
Gaibandha LAP-3 (LA Case No. 07/2017-18)	1.Somaspara 2. Chondipur 3. Tajpur 4. Hatidah	13.9650	13.9648
Gaibandha LAP-4 (Corrected) (LA Case No. 05/2018-19)	1. Kamardah 2.Digholifulbari	16.3530	16.2200
Gaibandha LAP-5 (LA Case No. 09/2017-18)	1.Bogchar 2. Tardah 3. Barnachandrashekhor 4.Masta	14.6700	14.1692
Gaibandha LAP-6 (LA Case No. 10/2017-18)	1.Poschim Gopinathpur 2.Dublagari 3.Rampur 4.Vogobanpur	12.8100	12.3100
Gaibandha LAP-8 (LA Case No. 05/2019-20)	1.Gobindopur 2. Boalia	11.6360	11.4875
Gaibandha LAP-9 (LA Case No. 01/2020-21)	1.Panthapara 2. Bujruk Boalia 3. Bogchar 4.Tardah 5.Dorbosto	14.9150	10.8800

Table 4: Timeframe of LA				
LA Proposal	**Proposal Submitted to DC office**	**Feasibility Completed**	**DLAC Completed**	**Notice u/o:4 Served**
Bogura LAP-14 (LA Case No. 09/SASEC/2019)	April.15.2019	May 15, 2019	May 26, 2019	May 25, 2019
Bogura LAP-15 (LA Case No. 18/SASEC/2019)	May 23, 2019	September 3, 2019	October 13, 2019	December 8, 2019
Gaibandha LAP-1 (LA Case No. 01/2017-18)	April 10, 2017	July 24, 2017	August 7, 2017	August 21, 2017
Gaibandha LAP-2 (LA Case No. 05/2017-18)	April 11, 2017	December 12, 2017	January 10, 2018	March 27, 2018
Gaibandha LAP-3 (LA Case No. 07/2017-18)	August 20, 2017	March 20, 2018	April 11, 2018	June 28, 2018
Gaibandha LAP-4 (Corrected) (LA Case No. 05/2018-19)	February 12, 2019	May 11, 2019	May 15, 2019	June 23, 2019
Gaibandha LAP-5 (LA Case No. 09/2017-18)	September 19, 2017	March 20, 2018	April 11, 2018	June 28, 2018
Gaibandha LAP-6 (LA Case No. 10/2017-18)	October 8, 2017	March 20, 2018	April 11, 2018	October 3, 2018
Gaibandha LAP-8 (LA Case No. 05/2019-20)	January 28, 2018	August 5, 2019	September 5, 2019	September 23, 2019
Gaibandha LAP-9 (LA Case No. 01/2020-21)	January 6, 2020	July 22, 2020	July 30, 2020	January 3, 2021

Table 5: Timeframe of LA				
LA Proposal	**Joint Verification Completed**	**Notice u/o:7 Served**	**Estimate Received**	**Payment Made**
Bogura LAP-14 (LA Case No. 09/SASEC/2019)	July 9, 2019	June 27, 2020	July 27, 2020	51,37,80,258.73 (Full) Dated.22.09.2020
Bogura LAP-15 (LA Case No. 18/SASEC/2019)	December 10, 2019	July 15, 2020	October 13, 2020	34,91,61,266.093 (Full) Dated.10.11.2020
Gaibandha LAP-1 (LA Case No. 01/2017-18)	December 14, 2017	July 4, 2018	February 20, 2019	47,32,39,968.83 (Full) Dated.18.04.2019
Gaibandha LAP-2 (LA Case No. 05/2017-18)	May 21, 2018	September 6, 2018	March 27, 2019	42,35,06,741.34 (Full) Dated.07.05.2019
Gaibandha LAP-3 (LA Case No. 07/2017-18)	July 29, 2018	June 10, 2019	October 31, 2019	52,59,47,040.38 (Full) Dated.02.01.2020
Gaibandha LAP-4 (Corrected) (LA Case No. 05/2018-19)	July 15, 2019	November 9, 2020	July 5, 2021	68,75,42,025.62 (Full) Dated.27.09.2021
Gaibandha LAP-5 (LA Case No. 09/2017-18)	July 29, 2018	June 16, 2019	October 31, 2019	26,37,05,131.10 (Full) Dated.23.02.2020
Gaibandha LAP-6 (LA Case No. 10/2017-18)	February 14, 2019	June 19, 2019	November 17, 2019	14,74,77,255.26 (Full) Dated.29.12.2019
Gaibandha LAP-8 (LA Case No. 05/2019-20)	December 3, 2019	May 16, 2021	June 15, 2022	1577596032.37 (Full) Dated.27.06.2022
Gaibandha LAP-9 (LA Case No. 01/2020-21)	September 6, 2021	February 12, 2023	July 13, 2023	7309892488.03 (Full) Dated.01.01.2024

Table 6: LA details

LA Proposal	Land Received	Location	Length KM	Remarks
Bogura LAP-14 (LA Case No. 09/SASEC/2019)	September 4, 2020	76+100 to 79+000	2.90	Handed over to Contractor - 04.11.2020
Bogura LAP-15 (LA Case No. 18/SASEC/2019)	September 4, 2020	79+000 to 81+800	2.80	Within 10 Days land will be Handed over From the DC office
Gaibandha LAP-1 (LA Case No. 01/2017-18)	June 20, 2019	98+800 to 102+900	4.10	Handed over to Contractor - 03.12.2019
Gaibandha LAP-2 (LA Case No. 05/2017-18)	September 5, 2019	96+000 to 98+800	2.80	Handed over to Contractor - 03.12.2019
Gaibandha LAP-3 (LA Case No. 07/2017-18)	September 14, 2020	92+900 to 96+000	3.10	Handed over to Contractor - 14.09.2020
Gaibandha LAP-4 (Corrected) (LA Case No. 05/2018-19)	December 19, 2021	81+800 to 84+800 & 92+700 to 92+900	3.20	Handed over to Contractor - 19.12.2021
Gaibandha LAP-5 (LA Case No. 09/2017-18)	January 4, 2021	84+800 to 87+900	3.10	Handed over to Contractor - 04.01.2021
Gaibandha LAP-6 (LA Case No. 10/2017-18)	November 3, 2020	102+900 to 105+200	2.30	Handed over to Contractor - 03.11.2020
Gaibandha LAP-8 (LA Case No. 05/2019-20)	October 27, 2022	90+600 to 92+700	2.10	

From the tables, it is clear that it is a complete failure of the project authority. Though project authority tried their level best and always informed their higher authority. The higher authority also set several meetings with the DC office. However, the DC office was not able to complete the task in due time. DC office has also some limitations. Always officers transferred to other districts and there was also a scarcity of expert surveyors and logistics. Project Authority always supported logistics to the DC office. But there was complete mismanagement and failure in this area. One segment of land is yet to be handed over to the project authority by the DC office where the main mega structure named Govindogong Flyover will be implemented. Already project is running its EOT (Extension of Time 2). But it seems that the project needs another 2 years and 6 months to be completed.

4.4. Non-Title Holder Relocation

Some habitants used to live and do business in the Government lands. They are illegal occupancies who have been using RHD lands for a long time. This project directly affects their livelihood. According to the donor agency's guidelines, these illegal inhabitants also be paid for losing their households and businesses. As they are not title holder their payment is considered as non-title holder (NTH) payment.

***Fig.2**: Methodology for Updating & Implementation of Resettlement Plan for the NTH*

Table 7: Package wise PAPs & CPRs (THs & NTHs)

Work Packages	Package wise PAPs & CPRs (THs & NTHs)									Grand Total
	NTHs (as per PAVC & GRC)					THs (as per Final LAP)				
	Male	Female	CPR	By GRC	Total	Male	Female	CPR	Total	
WP-10	737	47	21	84	**889**	6487	178	22	**6687**	**7576**
Total	**7,186**	**306**	**189**	**178**	**7,859**	**26,628**	**1,494**	**208**	**28,330**	**36,189**

Table 8: Progress of Payment to the Non-Titled EPs up to 31.12.2023

Issues	WP-10	Progress (In all WPs)	Remarks
Total NTHs	889	-	-
Indent Submitted	680	58.56%	-
Indent Approved Up to 31.12.23	606	56.60%	-
Total Paid up to 31.12.23	605	54.96%	-

Table 9: Financial Status of Payment to the Non-Titled EPs

Issues	WP-10	Progress %
Estimate Tk.	122,058,413	-
Total Paid	**89,638,906**	**41.64%**

Table 10: Progress of CCL Payment to the Titled EPs up to 31.12.2023

Issues	WP-10	Remarks
Total EPs on Private Land	3007	As per SES
Total EPs on Private Land as per final LAP	6687	As per JVS
Total CCL Paid by DC Offices up to 31.12.2023	**2981**	Progress=72.30% as per SES & 50.73% as per JVS

Table 11: Top-up Payment to the Titled EPs up to 31.12.2023

Issues	WP-10	Progress	Remarks
Total EPs on Private Land	6687		As per Final LAP
Top up to 31.12.2023	0	0%	Started in WP-7

Table 12: Grievances and Disposal Status of Non-Titled EPs

Issues	WP-10	Total (SASEC II)
Total Grievances Received	105	347
Hearing Completed	105	347
Grievances Recommended by the GRC Committee	105	341
Grievances Rejected	0	6
Payment Completed	105	204

4.5. Obstructions

Eviction of obstructions from RHD land and newly acquired land creates lots of problems and takes a long time to remove completely. Removal of obstructions from developed/market areas is very complicated and requires an abnormally long time.

SASEC II project suffered a lot due to that type of obstruction. In all acquired land the inhabitants tended to stay a long time and did not vacate the structure pointing various reasons. Their main argument was not to get the money from the DC office and blamed the staff of the DC office for harassment. Although there is so much evidence against that corrupted staff the affect the people also intended to stay longer to get the benefits from both ways. Though the DC office of Gaibandha handed over the land to the project authority it took almost 4 to 5 months to get the clear land for construction. Besides that, in Gaibandha LAP-8 (LA Case No. 05/2019-20) affected people raised their voices against some corruption of the DC office as their lands were not properly estimated. So, they were making hue and cry and did not permit the contractor to continue their work. Finally, the project authority conducted an eviction program in the presence of a Magistrate and law enforcement agency. After that, the project authority cleared the said segment and the contractor started the construction work.

Another thing is utility. The whole section (Mokamtola, Bogra to Polashbari, Gaibandha) is fully occupied by electric poles and lines. The utilities are mainly from the Rural Electrification Board and NESCO. Initially project authority gave the payment regarding their demand. But utility shifting is directly connected to the Land Acquisition. So, after dismantling of existing buildings and structures the utility can be shifted outside of the construction area.

4.6.Contractor's Incapability

Inappropriate site management, insincere in timely completion of work, lack of equipment and qualified manpower, unwilling to carry out work in the 1st year to grab escalation benefits and execute work from the next year when PA (Price Adjustment) will be applicable.

The contractor of WP-10 was not free from this type of allegation. Initially, 6 km h was given to the contractor from the project authority out of 30 km. However, they showed less implementation in the said section as they did not deploy heavy equipment or they tended to minimize the cost to maximize the profit. So, they search for which quality just meets the specification in the lower range. During the bidding, process the amount in some items. For these reasons, they were not serious about implementing the contract. Rather, they were blaming the project authority for not giving them the full length the of construction area. Moreover, there were local people and some stakeholders who wanted to take some financial advantages from this international contractor. These stakeholders or the sub-contractors raised the rates of the supplying materials at a higher rate. Also, they manage their internal procurement which gives them time to maintain the contract perfectly with the employer.

4.7.COVID-19 Pandemic

The outbreak of the coronavirus in 2020 all over the world, for which people were anxious and affected their work.

In Bangladesh, the first lockdown happened in March 2020. Before that contractor started the. As this is a Chinese contractor and the pandemic was first generated in Wuhan, China, they knew a lot about the adverse effects of this infectious disease. The first two months were down. Then the Government of Bangladesh circulated that these foreign-type projects would be free from the lock-down. The contractor again started the work maintaining social distance and safety protocols. However, they suffered a lot in the supply chain management. The main ingredients of this construction work are stone. In Bangladesh stones are only found in Sylhet and Moddhopara but the quantity there is not up to the mark for this huge type of construction. So, the contractor used to import stone from Bhutan or India as the construction site is not very far from the Indian border. In the pandemic situation the borders were sealed, so this contract faced a lot of obstruction during that period. Accordingly, the supply chain of reinforcement, cement, and bitumen was also hampered.

4.8.Non-Tender Item (NTI)

Some NTIs were essentially required for which approval was indispensable, which has caused a loss of time. These NTIs should be included in the RHD Schedule of Rates. Estimate to be prepared carefully to avoid NTI as far as possible.

The world is changing day by day. So many research activities are performing to meet the present demand of the world. SASEC II is not free from that. The original planning and design of SASEC I and SASEC II were done almost 7 to 8 years back. The 1st 4 lane project is the Dhaka-Chittagong highway project. Then Dhaka- Mawa- Bhanga which is known as National Highway 8 (N8) was implemented. The N8 project comprises 4 lanes with SMVT lanes on both sides. There all the bazaar or crossings were solved through underpasses, and flyovers to

make the traffic flow uninterrupted. The SASEC-I project started during the implementation time of the N8 project. After the completion of the SASEC I project SASEC II project started and while implementation it seemed that there were so many non-tender items required that is not kept in the RHD rate schedule. In WP-10, to avoid future maintenance cost the segments of bazar areas and the low-lying areas have been converted into rigid pavement. As a result, inclusion of non-tender items was not easy task for the project management team to fix the rates. After so many meetings with the contractor management team was able to get the approval for non-tender items from donor agencies and higher authority. So, it is a crying need for the planning division of RHD to be updated with modern technology to set the RHD schedule; so that, no non-tender items will be needed in the future.

4.9. Insurance Policy

Contractors are reluctant to submit an Insurance Policy as per the contract which has risk coverage for execution of the works.

In SASEC II project contractors were so much reluctant to coverage the insurance policy. They were not entitled to get the mobilization advance before starting of insurance policy against the contract. At that time a notice was circulated from the government of Bangladesh to open insurance in Jibon Bima against the contract. The economic crisis is prominent all over the world. As a third world country Bangladesh has been facing a lot of challenges in recent time. The Government of Bangladesh is trying hard to run the economy of Bangladesh through its limited resources. So, the circulation was exact. If the policy is opened against the contract Bangladesh will achieve more currency to fulfill the demand and run the activities smoothly. Already China Seventh Engineering Corporation group opened the policy through 3rd party. Then the project management team pressured them to open the policy in Jibon Bima Finding no other options finally the contractor opened the policy in Jibon Bima and got the mobilization advance.

4.10. Price Escalation (PA)

a) As per tender, PA is applicable after one (1) year. So, the Contractors were not serious about work for the 1st year as they would not get PA in the 1st year, which caused the delay in progress.

b) Construction materials cost raised abnormally but corresponding Price Indices did not reflect simultaneously, which has loss to the contractor resulting negative impact on progress.

c) Base Index of Miscellaneous (MI) item was 467.19 in Aug/17 and usually continued up to Feb/23 as 602.58. Suddenly Base Index changed to 108.53. Now, a running project can't follow this lower Base Index as they used BBS previous higher Base Index initially. Change in the Base Index creates a great problem for running a project.

d) Bitumen- BBS (Bangladesh Bureau of Statistics) Base Price Index was followed as per tender. BBS suddenly stopped publishing the Base Price Index of Bitumen and instructed to follow BPC's (Bangladesh Petroleum Corporation) Base Price Index. However, BBS did not accord approval regarding changing the Base Price Index.

Price escalation has become an integral part of the SASEC II project. As the project suffered a lot from COVID-19, the Russia- Ukraine war, and many other issues the contractors achieved their profit and reduced the loss in many items just for this price escalation. The price escalation perhaps played a pivotal role for the contractors. Besides the pandemic and the war access to land became a great factor for the poor acceleration of the implementation of the contract. In Bangladesh, the greatest construction was the Padma Multipurpose Bridge Project. And during the 75% implementation of PMBP the SASEC II contract was signed with the contractors. Then the base index which is set by the Bangladesh Bureau of Statistics (BBS) was higher. So, the SASEC II contractor got less benefit as the denominator amount was higher. Beside that there was some corruption observed with the officials of BBS as they were reluctant to change the current indices. If the nominator is not higher than the denominator, then the escalation becomes negative. The project management authority made several meetings with the BBS officials to correct that scenario and also wrote several letters through the ministry. Finally, some amendments were made by the BBS and contractor faced the profit margin. Again, there was an ambiguity about the index of bitumen. In the PCC clause, it was written to follow the index of bitumen from Bangladesh Petroleum Corporation whereas in the escalation chart, it was mentioned to have it from BBS. We all know that, in such circumstances PCC clause must prevail. Also, BBS stopped showing the bitumen index. Finally, the index from Bangladesh Petroleum Corporation was used. Another problem has yet to be solved. That is the index of stones. The BBS index is based on the stones that are procured from Sylhet. But this project is going in the northern part of Bangladesh. So, it is mandatory to use the rate of Maddhopara which will raise the index of the nominator. Still, now project management authority is fighting for that.

4.11. Price hike of Construction Materials

Suddenly price rates of construction materials have risen abnormally but the BBS Base Prices Index has not reflected simultaneously causing delays in work progress. In the SASEC II project contractor faced price hike of construction materials such as reinforcement, bitumen, stones and sand also. Embankment-filling sand is the main ingredient for highway construction. Sometimes, the suppliers made internal syndicates to raise the price of those materials. Again, there are some laws about sand collection. The local politicians, journalists law enforcement agencies, and the local administration wanted to take benefits from that supplier by making some embargos in sand collection procedures. As a result, sometimes the price of the sand is raised and contractors have to make overpayments to get sand materials. The WP-10 contract is full of concrete pavement which deeply depends on cement and reinforcement. We know that Bangladesh is self-sufficient in the production of cement and steel. There are so many companies like Shah Cement, Crown Cement, Bashundhara Cement, Holcim Cement, Bengal Cement etc. For reinforcement BSRM, KSRM, SSRM, etc. but the reinforcement companies directly depend on imported scrap ships and cement companies import different types of limestones and ingredients from different countries. Due to COVID-19 and the Russia-Ukraine war, there was so much hindrance in importing raw materials.

At present the dollar rate is so high and the companies are not able to open LC for import. So, the manufacturing cost is rising and the contractor of the SASEC II project spent more money to get the reinforcement and cement. The project management team set several meetings with the cement and steel companies. But considering the present scenario of the world they also failed to reduce cost. Finally, they made some arrangements; so that the contractor could get the credit facilities and finally solve this purchasing problems.

4.12. Non-availability of the required Quantity of Bitumen

Bangladesh Petroleum Corporation is the only source in Bangladesh to produce Bitumen that could not deliver the required quantity of Bitumen due to a limited production rate, which has caused delays in progress. So, it should be considered alternative sources that are imported directly by the Contractor or depend upon the importer. Anyway, the Contractor is responsible for getting the required materials for the Project.

Initially in SASEC II projects all contracts' pavement was flexible pavement or bituminous pavement. All contractors started the work considering that specification. They set the profile and filled the embankment up to the desired level. Usually in Bangladesh contractors use eastern refinery bitumen for the construction of flexible pavement. There are two types of grades. One is 60/70 grade and another one is 80/100 grade. Eastern Refinery produces bitumen in bulk quantity and provides it to the contractors either fill-in drums or bulk volume through bitumen carrier trucks. SASEC II is a mega project where bulk volume bitumen is needed. The eastern refinery is not free from corruption indeed. As all contractors want the bitumen from the eastern refinery the staffs with the local politicians try to make it a monopoly. Every time they try to take advantage from the contractors to get them the bitumen within a short time. Besides, a giant group of Bangladesh is now importing crude oil and setting up their factory in different parts of Bangladesh. They are trying to make this business a monopoly. So, they reduce the capacity of the production of Eastern Refinery by bribing the staff and thus pressurize the contractors to use the bitumen of that company only. Due to this hindrance, the Chinese contractor changed the specification and converted the maximum segment of highways into rigid pavement instead of flexible pavement. Other contractors persuaded the eastern refinery with the project authority and finally, they got the bitumen from the eastern refinery at a reasonable price. Thus, the contractor's project management team solved the bituminous crisis finally.

4.13. Design Change

Design change is one of the major factors of the delay of work progress, as it takes a very long time from design change to issue of final working drawings. Sometimes it causes Non-Tender Items which need separate approval resulting loss of time as well.

The ADB finance SASEC 1 and SASEC 2 projects aim to uninterrupted traffic flow through the northeastern corridor. In the SASEC 2 project, the scope is expanding 192 km long highway into 4 lanes with SMVT lanes on both sides and some bridges, culverts, underpasses, and flyovers. The whole project is divided into 11 contracts from WP 05 to WP 15. Among them, the WP 10 contract is the longest one. Govindogonj is an upazila of Gaibandha district that lies in the WP 10 contract. It is the most ancient market area where two main road corridors intersect

there. The road width of that area is only 7.6 meters and so many high-rise buildings are just beside that area. So, considering all the criteria it was decided to construct a long flyover over that area. The congested area is almost 700-meter-long and the rest of the areas both Dhaka and Rangpur end have some small type semi-permanent buildings. For this reason, in the original contract, a 739-meter flyover length was set considering that congested area.

After starting the work contract of WP 10 a joint survey was held in the presence of PIC, the Client, and the Contractor to assess the sustainability of Govindogonj Flyover. After that survey, they got the opinion to increase the length of the flyover to maintain the crossing facility of the inhabitants of that market area. Besides that, in the Rangpur and Dhaka ends of the Govindogonj area, there is a women's college and a hospital respectively. People of that area demanded an opening for the free and safe crossing of the students, ambulances, and patients. Finally, considering all issues the flyover length was increased to 1619.4 meters, and accordingly, PIC made the detailed design of the Govindogonj flyover which was approved in the Variation Order 1 of WP 10.

However, the Land Acquisition of that vast area is yet to be done by the employer where the contract is running its EOT period. Once the land is handed over to the contractor it will take almost 2.5 years to complete that 1619.4-meter-long flyover. In the meantime, the local representative again raised the demand to extend the length of the flyover by almost 500 meters as there is a primary school which is situated almost 500 meters away from Dhaka end Abutment. Thus, the total length of the flyover was almost 2200 meters without the ramps which exceeded the DPP and contract value. The whole contract except the Govindogonj flyover will be coming to an end shortly. People in that area are already getting a safe, comfortable, and congestion-free movement journey in that corridor.

After reviewing the scenario, the Team Leader of PIC suggested that the total length of the flyover should be reduced to optimize the construction period in a manner so that, no further contractual obligation may not arise. In that regard, through PIC Reference No: SASEC-2/PIC/TL/RHD/2023/04178 Date: 27 November 2023 the Team leader has finalized the total length of the flyover by 1006 meters without the ramps. He also suggested that the hospital will get the opening facility for the patients and ambulances but the school and college will pass through a pedestrian-type underpass/foot-over bridge which will be designed and implemented later. This recommendation and finalization about the Govindogonj flyover are rational and satisfactory in all respects which are associated with that ancient market area.

4.14. Utilization of Advance Payment

A Contractor needs to invest huge money at the initial mobilization stage to establish the Contractor’s site facilities, stack yard, mobilize construction equipment, laboratory equipment, site transport, construction materials, and fuel, to construct the Engineer’s site Office and accommodation, laboratory, advance payment to the Sub-contractors, etc. To expedite the project works, there is a provision of advance payment to the Contractor payable at the beginning. Sometimes, the Contractor doesn’t utilize the full amount of advance payment for the Project, which has caused the Contractor’s cash-flow problem and resulting delay in progress.

In FIDIC contract contractors get this advantage. This is 10% of the contract amount. The contractor gets this amount and starts the work. They set up their camp, and purchase logistics, equipment, and materials. In the SASEC II project some contractors used this amount for different purposes. We all know the present money laundering activities in Bangladesh. One of the National contractors is directly involved in this practice. In the Panama Papers, their name was published. As a result, in Bangladesh in many contracts, they faced the fund crisis. Their activities were very slow. They utilized the mobilization advance payment of SASEC II contracts in different contracts to run them. Again, they didn't pay the bank installments. As a result, when any payment was given to them the said bank just absorbs the amount. When all contractors except that company were completing their activities that company was beyond up to the mark. The project authority several times warned them but they did nothing. Their supply chain management was broken. Every time the local suppliers make hue and cry to get their payment. The project management team changed several bank accounts to give them the payment that will be utilized in their contract. But that time the contractor again spent their expenses on different contracts. So, from every aspect, they failed to make the contract. Finally, the project management team monitored everything and they acted like they were the contractors. They made the payment, they changed the items which are lost for the contract, they maintained the sub-contractors and now the contract is running smoothly and hopefully, it will be completed within the stipulated time without further delay.

4.15. Russia-Ukraine War

It has caused global inflation and affected the cost of construction materials and essential commodities as well. In the SASEC II project this phenomenon hit directly. Already it was discussed that due to this war contractor faced a problem in supply-chain management. Though national products like steel, and cement had been used in the implementation SASEC II project the raw materials used to produce steel or cement were affected much more. As a result, the price of the said components rose and contractor spent a huge amount and time to make the project successful.

4.16. Unforeseen Item

Shifting of graveyard, mosque, and boundary wall. These are the unforeseen items in implementing any project all over the country. SASEC II project was not free from this obstruction. Infrastructure development in Bangladesh has not been done in a planning way. Several Plan was made like Delta, DAP, etc. After independence from Pakistan, our political scenario was always vulnerable. Bangladesh is a Muslim-based country. People of Bangladesh used to go to mosques 5 times a day and spend much more time for their spiritual purposes. They believe that the mosque is very pure and a graveyard also. Our government is trying hard enough to make uninterrupted roads and highways to reduce travel time and accidents. As a result, when fixing the alignment, the project management authority faced the problems of the graveyard, mosque, and boundary walls. Initially, people raised their voices against the dismantling of mosques or boundary walls. Sometimes, they become ferocious while the graveyard needs to be shifted. But now the Bangladesh Government circulated the notice that the graveyard can be shifted and mosques and boundary walls must be dismantled if development works are needed. But the condition is that proper compensation must be paid

and if necessary new mosque must be built. In WP- 10 contract there were so many graveyards, mosques, shrines, and boundary walls. The project management authority replaced all of them with the help of the local administration and representatives. No hue and cry were associated with local people because they also wanted the development. Still, now, the boundary walls of Govindogonj High School are yet to be dismantled. Once the land of Govindogonj SASEC II authority will apply their full force to dismantle that wall to start the construction work of a 1.5 km long flyover.

4.17. Time Extension (EOT)

Sometimes, EOT (Extension of Time) for completion is requested by the Contractor due to mainly increment of the work volume by variation order, even by poor site management and insincerity of the Contractor, which EOT may be considered reasonable by the Employer. SASEC II project is divided into 11 contracts. Contracts 5 to 12 are road extension contracts with some structures like bridges, culverts, underpasses, flyovers, and railway overpasses. All contracts were contracted to be completed within 42 months. But a time extension was needed to complete all the contracts. This was due to access to land was delayed. Moreover, the COVID-19 pandemic situation made all contracts for an indefinite time. After that, construction materials were scarce, and skilled laborers. For a long time, all the equipment remained idle. As a result, it took a long time to run them again. Besides, the Russia-Ukraine war directly hid the supply chain management. Now, all the contracts are running their Extension of Time 2 period; that means almost 18 months have been added to the contracts. The original time frame was up to June 2023. Hopefully, within December 2024, maximum contracts will be completed.

It is a matter of great regret that WP-10, WP-5, and Wp-7 will take more EOTs to complete their contracts. The project authority can extend the time two times, later, the higher authority is entitled to provide an extra extension of time. The contracts WP-5 and WP-7 are implemented by a nationally renowned company. For their internal mismanagement, they are failing to complete the contract within the stipulated time. Those contracts found the land at a convenient time. The project management authority took the initiative to shift the utilities within a short period. However, the contractor's lack of professionalism delayed the contracts.

The contractor of WP-10 is very capable enough to complete any longer segment. They have that skill and professionalism. Before this contract, this company implemented an almost 400 km long highway in Pakistan within 30 months. It has already been shown in the land acquisition part that the contractor got the land after a long time. All their men, material, and equipment sat idle. This contractor also got an extension of time for 2nd time. But still, now the long 1.5 km flyover land is yet to be found by them. Once they get the land, the project management authority must dismantle the existing structures. Then they have to shirt the utilities to the end of the right of way. As this is National Highway 5 and the vehicles have no other way to make their trip the contractor must construct the diversions in both ways for smooth and uninterrupted movement of traffic. Finally, installing safety barriers contractor will start the flyover construction work.

There are some extra facilities contractors want to take. The price escalation is the main thing. In the SASEC II contract it was written that the contractor would be entitled to escalation after

1 year of the signing of the contract. So, every contractor showed the tendency to delay work pointing to various arguments. Though the project management authority wrote several letters to the contractors to start the work very soon, they were reluctant in this regard. After 1 year when the escalation started then the base prices which were set by the BBS were not up to the mark. To make more profit every contractor delayed their work and wanted to take advantage. For this reason, an extension of time is severally needed by the contractors to complete the project. Another mega project is implementing under the Roads and Highways department which is the SASEC Dhaka-Sylhet Highway project. After lessons learning from, the SASEC II project, the SASEC Dhaka-Sylhet Highway project set that the escalation will be applicable from the signing of the contract day.

4.18. Variation Order (VO)

Work quantity may change and new items are sometimes required to be done during execution which requires approval and EOT. So, a precise estimation of the quantities should be prepared carefully to minimize VO as little as possible. Variation is necessary to implement any project in Bangladesh. It takes a long time in Bangladesh to launch a project. There is a planning section in the Roads and Highways Department where the SRTPPF project is being implemented. From that project, all design and development project proposals are being made. However, the officials of that project always face a lack of logistics, skilled manpower, and equipment. Accordingly, sometimes from the higher authority they are pressured to send any segmental proposal immediately. For these reasons, with a lot of mistakes, the DPP has been approved. When the consultant starts the design first, they feel the mistakes. Then DPP is corrected again. From the design period through the tender when a contractor comes into the fields it takes almost 2 years. In this period in most areas' the scenario is not as expected. Then redesign is required which makes variations in the contract. Besides, when submitting bids contractor intends to quote less in some items to become the lowest bidder. But when implementing they refused to do that showing lame excuses. They also want to change the specification to get the new rates. Project Management authority must be aware of this condition. Some changes make the project more successful while others make the contractor financially benefitted. Variation is a very complex procedure. There are two committees Project Implementation Committee (PIC) and Project Steering Committee (PSC). PIC is headed by the Chief Engineer, RHD, and PSC is headed by the Secretary, Ministry of Road Transport and Highways Division. First project authority must discuss the changes of the contracts with those committees. After getting approval from those committees the change proposal must go to the donor agency to get no objection. Finally, the said proposal goes to the Cabinet Committee for Government Purchase (CCGP) as the original contract was approved by this committee. The whole process takes almost 1 year. By this time. According to the contract condition contractor is entitled to some percentage of the amount of money in the changing items which sometimes delays the contract implementation.

In the WP-10 contract of SASEC II, one variation has already been done by the project management team and the authority. Initially, the full WP-10 contract was a bituminous. There was no rigid pavement provision in any segment even at the bazar portions also. The contractor proposed about new type of rigid pavement that was called CRCP (Continuous Reinforced Concrete Pavement). In the proposal, they mentioned that this type of pavement will be implemented by a paver machine that will make the surface smooth and the roughness index will be most similar to flexible pavement. In this regard, they contacted with BUET professor, and the BUET professor designed and presented it to the Roads and Highways department in the presence of the Chief engineer, RHD, and RHD officials of Bangladesh. In his presentation, he showed that there would be no maintenance cost for rigid pavement, and considering the long term the total investment would be the same just like the contract of Wp-10. After getting approval from the PIC, and PSC and no objection from the Asian Development Bank finally SASEC II authority successfully passed variation 1 for the WP-10 contract.

Already WP-10 contract has overcome 70% progress. Very soon without the Govindogonj flyover, the contractor will complete all other items. Construction of the Govindogonj flyover will take at least 2 years to complete. It is exact that considering the 2018 quoted rate by the contractor it is not possible to construct the flyover as all the item's prices are now very high. So, it is needed to revise the price of the Govindogonj flyover; so, another variation (Variation Order-2) is highly recommended by the project management team and already they have started the work regarding the Govindogonj flyover.

5. Conclusion

The survey on work contract management practices in Bangladesh reveals valuable insights into the existing procedures, challenges, and areas for improvement. Several key findings emerged from the responses, shedding light on both strengths and weaknesses in the current approach to contract management within the country.

Firstly, it is evident that there is a mix of adherence to established guidelines and standards, with variations in the degree of compliance among respondents. While some practices align well with the PPR-2008 and FIDIC, there are instances where improvements are needed to ensure consistent conformity.

Delays in project timelines, both attributable to the contracting entities and contractors, were identified as significant challenges. Issues such as late issuance of drawings/specifications, delays in possession of sites, and sluggish approval processes contribute to project setbacks. Additionally, the survey highlighted the importance of effective communication and cooperation among various stakeholders, including procuring entities, project managers, contractors, and subcontractors.

Quality assurance measures, such as inspections, tests, and proper documentation, appear to be widely implemented, but there is room for enhancement in some areas. The incorporation of key clauses in contract documents, including liquidated damages, termination due to delay, and time extension provisions, demonstrates a commitment to managing on-time delivery.

6. Recommendations

- **Enhanced Training Programs:** Implement comprehensive and regular training programs for all stakeholders involved in contract management. This should cover the latest updates in regulations, best practices, and the effective use of contract management tools.
- **Streamlined Approval Processes:** Improve the efficiency of approval processes for drawings, specifications, and other project-related documents to minimize delays. Encourage proactive communication among project teams to address issues promptly.
- **Robust Record-Keeping:** Emphasize the importance of maintaining accurate and accessible records in both hard and soft copy formats. This will contribute to transparency, accountability, and efficient dispute resolution.
- **Continuous Monitoring and Evaluation:** Establish a system for continuous monitoring and evaluation of contract management practices, incorporating feedback loops to identify areas for improvement promptly.
- **Strengthening Dispute Resolution Mechanisms:** Clearly outline and promote alternative dispute resolution mechanisms, such as negotiation, adjudication, and conciliation, to facilitate swift and fair conflict resolution.
- **Regular Contract Audits:** Conduct regular audits of ongoing contracts to ensure compliance with established procedures, identifying potential risks and areas requiring corrective action.
- **Knowledge Sharing and Collaboration:** Foster a culture of knowledge-sharing and collaboration among industry professionals, encouraging the exchange of experiences and best practices within the construction and procurement sectors.
- **Technology Integration:** Explore opportunities to leverage technology for contract management, including the use of dedicated software platforms for project monitoring, document management, and communication.

By implementing these recommendations, Bangladesh can enhance its work contract management practices, ensuring smoother project execution, minimizing delays, and optimizing the overall procurement process. This, in turn, will contribute to the successful delivery of high-quality works and the realization of maximum benefits for projects across the country.

7. References

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