

**e-procurement and transparency in Public sector :
A case of Local Government Engineering Department (LGED),
Dhamoirhat upazila,Naogaon.**

Dissertation

Submitted in partial fulfillment of the requirements for the Degree of
Masters in Procurement and Supply Management

Submitted By
Hussain Ahmed
Batch-15
Student ID: 17382026

Masters in Procurement and Supply Management (MPSM)



BRAC Institute of Governance and Development
BRAC University

Date of submission : March,2018

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Submitted To
Mohammed Abu Bakar Siddique (MCIPS, PhD)
Procurement Specialist
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Masters in Procurement and Supply Management (MPSM)



BRAC Institute of Governance and Development
BRAC University

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LETTER OF TRANSMITAL

February 20, 2018

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Dissertation Supervisor
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Sub: Submission of Dissertation Report.

Dear Sir

It's my pleasure to submit herewith my dissertation report on "e-procurement ensures transparency in Public sector: A case of Local Government Engineering Department (LGED), Dhamoirhat upazila, Naogaon" as a requirement for achieving the degree Masters in Procurement and Supply Management (MPSM). It is grateful to you for your active supervision, care and guidance.

I have collected data from Local Government Engineering Department (LGED), Dhamoirhat, Naogaon for preparing my research paper. I have paid my attention to prepare this paper in most realistic and proficient way. If any mistake is found please see in the eye of forgiveness. I will be available enthusiastically at any clarification when required. I believe and hope that you would be kind enough to accept my report for assessment and oblige thereby.

Sincerely yours,
Hussain Ahmed
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CERTIFICATION

This is my pleasure to certify that the dissertation entitled "e-procurement ensures transparency in Public sector: A case of Local Government Engineering Department (LGED), Dhamoirhat upazila,Naogaon” is the original work of Hussain Ahmed that is completed under my guidance and supervision. So far I know, the dissertation is an individual achievement of the candidate’s own efforts and it is not a conjoint work. I also certify that I have found the dissertation satisfactory for submission to BRAC Institute of Governance and Development (BIGD), BRAC University which is a partial fulfillment of the requirements for the degree of Masters in Procurement and Supply Management.

Mohammed Abu Bakar Siddique (MCIPS, PhD)
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Hussain Ahmed

Statement of the Author

It is hereby declare that I am the sole author of this dissertation. I also declare that this paper has not been submitted anywhere.

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LIST OF ABBREVIATIONS AND ACRONYMS

ADP	Annual Development Plan
AE	Assistant Engineer
ASEAN	Association of Southeast Asian Nations
BPR	Business Process Reengineering
BoQ	Bill of Quantities
CIPS	Chartered Institute of Procurement and supply
CPTU	Central Procurement Technical Unit
CSR	Corporate Social Responsibility
E-GP	Electronic Government Procurement
E-procurement	Electronic Procurement
ICT	Information and communication Technology
IMED	Implementation, Monitoring and Evaluation Division
IT	Information Technology
LGED	Local Government Engineering Department
PPA	Public Procurement Act
PPR	Public procurement Rules
PW	Public Works
SAE	Sub-Assistant Engineer
SE	Superintending Engineer
SME	Small and Medium-sized Enterprise
Sr.AE	Senior Assistant Engineer
UAE	Upazila Assistant Engineer
UE	Upazila Engineer
UEO	Upazila Education Engineer
UK	United Kingdom
UN	United Nations
VFM	Value for Money
WLC	Whole Life Costing
WTO	World Trade Organization
WB	World Bank
XEN	Executive Engineer

Abstract

Procurement is the acquisition of goods, services or works from an external sources and performance of services by any contractual agreement. Public procurement means procurement using public funds. Public sector organizations acquire goods, services and works from external sources. Before 2003, public procurement process of Bangladesh was not standard neither to fulfill donor agencies' expectation nor meet the country's goal for ensuring transparency and good governance. In this context, Government of Bangladesh, by replacing traditional public procurement legal frameworks, enacted Public Procurement Act, 2006 with consultation of World Bank and based on this Act Public Procurement Rules, 2008 were formulated. Despite of comprehensive legal framework, tender box looting by the powerful bidder, corruption, fraudulent, conspiracy and coercion were the common phenomena of manual public procurement system in Bangladesh. These irregularities lead to reducing economic growth and lowering the achievement of social objectives. In order to streamline the procurement process and address mismanagement the public agencies, within the legal mandate drawn from PPA, 2006, introduced electronic public procurement (e-GP). This study aims to evaluate the transparency of e-GP in public procurement by examining the procurement process of Dhampirhat LGED office. For this purpose, a questionnaire survey has been conducted to gather primary data. Key informant Interviews have been conducted to collect invaluable opinions of upazila engineer and his team. Likely, a short-listed bidder of Dhampirhat LGED office has been interviewed for understanding their opinion about e-GP. It is found from the survey that e-GP is more transparent than manual system in terms of bidding document submission. e-GP saves 50 per cent per cent of the procurement processing cost than manual system. e-GP promotes competition that naturally reduces prices. Selection of eligible bidder is more transparent in e-GP than manual system. Besides the benefits, a number of shortfalls have been identified: lack of infrastructure and unskilled manpower. Recently World Bank has approved "Expand -e-GP project" which worth \$55 million for strengthening the country's public procurement. This project will help the Implementation Monitoring and Evaluation Division (IMED) effectively monitor the execution of annual development programs by establishing a single online platform connecting all public sector organizations.

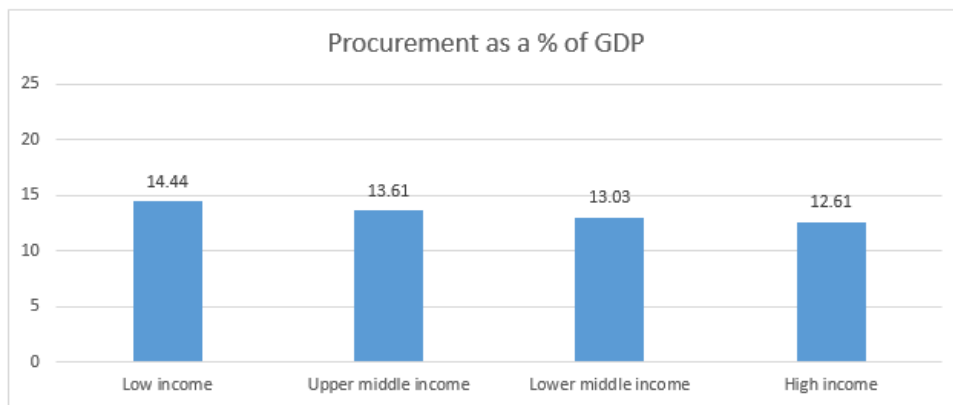
Chapter : One

Introduction

1.1 Background of the study

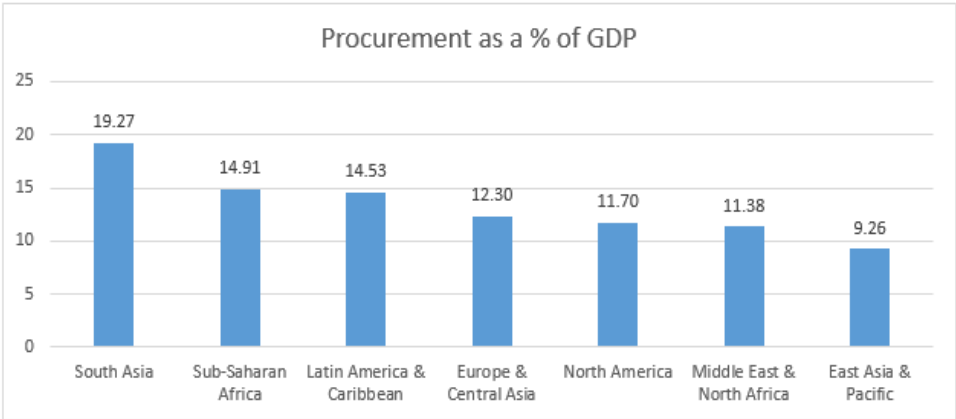
Public procurement plays a vital role in socio-economic development in the world. Public expenditure is being treated as the prime indicator for growth and development of any country. The size of Public procurement in economies and the share of public procurement to GDP indicates annual development plan of any government of any country. The European Union calculates the average share of public procurement in the GDP of its 28 member states to be 16 per cent. The OECD also collects statistics on the share of public procurement in its 35 member countries, which averaged 12 per cent of GDP in 2015. The World Trade Organization estimates the share of public procurement in GDP globally to be between 10 and 15 per cent (Figure 1.1), implying that the share of public procurement in GDP is higher in low income and middle income countries than rich countries (Djankov,S,2016).

Figure 1.1: Procurement as of GDP (per cent) of low,middle and high income countries



In regional perspective, South Asia has the highest share of public procurement in GDP; at 19.3 per cent followed by sub-Saharan Africa at 14.9 per cent. India procures 20 per cent of GDP publicly, Pakistan 19.8 per cent. Conversely East Asia has the lowest share, 9.3 per cent of GDP, largely driven by China, where only 2.8 per cent of GDP is generated through publicly procured projects. Figure 1.2 illustrates that public procurement is indeed as important in developing countries as it is in advanced economies. Governments in developing countries purchase goods and services and these markets represent huge opportunities to enhance competition and development. Public procurement ensures competitive markets for goods and services. It also ensures benefits for the consumer, higher quality and perhaps lowers prices. Free and fair competition will reduce corruption, which lead to transparent procurement. Transparent procurement process will weed out corrupt practices (Djankov, S, 2016).

Figure 1.2: Procurement as of GDP (per cent) of on region basis



Bangladesh spends over \$7 billion yearly on public procurement, which constitutes about 70 per cent of the annual development programme and about 20-24 per cent of the annual national budget outcome (World Bank, 2017).Public procurement through government contracts has always been the primary source of corruption. It is found in the research that in case of government procurement and work tender, only 15 per cent of the money reaches its intended destination as 85 per cent is siphoned away through systematic leakages (World Bank, final report,2015).

The manual tendering based public procurement system presents many opportunities for manipulation by corrupt civil servants and tender "mafias." Killing of tender rivals and cinema style kidnapping and violence have always been part of the tendering process in our country. In some cases, cartels distribute the works within themselves and seek exorbitant price. Politicians and public employees also collaborate to award contracts to the payer of the highest bribe or to their favored contractor. They also indulge in corruption by systematically leaking information and manipulating papers during the tender approval process. (Hassan, Z, 2008).

Government and donor agencies especially the World Bank realized that an overall reform was required to address these issues. e-procurement system can be the best way to restrain these malpractices, because it takes away the power of awarding contracts from corrupt civil servants and transfers it to a neutral software based system that allows transparency, competition and equal opportunity for all eligible vendors. It dramatically reduces cycle time for processing of tenders and task completion, and can also standardize the procurement process across all government departments and agencies. It increases purchasing power by demand aggregation, and empowers the small and medium bidders because the entire content and bid submission is online (Hassan ,Z ,2008).

The Public Procurement Act, 2006 which was enforced on 27th January 2008 seeks to regulate and ensure transparency and accountability in the procurement of goods, works and services using public moneys and ensuring equitable treatment and free and fair competition among all persons wishing to participate in procurement . In public procurement, Government of Bangladesh is being given efforts to ensure value for money to the tax payers' money. Centre procurement Unit (CPTU) under Ministry of planning of Bangladesh has taken several initiatives in the recent decade to enhance transparency in public procurement (Mahmood,S,2013).

‘Vision 2021’ of the Government of Bangladesh (GoB) has strong desire to improve transparency and efficiency in public service by building digital Bangladesh. As part of the e-governance framework, the government has given highest priority to information and communication technology (ICT) based public service. Thus, the country has been transforming its public procurement environment by shifting gradually from traditional procurement practices to international standards through digitization (www.egp.gov.bd/).

According to e-GP Readiness Assessment Report, 2006, e-GP has started from the recommendations of e-GP Readiness Assessment Report 2006 in Bangladesh, under Technical Assistance Project H107-BD funded by World Bank and Government of Bangladesh.

Bangladesh Government has legal mandate for e-GP under the Public Procurement Act, 2006 section 65. This section ensures e-GP as the collaborative use of information and communications technology (especially the Internet) by government agencies and other actors of procurement community in conducting all activities of Government Procurement Process Cycle (GPPC) for the acquisition of goods, works, and consultancy services with enhanced efficiency in procurement management (www.cptu.gov.bd).

e-GP is the web based system which comprises the total procurement lifecycle and records the all procurement activities. The purpose of this system is to maintain complete and up-to-date Public Procurement System activities of all public agencies as well as provide tender opportunities to all potential bidders from Bangladesh and abroad. The vision of the e-GP is to enhance the efficiency and transparency in public procurement through the implementation of a comprehensive e-GP solution to be used by all government organizations in the country (www.cptu.gov.bd).

The e-GP has been embraced both by the public sector and the bidding community, and is progressing rapidly by contributing to enhanced economy, efficiency, and transparency, resulting in the savings of transaction costs with better value for money. Initial results shows that e-GP also contributed significantly in reducing inappropriate bidding practices like collusion, coercion, fraudulent and improved overall governance by opening a new epoch of doing business with the government. As of 2018, 1208 out of 1300 procuring agencies were connected to e-GP. The number of tenders invited through e-GP up to February 4, 2018 was 146386 and their total value was 1 lakh 33 thousand 992 crore taka. The number of tenderers registered with e-GP system the same time is 41815. All such figures are increasing every-day (www.cptu.gov.bd).

1.2 Rationale of the study

Bangladesh government spends more than Tk. 72,000 crore on government procurement. It is found in the research that if procurement process could be done just 1 per cent more efficiently that would save Tk. 720 crore. As it turns out, it can likely be improved by closer to 10 per cent, saving billions of taka that could pay for other projects or services (Lomborg,B,2016).

Public procurement is fraught with inefficiency. Sometimes, contractors who have political connections are best placed to win bids, or even to block other contractors who might be able to offer better prices. On other occasions, winning bidders subcontract the work out to other firms, taking their own cut along the way and pushing costs higher and higher. These practices in public procurement can lead to delays, cost overruns, and subpar output, which all add up to higher costs for the government - which ultimately means higher cost to taxpayers and donors (Lomborg,B,2016).

According to Transparency International Bangladesh (2006), public procurement is one of the sources of corruption in Bangladesh. TIB's study found that corruption in public procurement lost 10 to 25 per cent contract value, it forfeit about 42 to 50 per cent contract value in some cases. The corruption watchdog body highlighted that corruption in public procurement and development projects made Bangladesh first position in corruption perception index from 2001 to 2005.

To reduce corruption and improve transparency in public procurement, the government implemented e-GPP on pilot basis in the fiscal year 2011-12 in four target agencies namely Bangladesh Water Development Board (BWDB), Rural Electrification Board (REB), Roads and Highways Department (RHD) and Local Government Engineering Department (LGED). Fundamental purpose of inaugurating e-GP was (www.cptu.gov.bd/):

- to reduce the cost of the procurement process of public sector
- to reduce corruption, fraudulent, conspiracy and coercion in procurement process
- to improve transparency, ensures accountability and value for money.

It is found that Government allocated TK 93,894.68 crore for LGED of total annual development programme in fiscal year 2016-17. LGED works for construction of rural and urban roads. Presently, LGED constructs primary school under different projects. Therefore, LGED plays vital role for development of rural economy. Every year this agency implements huge number of projects where transparency and accountability need to be established. A study evaluated that LGED reduces price to cost ratio by 10.25 per cent after introducing e-GP in 2011. More transparency and accountability are essential for the development of rural economy as well as ensuring value for money in public procurement (Abdullah,W , 2015). This paper aims to study the current scenario of e-GPP in LGED that ensures transparency and makes the organization more cost effective in terms of public purchasing than before.

1.3 Statement of the problem

Government allocates more than 25 per cent of its GDP for annual public procurement. Moreover, LGED spent about 20 per cent of ADP in FY 206-17. It is proven that LGED is the organization that has a capacity to spend public money which is allocated in ADP. That is why, LGED has already established faith in government to implement projects successfully and achieved trustworthiness to the common people for ensuring value for money in public procurement. Therefore, LGED has a capability to take the challenges to introduce e-GPP instead of manual procurement system. LGED executes more than 5000 procurement contracts in different level (division, district and upazila) every year. It is further evident that LGED has already introduced 100 per cent procurement through e-GP (www.lged.gov.bd).

Despite an increasing trend of e-GP implementation across the government agencies, LGED and other government agencies are not acquainted with the system. Most of the bidders have very few knowledge about technology. Even though, government could not reach the power supply and internet facilities to the all upazila. As a result, the bidders who have been living in remote areas have a chance to be deprived of. Therefore, on-going argument among the key stakeholders made the system questionable. Some stakeholders argue that we are not ready for introducing the system; others say that this might ensure value for money and open competition. Another group argues that World Bank introduces the system for their own interest. Some critics said that e-

GPP has some limitations. It should debug before going to full operation. As a result, it is time to find the fact which might lead to reduce contention.

1.4 Research objectives

1. To evaluate the efficiency and effectiveness of e-procurement system in LGED.
2. To examine transparency in e-procurement compared to manual system in the field of LGED.
3. To identify gaps and to suggest further possible means to improvement of e-procurement in Bangladesh.

1.5 Scope and limitations of the study:

The government allocated around Tk 1.1 trillion for ADP in FY 2016-17. LGED is currently responsible for implementing approximately 20 per cent of total ADP outlay. This study does not reflect the overall picture. On the other hand, this study will not cover all stakeholders of LGED; it simply covers one operating region (LGED office, Dhamoirhat, Naogaon).

1.6 Structure of the study

This paper has been divided into six chapters. Chapter one discussion on background and rational of the study. It incorporates research objectives as well. Chapter two mainly on literature review which tries to link with research objectives. Chapter three highlights on theoretical overview of public procurement. Chapter four illustrates the research area and methodology of the research. Chapter five discuss on survey results based on questionnaire. Finally Chapter six concludes and puts forward recommendations.

Chapter : Two

Literature review

2.1 Review of literature: (objective-1)

e-procurement in Kenya dramatically changed the lost time and errors which was resulting from exchange of paper and retyping of data (Steve Ondieki, N and Okibo,W,2013). Gebauer et al (1998) carried out empirical studies in the USA in which they noted that cost and time are the important measures for the success of the procurement processes. In e- procurement, there is no paperwork, postage fee and other costs associated with preparation and sending tender document. It is also faster to send document electronically as compared with traditional method of sending (ibid).

e-procurement reduces time to source materials. It is an effective method of finding and connecting new sources. A lot of time is spent on paper invoicing in terms of writing, filing and postal communication but e-procurement staff have sufficient time to engage with strategic issues of procurement. e-procurement reduced maverick buying (Eadie et al 2007).It reduces administrative cost due to less paperwork (Rankin, 2006). e-procurement reduces staff which is the important way of gaining competitive advantage through reduced cost (Eadie et al 2007). This statement is supported by Egbu in his study which revealed that by introducing e-procurement , a steel supplier was able to carry out a multi million pound project with only 20 per cent of the staff the company would normally have used (Egbu et al 2003).

e-procurement gives an organization competitive advantage over its competitors. Central department can oversee all procurement activities and different offices worldwide. It gives a distinct advantage over the much slower process of having post documentation between offices. It reduces geographical distances where suppliers can be monitored on timely delivery, quality delivery of products and services (Hawking et al 2004). e-procurement is important for improvement of communication. It allows the sections of electronic documentation to flow through the supply chain; it improves the speed of returns and subcontractor price visibility (Eadie et al 2007). e-procurement improved market intelligence and enhanced decision making

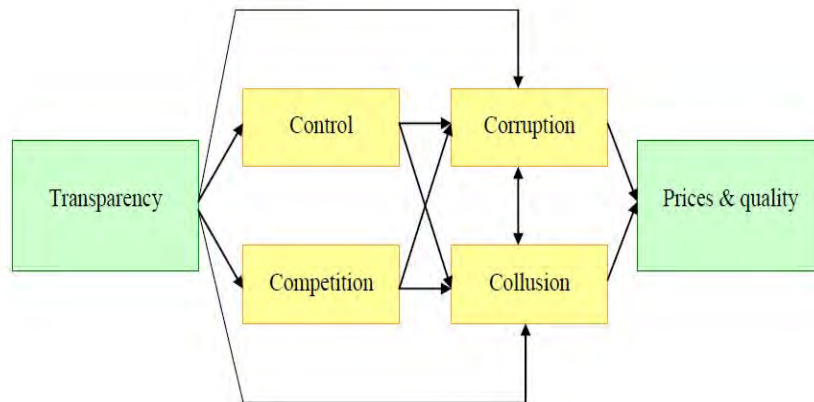
ability which leads to enhanced inventory management and increased accuracy of production capacity (Hawking et al 2004).

In Bangladesh, e-GP virtual bidding process reduced 15 per cent procurement cost than manual system (Mahmood,S,2013). LGED first introduced e-GP as a very small pilot in 2012, when less than 1 per cent of the entire department's items were procured electronically. In 2013, however, this rate jumped to 61 per cent as more LGED staff were trained and more bidders registered for the online process. Today, about 95 per cent of LGED procurement uses e-GP, which is about as high a rate as can be expected for any government agency. More bidders adopted e-GP which lead to prices down, the new price was typically 11.9 per cent lower than manual system. Expanding e-GP in all procuring entities in LGED saved an estimated Tk. 5,274 crore per year. It would save total Tk. 95,677 crore in near future. This estimate includes savings on works procurement only. So it is evident that each taka spent to expand e-GP would yield at least Tk. 663 in benefits in public procurement of LGED (Lomborg,B,2016).

2.2 Review of literature: (objective-2)

Transparency of public procurement is generally correlated with competition, corruption, and control. It also influences outcomes of procurement procedures. In procurement nobody knows the estimated cost which remains hidden in this system. Once submitted, there is no chance of manipulating the papers by anybody. Moreover, everyone from any corner of the country can buy and submit the bidding documents. The system makes the procurement more transparent than manual. That is why, greater transparency leads to better control and less corruption or collusion. Another answer is the level of transparency is connected with the level of competition for the public contracts. Moreover, transparency may influence the behavior of the suppliers and, consequently the probability of collusive behavior. Therefore, competition, corruption, and collusion are also interrelated in public procurement (Balsevich, A, Pivovarova, S, Podkolzina, E, 2011). Figure 2.1 demonstrates possible channels of interrelationship between transparency and the results of procurement:

Figure 2.1: interrelationship between transparency and the results of procurement



Source: <https://publications.hse.ru/mirror/pubs/share/folder/islf6b0sfk/direct/59052137>

From the figure 2.1, it is found that transparency controls on illegal bidding and keep aloof muscle-power bidderers from snatching tender box . Transparency ensures competition as well by participating more bidderers from different corner of the country. When ensures more transparency , corruption will reduce remarkably. On the other hand, if competition ensures by enhancing transparency ,it will lead to reduce collusion among ill-motivated bidderers. Therefore, we can draw a conclusion that if transparency is high , it ensures competition , competition leads to low corruption and low collusion. As a result , the channel ensures value for money and avoid cutting corner. In a complete market structure having more transparency, the procurer’s expected surplus because improved transparency reduces costs, which in turn, lowers prices and enhances national welfare (Evenett, Huseoekman, 2005, p.178).

In Bangladesh, manual procurement system is far from satisfactory due to poor advertisement, a short bidding period, poor specifications, nondisclosure of selection criteria, award of contract by lottery, one side contract documents, negotiation with all bidders, rebidding without adequate grounds, other miscellaneous irregularities and corruption and other influences (WB,2003). IMED compiled data to award in 148 procurement cases in the year 1998. The normal time allowed is 150 days. The reviewed showed that 29per cent award required 240 days, 28 per cent award required a year and the rest award needed more than 500 days. Procurement delays increase costs, defer benefits and achieving value for money, deter good firms from participation

in bidding and are often indication of corruption, fraudulent, conspiracy and coercion(Transparency,2009). e-GP connects the government body and the national and international contractors on an online platform, which automates the entire government's procurement process by introducing centralized registration of contractors, e-tendering , e-contract management system, e-payments, e-signature and e-security. It combat against bid rigging, corruption and ensure transparency by free and fair competition (Mahmood, S, 2013)

e-GP improved efficiency by reducing procurement delays with the award of contract within the initial bid validity period in 83 per cent by 2016 from 10 per cent by 2007. It also enhanced transparency to initiate publication of contract awards through website in 100 per cent by 2026 from 10 per cent by 2007. e-GP also increased transparency publishing bid invitations through website in 100 per cent by 2016 from 70 per cent by 2007. It also increased competition which is 7 in 2016 with comparison to 2007 which was only 4. After e-GPP launching, collusion/coercion/bid rigging/fraud at different level significantly reduced in the frequency of newspaper reporting in 2016 as against 2010–2011 (World Bank, 2017).

In LGED, from October 2017 to December 2017, it is reported that average number of days between publishing of advertisement and tender/proposal submission deadline in open tendering method is 18.23, average number of days between tender/proposal opening and completion of evaluation is 11.48 and average number of days between final approval and notification of award is 1.75 and fraud and corruption is 10per cent among 19876 tenders (www.lged.gov.bd). In 2018 (up to January), it is also reported that percentage of invitation for tender/proposals (IFT) published in newspapers by LGED is higher than other agencies which is 30 per cent in LGED and 29 per cent in other ministries and divisions. At the same time LGED scored 100 per cent for invitation for tender/proposals (above threshold) advertisement in CPTU's website. It is remarkably that 99.27 per cent of contracts competed/delivered within the original schedule as mentioned in contract by LGED. This leads to ensure transparency in public procurement of LGED through e-GP (www.lged.gov.bd). e-GP also facilitates some local bidders of LGED who did not compete before for local political capture (Abdullah,W ,2015).

2.3 Review of literature: (objective-3)

A survey in France stated that 89 per cent of respondents consider that e-procurement will improve the procurement process. On the other hand 56 per cent believe that e-procurement will contribute positively to good public procurement management practices and 22 per cent consider that it is very much imperative. The study also found some problems as well. Main difficulties of e-procurement lies in the teething problems of the tools and lack of incentives to motivate staff. The study also found that 60-80 per cent public organizations use electronic means to publish calls for tenders but only 22 per cent effectively handles offers electronically through e-procurement platform. It is also found that 13per cent public procurement agencies never use e-procurement because of insufficient training and knowledge about the e-procurement tools and process and fear of juridical complications. France introduces several steps to remove the gaps. They introduced common principle for e-procurement platform, the standardization of data and information relating to purchase orders and invoices, cross- border recognition of electronic signatures. They also established a common platform for monitoring the functions (Beauvallet,G, Boughzala Y and Assar S,2011).

It is evident in the case study that e-GP reduces the time and cost of procurement process in LGED department .70 per cent respondents of the survey agreed that e-GP ensure efficiency and effectiveness in public procurement and the same respondents also argue in favor of the ensuring competitiveness through e-GP. On the other hand, 30 per cent of stakeholders told that they are not ready to implement e-GP due to inefficient manpower. They also face the teething problem with the e-GP tools. Some bidders are not acquainted with the CPTU server. As a result CPTU train about 3000 bidders who are enlisted in LGED (Abdullah,W ,2015).

Chapter : Three

Basic concepts of procurement, status of e-GP, its benefits and challenges

3.1 Procurement

According to CIPS Procurement Glossary (2017), procurement describes the processes which concerned with developing and implementing strategies to manage an organization's expenditure portfolio in such a way as to contribute to the organization's overall goals and to maximize the value released and/or minimize the total cost of ownership. Procurement focused on the acquisition of goods and services and the execution of plans rather than the development of strategies. Procurement begins with the review of the spend portfolio and the development of an opportunity analysis. Procurement process involves identifying and engaging with potential stakeholders, defining business needs and preparing a business case.

Procurement differs from sourcing in that the procurement process addresses all pre-contract and post-contract processes. Supplier relationship management, performance management and supplier development are key procurement activities to realize the potential value created during the sourcing phase.

3.2 Public Procurement

According to OECD public procurement website (2017), public procurement refers to the purchase by governments and state-owned enterprises of goods, services and works. As public procurement accounts for a substantial portion of the taxpayers' money, governments are expected to carry it out efficiently and with high standards of conduct in order to ensure high quality of service delivery and safeguard the public interest.

Public procurement generally follows some rules and regulations. In Bangladesh, The Public Procurement Act, 2006 which was enforced on 27th January 2008 seek to regulate and ensure transparency and accountability in the procurement of goods, works or services using public funds and ensuring equitable treatment and free and fair competition among all persons wishing

to participate in such procurement. The Public Procurement Rule, 2008 defines a code of professional misconduct for the procuring entity as well as the bidders. It strictly prohibited corruption, fraudulent, conspiracy and coercion.

3.3 e-Procurement

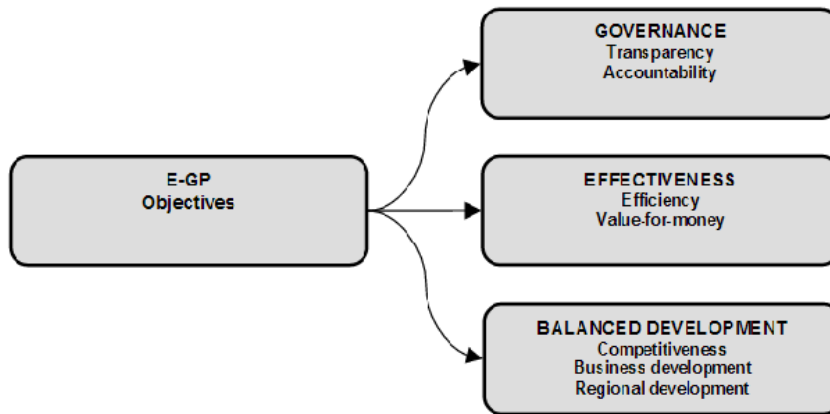
According to Deltabid e-procurement website 2017, e-procurement is the electronic purchase and sale of goods and services, usually through an internet-based platform. It is a tool designed to improve the purchasing process in terms of transparency, efficiency and cost savings.

The significance of e-procurement is not only automation in the procurement process but also an organization can improve oversight, a decrease in request-to-purchase cycle time, and an increase in the number of event. It also improves data visibility and management, increases transparency in request for proposal (RFP) process, and spends optimization which ensures value for money in the public sector (<https://www.deltabid.com/e-procurement/> , 2017).

3.4 Electronic Government Procurement (e-GP)

According to ADB, IDB and world Bank Electronic Government Procurement Roadmap 2004, e-GP is the use of information technology by governments in conducting their procurement relationships with suppliers and contractors for the procurement of works, goods, and services required by the public sector. e-GP breaks down the physical barriers of space and time and allows a more transparent and efficient information flow and wider access to information and services. These information facilities include the internet, standards, simplified procedures, databases and communications that might support the three broad objectives for an e-GP strategy that are depicted in Figure 3.1.

Figure 3.1: e-GP objectives

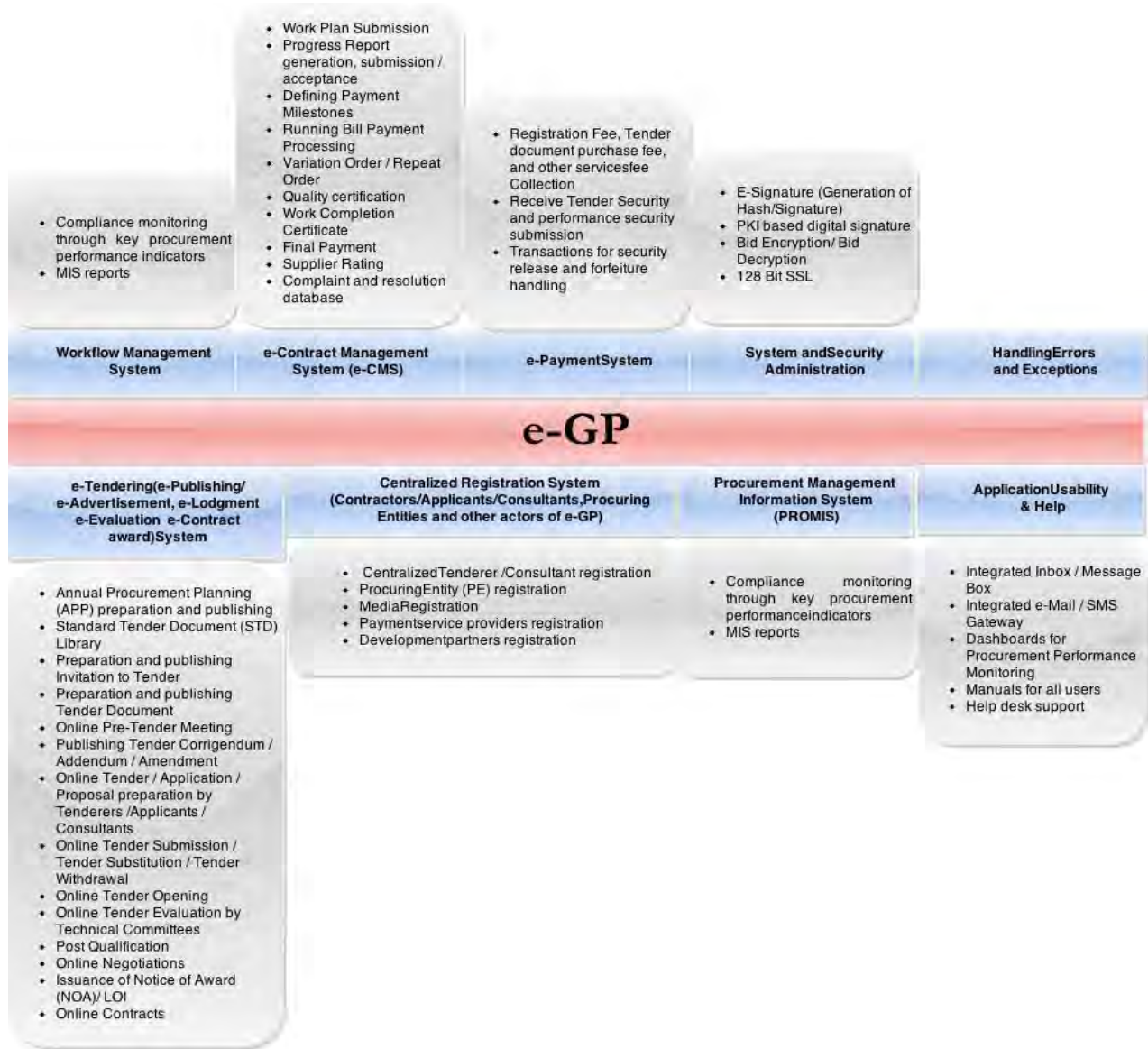


Source: www.eprocure.gov.bd

3.5 e-GP in Bangladesh

e-GP portal is developed, owned and being operated by the Central Procurement Technical Unit (CPTU), IME Division of Ministry of Planning. The e-GP system provides an on-line platform to carry out the procurement activities by the public agencies called procuring agencies (PAs) and Procuring Entities (PEs). The e-GP system is a single web portal from where and through which PAs and PEs will be able to perform their procurement related activities using a dedicated secured web based dashboard. The e-GP system is hosted in e-GP Data Center at CPTU, and the e-GP web portal is accessible by the PAs and PEs through internet for their use. This complete e-GP solution was developed under the Second Public Procurement Reform Project (PPRP II) supported by the World Bank and gradually used by all government organizations. This online platform also helps them ensuring equal access to the bidders/tenderers and also ensuring efficiency, transparency and accountability in the public procurement process in Bangladesh (www.eprocure.gov.bd). Figure 3.2 depicts the modules of e-GP system in Bangladesh.

Figure 3.2: Modules of e-GP system in Bangladesh



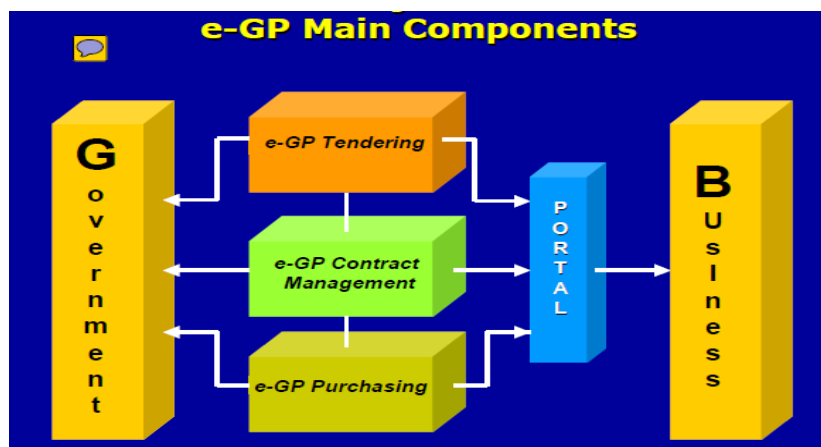
Source: www.eprocure.gov.bd

The e-GP guidelines were approved by the Government of the People's Republic of Bangladesh in pursuant to Section 65 of the Public Procurement Act, 2006. As per approved guidelines, e-GP system has been introduced and implemented. The e-GP system has been developed and introduced in two phases (*www.eprocure.gov.bd*) :

e-Tendering has been introduced on pilot basis in the CPTU and 16 other procuring entities (PEs) under four high spending public agencies namely: Bangladesh Water Development Board (BWDB), Local Government Engineering Department (LGED), Roads and Highways Department (RHD) and Rural Electrification Board (REB). The system rolled out to 291 PEs of those four selected agencies, which is now expanding to all the PEs of the government up to districts and sub-districts level.

e-Contract Management System (e-CMS) has been developed and introduced and implemented. e-CMS is a complete electronic contract management system which provides platform for preparation of work plan and its submission; defining milestone, tracking and monitoring progress, generating reports, performing quality checks, generation of running bills, vendor rating, generation and issuance of completion certificate. Figure 3.3 provides key components of e-GP.

Figure 3.3: e-GP main components



Source: www.eprocure.gov.bd

3.6 Readiness for e-GP

A World Bank report titled e-GP Readiness in 2006 measured public procurement condition whether the government is ready to introduce e-GP or not. In this regard, World Bank took opinion from different stakeholders and assessed the level of readiness public procurement environment to launch e-GP. This report also illustrated to the degree of readiness on nine key components related to e-GP (Figure 3.4).

Figure 3.4: Components for measuring readiness for e-GP in Bangladesh



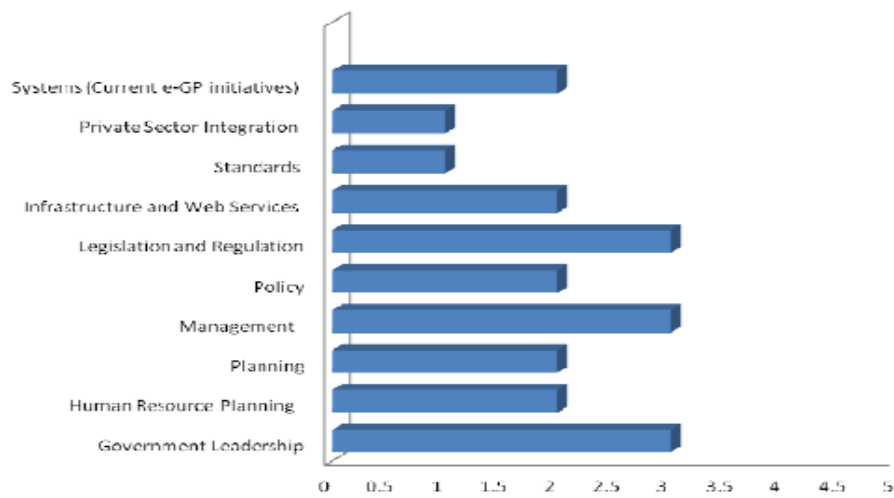
Source: WB 2006:6

The Bank's report acknowledged that government took very effective initiatives to set up CPTU, new regulations, standard bidding documents, and the drafting of legislation. The report also found the significant gap to develop human resources management which is very inefficient to deal with the challenges of current and future reforms in procurement process. It addressed the weak infrastructure of ICT planning which is very much imperative to implement the future e-GPP and monitoring the contract outcomes. The study also reported absence of publicity of e-GPP to the stakeholders which might ensure transparency, accountability and value for money in public sector procurement. According to the report, telecommunication is poorly integrated. Though telecommunication and internet infrastructure was developed but some important issues like policy, technical and business cases are needed to be addressed before achieving national infrastructure. Access of broadband and the cost of the access needed to be addressed for assisting the e-GP initiatives. The report also found that very insignificant initiatives had been

done on procurement market and technical standards which might cause the integration problem of government e-services in the upcoming future. The report mentioned that it was very much essential to build up a relationship with private sector through effective consultation, awareness raising programme and the government should address the concern of suppliers. The assessment also suggested implementing e-tendering system on pilot scheme basis (WB 2006:18-39)

The assessment report summarized the levels (scale of 5) of readiness for each component in Figure 3.5.

Figure 3.5: Level of readiness for e-GP in Bangladesh



Source: WB 2006:10

It is mentionable that World Bank helped Bangladesh roll out e-GP in four key public procuring entities in 2011, and establish a high capacity data center in 2016 to accommodate increasing demand for e-GP. In July 2017, the Bank has approved a project worth \$55 million for strengthening the country's public procurement. The project will help the Implementation Monitoring and Evaluation Division effectively to monitor the execution of annual development programs by establishing a single online platform connecting all public sector organizations. The new project will expand e-GP to all 1300 government procuring organizations (<https://wbnpf.procurementinet.org/.../bangladesh-strengthen-public-procurement-worl>).

3.7 e-GP in Local Government Engineering Department (LGED)

Connecting all procuring entity offices in e-GPP portal is the most important assignment for LGED. Without this infrastructure, e-GPP could not run in any level of organization. LGED launched e-GP on pilot basis in 2011-12 targeting its Districts Executive engineering Offices at 4 different districts. After that LGED decided to introduce e-GP in other 60 PE offices for remaining districts. In 2012-13, LGED took the decision to launch e-GP in Upazila Engineer's office as a PE office to meet the World Bank guidelines which was targeting to start e-GP in upazila level by 2013-14. LGED took a crash programme to introduce e-GP in 485 PE offices at upazila level. Later on LGED decided to implement e-GP to its all offices by 2015-16 and accordingly, LGED has establish e-GP to all its offices in district and upazila level. Successful implementation of e-GP will not come true unless the officials and employees involved in the procurement process are brought under specialized training. Realizing the emergency, LGED trained their officials and employees in last 4 years. The number of trained persons is about 1200. LGED trained the personnel by its own fund. On the other hand some people of LGED got training from World Bank DLI funding.

Bidders are the key stakeholders in a tendering process. Without participation of considerable number of bidders in a tendering process, e-GP system can't achieve its ultimate benefits. LGED is the only department which had undertaken initiatives to register a number of bidders officially in 2013-14. LGED also took steps to train the registered bidders for the effective participating in e-tendering process.

LGED engineers make their own cost estimate for every item that will be procured. This provided a clear measure to track the effects of e-GP. Unsurprisingly, as more and more users adopted e-GP, prices went down - the new price was typically 11.9 per cent lower. The costs are straightforward. The majority goes toward purchasing computers and software, costing Tk. 98.58 crore. It will also require training staff to handle e-GP nationwide, as well as paying for operations and maintenance. The total value of these costs spread across the indefinite future equals Tk. 144 crore. The benefits would dwarf these costs which was highlighted in Chapter 2.

3.8 Benefits of e-GP

Abdullah (2015) highlighted the following benefits from e-GP:

- (1) e-GP system makes participating in the bidding process relatively easy, resulting into reduction in cost of participation. In particular, the bidders do not have to travel to the procuring entity's office to collect bidding information and submit bids. This saves transportation cost and opportunity cost of traveling to the office.
- (2) Bid submission is always a risky business as conflicts often ensue when politically connected bidders attempt to stop non-political bidders from participating. The online system allows bidders to participate from home reducing such risks significantly. These cost savings will be reflected in the final bids submitted by a bidder. In particular, a bidder can be expected to bid lower than before e-GP was initiated, everything else constant .
- (3) e-GP system increased competition that lead to lower cost of participation. The cost of participation in the bidding process is now uniform across all the bidders. Therefore, bidders from across the country should be able to apply. This, in turn, will reduce the prices for publicly procured goods, works and services further.
- (4) It is reported that incidences of conflicts in the times of bid submission would decrease considerably. Bidders submit their bidding documents from home online. The CPTU also indicated that there will be greater participation in the bidding process. This can be attributed not only to the more secured nature of bidding participation but also to the general simplification of bidding participation: anyone from any corner of the country now can apply and thus it enhances competition. Economic theories illustrated that increased competition reduce price. It also increases transparency as well.

3.9 Challenges e-GP implementation

Although e-GP brings some benefits, but there are some internal and external challenges and risks regarding to adoption of e-GP. Determining income tax and the process to suit with the IT system still remain challenges in e-GP system in Bangladesh. Therefore, government requires a state forward plan for implementing e-GP technologies. There are three important challenges to e-GP implementation, as Angeles and Nath (2007) identified:

1. Lack of system integration and standardization issues relates to the fact that e-GP is still relatively new system and it is not suit with the existing remarkable reference models. Another challenge is software immaturity which relates to certain key features like invoicing, payment reconciliation or managing of different geographical jurisdictions, tax structures, currencies etc. There are another challenge lies in hidden costs which relate to system integration, content aggregation and rationalization, catalog and search engine maintenance, supplier enablement, end user training and procurement process re-engineering. These hidden costs might exceed software licensing and maintenance cost by five to ten times.
2. The second challenge relates to the immaturity of providers of e-procurement services and the lack of supplier preparation, and the resistance of solutions end-users. There are many examples in the procurement arena that a lot of complex or advanced e-GP failed due to immature service providers could not provide a complete suite of services. Lack of knowledge of tenderers regarding e-GP also a challenge for many organizations. On the other hand, it is imperative for suppliers to learn the system of generating catalogs, process electronic purchase orders, and using invoicing mechanisms among other tasks. The success of e-GP solutions relies on the network effect that will be more effective if enough players are adopting the same technology. The other challenge lies in the resistance of end-users that is relating to easy e-GP operating system. To prevent the resistance government should introduce regular training and promotional activities for the end-users.
3. The third challenge is related change the procurement behavior among the government employees. Some creates barrier to launch e-GP instead maverick buying. To solve the challenge, government should introduce intensive training and educational sessions for the employees and end-users as well.

CHAPTER : FOUR

RESEARCH AREA AND METHODOLOGY

4.1 Methodology for the study

This thesis is a qualitative research. Qualitative research aims to produce new knowledge about how things work in real-life business context relies on several methods of data collection and analysis. In the second chapter, the theory of the thesis is examined. The theory in this thesis has been collected using scientific articles and other literature to create a basis for the research. The empirical data was collected through interviews.

The interviews used in this research were semi-structured. Semi-structural interview are useful if the researcher has a clear theoretical understanding of the topic, which allows the researcher to create an appropriate questionnaire. Semi-structured interview means that there is some flexibility in the wording and order of the questions. The script of the interview is preplanned and the order of the questionnaire fixed. The questionnaire used in the interviews is presented in appendix.

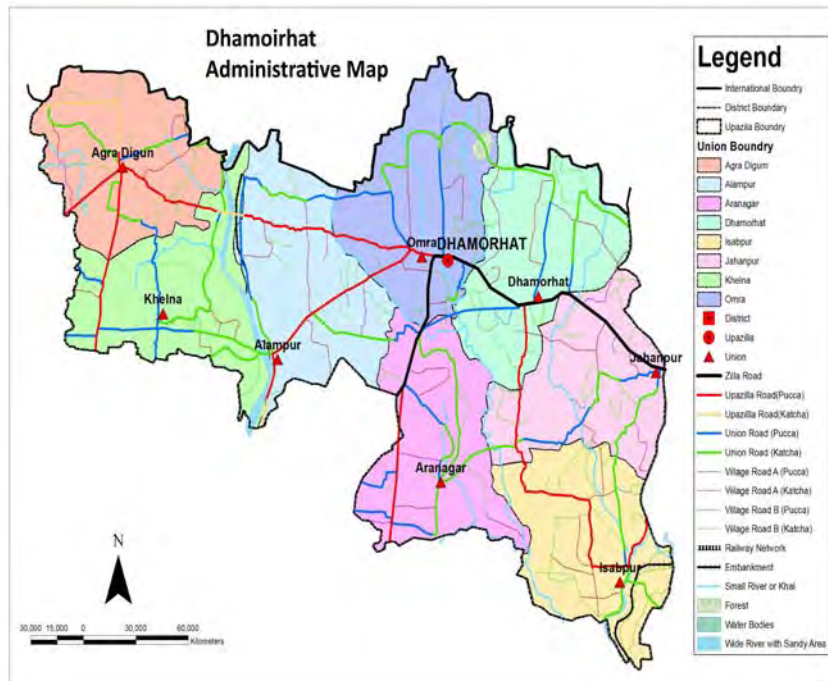
To find out the transparency and cost effective issues of e-GP system, in-depth interview was conducted with upazila engineer, LGED office, Dhamoirhat Naogaon. On the other hand, researcher also has taken a vibrant interaction with short-listed tenderer of that office.

Sampling Method : For this study purposive sampling method was used. Interviewer for this study was chosen from officers and short-listed tenderers of Local Government Engineering Department (LGED) of Dhamoirhat,Naogaon.

4.2 Research Area

The research area of this case study is LGED Dhamoirhat office, Naogaon district (Map 4.1). Dhamoirhat Upazila with a place of 300.80 sq km having eight union parishads. Its population is 151875; men 51.73 per cent, women 48.27 per cent. Average literacy of this upazila is 28.4 per cent; men 34 per cent, women 22.2 per cent. The Unions of Dhamoirhat Upazila include: Dhamoirhat sadar, Alampur, Jahanpur, Agradigun, Isobpur, Khalna, Umar and Aranagar. There are one upazila engineer, two sub-assistant engineer, two surveyor, one draftsman, one accountant, two community organiser, two work assistant, two MLSS and one night guard in Dhamoirhat LGED office.

Map 4.1: Map of Dhamoirhat Upazila



CHAPTER: FIVE

RESULTS AND DISCUSSIONS

5.1 General discussion

A Semi Structured questionnaire was designed including a number of questions which covered not only the transparency of e-procurement but also cost efficiency and measure against corruption, fraudulent and coercion. There are four sections in the questionnaire. Section-1 of the questionnaire illustrates the general information of the respondent, experience of the procurement activities and average annual volume of procurement over the last three years. The questions were intentionally set in such a way that we could easily know the respondent experiences regarding manual and e-tendering process. Section-2 is about assessment of transparency from selective LGED office. This section will provide the answer how the LGED office combat against corruption, which process is better in terms of transparency, how e-GP ensures transparency, limitations and advantages of e-GP system. Section-3 is about the assessment of cost efficiency between manual and e-GP system. Section-4 is about assessment of transparency from selective enlisted bidders/suppliers of LGED office. It is incorporated for check and balance of e-GP from tenderer side.

5.2 Results

This section illustrates the findings and analysis of the survey data. Upazila engineer and his team who have experienced enough to deal with public procurement and one short-listed tenderer have been interviewed by the researcher according to the questionnaire. This process would help find out the whole matter clearly. Some of the responses have been done qualitatively from their practical experiences; on the other hand, some responses have been made quantitatively which based on the supplied official data by the respondents. The followings are the survey results based on questionnaire which might seek to address the research objectives:

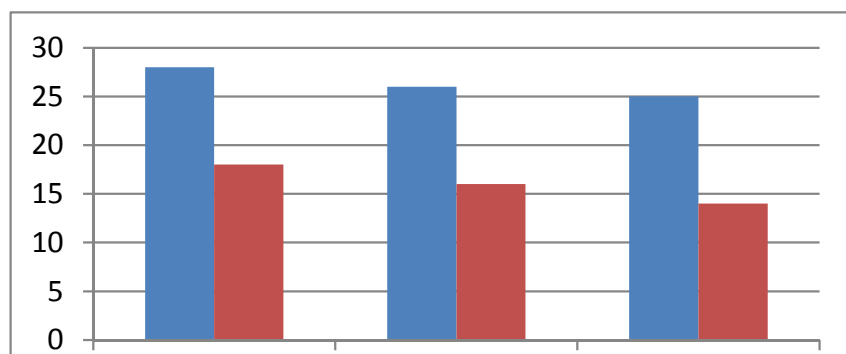
Combating corruption, fraudulent, conspiracy and coercion through e-GP

(a) During the interview period when they were asked regarding the role of e-GP to reduce corruption, fraudulent, conspiracy and coercion, Upazila Engineer and his experienced procurement team answered that in e-GP system, nobody knows the estimated cost along with other issues, because it remains hidden. Once submitted, there is no chance of manipulating the papers from either sides (procuring entity or bidder). Everyone from any corner of the country can buy and submit the tender papers (bidding documents) and they don't need to bother about to keep any security personnel (like police force).

(b) At the same time, short-listed bidder said that in manual tendering process, he found problem a couple of years ago. Some of the rogues tried to prohibit him to buy the bid documents. Though it was solved with the hard step taken by the officials, but he faced difficulties. But in case of e-GP system, they didn't find any such problem. e-GP is transparent and good enough for him to participate in all the tendering process.

(c) When the short-listed tenderer was asked about the time required from submitting tender document to Notification of Award (NOA) over the following three years, he presented the following statistics which easily indicate that e-GP took approximately 10 per cent less time over the mentioned three years than manual system (Figure 5.1). It leads to reduce corruption, fraudulent, conspiracy and coercion in public procurement.

Figure 5.1: Time difference between manual and e-GP



Impact of e- procurement on cost reduction in public sector purchasing

Upazila Engineer and his team presented the following data for a work tender which from 1.0 to 2.0 crore when they were asked about the cost efficiency of both the system. From the available information, it is found that average advertisement cost of tender in the daily newspaper has reduced 50 per cent in e-GP system which is now Tk. 15000 but it was Tk 30,000 in the manual system. It is mentionable that cost for collection of tenders from multiple locations in manual system was Tk. 2000 but in e-GP system it is not applicable due to online facilities. Likewise, cost for issuance of notification of award (NOA) and communicate with tenderer was Tk. 200 in manual system but in e-GP system LGED office need not pay the money because of prevailing online system. They issue online NOA. Likely, cost for contract agreement drop down 50 per cent in e-GP system. Tender evaluation report preparation cost and tender preparation cost (for PE) has cut down remarkably in e-GP system. Table 5.1 summarizes the impacts of e- GP on cost reduction in public sector purchasing.

Table 5.1: Cost efficiency between manual and e-GP

SL. No	Category	Process	Cost for manual tendering	Cost for e-GP
1.	Invitation for Tender	Average advertisement cost of tender in the daily newspaper	30,000.00	15,000.00
		Tender Preparation Cost (for PE)**	15,000.00	5,000.00
2.	Tender Submission	Cost for pre-tender meeting. (in person/websites)	2,000.00	100.00
		Cost for collection of tenders from multiple locations	2,000.00	Not Applicable
		Any other cost: (for sending the documents for sale)	1,000.00	N/A
3.	TOC and TEC	TOC & TEC creation & management cost (process, communication, etc.)	5,000.00	-
4.	Tender Evaluation	TOC & TEC members honorarium	8,000.00	6,000.00
		Tender Evaluation Report preparation cost	2,000.00	1,500.00
		Any other cost: conveyance cost for assessing of papers/certificates submitted by the bidders.	-	5,000.00
5.	Tender Evaluation Report Approval	Cost for Tender Evaluation Report sent to AA	1000.00	100.00
6.	Contract Award	Cost for issuance of NOA and communicate with tenderer	200.00	-
		Cost for contract agreement	1000.00	500.00
		Cost for contract award publication to CPTU's Website	100.00	-
		Any other cost (Please Specify)	-	-
Total Amount in BDT, lacs			67.3	33.2

Table 5.1 shows that in manual system total costs for a typical procurement was 0.673 crore, however, when government has introduced e-GP system the expenditure regarding tendering process reduced by approximately 50 per cent which is now 0.332 crore taka. This is the reliable indication that LGED has been reducing cost of procurement process since the inception e-GP.

Challenges to incorporate e-procurement in LGED

Both the LGED Engineer and the tenderer were asked regarding the challenges of e-GP to adopt in LGED office. Upazila Engineer has said that since e-GP is a new process in the country, they have to pay more attention on it. It has required more attentions to cope up with the system. It has needed adequate training programs to make everything clear. They need subsequent time for coping up with the whole process.

On the other hand, the tenderer mentioned that he personally faced some problems in the e-GP system because it was a new introduction for him. He was not well trained about the system. That is why he had to pay attention seriously to the computerized system. It took a lot of time to be familiar with the new system. Meanwhile he overcame the situation.

From their statements, it is evident that lack of training and unacquainted with the e-GP system consumes their time. These are the basic challenges for implementing e-GP in public offices.

Advantages for LGED from e-procurement system

Upazila Engineer and his team:

- This is an easier process to keep transparency;
- There is no chance of losing any document;
- System works only sequentially;
- No need of ensuring smooth selling and submitting bid document; it happens without any interruption.
- No chance of misplacement of papers.

Tenderer:

- 'I can be in relaxed mood while buying and depositing bid documents'.
- Documents are uploaded in a sequence and possibility of doing wrong is negligible.

Ensuring transparency through e-GP system in LGED office

LGED office:

- In e-GP system, nobody knows the estimated cost along with other issues, it remains hidden;
- We don't need to bother about to keep any security person
- Once submitted, there is no chance of manipulating the papers from either sides (procuring entity or bidder);
- Everyone from any corner of the country can buy and submit the tender papers.

Tenderer:

- We don't need to face the muscleman since the e-GP system was induced.
- Nobody can snatch the tender box from any of the offices; in manual process, it was very difficult to prevent the rogues
- Easy access is possible for smooth buying and depositing bid documents, while in manual system we faced too many problems to overcome.

5.3 Summary of the Analysis

In this section, results are summarized in response to research objectives.

Objective -1:

The findings indicate that LGED office, Dhamoirhat Upazila has cut down average advertisement cost of tender , cost for collection of tenders from multiple locations, cost for issuance of NOA and communication with tenderer, cost for contract agreement, tender evaluation report preparation cost and tender preparation cost (for PE) remarkably in e-GP system. This system leads to diminish 50 per cent of tender processing cost that is now 0.332

crore taka which was 0.673 crore taka in case of manual system. It is evident from the findings that e-GP ensures efficiency in public procurement than manual system. On the other hand, the number of projects implemented through e-GP and average annual volume of e-GP increased dramatically which was 113 per cent in 2014-15 but 500 per cent in 2016-17. These findings indicate the effectiveness of e-GP system.

Objective -2:

The findings illustrate that there is no chance to know the estimated cost in e-GP system. If once submitted the tender, there is no chance of manipulating the papers from any side. Everyone from any corner of the country can buy and submit the bidding documents. Nobody can snatch the tender box from any of the offices like in manual process. Easy access is possible for smooth buying and depositing bid documents in e-GP system. These findings have proven the level of transparency in e-GP compared to manual system.

Objective -3:

Despite having numerous benefits from e-GP system, the findings convey some gaps to adopt in e-GP in Bangladesh which are: lack of training for both the officials and the bidders and they are very much unacquainted with the e-GP. The people with little knowledge need more training to get acquainted with the new system and hence can minimize the gap between present level and expected level.

Chapter : Six

Conclusion and Recommendations

6.1 Conclusion

With comparison between manual and e-GP system in LGED office, Dharmoirhat, it has been observed that achievement of diminishing average advertisement cost of tender in the daily newspaper, tender preparation cost, cost for pre-tender meeting, cost for collection of tenders from multiple location. TOC & TEC members creation & management cost (process, communication etc.), tender evaluation report preparation cost, cost for issuance of NOA and communicate with tenderer, cost for contract agreement and cost for contract award publication to CPTU's website are successfully done through e-GP system. Moreover, the information depicts in the FY 2014-15, 2015-16 and 2016-1, it alludes the annual volume of procurement in e-GP is higher than the manual system. It has also been observed that e-GP contributed to grasp benefit for both sides (LGED office and bidder) by ensuring competition, fairness, transparency, efficiency, economy, remote management and internal control in public procurement.

6.2 Recommendations

In the light of my findings and analysis, the following recommendations might be considered:

1. This paper expounds the existing e-GP system in developing countries like Bangladesh that have both technical and non-technical problems. The prime technical problems are lack of infrastructure and skill manpower to operate the e-GP system properly. The people who work in e-GP system must undergo extensive training programme. The cost of the training must be borne by the CPTU on behalf of the government.
2. Still there are some infrastructural problems such as: low internet connectivity and shortage of power. Power has been a challenging issue in Bangladesh, but government has a commitment to reach power at the last boarder of the country by 2018. Government should materialize its promise as early as possible. At the same time ensure high internet connectivity in the Upazila level that leads to cover all corners to operate and participate in e-GP system effectively.

3. The government should introduce ICT in union level for delivery of services and should work hard for bridge the demand-supply gap at the grass root level. This is very much impetrative to cover all area for e-GP system that ensure transparency, fair competition, reducing corruption and works for uplifting the quality of the life of the people by creating employment opportunities and overall improvement of the infrastructure.
4. Still there are a huge room for software development which might gain more efficiency in case of e-GP . CPTU can take the lead for this creative enterprise.
5. There should be a separate research work in the light of LGED procurement system through e-GP. The aim of the research will find the level of progress of social life of rural people using 100 per cent ADP fund without mismanagement of procurement process rather than transparency, cost effectiveness and fair competition issues.

6.3 comments and suggestions

It is certainly a very positive step to introduce e-GP . This system incorporates submitting the tender over internet like other developing and developed countries and to ensure transparency and accountability, equal opportunity and fair competition. e-GP ensures value for money in public sector procurement and drive our cutting corner. In Bangladesh, only the e-GP could not ensure transparency , Good governance and rule of law is crying need to sustain the achieving transparency through e-GP. Though Bangladesh has already introduced competition Act,2012 and The Right To Information Act,2009, but it is necessary to apply the act irrespective of identity, status and political implication. Information should be available for all which lead to uplift transparency .Therefore, legal infrastructure and changing mind set of officers and bidders of public sector might go long way to countering corruption through e-GP.

References

Abdullah,W ,2015 , *Effect of electronic public procurement: Evidence from Bangladesh,working paper on international growth centre*, wabd@brac.ac.bd ,Accessed on 15 June 2017.

Afoakwa, k, Dr, 2014: How Relevent is the Principle of Transparency in Public Procurement?, *Developing Country Studies*, ISSN 2224-607X (Paper) ISSN 2225-0565 (Online: www.iiste.org),Vol.4, No.6.

Albano,GL,Dae L-K,2010, *special issue international public procurement : Introduction,J, public procurement* 10(3),Pre Academic Press.

Amaral, M., Saussier, S., Yvrande-Billon,2009: A. Auction procedures and competition in public services: The case of urban public transport in France and London ,*Utilities Policy*, vol 17, 2009, pp.166–175 .

Angeles, R. and Nath, R. (2007). *Business-to-business e-procurement: success factors and challenges to implementation. Supply Chain Management: An International Journal*, 12/2, pp.104-115.

Arora, A., Greenwald, A., Kannan, K., Krishnan, R. 2007, Effects of Information-Revelation Policies under Market-Structure Uncertainty // *Management Science*, vol. 53 (8), pp. 1234–1248.

Azmi k and Rahman A, 2015, *e- procurement: A Tool to Mitigate Public Fraud in, The Electronic Journal of e-government*, vol.13, issue.2 p.150.

Balsevich,A,Pivovarova,S,Podkolzina,E,2011,*Information Transparency in Public Procurement: How It works in Russian Regions, National Research University Higher School of Economics, Series: Economics ,WP BPR 01/EC/2011.*

Bangladesh to strengthen public procurement with World Bank, Available from <https://wbnpf.procurementinet.org/.../bangladesh-strengthen-public-procurement-worl>[Accessed on: 18Feburary, 20018].

Beauvallet,G, Boughzala Y and Assar S, 2011, *E-Procurement, from Project to Practice: Empirical Evidence from the French Public Sector, Practical Studies in E-Government: Best Practices 13 from Around the World*, DOI 10.1007/978-1-4419-7533-1_2, Institute Télécom, Telecom Business School.

Bertot, J.C., Jaeger, P.T., Grimes, and J.M, 2010: Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies, *Government Information Quarterly*, vol. 27, pp. 264–271.

Bertók, J. 2005, “The Role of Transparency in Preventing Corruption in Public Procurement: Issues for Consideration”, *Chapter 9 in Fighting Corruption and Promoting Integrity in Public Procurement*. OECD Publishing: Paris, 85-92.

Boehm, F. and Olaya, J, 2006: Corruption in public contracting auctions: the role of transparency in bidding processes // *Annals of Public and Cooperative Economics*, vol. 77, No, 4, pp, 431–452.

Chartered Institute of Procurement and Supply Website, Available from: <https://www.cips.org/knowledge/procurement-glossary/> [Accessed: 16June 2017].

Djankov, S, 2016, is public procurement a rich country's policy? - World Bank Blogs, Available from blogs.worldbank.org/governance/public-procurement-rich-country-s-policy [Accessed on: 16 February 2018].

Eadie,R.Perea S. Heaney G. and Carlisle J ,2007, *Drivers and Barriers to Public sector e-Procurement within North Ireland's construction industry,IT con journal*, vol.12 pp103-120.

Egbu,C .Vines M and Tookey,J 2004, *The role of knowledge management in e-procurement initiatives in construction organizations,ARCOM proceedings Twentieth Annual conference 2004 Herriot Watt University*, Scotland, pp 661-671.

e-Government procurement (2017),CPTU[online], Available from : <http://www.cptu.gov.bd/EProcurement.aspx> [Accessed on 18 February,2018].

Electronic Government Procurement Roadmap, 2004,*The Procurement Harmonization Project of The Asian Development Bank, The Inter-American Development Bank and The World Bank*, Available from <http://www.mdb-egp.org/> [Accessed on :16June 2017].

Ellmers, B. 2011. “*Helping or hindering? Procurement, tied aid and the use of country systems in Bangladesh*”. *Voices for Interactive Choice & Empowerment (Voice) and European Network on debt & development* .

en.banglapedia.org/index.php?title=Dhamoirhat_Upazila [Accessed on: 13 February 2018].

e-Procurement - definition and functions : DeltaBid Available from <https://www.deltabid.com/e-procurement/> [Accessed on: 16June 2017].

Evenett, S. J., & Hoekman, B. M, 2003,“Transparency in Government Procurement: What can We Expect from International Trade Agreements?” *Public Procurement: The Continuing Revolution (Arrowsmith, S. & Trybus, M. editions)*, 269-282.The Hague: Kluwer Law International.

Evenett, S.J. Hoekman, B.M, 2005, Government procurement: market access, transparency, and multilateral trade rules // *European Journal of Political Economy*, Vol. 21, , pp. 163–183.

Gabauer, J. Beam C, and Segev, A, 1998, *Impact of the internet on purchasing practices*, *Acquisition Reviews*, Quarterly, vol.5 Issue no.2 pp.167-184.

Government of the peoples' Republic of Bangladesh and World Bank, *e-Government procurement Readiness Assessment Report, 2006*.

Hassan, Z, 2008, e-Procurement in Bangladesh | *The Daily Star* , Available from www.thedailystar.net/news-detail-18264 [Accessed on: 16 February 2018].

Hawking, P. Stein, A, Wyld, D and Foster S, 2004, *e- procurement is the ugly duckling*, *Asia Pacific Journal of Marketing* vol.12 issue. 8 p.12.

Islam, S, 2011, *Improving Transparency in public procurement in Bangladesh, use of right to information and whistleblowers' protection laws at sub national levels*, islam_mahmud_sirajul.

Kim, S., Kim, H.J., Lee, H, 2009: An institutional analysis of an e-government system for anti-corruption: The case of OPEN , *Government Information Quarterly*, vol. 26, pp. 42–50.

Kolstad, I., Wiig, A, 2009, Is Transparency the Key to Reducing Corruption in Resource-Rich Countries? // *World Development* Vol. 37, No. 3, pp. 521–532.

LGED annual report 2015-16), [online], available at <http://www.lged.gov.bd/LibraryReports.aspx?digitalLibraryType=1>, accessed on 14 March 2017.

Lomborg, B, 2016, How e-GP save taxpayers tens of billions each year [e-procurement | The Daily Star](http://www.thedailystar.net/tags/e-procurement) , Available from www.thedailystar.net/tags/e-procurement [Accessed on :16 February 2018].

Mahmood, S, 2013, *Public procurement system and e-government implementation in Bangladesh: The role of public administration*, *Journal of public administration and policy research*, vol.5(5), issue no.2141-2480. pp.117-123.

Ministry of law, Justice and Parliamentary Affairs, *Public Procurement Act, 2006, and Public Procurement Rule, 2008*, Government printing press, Tajgaon, Dhaka.

Ohashi, H, 2009: Effects of Transparency in Public Procurement Practices on Government Expenditure: A Case Study of Municipal Public Works, *Review of Industrial Organization*, Vol. 34, p.267-285.

Oxford College of Procurement and Supply, 2016;The benefits of e-procurement , Available from <https://www.oxfordcollegeofprocurementandsupply.com/the-benefits-of-e-procureme>. [Accessed: 28June 2017].

Patti, Pv, 2016, *Tranparency in Public procurement Through e-procurement in India*, *Journal of internet banking and commerce*, vol.21, issue.3 p.2.

Public procurement - OECD Available from www.oecd.org > *Directorate for Public Governance/* [Accessed: 16June 2017].

Rakin,J.Chen Y and Christian,A ,2006, E- procurement in the Atlantic Canadian AEC industry ,*IT con Journal* , vol.11 pp 71-75.

Ramkumar, V. 2008. “*Our Money, Our Responsibility: A Citizens’ Guide to Monitoring Government Expenditures*”, *International Budget Project, Washington DC*.

Rawlins, B.L. 2008, Measuring the relationship between organizational transparency and employee trust.*Public Relations Journal* (online version), 2(2), pp. 1-22. <http://www.prsa.org/Intelligence/PRJournal/Documents/Vol2No2/Rawlins.pdf>.

Research , Importance of Research, Aims and Motives - Mass ... Available from www.masscommunicationtalk.com > *Research Methods* [Accessed on: 16June 20113 Feburay 2018].

Research methods in social relations - Claire Selltiz, Society for the ... Available from https://books.google.com/books/about/Research_methods_in_social_relations.html?id... *Methods* [Accessed on: 13 Feburay 2018].

Steve,Ondieki N and Okibo,W, 2013 , *The effective of e- procurement practices on public Hospitals, A case of KISII level 5 hospital*, *American International Journal of Contemporary Research*, vol.3, Issue no 8. pp 103-105.

The World Bank, 2017: Digitizing Implementation Monitoring and Public Procurement (P160758) ,*Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)*.

Transparency (2009), Bangladesh: Politics and Business between corruption and development [online] ,<http://74.125.93132/search/q=cacje.www.trasparen>, accessed on 14 March 2017

Transparency International 2006. “*Handbook: Curbing corruption in Public Procurement*”.*[online]*available at http://www.transparency.org/regional_pages/asia_pacific/newsroom/news_archiv_e2/handbook_for_curbing_corruption_in_public_procurement_2006accessed on 15June 2017.

Wakefield, R.I., and Walton, S.B. 2010, Why Full Transparency is not always the Most Ethical Approach, *Public Relations Journal* Vol. 4, No. 4, Fall 2010 ISSN 1942-4604.

Welcome to e-GP Available from <https://www.eprocure.gov.bd/> [Accessed on:16June 2017].

Wittig, W. A. 2005, “Good Governance for Public Procurement: Linking Islands of Integrity”, *GOV/PGC/ETH*. (2005)2.

World Bank, (2003), *Bangladesh country procurement Assessment Report* [online], available at www.worldbank.org accessed on 14 March 2017.

World Bank and Government of the Peoples Republic of Bangladesh (2006,) ‘Report on Electronic Government Procurement (e-GP) Readiness Assessment’.

World Bank, 2002. “*Bangladesh: Country Procurement Assessment Report*” [online], available at www.worldbank.org accessed on 14 June 2017.

World Bank, final report 2015” [online], available at www.worldbank.org accessed on 14 June 2017.

Appendix

QUESTIONNAIRE

Title of Dissertation: *e-procurement ensures transparency in public sector: A case study of Local Government Engineering department (LGED) of Bangladesh, Dhamoirhat, Naogaon.*

Name of the Researcher: Hussain Ahmed, Senior Assistant Secretary, Finance Division, Ministry of Finance.

[This is a survey questionnaire intended to perform an academic research on *e-procurement ensures transparency in public sector: A case study of Local Government Engineering department (LGED), Dhamoirhat, Naogaon.* The aim of the survey questionnaire is to determine the LGED's present performance after using e-GP compare with manual system. The ultimate aim of the survey questionnaire is to find transparency of public procurement through e-GP which encourages competition, reducing corruption and collusion. It is a requirement for the Partial Fulfillment of the Degree of “Masters in Procurement and Supply Management (MPSM)” at the BRAC Institute of Governance and Development (BIGD), BRAC University. Your honest response is valuable for the researcher. The researcher does assure that the information given by you will be kept confidential and will be used only for the academic purpose.]

SECTION-1: GENERAL INFORMATION OF THE RESPONDER

1. Name of the Department: LOCAL GOVERNMENT ENGINEERING DEPARTMENT, Dhamoirhat, Naogaon.
2. Name of the Responder (Optional): **Mr. Md. Ali Hossain**
3. Designation: **Upazila Engineer.**
4. Present Place of Posting (Optional): **Upazila-Dhamoirhat, District: Naogaon.**
5. Years of Experiences in Procurement Activities: **04 Years.**
6. State the information of Average Annual Volume of Procurement you were Involved (in F.Y: 2014-15, 2015-16 & 2016-17):

[Please Provide Tick (✓) mark within relevant field]

Tender processing	Financial year	Average Annual volume of procurement(Amount in BDT,Crore)						
		<1.00	1.0-2.0	2.0-4.0	4.0-6.0	6.0-8.0	8.0-10.0	>10.0
Manual Tendering	2014-15	0.95						
	2015-16	0.99						
	2016-17	0.92						
e-Tendering	2014-16			2.02				
	2015-16			1.42				
	2016-17				5.5			

SECTION-2: Assessment of Transparency from selective LGED office

1. What is the mode of sharing information to the bidders/tenderers? (Please Tick (✓) the relevant field): (a) Website (b) email (c) from your office (d) all ✓

2. Mention the average time required to complete the following tendering process:

Year	Manual	e-GP
2014-15	50 days	90 days
2015-16	45 days	90 days
2016-17	45 days	90 days

3. Did you find any incidents which linked to corruption, fraudulent, conspiracy, coercion and collusion among your short-listed bidders/tenderers? Please draw some main points which lead to commit such offences through both of the systems (manual and e-GP):

In eGP system, there were no such problems found hereby. But we found some problems in case of **Manual Tendering process**. There were some scoundrels who tried to make some **coercion practice** by preventing some of the bidders from dropping the bid documents during the last time of submission in our office. We somehow managed to control the situation keeping some armed police in the office on the very date and time.

4. (Please Tick (✓) the relevant field: Which system is better in terms of ensuring Transparency in tendering process: (a) Manual (b) **e-GP** ✓

5. Mention some main reasons why e-GP ensures transparency:

- a) **In e-GP system, nobody knows the estimated cost along with other issues, it remains hidden;**
- b) **We don't need to bother about to keep any security in person (like keeping Police Force);**
- c) **Once submitted, there is no chance of manipulating the papers from either sides (Procuring entity or bidder);**
- d) **Everyone from any corner of the country can buy and submit the tender papers (bidding documents).**

6. Have you faced any problem to adapt in e-GP? If yes, mention the type of problems and give some recommendations to overcome the problem:

As the e-GP system is a new process in our country, we had to pay more attention on it. It really required more attentions to cope up with the system. It needed adequate training programs to make everything clear. We were in need of subsequent time for coping up with the whole process.

7. Mention some advantages which you are taking from e-GP system:

- a) This is an easier process to keep transparency;**
- b) There is no chance of losing any document;**
- c) System works only sequentially;**
- d) No need of ensuring smooth selling and submitting bid document; it happens without any interruption.**
- e) No chance of misplacement of papers.**

8. Further recommendations to update e-GP which could ensure more transparency in future:

The prevailing system is good enough to continue. No such findings up to till date are noticed.

SECTION-3: Assessment of cost efficiency

[Please consider average cost expenditure for a works Tender valued 1.0 to 2.0 Crore

(PW2a & e-PW2a)]

SL. No	Category	Process	Cost for manual tendering	Cost for e-GP
1.	Invitation for Tender	Average Advertisement Cost of Tender in the daily Newspaper	30,000.00	15,000.00
		Average Advertisement Cost of Tender in CPTU's Website	-	
		Tender Preparation Cost (for PE)**	15,000.00	5,000.00
		Any other Cost:	-	
2.	Tender Submission	Cost for Pre-tender Meeting. (In person/websites)	2,000.00	100.00
		Cost for Collection of Tenders from Multiple Locations	2,000.00	Not Applicable
		Any other Cost: (for sending the documents for sale)	1,000.00	N/A
3.	TOC and TEC	TOC & TEC Members Creation & Management Cost (Process, communication, etc.)	5,000.00	-
		Any other Cost (Please Specify):		
4.	Tender Evaluation	TOC & TEC Members Honorarium	8,000.00	6,000.00
		Tender Evaluation Report Preparation Cost	2,000.00	1,500.00
		Any other Cost: Conveyance cost for assessing of papers/certificates submitted by the bidders.	-	5,000.00
5.	Tender Evaluation Report Approval	Cost for Tender Evaluation Report sent to AA	1000.00	100.00
		Any other Cost (Please Specify)	-	-
6.	Contract Award	Cost for Issuance of NOA & Communicate with Tenderer	200.00	-
		Cost for Contract Agreement	1000.00	500.00
		Cost for Contract Award Publication to CPTU's Website	100.00	-
		Any other Cost (Please Specify)	-	-
Total Amount in BDT, lacs			67.3	33.2

****Consider required average number of Tender Document you need to prepare for one Tender. A PW2a Tender Document contains average 54 numbers of pages without BOQ, General Specifications, Particular Specifications and Drawings.**

SECTION-4: Assessment of Transparency from selective enlisted bidder/supplier of LGED office:

Name: M/S Sumon Traders

Upazila: Dhamoirhat, Naogaon.

1. In which system you have felt comfortable to draw your tender? (Please Tick (✓) the relevant field): (a) Manual (b) e-GP ✓

2. Illustrate the time required from submitting tender document to Notification of Award (NOA):

Year	Manual	e-GP
2014-15	28	18
2015-16	26	16
2016-17	25	14

3. Did you find any incidents which linked to corruption, fraudulent, conspiracy, coercion and collusion between LGED office and other short-listed bidders/tenderers? Please draw some main points which lead to commit such offences through both of the systems (manual and e-GP):

During Manual Tendering process, there are some problems found a couple of years ago. Some of the rogues tried to prohibit us to buy the bid documents. Though it was solved with the hard step taken by the Officials, but we faced difficulties.

But in case of e-GP system, we didn't find any such problem. The later process is transparent and good enough for us to participate in all the tendering process.

4. Did you experience to loot your tender box from the influential bidders in manual system? If yes, Please draw some weakness of manual system in comparison with e-GP:

In the year 2015, such bad incident took place at our upazila office where a group of villains attempted to snatch the tender box but failed at last due to the step taken by the LGED officials.

5. Have you faced any problem to adapt in e-GP? If yes, mention the type of problems and give some recommendations to overcome the problem:

Yes, I personally faced some problems in the e-GP system, which is a new introduction for us. We were not well trained about the system. So, we had to pay attention seriously to the computerized system. It took hell of time to be familiar with the new system. Meanwhile I overcame the situation.

6. Could you mention some main reasons why e-GP ensures more transparency than manual system?

- a) We don't need to face the muscleman since the e-GP system is induced; which is not even thought in the manual system.**
- b) Nobody can snatch the tender box from any of the offices; in manual process, it was very difficult to protect the rogues.**
- c) Easy access is possible for smooth buying and depositing bid documents, while in manual system we faced too many problems to overcome.**

7. Mention some advantages which you are taking from e-GP system:

- a) I can be in relaxed mood while buying and depositing bid documents.**
- b) Documents are uploaded in a sequence and possibility of doing wrong is negligible.**

8. Please illustrate further recommendations to update e-GP which could ensure more transparency in future:

We, the people with little knowledge need more training to get acquainted with the new system. But the system is so far very transparent.