

Evaluating the e-GP System in Local Government Institutions (LGIs): A Study on 30 Pourashavas

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A thesis submitted to the Department of BIGD in partial fulfillment of the requirements
for the degree of
Masters in Procurement and Supply Management (MPSM)

BRAC Institute of Governance and Development
Brac University
June 2019

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Declaration

It is hereby declared that

1. The thesis submitted is my/our own original work while completing degree at Brac University.
2. The thesis 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 thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

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Approval

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has been accepted as satisfactory in partial fulfillment of the requirement for the degree of Masters in Procurement and Supply Management on June 2019.

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Abstract/ Executive Summary

In developing economies like Bangladesh, Public sector led development is a highly responsible function linked to the requirement of spending public funds ensuring highest level of transparency, accountability, least cost, and quality standard. One major study of the World Bank/United Nations Development Program found that among too many reasons of aid utilization, one single main reason is procurement delay. According to a World Bank Study, procurement delays emanate from among others lack of necessary skills on the backdrop of absence of simplified procurement systems for procuring agencies. The management of public procurement with the help of information technology can help in this regard. The electronic Government Procurement promotes competition through participation of local as well as region bidders and government procurements are processed in more efficient, transparent and accountable manner. Grounded on these benefits, e-GP was introduced in the Local Government Engineering Department (LGED) in 2010-11 under the auspices of the Second Public Procurement Reform Project (PPRP II). After Successfully Implementing e-GP system in Target Agencies, Digitizing Implementation Monitoring and Public Procurement Project is Started, Its one major component aims to enhance the scope of e-GP for all public sector organizations across the country. Collectively all LGIs procure a lot using public fund. For enhancing digitization of public procurement, it is necessary to introduce e-GP within these institutions/organizations. The overall purpose of this study is to assess the implementation of e-GP in selected Local Government Institution i.e. some selected Pourashava offices. Identify the challenges of implementing e-GP in various stages of procurement cycle in Pourashava and find out the measures to overcome those challenges. A questionnaire survey has been administered among the officials of these offices. Survey data have been presented using statistical tools and with descriptions. Prior to presentation of anecdotal evidence from survey, the secondary information has been summarized which were collected from various documents and statistics published by World Bank, CPTU and other organizations. This study evaluates implementing e-GP in Pourashavas, challenge addressed and scope of further improvement. Finally, there is a lot of scope for further study and improvement in government procurement process.

Keywords: e-GP; Pourashava; Public Procurement; Local Government

Table of Contents

Declaration	ii
Approval.....	iii
Ethics Statement.....	Error! Bookmark not defined.
Abstract/ Executive Summary	iv
Table of Contents	v
List of Tables	vii
List of Figures.....	Error! Bookmark not defined.
List of Acronyms	viii
Glossary	Error! Bookmark not defined.
Chapter 1 Introduction	1
1.1 Background	1
1.2 Objective of This Study:	3
1.2.1 Research Objective	3
1.2.2 Research Hypothesis	3
1.2.3 Research Question	3
1.3 Methodology:	4
1.4 Rationale of the study	4
1.5 Organization of the study	5
Chapter 2 Literature Review	6
2.1 Local Government Institutions (LGIs) in Bangladesh.....	6

2.2 Electronic Government Procurement (e-GP)	8
2.3 Benefits of e-Procurement.....	13
2.4 Benefits to the Government.....	13
Chapter 3 Research Area and Methodology	16
3.1 Research Area.....	16
3.2 Research Models and Methodology	18
3.3 Research Design and Data Collection	19
Chapter 4 Data Analysis and Findings.....	20
4.1 Respondents' profile	20
4.2 Assessment of e-GP implementation in surveyed Pourashava Offices	21
4.2.1 Extent of procurement cycle managed manually, electronically and combined	21
4.2.2 Preparedness of Pourashava offices to manage e-GP	22
4.2.3 Benefits from use of e-GP	25
4.3 Challenges in managing e-GP	29
4.4 Measures to address the challenges of e-GP implementation	31
Conclusion and Recommendation	33
5.1 Conclusion.....	33
5.2 Recommendations.....	36
5.3 Recommendations for Future Research	38
References.....	39

List of Tables

Table 1.1: Annual income of different categories of Pourashavas

Table 2.1: Selected Pourashavas as Research Area

Table 3.1: Manual activities within the e-GP system

Table 4.2: Scope to disclose confidential information related to tender by banks

Table 4.3: Respondents' opinion regarding reduction of external pressure in procurement because of e-GP

Table 4.4: Respondents' opinion regarding easiness verification of bidders' records by Procuring Entity

Table 4.5: Respondents' opinion regarding easiness of verification of bidders' documents during post qualification stage

Table 4.6: Mistakes can be corrected easily in e-GP.

Table 4.7: Challenges in managing e-GP in last five years

Table 4.8: Recommendations for addressing the challenges or improving e-GP implementation

List of Acronyms

AE	Assistant Engineer
BWDB	Bangladesh Water Development Board
BDT	Bangladesh Taka (Currency)
CPTU	Central Procurement Technical Unit
CMS	Contract Management System
e-GP	Electronic Government Procurement
e-CMS	Electronic Contract Management System
F.Y.	Financial Year
IMED	Implementing Monitoring and Evaluation Division
LGED	Local Government Engineering Department
LGI	Local Government Institution
NOA	Notification of Award
PPA	Public Procurement Act
PPR	Public Procurement Rules
PE	Procuring Entity
PA	Procuring Agency
PROMIS	Procurement Management Information System
PPR	Public Procurement Reform
PWD	Public Works Department
RHD	Roads and Highways Department
REB	Rural Electrification Board
RFI	Request for Interest
RFP	Request for Proposal
TEC	Tender Evaluation Committee
TOC	Tender Opening Committee
TER	Tender Evaluation Report
XEN	Executive Engineer

Chapter 1

Introduction

1.1 Background

Bangladesh makes substantial investment in annual development program each year. It is estimated that the annual expenditure on public procurement, amounting to over \$7 billion which stands 70 percent of the annual development program (ADP) of the government. Bangladesh has been making sustained efforts over the years to bring about a systemic change in its public procurement environment. As part of this process, the government has been implementing a complete package of reforms- Public Procurement Reform Project-PPRP (2002–2007), and PPRPII with its two additional financing (2007–2017) with the assistance of the World Bank. The country now has a good foundation of public procurement system.

Government of Bangladesh (GOB) has taken up a new project financed by the World Bank called Digitizing Implementation Monitoring and Public Procurement Project (DIMAPPP) to improve public procurement performance and enhance capacity for implementation monitoring of development program/projects. The project is being implemented by Implementation Monitoring and Evaluation Division (IMED) of the Ministry of Planning through its Central Procurement Technical Unit (CPTU). In consideration of the geographical spreading of most Local Government Institutions (LGIs) across the country and previously proven experience of implementing e-GP, Local Government Engineering Department (LGED), through a Memorandum of Understanding (MoU) with the CPTU, will implement expansion of the scope of e-GP to these institutions.

The Government of Bangladesh (GOB) has specific priority for capacity development in the public sector procurement under its reform program. DIMAPPP is taken to improve public procurement performance and enhance capacity for monitoring of development program/projects. Among the four components of DIMAPPP one of the major components is Enhancing Digitization of Public Procurement. Government has already taken initiative to digitize public procurement by introducing e-GP for last 7 years within the targeted organizations; those procure a lot using public fund such as Local Government Engineering Department (LGED), Roads and Highways

Department (RHD), Bangladesh Water Development Board (BWDB) & Rural Electrification Board (REB). Now the Government Policy is to make e-GP mandatory to all organizations for all types of procurement.

Collectively all LGIs procure a lot using public fund. For enhancing digitization of public procurement, it is necessary to introduce e-GP within these institutions/organizations. To achieve this target, capacity development of LGIs staffs are necessary. LGED has been implementing comprehensive procurement training and e-GP training program for its different category staffs who are procurement practitioners. LGED started in-house procurement training since enactment of public procurement regulatory framework and started in-house e-GP training since LGED selected as the target agency for e-GP implementation. Under DIMAPPP, LGED's responsibility is to assist 888 procuring organizations of LGIs covering 327 Municipalities (Pourashavas), 61 Zila Parishads (excluding three districts under Chittagong Hill Tracts), 491 Upazila Parishads and 9 City Corporations (excluding two City Corporations of Dhaka).

Local Government Institutions:

There are 8 divisions and 64 districts in Bangladesh, each district further subdivided into upazila (lit. sub-districts). The area within each sub-district, except for those in metropolitan areas, is divided into several unions, with each union consisting of multiple villages. Mainly there are four types of Local Government Institutions-

1. City Corporations
2. Municipalities (Pourashavas)
3. Zila Parishads
4. Upazila Parishad

Electronic Government Procurement (e-GP):

e-GP (Electronic Government Procurement) is the revolution of the public procurement of Bangladesh government. Central Procurement Technical Unit (CPTU), Implementation Monitoring Evaluation Division (IMED) under Ministry of Planning is the key body for start up the e-GP System in Bangladesh. e-GP means to complete the government procurement through electronic way by using the PPA-2006, PPR-2008 & e-GP Guideline. With the direct support of World Bank Bangladesh Government started to implement the e-GP system with four departments as a pilot program.

1.2 Objective of This Study:

e-GP is the new system of tendering process in the government organization, especially for Local Government Institutions. They are habituated to-do procurement by manual tendering process. So suddenly absorbing the electronic tendering process is very difficult for them. They are not easily interested to cope up with this electronic tendering process. So find out the difficulties and solve of the difficulties of absorbing e-GP system of the human resource is the main aim of this study.

1.2.1 Research Objective

The purpose of the study is to assess the effectiveness of e-GP system in procurement of Local Government Institutions (LGIs), specifically the Pourashava. Considering the time and other logistic support resources available to this research work, specific objectives of the study are:

- *To evaluate the efficiency and effectiveness in the procurement process of LGIs by using the e-GP system.*
- *Providing recommendations that will ease the successful implementation of e-GP system in LGIs to increase the efficiency and effectiveness.*

1.2.2 Research Hypothesis

In order to assess the efficiency and effectiveness the following 3 hypotheses are set for the research work:

- Hypothesis 1: e-Tendering process is faster and time saving than Manual Tendering Process.
- Hypothesis 2: Transparency can be achieved in e-tendering process.

1.2.3 Research Question

The overarching question of the research will be whether the e-GP system is efficient and effective in the procurement process of LGI's. The question will be addressed by the 2 sub-questions, which also address the 2 hypotheses:

- Is the e-Tendering easier and faster than Manual Tendering System?
- Did the procurement process increase the transparency?

1.3 Methodology:

Primary survey is the key part of this study. Some questionnaire are made for this study which are given to that person who are directly involved with e-GP process for tendering purposes of the organization. Mixed approaches are followed such as qualitative and quantitative. Qualitative Open Ended Questions was asked to respondents, who are actively involved in the Electronic Government Procurement. A questionnaire was developed to collect experience and insight of the PE's of selected Pourashavas. Among all Local Government Institutions, Some Pourashavas are selected for conducting the study, who took part in e-GP system are used for taking data for this study. In the field of procurement, a group of executives argue that introduction of e-GP has developed and positively influenced the public procurement system; other hand, the other group comment that e-GP system has some shortcomings and it needs more testing and debugging before full time implementation. So it is necessary to find out the facts behind these arguments. This is the incentive of the present study.

1.4 Rationale of the study

e-procurement reduces administrative costs and bureaucracy by helping the country, avoids repeating tasks such as registration and certification of contractors, allowing for additional effective control mechanisms and reducing paperwork, improving transparency and reduce transaction cost and time for tendering. Public procurement systems can help governments optimize resources to obtain better value for money. To ensure the good governance in public procurement, different parameters are introduced in different organizations such as e-GP, CMS etc. e-GP system in Bangladesh was launched successfully on pilot basis and eventually being

rolled out to all PEs of four sectorial Agencies. It is now expanding to all government procuring entity dealing with public procurement. All the stakeholders, including Bidders/Tenderers/Applicants /Consultants (National and International), PEs, Procurement related committees, Payment service providers, Development Partners (DPs), Media, Operation Maintenance and Management Entity (OMME), e-GP system administrators, Auditors and General public are getting access to e-GP system and information as per the terms and conditions of use and disclaimer and privacy policy. e-procurement has already been introduced in Local Government Institutions.

1.5 Organization of the study

The report is comprised of 5 chapters. They are summarized below:

- Chapter 1 discusses about the background, rationale, objectives of this study. It highlights the problem statement why the topic has been taken for study. It also defines the limitations and scope of the study.
- Chapter 2 describes the literature review of this study. The chapter will give a good picture of Local Government Institutions and their present condition, procurement, electronic government procurement, process of e-GP and how the e-GP is conducted and administered.
- Chapter 3 describes the approach and methodology.
- Chapter 4 describes the analysis of data regarding transparency. It also focuses on the evaluation of effectiveness.
- Chapter 5 provides conclusion and recommendations of this study based on the information leading to conclusion.

Chapter 2

Literature Review

2.1 Local Government Institutions (LGIs) in Bangladesh

Local government system is meant for management of local affairs by locally elected persons. Local government generally acts within powers delegated to it by legislation or directives of the higher level of government and each country has some kind of local government which will differ from those of other countries. The term local government can be defined in various means “authority to determine and execute measures within a restricted area inside and smaller than the whole state. The variant local self-government is important for its emphasis upon the freedom to decide and act” (Srivastava, 1980). Clarke defines local government as that part of the government of a nation or state which deals mainly with such matters that concern the inhabitants of the particular district or place together with those matters which parliament has deemed it desirable should be administered by local authority, sub ordinance to the central government (Clarke J. J. (1948).

The UN (1962) definition of local self-government is considered as the most acceptable definition that defines it as an elected or locally selected political sub-division of a nation or state. It is constituted by law, and it has substantial control over local affairs. It has also the power to impose taxes, or to exact labor for prescribed purposes. In the context of the present study, the Municipalities or Pourashavas (hereinafter referred to as Pourashavas) has been chosen as a unit of the LGIs in Bangladesh. It is run by the elected people’s representatives that have control over certain local affairs. It has also the power to impose taxes.

Although e-GP has recently started functioning in LGIs, it is too early to evaluate its effectiveness and efficiency in the Procurement system. But as being an urban area, procurement of pourashavas are growing very fast and these are the most potential areas for growth of procurement. Thus, the Pourashavas has been found to be an appropriate organization to focus on.

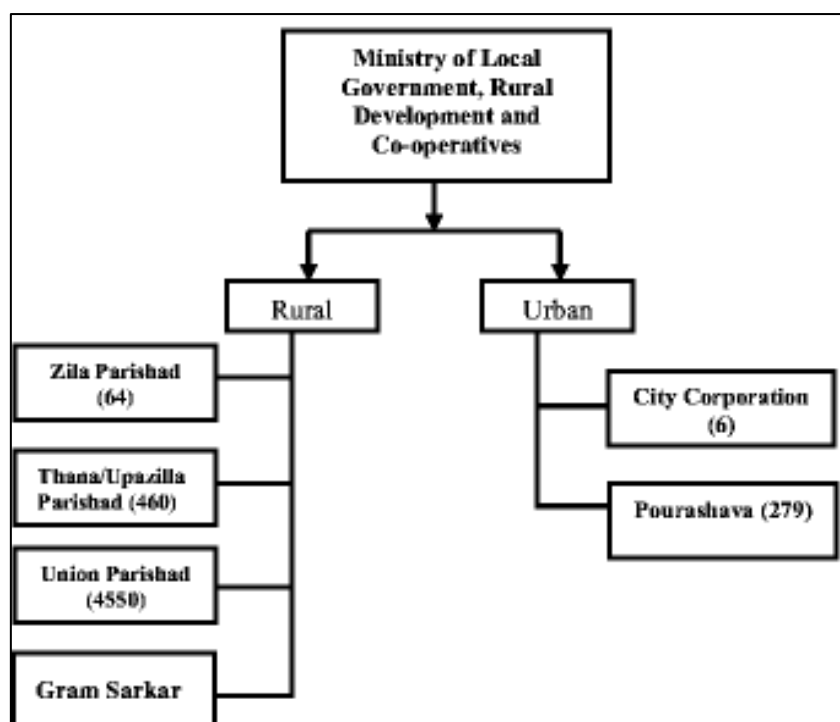


Fig 2.1: Existing Structure of Local Government Institutions in Bangladesh

Pourashavas also known as Municipal Corporations are the local governing bodies of the cities and towns in Bangladesh. There are 327 such municipal corporations in eight divisions of Bangladesh. A municipal corporation serving a town may be called a town council, and a municipal corporation serving a city is styled a city council; these bodies are divided into wards, which are further divided into mauzas and mahallas. Direct elections are held for each ward, electing a chairperson and a number of members. The municipal heads are elected for a span of five years.

The Pourashavas has been classified in three categories depending on the extent of their annual income.

Table 4.1: Annual income of different categories of Pourashavas:

Category	Annual Income Level
Class A Pourashavas	6 million +
Class B Pourashavas	2 million
Class C Pourashavas	Less than 2 million

In addition, there are some urban centers that are under military Cantonment Boards. The large numbers of small urban centers are administered under the Union Parishad system of (rural) local government. Some urban centers have a fairly large population but have not yet been declared a Municipality and therefore also remain under Union Parishad management.

2.2 Electronic Government Procurement (e-GP)

e-GP is the use of a standard and efficient management framework for public sector procurement, facilitated through information and communication technology. e-GP is very much prospective in establishing accountability, transparency, and making Government procurement system efficient and effective. e-GP is also referred as Electronic Public Procurement.

An expert group from UN stated several principles for e-procurement implementation for public sector in their report (UN, 2011, p.viii-ix):

- ☐ e-Procurement is a governance practice that should go beyond ICT aspects. It should not be not just about placing an “E” in front of outdated procurement practices.
- ☐ Though e-Procurement does not guarantee the complete elimination of corruption practices, but it can reduce the rate and work as an obstacle against corruption. Also this can be an instrument for effective and efficient public administration.
- ☐ e-Procurement holistic approach to modernize public procurement systems not just using ICT.
- ☐ The integration between public financial systems and e-Procurement aspects is necessary for managing the end to end procurement process including payment, but not necessarily required for getting started on the basic implementation of a system.
- ☐ For each one of the basic phases of an e-Procurement process several recognizable standards, approaches, strategies, are available
- ☐ Less developed countries may consider hybrid approaches (on-line and off-line) while implementing e-Procurement in public sector. Also they can combine centralized and

decentralized approaches based on country and particular region specific features. The governance and capacity development is, more important than the availability of technology.

□ Government should invest on capacity building before investing highly on infrastructure for e-Procurement. This also depends highly on to the attitude of political society towards transparent approaches and engaging the supplier community and civil society.

□ The e-procurement system is not a “quick-fix” system implementation plan. it is a business process re-engineering project that needs a time over 10 to 20 years period;

□ The long-term benefit of the e-procurement system will come from analyzing the information

collected in the system over the years of operation to better understand spending patterns, the marketplace and processes applied. Governments need to give consideration to the information required for analytical and reporting requirements and interaction with other system to obtain to most value from the procurement information management system provided by e-procurement practices.

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. e-GP system is a web based system which encompasses 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 tenderers 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. Initially, on pilot basis, this will apply to a few PEs of four target agencies namely BWDB, REB, RHD and LGED in Bangladesh. The System, later on, will be rolled-out across all the procuring entities in a phased manner. The entire public procurement activity undertaken by the government shall be channeled through the e-GP infrastructure and implemented in a phased manner. Efficiency in handling public procurement by the government organizations shall be enhanced through automation and process reengineering. The system shall enable the government to maintain a clear picture of its procurement activities on a real time basis. By

engaging in e-GP, the government catalyzes the supplier community to participate in e-business.

CPTU, IMED, Ministry of Planning is developing the e-GP System using the cutting edge technology and global expertise complying with the PPA 2006 and PPR 2008. Bangladesh e-GP system consists of a comprehensive set of interlinked modules (CPTU, 2017c). These modules are described in details in the website of the CPTU.

i. Centralized Registration System

- ☐ (Contractors/Applicants/Consultants, Procuring Entities and other actors of e-GP)
- ☐ Centralized Tenderer /Consultant registration
- ☐ Procuring Entity (PE) registration
- ☐ Media Registration
- ☐ Payment service providers registration
- ☐ Development partners registration

ii. e-Tendering (e-Publishing/e-Advertisement, e-Lodgment, e-Evaluation, e-Contract award) System

- ☐ Annual Procurement Planning (APP) preparation and publishing
- ☐ Standard Tender Document (STD) Library
- ☐ Preparation and publishing Invitation to Tender
- ☐ Preparation and publishing Tender Document
- ☐ Online Pre-Tender Meeting
- ☐ Publishing Tender Corrigendum / Addendum / Amendment
- ☐ Online Tender / Application / Proposal preparation by Tenderers / Applicants / Consultants

- ☐ Online Tender Submission / Tender Substitution / Tender Withdrawal
- ☐ Online Tender Opening
- ☐ Online Tender Evaluation by Technical Committees
- ☐ Post Qualification
- ☐ Online Negotiations
- ☐ Issuance of Notice of Award (NOA)/ LOI
- ☐ Online Contracts

iii. Procurement Management Information System (PROMIS)

- ☐ Compliance monitoring through key procurement performance indicators
- ☐ MIS reports

iv. Workflow management System v. e-Contract Management System (e-CMS)

- ☐ Work Plan Submission
- ☐ Progress Report generation, submission / acceptance
- ☐ Defining Payment Milestones
- ☐ Running Bill Payment Processing
- ☐ Variation Order / Repeat Order
- ☐ Quality certification
- ☐ Work Completion Certificate

- ☐ Final Payment
- ☐ Supplier Rating
- ☐ Complaint and resolution database

vi. e-Payment System

- ☐ Registration Fee, Tender document purchase fee, and other services fee Collection
- ☐ Receive Tender Security and performance security submission
- ☐ Transactions for security release and forfeiture handling

vii. System and Security Administration

- ☐ E-Signature (Generation of Hash/Signature)
- ☐ PKI based digital signature
- ☐ Bid Encryption/ Bid Decryption
- ☐ 128 Bit SSL

viii. Handling Errors and Exceptions ix. Application Usability and Help

- ☐ Integrated Inbox / Message Box
- ☐ Integrated e-Mail / SMS Gateway
- ☐ Dashboards for Procurement Performance Monitoring

☐ Manuals for all users

☐ Help desk support

2.3 Benefits of e-Procurement

e-Procurement uses web-based technologies to connect the public institutions (as buyers) and vendors (as sellers). Therefore, the public procurement process in some way affects both the public institutions that need goods and services and the vendors that meet this need. Basically, public institutions can access various goods and services from a variety of vendors whereas vendors can reach all the public sector opportunities easier than ever before. As a result, both public institutions and vendors will benefit from a common platform where the former can get all the information to make a purchase decision and the latter can reach potential customers more than usual. Considering the inefficiencies found in the existing procurement process, the large purchasing power of the government as well as the developments in the ICT, the electronic transformation of the public procurement processes will offer the potential for significant savings from its early stages. It also brings lots of opportunities including reducing costs of goods and services through aggregating purchasing volume, streamlining procedures and etc. for both the government and the private sector. (Joarder, 2015).

2.4 Benefits to the Government

Public procurement is a key process. Both lots of gains can be obtained and it is easy to implement e-Procurement technically. Because of the relationship between strategic purchasing and public procurement, it is obvious that when strategic sourcing is performed well, public procurement becomes more effective and efficient. In addition, by taking advantage of the ICT, purchasing organizations will be able to operate more effective and efficient in the way they buy from, and work together with their vendors (Alam, 2012) The increased efficiency and effectiveness of public procurement process will provide potential to reduce the cost of public procurement. These savings are due to:

☐ Decrease in costs associated with publishing and getting information

- ☐ Publishing the information related to the public sector opportunities and contract awards electronically in the Internet is both faster and cheaper than the traditional methods.
- ☐ Purchasing activities can be monitored better and statistical data for reporting on public procurement data and vendor activity will be provided.
- ☐ Market search will become easier through the e-Catalogs of vendors.
- ☐ Public institutions will access various goods and services of multiple vendors in a competitive environment.
- ☐ Decrease in procurement transaction costs
- ☐ Public procurement services will become more efficient and effective like market search, ordering, tendering, etc.
- ☐ Available public resources will be used more efficiently and effectively.
- ☐ Administrative costs and time will be reduced such as time and cost associated with business meetings.
- ☐ Time spent in the requisition-to-payment cycle will be reduced through the use of electronic ordering, electronic invoicing and etc.
- ☐ Maverick buying will be reduced.
- ☐ Bureaucratic inertia will be reduced.
- ☐ Increase competition
- ☐ The public sector business opportunities will be accessible by all vendors, which in turn will enhance the competitive environment.
- ☐ The purchasing power of the government can be better coordinated and costs of goods and services will be reduced through this aggregating purchasing volume (Akando, 2016).

e-Procurement will assist the improvement of not only public procurement processes but also other processes to which it must interface such as accounting, public expenditure management and public investments changing the dynamics of public procurement management. e-Procurement not only does enhance the overall quality of public procurement management

throughout savings in terms of cost and time but also improves transparency in public administration.

Chapter 3

Research Area and Methodology

Research methodology is the combination of tools, techniques and approaches through which a scientifically designed research is actually carried out. Research is a cyclical process which begins with a problem; an unanswered question in the mind of the researcher. Then research sees the goal in a clear statement of the problem.

3.1 Research Area

In our study we have focused completely on the some urban areas of Bangladesh, which are known as “Pourashava”. Municipal Corporations, also known as Pourashava, are the local governing bodies of the cities and towns in Bangladesh. There are 327 such municipal corporations in eight divisions of Bangladesh. A municipal corporation serving a town may be called a town council, and a municipal corporation serving a city is styled a city council; these bodies are divided into wards, which are further divided into mauzas and mahallas.

Government of Bangladesh has the policy to implement e-GP in all Government Organization. Pourashavas, being an Government organization are compelled to start electronic government procurement (e-GP) in their tendering process. But, as they are at beginner level, they have experienced teething problems in this regard.

To understand the present situation and get a clear picture, we have picked 30 pourashavas among 327 (around 10%, as representative area) as our Study area. Following are the Pourashavas-

Table 5.1: Selected Pourashavas as Research Area

Sl Name	Name of Pourashava	Name of District
1	Muladi	Barisal
2	Bhola	Bhola
3	Mathbaria	Pirojpur
4	Barguna	Barguna
5	Galachipa	Patuakhali
6	Banashkhali	Chattogram
7	Satkania	Chattogram
8	Baghaichari	Rangamati
9	Brahmanbaria	Brahmanbaria
10	Hajiganj	Chandpur
11	Kachua	Chandpur
12	Homna	Cumilla
13	Nangalakot	Cumilla
14	Dagarbhuiyan	Feni
15	Raipur	Laksmipur
16	Chatkhil	Noakhali
17	Dohar	Dhaka
18	Kaliganj	Gazipur
19	Araihazar	Narayanganj
20	Bajitpur	Kishoreganj
21	Damudya	Shariatpur
22	Narail	Narail

Sl Name	Name of Pourashava	Name of District
23	Jamalpur	Jamalpur
24	Gaffargaon	Mymensingh
25	Bogura	Bogura
26	Panchbibi	Joypurhat
27	Thakurgaon	Thakurgaon
28	Taherpur	Rajshahi
29	Naohata	Rajshahi
30	Chengaracara	Chandpur

3.2 Research Models and Methodology

Model is an idealization, an abstract of some part of real world and is an incomplete representation of real thing. A model is central to every analysis. To construct a model for a given problem situation the actions to be taken are- to single out certain elements as being relevant to the problem under consideration, to make explicit the significant relationship among these elements and formulate hypothesis regarding the nature of relationship. Models can be classified broadly in two type's quantitative and qualitative model. Quantitative Research is used to quantify the problem by way of generating numerical data or data that can be transformed into useable statistics. It is used to quantify attitudes, opinions, behaviors, and other defined variables and generalize results from a larger sample population. Quantitative Research uses measurable data to formulate facts and uncover patterns in research. Quantitative data collection methods include various forms of surveys – online surveys, paper surveys, mobile surveys and kiosk surveys, face-to-face interviews, telephone interviews, longitudinal studies, website interceptors, online polls, and systematic observations. Qualitative Research is primarily exploratory research. It is used to gain an understanding of underlying reasons, opinions, and motivations. It provides insights into the problem or helps to develop ideas or hypotheses for potential quantitative research. Qualitative Research is also used to uncover trends in thought and opinions, and dive deeper into the problem. Qualitative data collection methods vary using unstructured or semi-structured techniques. Some common methods

include focus groups (group discussions), individual interviews, and participation/observations. The sample size is typically small, and respondents are selected to fulfill a given quota. Quantitative data collection methods are much more structured than Qualitative data collection methods.

3.3 Research Design and Data Collection

Research design precisely means drawing a systematic approach and establishing a plan of action to carry out the research. Selltitz defines research design as the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. Research design is only a tentative plan. It differs on the research purpose. The component of Research design are-

- The subject on which information will be gathered –Status of Electronic Government Procurement in Pourashava level
- The type of information required and its intended utilization- A semi structured questionnaire response data about present condition and future recommendations about e-GP
- The population on which information will be gathered- Pourashava Engineers who are involved in Public Procurement Process.

The method by which information will be gathered- Interview survey. The means/organization through which information will be gathered- Directly by researcher

Chapter 4

Data Analysis and Findings

4.1 Respondents' profile

Gender

In total 30 respondents were interviewed for this study. Among them 28 were male and only one respondent was female. It shows that Pourashava offices are dominated by male engineers. In fact, there are fewer female engineers working in Pourashava level.

Respondents' Concept on Procurement and training on procurement

Of 30 respondents only 1 was found who was not using computer in performing official responsibilities and the remaining officials were found to be using computer. However, all the surveyed respondents reported internet browsing. The respondent who did not use computer might be browsing internet on other devices such as smart phone. However, all the surveyed respondents received training on e-GP.

Roles played by respondents in managing e-GP

The respondents were asked about the types of roles played in managing e-GP in last five years. It was found that 90% of the respondents have been acting as Procuring Entity (PE). A large number of respondents played the role as chairperson of tender evaluation committees as well as member secretary of Tender Evaluation Committee (TEC), followed by playing the similar role in opening committees.

4.2 Assessment of e-GP implementation in surveyed Pourashava Offices

4.2.1 Extent of procurement cycle managed manually, electronically and combined

The e-GP system has two distinct parts:

1. Tender Management
2. Contract Management

e-GP system established in Bangladesh still now covers the Tender Management Part completely. Electronic Contract Management System (known as e-CMS) is going to be introduced very soon. That e-CMS will cover the contract management part. Now days this contract management process is mostly done manually.

Manual activities in e-GP system

The respondents were asked about the activities that are still being done manually in e-GP system. Table 4.2 shows that the highest number of the respondents has identified contract management which entails agreement, quality, termination, PCC correction being done manually. The second largest respondents pointed out verification of bidders' documents such as experience, turnover, liquid asset etc. being carried out manually. Some respondents mentioned evaluation (post qualification, minutes, comparative statement) being done manually. Some mentioned that calculation of tender capacity is still done manually which is also an important criterion of tender evaluation.

Table 4.1: Manual activities within the e-GP system

Activities	No. of respondents N = 30	Percentage (%)
Evaluation includes, -post qualification -Preparing minutes	12	40

-Preparation of comparative statement		
Calculation of Tender Capacity	7	23
Verification of bidders' documents (experience, turnover, liquid asset, performance guarantee)	9	30
Contract management (agreement, quality, termination, PCC correction)	2	7

The respondents were further asked to measure the management of the whole procurement cycle manually, electronically and combined. According to all respondents, bid submission and opening are managed completely in electronic manner in opposed to payment of bidder's bills being processed complete manually. The remaining activities of procurement cycle are managed both electronically and manually. Of these activities, about 60 percent of respondents reported overall contract management done both electronically and manually and the remaining respondents said that this activity is managed complete manually.

4.2.2 Preparedness of Pourashava offices to manage e-GP

Equipment to process e-GP

There are some digital tools such as computer, printer, scanner and photocopier, etc. required to conduct procurement activities digitally. All of the surveyed respondents either strongly

agreed or simply agreed that the necessary equipment in Pourashava offices to manage e-GP are available.

Power supply and uninterrupted internet connectivity to process e-GP

The respondents were asked whether the Pourashava offices had uninterrupted power supply to process e-GP. About, 65% respondents agreed that they have uninterrupted power supply and internet connectivity. However, more than one third respondents disagreed with the view and states that they do not have access to uninterrupted power supply and internet connectivity.

Knowledge and skills of Pourashava officers on computer and ICT

Pourashava engineers i.e. Sub-Assistant Engineer, Assistant Engineer and Executive Engineers are allowed to deal with e-GP. Accordingly, the respondents were asked whether the designated officers of Pourashava offices had sufficient knowledge and skills on Computer and ICT. Most of the respondents reported that in Pourashavas they have sufficient knowledge and skills required to process e-GP. Few respondent reported that they lacked knowledge on computer and ICT.

Knowledge and skills of the bidders on computer and ICT

While the Pourashava engineers play the role of demand side of procurement as procuring entity, the bidders are the supply side who responds to the bid advertisements. In case of processing the bidding activities through e-GP, the bidders need to have skills and knowledge about computer and ICT as like as the Procuring Entity side. Here, the surveyed engineers were asked to report on bidders' knowledge and skills on computer and ICT to deal with the e-GP. More than half of the respondents (i.e. 54 per cent) said that the bidders have sufficient knowledge and skills on computer and ICT. In contrast, 46 per cent of the respondents expressed their agreement to having bidders' sufficient knowledge and skills.

User-friendliness of e-GP website and software to Bidders Side and Procuring Entity Side

Eighty three per cent of the surveyed respondents observe that existing e-GP website and software is user-friendly to the bidders and the remaining 17 per cent are not sure about this. However, all respondents expressed their opinion that the e-GP website and software is user friendly to the procuring entity office.

Maintain confidentiality in e-GP

Security of password is highly critical to ensure confidentiality in public procurement. The respondents were asked whether the password in e-GP is secured or not. 90 per cent expressed their opinion that password is secured in e-GP and only one respondent i.e. 10 per cent said the opposite.

In addition to password security, confidential information related to e-GP might be disclosed from the banks to various stakeholders especially the bidders. Table 4.2 shows that about 47 per cent of the respondents expressed their agreement to having scope of banks' branches to disclose confidential information. Only 20 per cent of the respondents said that the branches of banks did not have any scope to disclose information. The remaining respondents (33 percent) are not aware of disclosure of tender related information from banks.

Table 4.2: Scope to disclose confidential information related to tender by banks

Opinion	No of respondents	per cent of respondents
Strongly agree	2	6.67%
Agree	12	40%
Neutral	10	33.33%
Disagree	6	20%
Strongly disagree	0	0%

Banks' willingness to deal with e-GP

At this time, banks are already used to with e-GP system. Furthermore, the respondents were asked whether the bank branches were willing to deal with e-GP. All of the respondents agreed that the banks were found willing to involve in e-GP system.

4.2.3 Benefits from use of e-GP

Maintaining confidentiality of price quotation in e-GP by bidders

More than two-thirds of the surveyed engineers observed that bidders could maintain confidentiality regarding price quotation while submitting tenders through e-GP. In contrary, 17 per cent of the respondents said that there was a scope of disclosure of price-quotation because of submitting tenders electronically.

Maintaining confidentiality of official estimated costs in e-GP by Pourashava Offices

The respondents said that Pourashava offices did not face any problem in maintaining confidentiality of official estimated costs because of handling public procurement through e-GP. Only 3 per cent of the respondents observe that the official estimated costs can be disclosed in e-GP.

Saving time in e-GP

This is generally argued that e-GP has been introduced in public sector to manage procurement more efficiently. In order to assess efficiency, the respondents were asked whether time is saved because of processing public procurement through e-GP. From our survey, about 80 per cent respondents said that time was saved because of processing public procurement through e-GP. However, 10 per cent of the respondents expressed their disagreement regarding time-saving in e-GP and the similar per cent of the respondents remained neutral in assessing time-saving.

Possibility of collusions in e-GP

Public procurement is vulnerable to collusions among the various groups. Such collusion may be forged between the Procuring Entity and bidders and the bidders themselves. It is revealed that 13 per cent of the respondents said that any sort of collusion is possible to be forged between LGED officials and bidders in e-GP. However, according to more than the four-fifth of the respondents (84 per cent), such collusion was not possible in e-GP.

Similar opinion was expressed about possibility of collusion among the bidders. Only 7 per cent expressed their opinion that collusion was possible among the bidders in e-GP. In contrast 90 percent disagreed with it and the remaining 3 (three) per cent remained neutral.

Reducing external pressures in public procurement because of e-GP

As like as collusion, external forces try to influence public procurement in developing countries like Bangladesh. For instance, bidders used to be barred from bid submissions. e-GP has been introduced in order to reduce or stop external influences. Accordingly, the Pourashava engineers were asked whether outside pressures had stopped in public procurement because of e-GP. Table 4.3 shows that 70 per cent expressed their agreement to the reduction of outside pressure in public procurement because of e-GP. However, 23 per cent respondents think that external forces can still influence the procurement despite of e-GP.

Table 4.3: Respondents' opinion regarding reduction of external pressure in procurement because of e-GP

	No of Respondent's	In percentage (%)
Strongly agree	2	6.67
Agree	10	33.33
Neutral	6	20
Disagree	8	26.67
Strongly disagree	4	13.33

4.2.4 Comparative benefits between e-GP and traditional procurement system

Transparency in Tender Opening Process

According to the surveyed Pourashava officials, processing tenders through e-GP has accrued benefits in comparison with the manual processing tenders. More specifically, tender opening in e-GP has been easier than traditional method, said all the respondents. Improved transparency has been another benefit from processing tenders through e-GP because it provides equal opportunity to all prospective bidders in case of accessing tender related information, documents and tender submission.

Verification of bidders' records by Procuring Entity (PE)

More than two-thirds of the respondents (73 per cent) said that the procuring entities could check records such as experience certificates, audit report, construction turnover record etc. submitted by bidders as per requirements of meeting bidding conditions properly in e-GP. However, the remaining respondents expressed their disagreement to this view. Details are shown in table 4.4.

Table 4.4: Respondents' opinion regarding easiness verification of bidders' records by Procuring Entity

	No of Respondent's	In percentage (%)
Strongly agree	9	30
Agree	13	43
Neutral	4	13
Disagree	2	7

Strongly disagree	2	7
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Verification of bidders' documents during post qualification stage

Further to proper checking the bidders' records, the respondents were asked whether document verification had been easier in e-GP. More than two-thirds of the respondents disagreed to easy verification of bidders' documents during post qualification assessment stage, among them 40 per cent respondents strongly disagreed to this notion. Only around 23 percent respondents said that e-GP had made such verification easier than the traditional method of procurement.

Table 4.5: Respondents' opinion regarding easiness of verification of bidders' documents during post qualification stage

	No of Respondent's	In percentage (%)
Strongly agree	3	10
Agree	4	13
Neutral	3	11
Disagree	8	26
Strongly disagree	12	40

While the verification of bidders' documents during post qualification had not been easier to the most of the respondents, such verification was accurate because of processing tenders through e-GP. This opinion was expressed by 55 per cent of surveyed Pourashava engineers. On the contrary, 38 per cent respondents did not agree to this opinion.

Less Paper Use in Office

Electronic transaction of businesses is meant to reduce paper usage. In reality, 30 percent of the surveyed respondents expressed their disagreement to the notion that e-GP had reduced

printing costs. In contrary, the majority of the respondents said that printing cost was reduced in e-GP.

Minimization of mistakes in e-GP

According to 37 percent of the respondents, if any mistake was made, those could not be corrected easily in e-GP. 63 per cent respondents expressed their opinion that mistakes could be corrected easily in e-GP. Details are shown in Table 4.6.

Table 4.6: Mistakes can be corrected easily in e-GP.

	No of Respondent's	In percentage (%)
Strongly agree	9	30
Agree	10	33
Neutral	5	17
Disagree	4	13
Strongly disagree	2	7

Acceptability of e-GP to bidders and Government officials

This study tried to understand the acceptability level of e-GP to the relevant stakeholders specifically to bidders and LGED officers. It was revealed that e-GP had been widely accepted by the bidders and the Government Officials. Only a few percentages did not agree.

4.3 Challenges in managing e-GP

The respondents were asked about the types of challenges/problems/barriers they observed in managing e-GP in last seven years. It was observed that server incapacity which is caused by

slow internet speed, weak network performance and lack of user friendliness, was the greatest problem while processing public procurement electronically. In addition, half of the total respondents pointed to manual verification of bidders' documents, which contributed to the lengthy process of managing government purchases and hence increased possibility of inaccuracy especially during evaluation. Inflexibility, manual contract management and bidders' deficiency in ICT were cited by respondents as major challenges for e-GP. Details are demonstrated in Table 4.7.

Table 4.7: Challenges in managing e-GP in last five years

Challenges/barriers/problems	No. of frequency N = 30	Percentage (%)
External Political Pressure in Pourashavas	23	77
Server incapacity (internet speed, network, user friendliness)	16	53
Lack of ICT skills of bidders	8	27
Prone to breaching confidentiality (use of common computer and lack of confidentiality in banks)	11	37
Insufficient time to open	6	20
Manual verification of bidders' documents during evaluation (lengthy process, hence inaccuracy)	17	57
Inflexibility	22	73

(correction of mistakes, extension of tender validity period, performance security)		
Manual contract management	13	43
Others (lack of central data bank, time consuming, power supply interruption)	18	60

4.4 Measures to address the challenges of e-GP implementation

In order to administer e-GP more efficiently and hence get full benefits the aforesaid challenges need to be overcome. Of 30 respondents, 25 emphasized enhancing capacity of e-GP server (i.e. high-speed, 24 hours uninterrupted internet, electricity especially in rural areas). Two other prioritized measures are training and awareness of bidders, officers and other stakeholders; and central storage of e-GP documents and improving its capacity. Details are given in Table 4.8.

Table 4.8: Recommendations for addressing the challenges or improving e-GP implementation

Recommendations	No. of frequency N = 30
Software to verify bidders' submitted documents within shorter period.	17
Training & awareness of bidders, officers & people.	26
More browser friendly e-GP software	22
Enhancing capacity of e-GP server	27

(high-speed, 24hours uninterrupted internet, electricity especially in rural areas)	
Easier and friendlier e-GP helpdesk services, logistics	19
Digitalization of existing manual tasks (TEC minutes, post qualification report, comparative financial report, auto calculation of turnover, CMS, e-billing)	14
Central storage of e-GP documents & improving its capacity	17

Chapter 4

Conclusion and Recommendation

5.1 Conclusion

The World Bank's board meeting on Friday (July 28, 2017) in Washington, USA, approved the World Bank's new project loan in government procurement. The implementation of the project, named as Digital Implementation Monitoring and Public Procurement Project, is provided a total of 5.5 million dollars. The aim of the project is to strengthen the development and supervision of the government procurement system. Through this project, the government's ongoing e-GP activities are expanded. This will increase the use of technology in monitoring the development project along with the development of government procurement activities. The World Bank believes that the maximum value of public money will be ensured. World Bank's Country Director in Dhaka, Chimaoya Fan, said that through implementing the project will ensure the proper utilization of government resources by effective government procurement. This will facilitate the government to go to high-middle income countries (Ittefaq, 2017). e-GP implementation in the local government organizations is a major component of the project.

The target of the project is to implement e-GP at a total of 1300 procuring entities, out of which in 888 offices LGED will be in charge of e-GP implementation management. For the implementation of e-GP with more professional vision through LGED, more than 327 municipalities (Pourashavas), 491 Upazilaparisads, 61 Zilaparisads and 9 (nine) city corporations (excluding Dhaka North and Dhaka south) under the Local Government Division have been included. Under the local government division of the Ministry of Local Government, Rural Development and Co-operatives, all local government institutions were set to implement 100 per cent e-GP implementation by December 2016. But reality is still not implemented in all the institutions.

The present government introduced the e-tendering system in 2011 to make the development process more dynamic and to ensure greater transparency and accountability at public

expenditure. Electronic Government Procurement (e-GP) system has already been popular in government departments and increasing the number of tender invitations at a significant rate day by day. Till now, about one lac twenty-five thousand tenders have been called through e-GP, of which 48 per cent of the tender is under LGED. LGED's role in implementing e-GP in Bangladesh is pioneer, which has come up in various reports of the World Bank and the Government.

Everybody thinks that the implementation of the project will be a challenge for implementing e-GP in this huge number of offices. However, the previous success of LGED's e-GP implementation and the long-standing experience of working with donor agencies is expected to provide encouragement to this challenge (Islam, 2017).

If we process tenders through e-GP, the public procurement will become more transparent and political influence will decrease. Considering these benefits, many countries are processing their procurements through e-GP. Bangladesh government has introduced it in June 2011.

Most of the respondents reported that Pourashava officers (Assistant Engineers and above) have had a good idea and skills required to process e-GP. Most of the engineers have sufficient ICT Knowledge and all are adequately trained on e-GP.

All of the surveyed respondents either strongly agreed or simply agreed to the availability of the necessary equipment in Pourashava offices to manage e-GP. Around 47 percent respondents expressed their agreement to having uninterrupted power supply but around 33 percent disagreed to uninterrupted supply of power in respective offices. 33 percent of the respondents disagreed to having uninterrupted internet connectivity in respective offices. However, 50 percent of the surveyed respondents said that their offices had uninterrupted internet connectivity.

There are several benefits of e-GP over manual tendering process. Bidders can maintain confidentiality in price quotation while submitting tenders (can be submitted from anywhere) through e-GP. Pourashava offices can maintain confidentiality of official estimated cost in e-GP. Time was saved because of processing public procurement through e-GP. If the estimated cost is unknown, possibility of collusion in e-GP is reduced. External pressure is reduced

because of e-GP. Tender opening, tender processing and bidders' document verification is easier and transparent in e-GP. Printing cost and procurement processing cost is reduced in e-GP. Mistakes are much fewer in e-GP than the traditional system.

In LGIs, specifically in Pourashava level, e-GP is comparatively new, there are some challenges in implementing e-GP.

The e-GP system is very slow and there are many problems in e-GP system till now. In Re-tendering process, the previous tender documents cannot be retrieved although there is an option to do so. Post clarification cannot be allowed more than the tender publishing date. There is no central databank for bidder's experience certificates, audit report, turnover record etc. Thus, procuring entity cannot check the records of bidders in e-GP online system. Procuring entities have to print huge document to send for post qualification. This is a time consuming and costly process.

Some corruption occurred in bank as the bank is responsible for selling tender document in e-GP procedure if the bank managers share the tender selling related information of one tenderer with others. All of the scheduled banks including all branches of our country are not willingly interested to work with e-GP process.

For evaluation there is no scope to change the declaration or the evaluation committee. The reviewer or approver of the Tender Evaluation Report cannot see the qualification criteria or TDS. No scope of calculating front loading in e-GP system. It has to be calculated manually by the Evaluation Committee.

Tender Evaluation Reports of any value under development projects have to be approved by the Chief Engineer without applying the delegation of financial power. It requires additional times.

Uninterrupted power supply and uninterrupted internet connectivity is not yet available in upazila and rural areas in Bangladesh. In e-GP system under Limited tendering method Salvage Item and Fixed Item could not be included in the BOQ of Tender document.

Password lock is very easy in e-GP system. One can easily lock the ID of someone else. It may hamper the tender submission. Specially, if any member of Opening Committee found his/her e-GP ID locked, it becomes a problem, because in e-GP system, if opening time lapses, tender become locked, and it requires approval of HOPE to re-open the tender.

The powerful political leaders/persons/tenderers want to have collusive practices in e-GP; which is a great barrier to proper e-GP implementation.

After getting the performance security within the stipulated time through online, all the remaining process are to be done by offline system. Contract agreement may be uploaded later mentioning an earlier date. Under e-GP, contractor selection and award of contract can be done electronically but agreement with the selected contractor, payment of the work done and overall contract management is being done manually (following existing procedure).

5.2 Recommendations

Considering the study findings and on international practice, some practical measures are recommended for better implementation of e-GP in Bangladesh:

- As Local Government Institutions are comparatively new in e-GP system, it is recommended to provide extensive trainings on Procurement and e-GP to equip the officials.
- It is highly recommended to generate a central database for bidders. A central database can be established where contractors' previous qualification will be stored, which is already verified. Thus, repetition of verification of same information for a tenderer by different PE offices can be eliminated and corresponding time and cost required for verification purposes also be reduced.
- There should be an integrated rate schedule for all public-sector Projects irrespective of the organization.

- The e-GP web portal should be fast and the software should be more user friendly.
- Comprehensive help menu in each page of e-GP system should be incorporated.
- The amendment of PPR 2008 issued on 21 November 2016 and the Performance Matrix included in Tender documents should be reviewed and should be made more comprehensive as there are negative effects (discussed earlier) after using this Matrix & Amendment.
- Improve monitoring of procurement performance within Pourashavas using indicators through constant tracking of activities that will show expected deadlines/deliverables/requirements, deviations and reasons for deviations. A fit list may be prepared for posting a focal person for procurement purpose in each Pourashava office.
- Some of the indicators value fully depends on user's awareness and skills. There are no alternatives without user's capacity development training in this regard.
- There are still many scope for software development to gain more efficiency in case of e-Tendering process, by developing this area system can ensure more compliance on tendering process.
- e-GP initiative needs to be monitored regularly to identify opportunities for ongoing improvements.
- Bank fees need to be kept on a reasonable level in order not to run the risk of reducing supplier's participation.
- Internet bandwidth and connectivity of the country should be upgraded i.e. not only in Capital, Division and District HQ level but also in all over the country. As it is not possible to do overnight, bidders may be encouraged to submit tender at night. Also, tender opening time may be spanned for any time of the day.

- All review Panels of CPTU should be expert in e-GP and should be corruption free.

5.3 Recommendations for Future Research

Further to the current study there are scopes of research in this area. Future research scope and location can be the following:

- Here in this study we covered only the urban part, (i.e: some pourashavas.), rest of the Local Government Institutions like: City Corporation, Zila Parishad, Upazila Parishad can be selected for further studies.
- Later a separate research work could be done for LGI's manual contract and e-CMS.
- In pourashavas, besides tendering process, a large number of Auctions and Lease process take place. These processes are a very potential area for future study.

Auction and Lease process can be done electronically.

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APPENDIX A- Questionnaire on Dissertation

General Information & Status of Electronic Government Procurement

1. Name of Respondent:
2. Name of Pourashava:
3. Designation:
4. Age:
5. Years of Experiences in procurement activities:
6. Did you get training or familiar with the following concepts? (Please Tick mark)
 - a. Public procurement..... Yes/No
 - b. Electronic Government Procurement (e-GP)..... Yes/No
7. Mention annual volume of procurement you are responsible for your Pourashava?
..... Taka
8. Do you think e-GP will help to increase the efficiency of procurement activities of your Pourashava? If yes, then explain the reason in brief.
.....
.....
.....
.....
9. In your opinion, What are the barriers of Implementing e-GP in Pourashava level?
.....
.....
.....
.....
10. Any more suggestions/ opinions/ comments regarding e-procurement from your experience in public procurement in Bangladesh.
.....
.....

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Thank you very much for your cordial co-operation.