Electronic Tendering in Public Procurement
A Case Study on Local Government Engineering Department (LGED)

Dissertation submitted in partial fulfillment of the requirements for the degree of

Master in Procurement and Supply Management (MPSM)

Submitted by

Md. Abdur Rahim
MPSM, Batch –7
September, Fall-2014
ID No: 14282018

Supervisor

S M Arifuzzaman
Assistant Professor
BRAC Business School
BRAC University, Dhaka, Bangladesh
Email-zmnarif@bracu.ac.bd

BRAC Institute of Governance and Development
BRAC University

Certificate of Authentication

This is my pleasure to certify that the dissertation entitled **"Electronic Tendering in Public Procurement: A Case Study on Local Government Engineering Department (LGED)"** is originated by Md. Abdur Rahim. The research work is completed under my direct 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 one. I also certify that I have gone through the draft and final version of the paper and found it satisfactory for submission to the BRAC Institute of Governance And Development (BIGD) formerly Institute of Government Studies (IGS), BRAC University in partial fulfillment of the requirements for the degree of Masters in Procurement and Supply Management (MPSM).

 I wish him every success in profession.

S M Arifuzzaman
Assistant Professor
BRAC Business School
BRAC University, Dhaka, Bangladesh.
Email-zmnarif@bracu.ac.bd

Declaration

This is hereby declared that the dissertation entitled "Electronic Tendering in Public Procurement: A Case Study on Local Government Engineering Department (LGED)" submitted to the BRAC Institute of Governance And Development (BIGD) formerly the Institute of Governance Studies (IGS), BRAC University for the degree of **Master in Procurement and Supply Management (MPSM)** is an exclusive work. This paper neither partly nor fully has been produced to any other University or Institute for any degree, diploma or for other similar purposes.

Dhaka: December, 2014.

Md. Abdur Rahim
Student ID No: 14282018
BRAC Institute of Governance and
Development (BIGD) formerly
Institute of Governance Studies (IGS)
BRAC University, Dhaka, Bangladesh

Acknowledgements

◆━━━━━━━━━━━━━━━━━━━━━━━━━━━◆

Abbreviations

ADB	Asian Development Bank
AE	Assistant Engineer
BDT	Bangladesh Taka (Currency)
BCC	Bangladesh Computer Council
BOQ	Bill of Quantity
BTRC	Bangladesh Telecommunication Regulatory Commission
BTTB	Bangladesh Telegraph and Telephone Board
CPTU	Central Procurement Technical Unit
DPD	Deputy Project Director
EDI	Electronic Data Interchange
E-GP	Electronic Government Procurement
ERP	Enterprise Resource Planning
GOB	Government of Bangladesh
HOPE	Head of Procuring Entity
ICT	Information and Communication Technology
IP	Internet Protocol
ISP	Internet Service Provider
ITES	Information Technology Enabled Services
IMED	Implementation Monitoring and Evaluation Division
LAN	Local Area Network
LGED	Local Government Engineering Department
Mbps	Megabyte per Second
MIS	Management Information System

NOA   Notification of Award

PD   Project Director

PE   Procuring Entity

PPA   Public Procurement Act

PPR   Public Procurement Rules

Sr. AE   Senior assistant engineer

TEC   Tender evaluation committee

WB   World Bank

WAN   Wide Area Network

XEN   Executive Engineer

PROMIS   Procurement Monitoring Information System

E-CMS   Electronic Contract management System

PPRP(II)AF   Public Procurement Reform Project (II) Additional Financing

Abstract

The research on "Electronic Tendering in Public Procurement: A Case Study on Local Government Engineering Department (LGED)" was done to evaluate the performance of LGED in E-GP implementation and simultaneously identification and overcome the barriers to ease of E-GP system implementation, because the government has taken initiative to curb the corruption, mismanagement of public fund and social anarchy revolving from government procurement, through introducing E-GP system. It was decided that E-GP would be implemented primarily in four Public organizations like Local Government Engineering Department (LGED), Roads and High ways Department, Rural Electrification Board and Bangladesh Water Development Board (BWDB). After the successful implementation, the system will be rolled over to the other Public organizations. Local Government Engineering Department (LGED) has been implementing the E-GP system in progressively with a great commitment and motivation. The research was carried out by reviewing of PPA-2006 and PPR-2008, E-GP guide lines and E-GP implementation track of India, Singapore, Korea and many others countries. Here both primary data from questionnaire survey and secondary data from central Procurement unit and Central Training unit were used. The sample were selected randomly and it was 64 nos. of Executive Engineer(Xen), Senior Assistant Engineer(Sr.AE), Assistant Engineer(AE), Upazila Engineer (UE) and Contractors from different districts of Bangladesh. The data obtained were analyzed by MS Excel Spread Sheet and produced different tabular and graphical forms to present it to the readers for better perception of the situations. It was found that LGED started to pilot the system in four districts like Dhaka, Gopalgonj,Faridpur and Sunamgonj in 2011-12 fiscal year. Then in Fiscal Year 2012-13, 2013-14 the targets were 100 and 1400 nos. but achieved 112 nos. (112%) and 4834 nos. (345%). In FY 2014-15 the target was 2400 nos. but up to the November 2014 the progress

was 1755 nos. of tenders which was 73% of target. The trend was very impressive and praiseworthy. About 97 % respondents believed that the E-GP would be implemented successfully. At the same time 99% respondents expected the E-GP system for the free, fair and transparent administration and participation in tender. The main challenges were lack of adequate internet facilities, training of LGED staff and bidders, insufficient branches of affiliated banks and lack of sincere support of banking officials, software problems in E-GP system. The e-GP system software only supports the browser Mozilla Firefox version 13 and Internet Explorer 8. But the browser version are upgrading regularly. The system does not link the existing estimating software RSEPS of LGED to make the Bill of Quantities (BOQ). The challenges found here matched to challenges mentioned in previous study " Operational Risk in e-GP Implementation of Bangladesh Perspective" by Md. Mahboob Hassan, Executive Engineer, LGED for the Master Program on Public Procurement Management for Sustainable Development", under International Training Centre of ILO, Turin Italy and "Challenges of Implementing electronic Government Procurement: A case study on Bangladesh Water Development Board" conducted by Syed Rafiqul Alam for the Masters in Procurement and Supply Management", under IGS ,BRAC University and many others report. Therefore the results of this research work are acceptable and validated for the future development of E-GP system implementation in LGED. This will help LGED to address the challenges for easy implementation of E-GP system. In my research work there might have some errors in data, collected by questionnaire survey regarding training needs, internet speed satisfaction, educational qualifications and power supply continuity. Some of the respondents might have hidden some information.

Table of Contents

List of Figures

List of Charts

Chapter -1

Introduction

1.1 Background

Public procurement involves acquisition through contracts of goods, works, or services required by governments. Purchasing has been getting importance since the start of Civilization and is progressing with globalization. The modern development of ICT and transportation facilities makes the purchasing more interactive and widened their boundaries by removing the physical barriers. In most of the countries, the Government is the single largest purchaser of national economy and the Public Procurement System in low and middle income countries are typically far away from spending money in a transparent and efficient way. In such a public activity therefore transparency on the part of the given government is a higher value which public law tends to promote. Government procurement represents 18.42% of the world GDP. Many countries have created specialized agencies in order to develop and manage business-to-government (B2G) electronic procurement (e-procurement) systems (Singer and Marcos, 2009). E-procurement systems can be used helping purchasing goods and services most reasonably (MiJung Lee, 2010) E- procurement is the online purchasing of goods and services through electronic channels (Parida and Parida, 2005). More, specifically, it is the use of electronic means for publishing, processing, exchanging, and storing all of the information related to institutional purchases in public organization (Asser & Boughzala, 2008). Public e-procurement is an important stage in e-government development and its economic stakes are considerable. Thus public procurement systems must consults dualistic systems for two customers - government and companies. (Mi Jung Lee, 2010).

Following the explosive growth of e-commerce in the private sector, governments of all over the world have started to pay close attention to e-GP as a tool to improve the Public Procurement System. Bangladesh is also progressing like many other countries. In this

respect the National Parliament passed the Public Procurement Act (PPA-2006). This Act provides for procedures to be followed for ensuring transparency and accountability in the procurement of goods, works and services using public funds and ensuring equitable treatment and free and fair competition among all persons wishing to participate in such procurement including the matters incidental thereto. Following the PPA-2006 the Public Procurement Rules (PPR-2008) has also been produced. To implement the electronic procurement System, Bangladesh government produced the e-Government Procurement (e-GP) Guidelines. This document provides principle guidelines of Electronic Government Procurement (e-GP) System of Bangladesh as provisioned under section 65 of Public Procurement Act 2006 and Rule 128 of Public Procurement Rules, 2008 for the use of the e-GP System. The guidelines are prepared also in consistent with the prevailing ICT Act 2009, Right to Information (R2I) 2009 and international practices on e-GP. These guidelines demonstrate government's commitments to achieve the greater openness and accountability in government procurement process.

To execute the e-GP System Central Procurement Technical Unit (CPTU) under IMED, Ministry of Planning is responsible to develop the software and is hosting the e-GP portal system to support all software facilities and support services to the stakeholders.

The e-GP software System consists of 9 major modules like:

1. Centralized Registration System

2. Work Flow Management System

3. E-tendering (e-publishing/e-advertisement, e-lodgment, e-valuation, e-contract awards) system.

4. E-Contract Management System.

5. E-Payment System.

6. Procurement Management Information System (PROMIS).

7. System security administration.

8. Handling error and exceptions.

9. Application usability and help.

The scope of the system is to maintain complete and up-to-date public procurement activities of all public agencies as well as provide tender opportunities to all potential renderers / Applicants / Consultants from Bangladesh and abroad. Initially this will apply to four selected target agencies namely Bangladesh Water Development Board (BWDB), Rural Electrification Board (REB), Roads and Highways Department (RHD) and Local Government Engineering Department (LGED). Gradually the system will be rolled out to all procuring entities using public funds.

1.2 Statement of the problem

The e-GP system supports the all activities of tendering like publishing Annual Procurement Plans, Invitation for Tender (IFT), Request for Quotation (RFQ), Tender/Application/Proposal Submission, Opening, Evaluation, Contract Award Notices, Endorsing Tender security and Performance security. Contract management and Payment System module are not yet exercised. These will be exercised subsequently. Local Government Engineering Department (LGED) is a public organization which is using around 14% of Annual Development Program and around 40-45 % of Local Government Division's (LGD) budget annually. So the efficiency of LGED in procurement system carries the high importance in the national economy. High efficiency in procurement of LGED will result the value for money of public funds. The e-GP system provides the fair competition in open tendering system which ensures the competitive price. That's why LGED launched e-GP System in four districts with limited contracts on pilot basis. After successful implementation of e-GP in pilot area, now it has widened the e-GP system in all 64 Districts throughout the country with limited contracts. It has also widened the system in Upazila Offices. LGED has

targeted to conduct 80% of contract using e-GP system by 2016-17 Fiscal Years. Now the only way to progress forward by mitigating all difficulties to ensure the value for money of public fund vested upon specially LGED. The laws as well as other legal framework are susceptible to reality faced by stakeholder for the greater interest of taxpayers. To make the e-GP system effective, efficient and user friendly difficulties are to be emerged. This research investigated and opened the realities faced by LGED in implementing e-GP, the present status of implementation. The overall target was to reduce the loss of public funds in procurement.

1.3   Rationale of Research

A research report of World Bank, in 2006 on "Electronic Government Procurement (e-GP) Opportunities & Challenges" said that the efficiency gains due to the application of e-GP can have a clear economic impact. The total public procurement volume of a national economy typically counts for 10 to 20% of the GDP. Procuring only 10% of all public purchases through electronic means with a moderate 10% in price and cost reductions would result in total annual savings equal to one percent of the GDP (. Local Government Engineering Department (LGED) is pioneering the development of rural roads and pertinent Bridges & Culverts, Economic infrastructures like Growth centers rural Markets, Urban infrastructures like Fly over, Social infrastructures like Primary School Building, Primary Teachers Training Institute (PTI), Union Complex and Upazila Complex and many other infrastructures as when and where needed.

 The annual budgetary fund utilized by LGED has been growing year after year. It started with an ADP allocation of 254 Crore only in 1990-91 where it is raised to 8987 Crore Taka in 2013-14 Fiscal Year.

  The details of ADP allotment of LGED from 1990-91 to 2013-14 are showed in figure below.
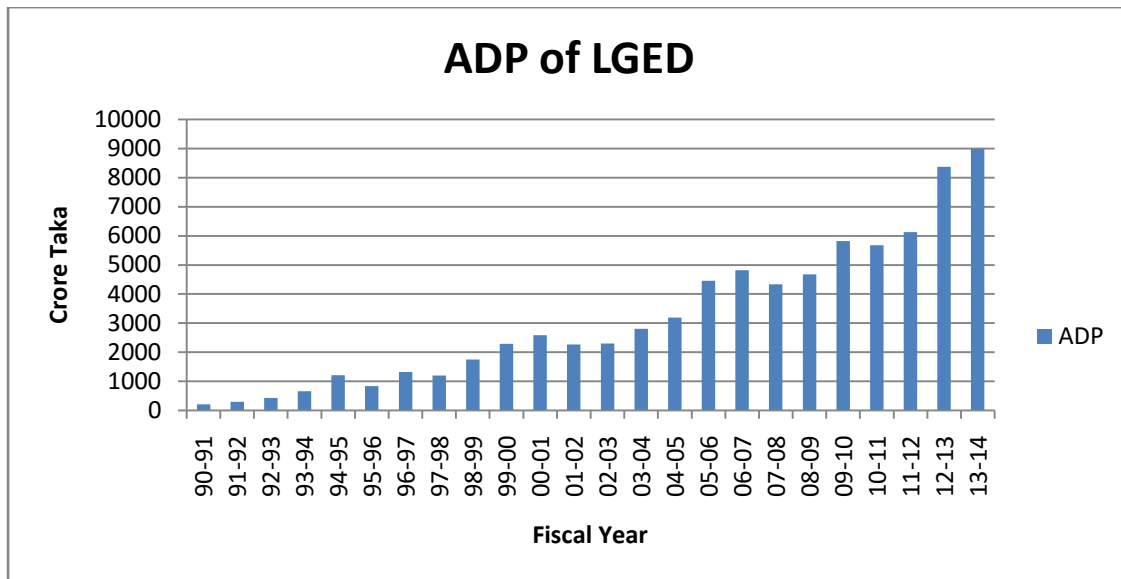
Figure 1- ADP used by LGED

Utilization of public fund is primarily depends on performance of procurement. It may safe huge money if performance of procurement improved. The performance of procurement is improved by using the e-GP system in procurement of goods, works and services in LGED as well as other organization. To improve the efficiency of E-GP system, it is invariably necessary to unveil the hindrances against the successful implementation of system. This research work identified the difficulties and social problems to implement and simultaneously suggested the possible way to improve the performance of e-GP system. The outputs of this research are equally important to LGED as well as other public department.

1.4   Research questions

- What was the present status of e-GP implementation?

- What were the challenges faced to implement the e-GP system?

1.5   Research objectives

Considering the time and other logistic support resources available to this research work, I set the following objectives

- Evaluation of the progress of implementation of e-Tendering System.

- Providing recommendations that will ease the successful implementation of e-Tendering in LGED to manage the difficulties emerged.

1.6   Scope and Limitation

Local Government Engineering Department (LGED) is a large procuring agency in public sector in Bangladesh. A huge numbers of projects are implemented by LGED. They are spending more than 8500 crore per annum. Most of these spent are used in procurement of Works, Goods and Services and only few is used for salary. For example in fiscal year 2013-14, they spent taka 8987 crore in procurement through about 15000 contracts. The number of procuring entities is more than 700 and a huge numbers of contractors and suppliers through the country. More over now LGED are procuring through international bidding so the numbers of suppliers and contractors are unlimited now. So the stakeholders in the procuring system are very large in numbers. To do an intensive research work, it needs a long time to take interview and questionnaire survey at all levels of stakeholders by classifying them accordingly. But I had only a very limited time to do research work approximately two months. This was verily insufficient with respect to the actual needs. That's why I limited my research work within fixed mission. I actually decided to evaluate the progress of e-GP implementation with respect to numbers of contracts conducted through e-GP against the target fixed by LGED. No other key performance indicators were used here. The main target was to identify the challenges faced by stakeholders to implement the system successfully. There might have many others challenges those were not met by user were not considered here.

Nevertheless, I believe that this work will help the organization to implement the e-GP system through the country phase wise, depending on the national difficulties that are out of control of LGED.

1.7   Organization of the report

The report is comprised of five chapters. The first chapter gives the background, statement of problems, research questions, research objectives, scope and limitation of the study. The second chapter gives the account of literature reviews. Various literatures like PPR'2008, PPA-2006, World Bank guide lines for procurement, E-GP Guide lines and many other research reports and media reporting. In third chapter the methodology of this study is described briefly. Here primary data is collected through direct questionnaire survey to the different officials like Xen, Sr.AE, AE, UE and contractors. Random sampling is used. Secondary data is taken from Central Procurement Unit and Central Training unit of LGED Headquarters. In chapter four, the results of the primary and secondary data with pertinent analysis and findings of this study are exposed. In Fiscal Year 2012-13 target was 100 nos. but achieved 112 nos. which was 112%, in 2013-14 target was 1400 nos. but achieved 4834 nos. which was 345% and in FY 2014-15 the target was 2400 nos. but up to the November 2014 the progress is 1755 nos. of tenders which is 73% of target. The trend is very impressive and praiseworthy. About 97 % respondents believe that the E-GP will be implemented successfully. At the same time 99% respondents desire the E-GP system for the free, fair and transparent administration and participation in tender. Finally, Chapter five discloses the conclusion and recommendations made by this study. The recommendations for LGED are to accelerate the training program, proper knowledge management for procurement unit, take initiatives to build awareness of contractors/bidders and continuous dialogue to CPTU for system up gradation and system integration to RSEPS.

Chapter-2

Literature Review

2.1   Global e-GP implementation history

E-procurement has proven itself as one of the more effective and efficient tools for bringing good governance to the procurement process in many member states, and E-procurement initiatives have received significant support from the donor community including the World Bank, the Asian Development Bank, the Inter-American Development Bank and the African Development Bank. Various initiatives have already been taken place, spearheaded by different organizations to define best practices and strategies for the implementation and development of E-procurement systems, and many countries have already introduced E-procurement into their business practices through various business models and approaches. (UN 2011)

E-procurement has been a common theme of many organizations for the promotion of transparency and good governance in procurement for many developed and developing nations. Some of the early adopters began implementing e-procurement / e-tendering systems 20 years ago before the Internet and Web services became a primary medium for the exchange and dissemination of information. The e-procurement status of some other countries around the world has been discussed below:

2.1.1   E-Procurement in Korea

 Korea is seen as a leader with the implementation of a fully integrated e-procurement solution that is integrated with all other electronic government operations, including financial management systems, company registrations and tax systems. The implementation of the Korean KONEPS system (Korea On-line E-Procurement System) was just one of 11

electronic government system initiatives across various institutions to support a fully integrated environment, including system support for the distribution and management of digital certicates to ensure the authenticity and security of the system and associated processes. Korean e-Procurement system is operated by Public Procurement Service (PPS), the Republic of Korea and it was started in the year 2000.

Korea has invested millions of dollars over a number of years as its system evolved from an electronic tendering system to improve transparency in the procurement process to today's fully integrated e-procurement solution that takes full advantage of the efficiencies an electronic system offers. Though the investment in electronic procurement numbered in the millions and Korea continues to fund millions each year to support system operation and business development activities, the results of the system outweigh the investment with an estimated $6 billion USD economic impact in savings to government and participating suppliers. KONEPS currently supports over 41,000 public entities, 191,000 registered suppliers and over $50 billion in annual procurement activity (UN, 2011).

KONEPS, or Korea Online E-procurement System, is drawing more attention from abroad than ever, the South Korean Public Procurement Service (PPS) said. Korea has signed multiple memorandums of understanding with 19 countries worldwide on e-procurement to install the system for them. Four countries — Vietnam, Mongolia, Costa Rica and Tunisia — have already imported the KONEPS to transfer to an electronic procurement system for those countries (The China Post, November 12, 2012).

2.1.2 E-Procurement in the Philippines

In the Philippines, the e-procurement initiative has focused more on e-tendering with the initial objective to improve transparency, open access and competition. Since 2001,

PhilGEPS (Philippine Government Electronic Procurement System) has served as the central procurement portal for all government procurement activity for goods, services and works. The system started as a pilot service with a few agencies and participating suppliers while the government began to initiate a procurement reform program that included a new procurement law instituting the use of PhilGEPS as the official procurement portal for all government procurement. One of the key changes with the new law was the change in requirement for newspaper advertisements.

Under the old regulations, agencies were required to advertise public tenders twice in three national papers at an average cost of $200 USD per add Under the new law, public tenders processed on PhilGEPS only require one newspaper ad, providing each agency a savings of $1,000 per public tender that required newspaper advertising. With an average of over 1,000 public tenders requiring newspaper advertising each month, the government on the whole is realizing a savings of almost $1 million USD each month in newspaper advertising costs alone. PhilGEPS now supports more than 8,000 government agencies and 50,000 suppliers, and publishes an average of 600 notices each day. PhilGEPS continues to evolve each year with the recent introduction of an e-catalogue and e-payment services. PhilGEPS has provided a technical foundation to support program reforms and grow the supplier marketplace by allowing suppliers to find and participate in tenders in different regions around the country. The system also provides management with access to a wealth of procurement data that was previously impossible to collate, allowing them to better understand and analyze the procurement activity being conducted across agencies. (UN, 2011)

2.1.3 E-Procurement in Canada

For the Government of Canada, the initial implementation of e-tendering took place 20 years ago at a time of government restraint and budget cuts. The introduction of an e-tendering business model in partnership with the private sector allowed the government to outsource the manual and electronic distribution of bid documents and removed the need to maintain various supplier source lists as all suppliers could now access all procurement information from the website and participate in any tender they chose. The result was an open and transparent procurement environment supported through user fees at no cost to government. This e-tendering approach helped the federal government realize over $6 million dollars in annual savings by outsourcing the manual duplication and distribution of physical bid documents to potential suppliers that had previously registered in various source lists maintained by different agencies. The open access and transparency provided by the system also supported Canada's commitments under the WTO, NAFTA and other trade agreements by enabling the same access to foreign suppliers as it did to local suppliers. (UN, 2011)

2.1.4 E-Procurement in Singapore

GeBIZ (Government electronic Business) is a Government-to-business (G2B) Public e-Procurement business centre where suppliers can conduct electronic commerce with the Singapore Government. All of the public sector's invitations for quotations and tenders (except for security-sensitive contracts) are posted on GeBIZ. Suppliers can search for government procurement opportunities, retrieve relevant procurement documentations and submit their bids online. Singapore's GeBIZ, or the Government Electronic Business Centre, was set up in June 2000 to simplify government procurement and tender activities. It was part of the programmes for businesses under the e-Government Action Plan (eGAP I) (2000–2003) in Singapore. As a one-stop centre for suppliers to have access to all procurement opportunities in the public sector and to trade electronically with the government, GeBIZ

would create an entry point for businesses to access G2B services in an enterprise-centric manner instead of an agency-centric manner. (Wikipedia, February 24, 2013)

There are 10,000 buyers in 144 agencies and 42,000 suppliers are connected through GeBIZ ensuring a common e-procurement system for the entire public sector in Singapore.

E-Procurement in India: The Government of India has developed the Central Public Procurement Portal (www.eprocure.gov.in) to facilitate all the Central Government Organizations to publish their Tender Enquiries, Corrigendum and Award of Contract details. The system also enables the users to migrate to total electronic procurement mode.

The primary objective of this portal is to provide a single point access to the information on procurements made across various central government organizations.

In March 2012, the government India issued office Memorandum to implement e-procurement for all government entity with a estimated value of Rs. 10 lakh and above in a phased manner with a target to cover the whole government procurement within next July 2013. (www.eprocure.gov.in)

2.1.5   E-Procurement in European Union

 PEPPOL (Pan-European Public Procurement On line) is an EU initiated and funded e-procurement project which started on May 2008. Many EU countries use electronic procurement (E-Procurement) to make bidding for public sector contracts simpler and more efficient. However, these national solutions have limited communication across borders. PEPPOL will enable any company in any EU member state to respond to any tender across the EU. It will connect existing national systems, crucial for allowing businesses to bid for public sector contracts anywhere in the EU; an important step towards achieving the Single European Market.

The pilot project will facilitate the electronic cross border exchange of orders, invoices, and catalogues. It also includes the reuse of company information required for bidding. The mutual recognition of electronic signatures will also be addressed.

The 12 EU member states, namely, Austria, Denmark, Finland, France, Greece, Germany, Italy, Ireland, Norway, Portugal, Sweden and United States are using PEPPOL in current test phase.

A core team of EU Member States are involved in this project in order to ensure that the development of new technologies in different countries does not create new barriers to the Single Market. Both governments and their suppliers will benefit from more efficient, harmonized electronic procurement and invoicing processes. It is anticipated that the use of e-Procurement will save billions of Euros (at least 50 billions) not only by reducing administrative burden but also by increasing competition and transparency. Taxpayers will ultimately benefit from the increased efficiency of the procurement processes and the savings achieved through better competition. (www.ec.europa.eu/information_society) Government of different countries have taken different approaches and applied different solutions with the implementation of their e-procurement systems. The nature and scope of the solutions varies based on the overall objectives, business model applied and the environment in which they operate. Countries like Singapore and Hong Kong have a significantly different operating environment, from the technical infrastructure available to support e-government initiatives to their ability to institute national regulations and policies, when compared to countries like Indonesia and the Philippines which are comprised of thousands of islands with varying levels of technical infrastructure or large countries like India, China and Russia that have a significant number of rural areas with varying degrees of capacity (UN, 2011).

The nature of the security methodology and supplier authentication processes also has an effect on the e-procurement system as does the structure of the information associated with a

supplier or tender record. The use of standards for technical implementation security and the exchange of data help facilitate integration and data exchange with other systems. In environments like the EU, cross border access to procurement opportunities is one of the foundations of open trade between jurisdictions which makes streamlining the registration processes and facilitating the exchange of documents through a standard process critical to procurement operations within each jurisdiction. The PEPPOL project in the EU is attempting to facilitate the interaction with suppliers and procuring entities across jurisdictions by establishing open data exchange standards and processes (UN, 2011)

Though there have been many successful e-procurement implementations there have also been a number of failed programs. Failures are not only related to how technology is applied, but also to how the implementation is managed and the level of leadership or support provided to ensure successful adoption by the participating agencies and supplier communities. Quite often, failures are not related to the E-Procurement system in itself but to lack of institutional coordination and workflow design.

2.2   Review of Public Procurement Framework in Bangladesh

The public procurement procedures and practices have evolved over the years from the days of British and subsequently Pakistani rule. A Compilation of General Financial Rules (CGFR) originally issued under British rule was slightly revised in 1951 under Pakistani rule and was reissued in 1994 and again in June 1999 with very few changes (World Bank, 2002). Since independence in 1971, the public procurement practices have been influenced by the World Bank, the Asian Development Bank, and other donors since the bulk of public procurement is externally funded.   Some departments, autonomous boards, and public undertakings have drafted their own set of procedures or a manual based on CGFR principles, and the rest follow the PWD code (World Bank, 2002).

In 1999, the World Bank and the Asian Development Bank conducted joint review of the country portfolio performance and prepared an action plan for government on public procurement. In 2002, the World Bank prepared Country Procurement Assessment Report (CPAR) in agreement with Government of Bangladesh, identified several deficiencies in the procurement system of the GoB, which as follows

- Absence of sound legal framework governing public sector procurement

- Complex bureaucratic procedure causing delay.

- Lack of adequate professional competence of staff to manage public procurement.

- Generally poor quality bidding documents and bid evaluation.

- Ineffective administration of contract.

- Absence of adequate mechanism for ensuring transparency and accountability.

The Government approved the implementation of the "Public Procurement Reform Project" with IDA assistance on 14 February 2002.

In the context of escalating concerns for streamlining the country's public procumbent system, the government undertook an array of reforms in order to strengthen the public procurement regime. The reform process ultimately led to the making and issuance of Public Procurement Regulations in 2003, providing a unified procurement processing system. The PPR, 2003 was supplemented by Public Procurement Processing and Approval Procedures (PPPA), a revised Delegation of Financial Powers (DOFP) and several Standard Tender Documents (STDs) and Standard Request for Proposal Documents for the procurement of goods, works and services. Further later, in order to intensify the improvement measures in the public procurement system, the House of the Nation enacted the much desired law, the PPA, 2006. Under the Act of 2006, the PPR, 2008 was framed and issued, which replaced the Public Procurement Regulations, 2003 which until then continued to have effect (Hoque, Ridwanul, 2010).

In early 2011, the Government of Bangladesh took a mile stone decision to introduce "electronic government procurement" e-GP as provisioned under Section 65 of Public Procurement Act, 2006 and Rule 128 of Public Procurement Rules, 2008, for further scaling up the reform leading to modern ICT based procurement system.

Procurement

Different institutions and authority defines the procurement differently. There are lots of definitions of procurement. Some of those definitions are given below:

- Complete process of obtaining goods and services from preparation and processing of a requisition through to receipt and approval of the invoice for payment (Business Dictionary.com)

- The action or process of acquiring or obtaining materiel, property, or services at the operational level, for example, purchasing, contracting, and negotiating directly with the source of supply (Sci-Tech Dictionary)

- Procurement is the process by which the resources (goods and services) required by a project are acquired. It includes development of the procurement strategy, preparation of contracts, selection and acquisition of suppliers, and management of the contracts. (www.apm.org.uk/Definitions.asp)

- The process by which the state obtains necessary goods or products from non-governmental vendors. (www.pewcenteronthestates.org/template_page.aspx)

- To acquire or obtain an item or service, sometimes rare, usually by extra effort; (en.wiktionary.org/wiki/procure)

Therefore finally, Procurement can be defined as "Purchasing, hiring or obtaining goods, works or services or any mixture thereof by any contractual means. This includes the development of the procurement strategy, preparation of contracts, selection and acquisition of suppliers, and management of the contracts.

Definition of e-GP

The most general description of e-GP is almost a self-explanatory definition of the three words "electronic government procurement". E-GP is the use of Information & Communications Technology (especially the Internet) by governments in conducting their procurement relationships with suppliers for the acquisition of goods, works, and consultancy services required by the public sector (The World Bank 2003).

E-GP defined in Bangladesh e-Government Procurement (e-GP) Guidelines in Bangladesh is as: "e-GP" means procurement by a Procuring Entity using the Electronic Government Procurement (e-GP) System developed, hosted and operated by the Government of Bangladesh through CPTU/IMED, Ministry of Planning under the e-GP guidelines.

2.3   Review on PPR- 2008

In PPR-2008 there are 130 rules, 9 chapters and 14 schedules. The PPA- 2006 and PR-2008 have been amended three and two times respectively with response to requirement.

There are various methods for procurement of goods & related services and works & physical services. These are Open Tendering Method (OTM), Limited Tendering Method (LTM), Request for Quotation (RFQ), Direct Purchasing Method (DPM), Two-Stage Tendering Method and Single Stage Two Envelope Method. There are also various Methods for Procurement of Intellectual and Professional Services. These are Quality and Cost Base Selection (QCBS), Selection under Fixed Budget (SFB), Least Cost Selection (LCS), Single Source Selection (SSS), Selection of Consultants Based on Consultant's Qualifications (SBCQ), Selection amongst Community Service Organizations (CSOs), Selection of Consultants by a Design Contest (DC), Selection of Individual Consultant (SIC).

In chapter two, describe about preparation of tender documents and formation of different committees. This document describes Principles of Public Procurement in Chapter three,

Methods of Procurements in chapter four, Processing of Procurement in chapter five, Procurement of Intellectual and Professional Services in chapter six, Professional Misconduct in chapter seven, E-Government Procurement in chapter eight and chapter contains Miscellaneous.

2.4 Review of E-GP Guide Lines

2.4.1 Introduction

The government of Bangladesh has approved e-GP guidelines in 15 February 2011. This document provides principle guidelines of Electronic Government Procurement (e-GP) system of Bangladesh. The objective of the e-GP is to enhance the efficiency and ensure transparency in public procurement through the implementation of a comprehensive e-GP solution to be used by any or all government organizations in the Country.

The e-GP a guideline has been prepared as provisioned under Section 65 of Public Procurement Act, 2006 and Rule 128 of Public Procurement Rules, 2008, for the use of the e-GP System. The guidelines provide general guidance on e-GP related technical issues, and set out the initial view on e- GP related working assumptions. The guidelines are prepared also in consistent with the prevailing ICT Act 2009, Right to Information (R2I) 2009 and international practices on e-Government Procurement (e-GP).

These guidelines provide e-GP general technical operational guidance only; no attempt is made to provide a guide to the Procurement, ICT Act, R2I Act itself, or to the associated Code of Practice, which are already available elsewhere. However, the aspects of those Acts relevant to the e-GP system that are most likely to affect general users have been discussed. These guidelines represent the Government's view of the application of the e-GP System for carrying out public procurement activities online. However, the public entities shall remain responsible for making their own judgments in individual cases. The e-GP System and its

guiding principles are not intended to be static, and shall be revised as necessary in the light of experience being gathered during the system run.

2.4.2 Scope and Application of e-GP:

The e-GP system shall be used by the procuring entities and other public entities spending public fund for the purposes of applying the procurement process using these guidelines in case of procuring goods, works and Services using e-GP System. The scope of this system is to maintain complete and up-to-date Public Procurement activities of all public agencies as well as provide tender opportunities to all potential Tenderers/ Applicants/ Consultants from Bangladesh and abroad. Initially this will apply to four selected target agencies namely Bangladesh Water Development Board (BWDB), Rural Electrification Board (REB), Roads and Highways Department (RHD) and Local Government Engineering Department (LGED). Gradually the e-GP system will be rolled out to all procuring entities using public funds.

2.4.3 Major Modules in Bangladesh e-GP System:

E-Government Procurement (e-GP) system in Bangladesh shall consist of several modules that are interlinked sub-systems, such as:

1. Centralized Registration System (Contractors/ Applicants/ Consultants, Procuring Entities and other actors of e-GP);

2. Workflow management System;

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

4. e-Contract Management System (e-CMS);

5. e-Payment System;

6. Procurement Management Information System (PROMIS);

7. System and Security Administration;

8. Handling Errors and Exceptions;

9. Application Usability & Help.

More modules, sub-systems and features (i.e. e-Catalogue/ e-Purchase, e-Auctions, e-Reverse Auction, integration to supply chain and others) may be added, removed or updated as demanded by the prevailing Acts, rules, government instructions and demand from procurement community.

2.4.4 Categories of e-GP Stakeholders/ Actors:

The e-GP system shall support the following user categories for stakeholders/actors initially, and provides them the secured access to related functionalities of the e-GP system through dashboards:

1. Ordinary Citizen/Public for procurement related general information

2. Tenderers/ Contractors/ Applicants/ Consultants

3. Procuring Agencies/ Entities

4. Payment Service Providers (Scheduled banks and other payment service providers)

5. Development Partners

6. e-GP System Administrators (CPTU and PE administrators) and Auditors

7. Operation & Maintenance partners

8. Evaluation Committees

9. Media community for updates, announcements, news releases etc.

2.4.5 Composition of the Guidelines:

The e-GP Guidelines include this document and four following Appendices that constitute as the integral part of the guidelines:

Appendix 1: Use of Payment Systems

Appendix 2: Business Process Re-engineering (BPR) of PPR-2008 under e-Government Procurement (e-GP) system

Appendix 3: Changes in Schedule –II, PPR 2008 for e-GP system

Appendix 4: Terms and Conditions of use

Appendix 5: Disclaimer and Privacy Policy.

2.4.6 E-GP System Features:

The e-GP System will be hosted in e-GP Data Center at CPTU, and e-GP web portal will be accessible for their use to procuring agencies and entities through web access. The system will be implemented in all the procuring entities of the government of Bangladesh. All the stakeholders including general public, tenderers/ applicants/ consultants, procuring entities, payment service providers, development partners, media, e-GP System administrators and auditors get access to e-GP system and information as specified in the Terms and conditions of use, and Disclaimer and Privacy Policy.

General public, registered and non-registered users of the e-GP System shall access to public records and information to the fullest extent through the e-GP Portal (i.e. http://www.eprocure.gov.bd owned by CPTU/IMED) of e-GP System consistent with laws, acts, rules and government instructions applicable in Bangladesh.

All the e-GP System users must accept the terms and conditions of using the e-GP system on the registration page before submitting registration information. CPTU/IMED shall have the right to modify clauses of the terms and conditions without prior notice.

To access the e-GP System securely, users should use appropriate web browsers and their associated security settings. However because of the rapid development of new browsers and new security measures come up frequently, users need to update or install new components and configuration settings as and when these come into effect.
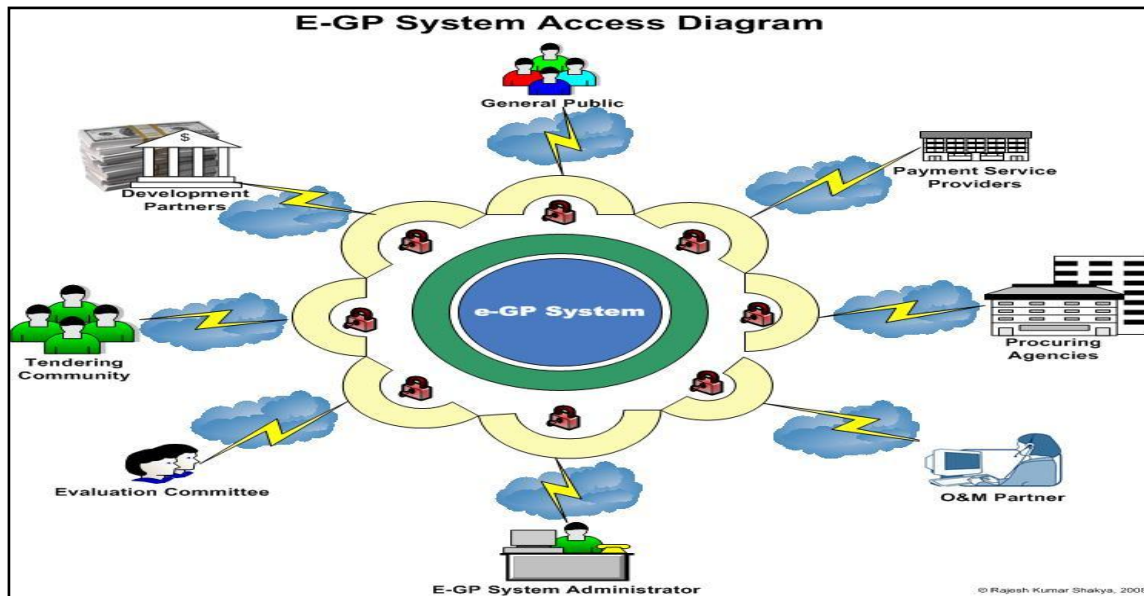
The e-GP system access Diagram are shown here

Figure 2-E-GP System Access Diagram

2.4.7 Procuring Entities and Approving Authority at LGED

There are various levels of Procuring Entities in LGED. Chief Engineer is the Head of Procuring Entity (HOPE) of LGED. Other significant procuring entities are Project Director, Executive Engineer and Upazila Engineer. LGED has six levels of Approving authority. These are Cabinet Committee for Government Purchase (CCGP), Ministry of LGRD&C specially Local Government Division(LGD), HOPE and three types of Project Directors likewise PD Grade-A, Cost more than 50 Crores ; PD Grade –B, Cost more than 20 Crores but not more than 50 crores; PD grade –C, Cost less than 20 crores. CCGP is responsible for the works and goods of contract value more than 50 crores and above 10 crore for consulting service contract. Ministry can approve more than 14 crore - 50 crore works, more than10 crores -50 crore goods,   more than 4crores -10 crores consulting service contracts. HOPE approves more than 8crores -14 crore of works, more than 4 crores -10 crore of goods and more than 2crores-4 crores of consulting service contracts. Project Director approve below 8 crore works, below 4crore goods and below 2 crore consulting service contracts. Chief

Engineer LGED delegated power to district Executive Engineer to approve contract up to 4.0 crore within estimated cost.

2.4.8 Implementation of e-GP in LGED:

LGED is one of the target agencies out of four to implement public procurement reform program in our country. As such the piloting of e-GP is being implemented in LGED. In the fiscal year 2011-12, four districts namely, Sunamganj, Faridpur, Gopalganj and Dhaka were selected for piloting of e-GP. In Dhaka, there were 2 schemes and for other three districts, there were single scheme for each district. From the table-1, it reveals that the participation in e-GP tendering is very low by the bidders. In Gopalganj district, only 3 tenderers submitted tender online and for other cases, only two trenderes submitted ender online for each schemes.

Name of District	Nos. of Schemes	Nos. of bidders purchased tender documents	Nos. of bidders dropped tender online
Dhaka	2	2 for each	2 for each
Gopalganj	1	5	3
Faridpur	1	2	2
Sunamganj	1	5	2

Figure 3- E-GP Piloting in LGED

The reason for this low participation of the bidders could the lack of readiness of the bidder's community. There needs to be a big campaign to involve the bidders in this system. There are 815 national contractors and 3 international contractors registered in e-GP systems up to February 2013. The registration of contractors is controlled by CPTU. CPTU has given one day orientation training to the contractors and 3 day training of 26 officials of four target agencies.

Chapter-3

Method

3.1 Strategy

The strategy used in this study was first to review the existing legal and other documents that are used by different institution and organizations. The review of Procurement Guidelines of WB and PPA-2006, PPR, 2008 and e-GP guide lines proclaimed by Government of Bangladesh. Then some key officials of Local Government Engineering Department (LGED) were interviewed. They are like Superintending Engineer, Project Directors (PD), Executive Engineer in concerned unit. Questionnaire surveys were conducted among the respondents of Xen District, Senior Assistant Engineer (Sr.AE), Assistant Engineer (AE) of district head quarters, Upazila Engineer (UE) at Upazila level office and contractors/Suppliers. I addition the secondary data were collected from different e-GP conducting offices either Head quarters or field offices.

In this research both qualitative and quantitative methods were followed. One questionnaire was used for this study (Appendix 1).

3.2 Selection of study area

The research work was limited to procurement functions of LGED only. No other functions and activities were considered to find out the challenges in e-GP. Only the difficulties related to e-GP were solely considered here. The procurement is done in head quarter, district and Upazila level Offices throughout the country. But just now all Upazilla offices are not involved in E-GP. Therefore, the offices representing the e-GP functionaries were considered as respondents. Those who were not concerned with this were kept out of questioning area. Nevertheless, overall challenges faced by stakeholders were summarized to be addressed for the betterment of this system for the implementation of e-GP not only in LGED but also all other public procuring entities.

3.3   Sample size

There is a formal system of sample selection. The numbers of samples should be representative to the population. In this study the size of total population were not ascertained. Because the numbers of contractors and suppliers home and abroad were fully uncertain and out of reach specially for overseas contractor and suppliers. Considering procuring entities in LGED, sample selected was representative to the population as far as possible. For questionnaire survey a sample of total 64 persons comprised of 6 Xen, 12 Sr.AE, 14 AE, 16 UE's and 16 contractors was selected.

3.4   Data collection and timeframe of the research   work

The research work was completed within a timeframe of 3 months .The distribution of total time used in this research work was 1 month for literature review, 1 month for data collection and interviews, 15 days for data analysis was used. Report writing needed 15 days. Most important here to say that the time mentioned here were not absolutely used for the research work, because we had to participate in examination for two subjects as a part of program.

3.5   Data processing and Analysis

The collected data were stored in computer. Analysis of data was done by spread sheet of Microsoft Office Program and also was presented in graphical and tabular form.

Chapter-4

Results and Discussion

4.1 Findings from questionnaire survey

4.1.1 Information about respondents of questionnaire survey

In this survey 64 respondents were questioned with defined questionnaire. Out of 64 respondents 6 Executive Engineers, 12 Senior Assistant Engineers who are key personnel in E-GP system execution in LGED, 14 Assistant Engineers, 16 Upazila Engineers and 16 nos. of Contractors throughout the country. Most of the LGED officials those who were questioned are Graduate Engineer and around 72 % are trained in PPR-2008 and 63% are trained in corresponding e-GP system following CPTU training module. The trainings were conducted through using the live web side of CPTU which was designed to act as dummy portal. The experiences of the concerned officials are from 3 to 31 years. They are acquainted with different systems of procurement. But most of the contractors are not trained in E-GP system and PPR-2008. Though in some areas some contractors were trained in PPR-2008 as well as E-GP system but none of them are questioned here because the respondents are selected randomly from different Divisions and Districts. Their composition of the respondents in percentage is represented in following Chart for better understanding of the readers.
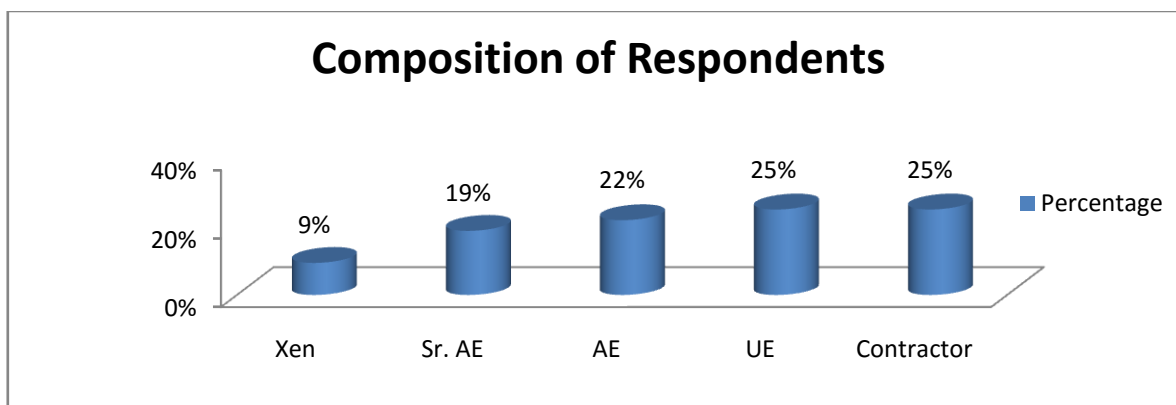

Chart 1- Composition of Respondents

4.1.1 **Analysis of the questionnaire survey**

In the questionnaire there were total 23 nos. of questions. Questions nos. 1-5 were demographic, question nos. 6-9 were for personal qualification and training received, questions nos. 10-15 were for experiences in E-GP related issues and expectations, question nos. 15 was for grading the e-GP system software comfortableness, question nos. 17-19 were to evaluate the service provided by concerned LGED, Bank and CPTU, question no. 20 was to know the expectation of the respondents about the success of E-GP system implementation .All of the above mentioned questions were closed end. But there were three open questions for the respondents to find out the problems faced by them and points of prosperity which are potential to the development of the system in future.

All the data received by questionnaire are presented in the following fashion of chart presentation, because the picture gives the better perception to reader about something than data table. All the charts are self explanatory to the readers. In the vertical axes the percentage of the respondent's responses and in the horizontal axis the composition of the respondents are shown. For more and vivid realization about the responses the data tables are also attached with Chart. In addition data label are also presented at the top of each bar.

Therefore each and every reader will be able fully to understand the scenarios of the survey conducted here.
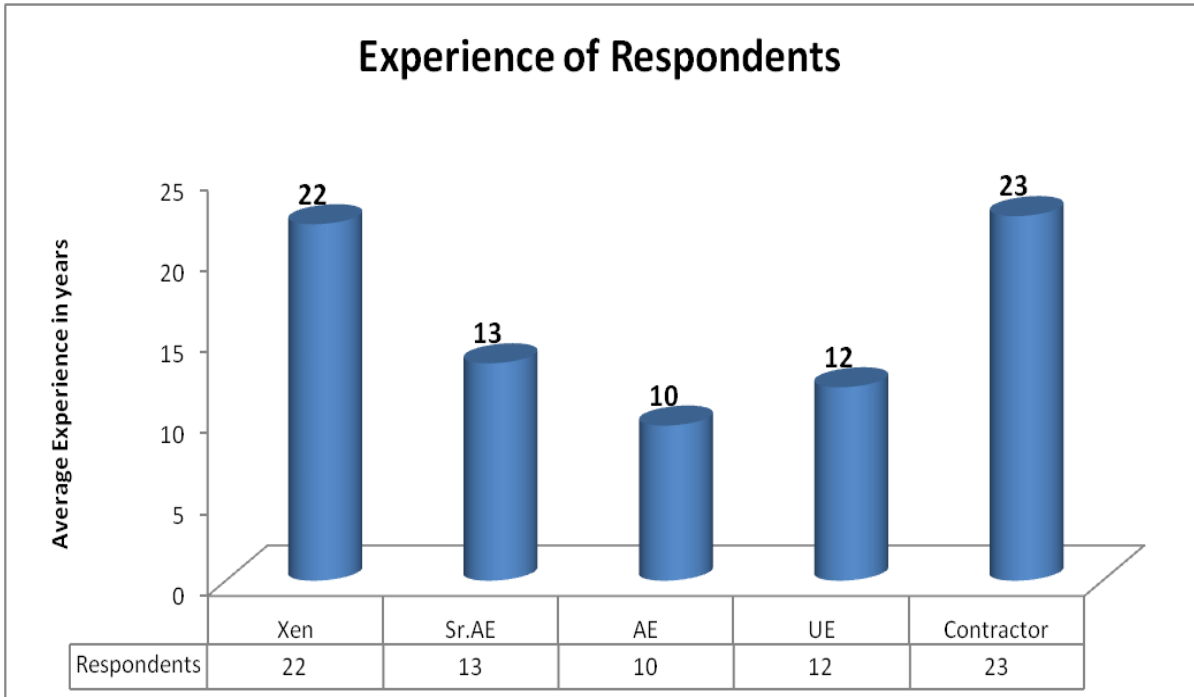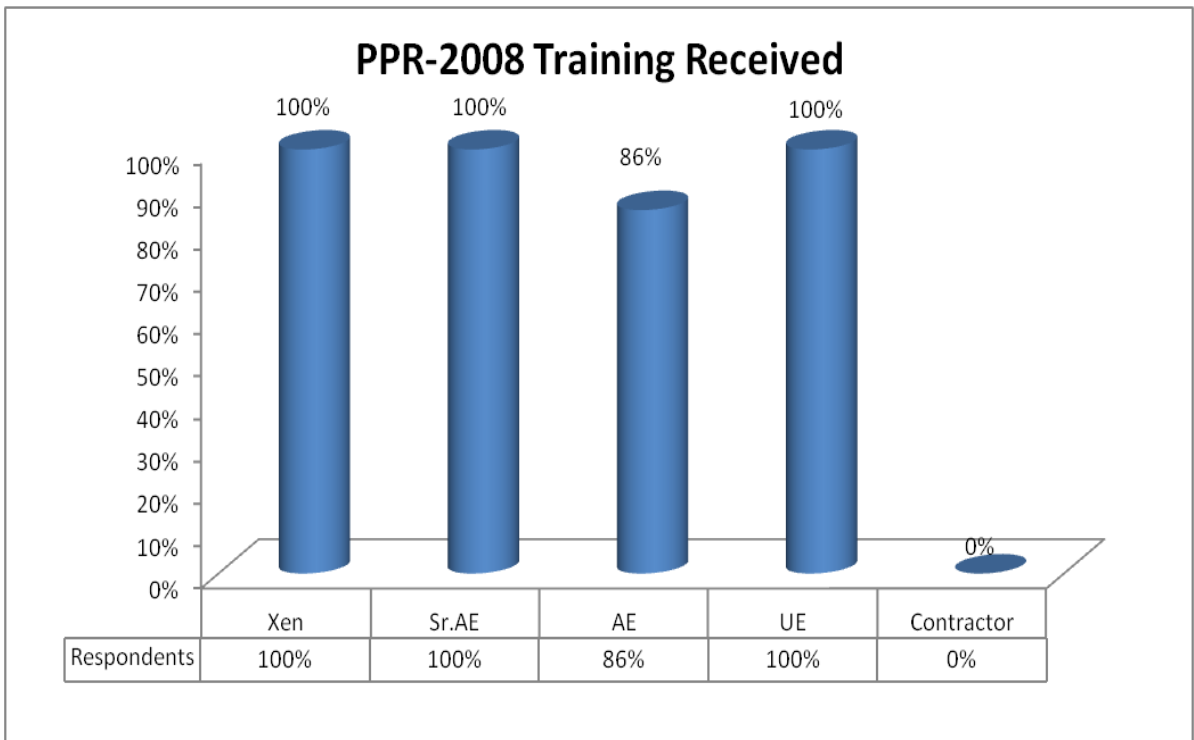
Chart 2-Experience of Respondents

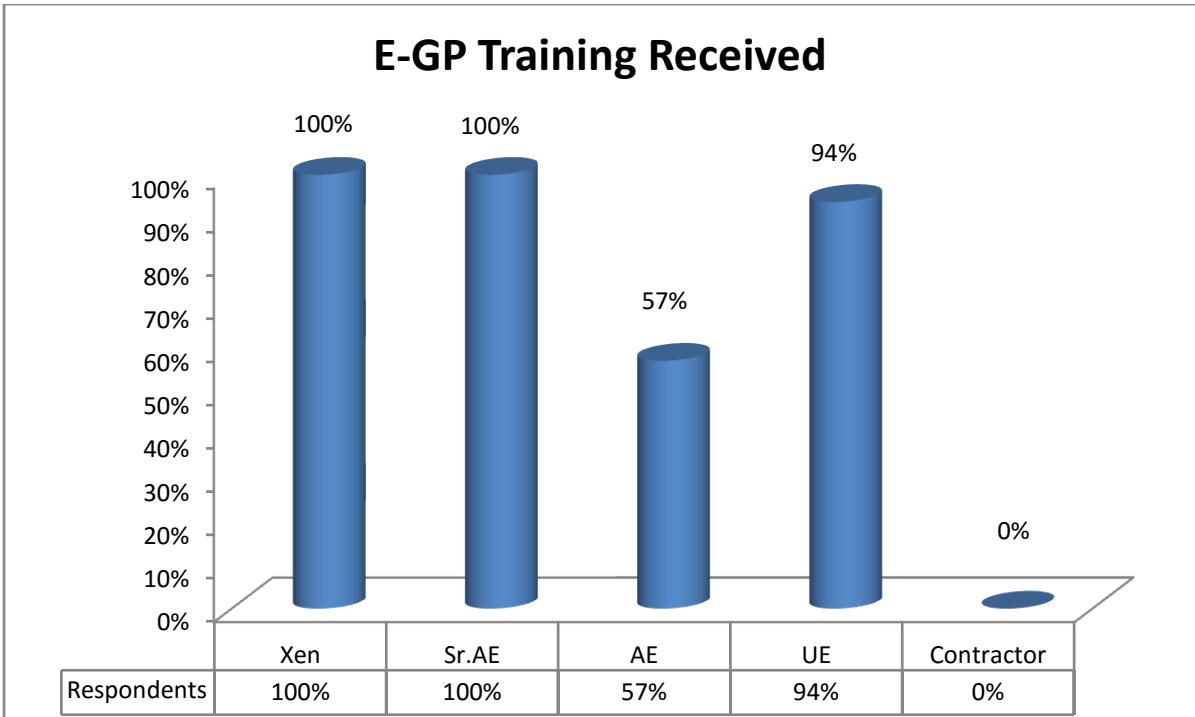**Chart 3- Percentage of respondents received training on PPR-2008.**

Chart 4- Percentage of respondents received training on E-GP system.
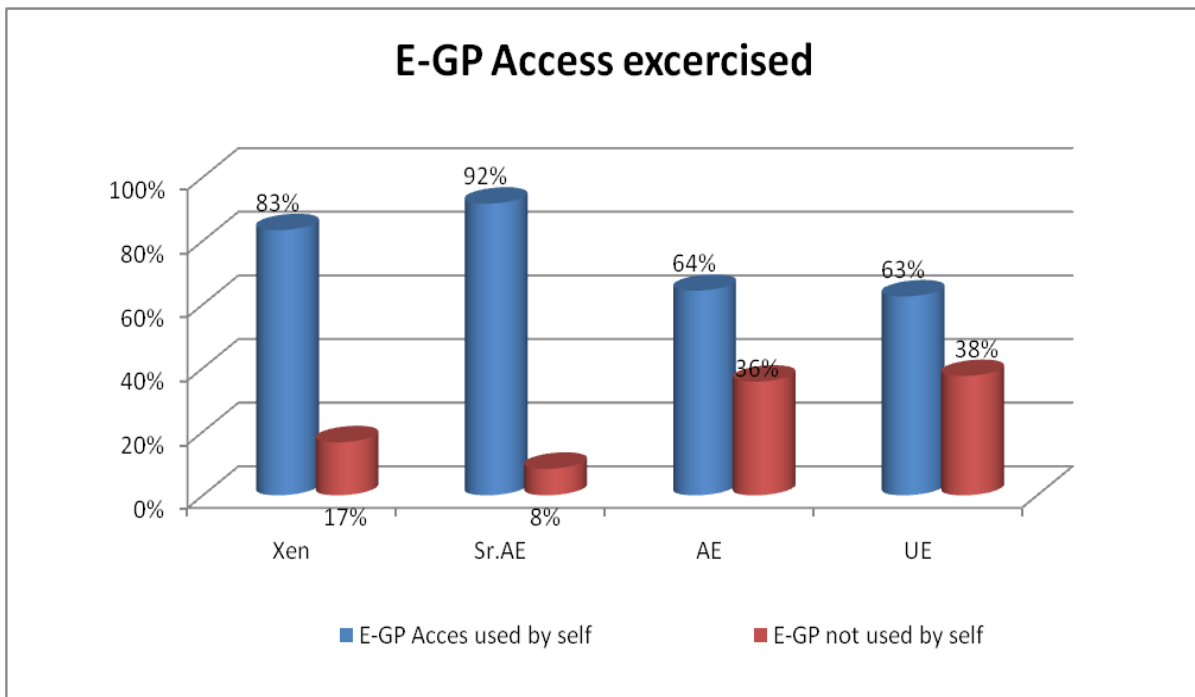

Chart 5- Percentage of respondents who exercise E-GP access by self or by others.
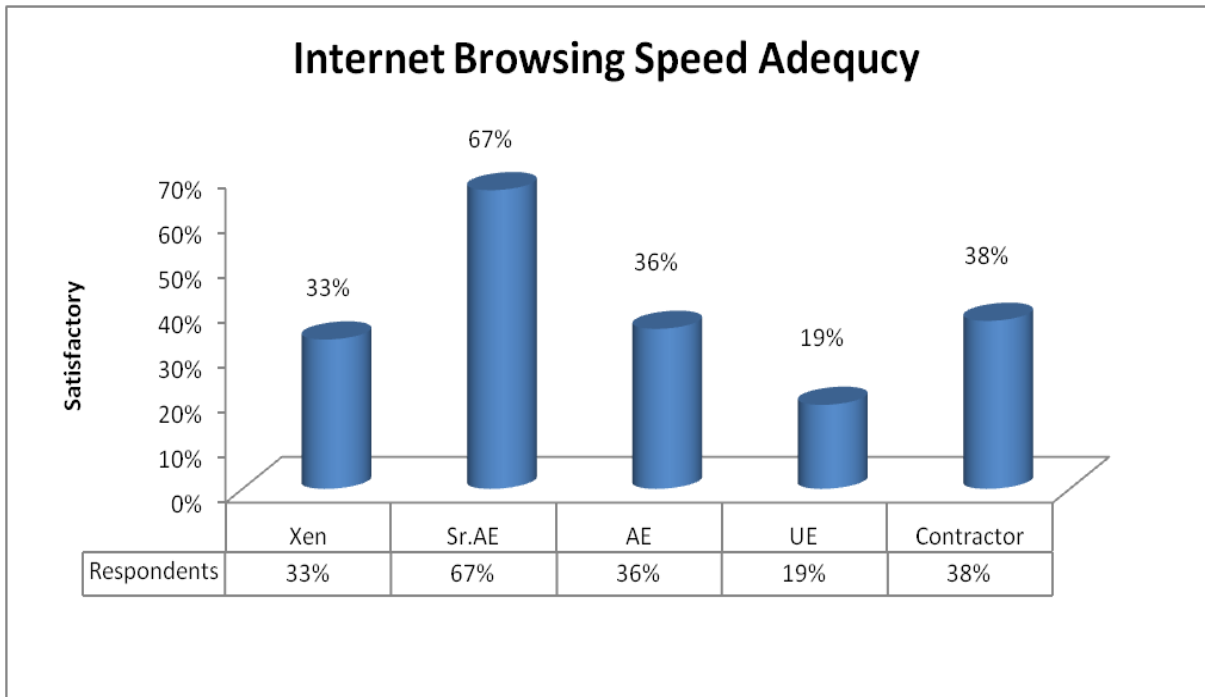
Chart 6-Percentage of respondents who are satisfied with existing internet browsing speed.
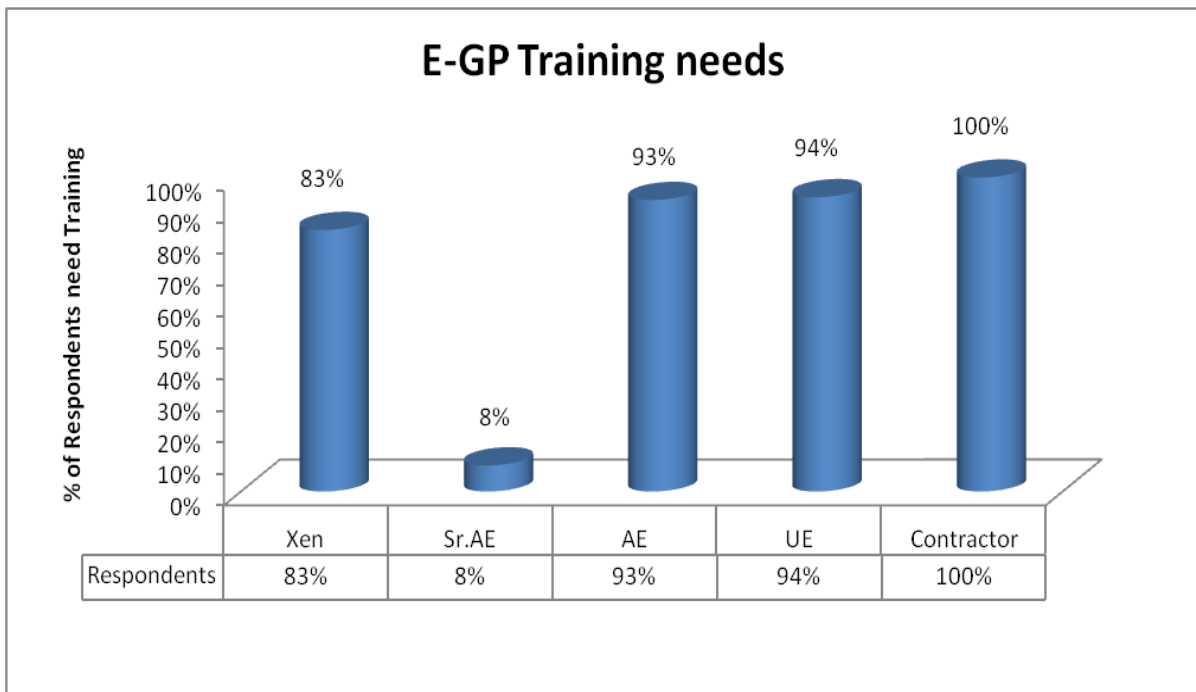
Chart 7-Percentage of respondents who needs E-GP Training.

User Friendlyness of E-GP

	Xen	Sr.AE	AE	UE	Contractor
Very High	0%	0%	0%	13%	0%
High	50%	50%	64%	50%	0%
Average	50%	50%	36%	31%	81%
Poor	0%	0%	0%	6%	19%
Not friendly	0%	0%	0%	0%	0%
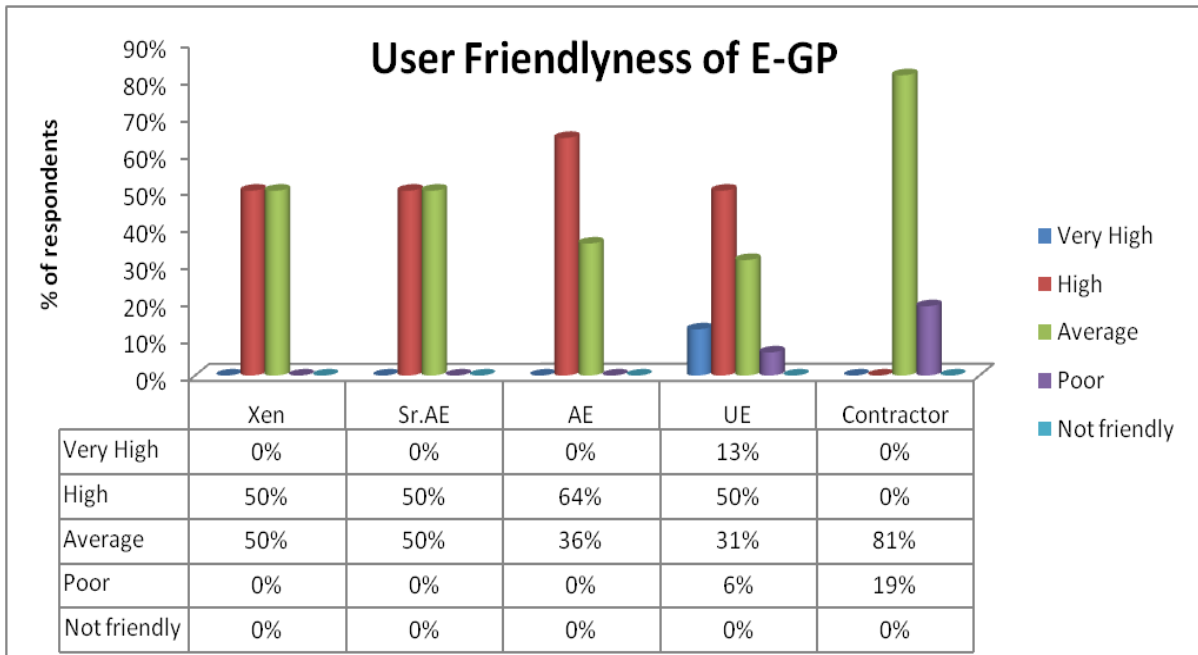
Chart 8-Respondent's ranking on E-GP system user friendliness

Chart 9-Respondent's satisfaction on support service of LGED to implement E-GP system.

Chart 10- Respondent's satisfaction on support service of Bank to implement E-GP system
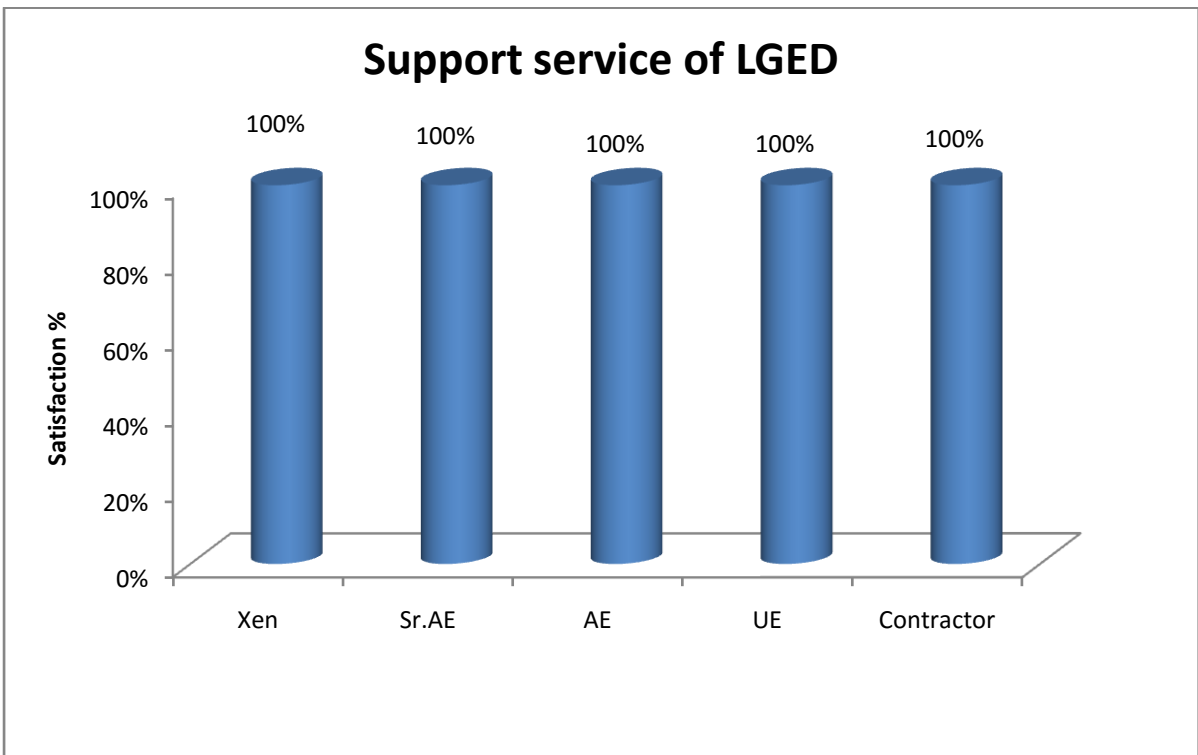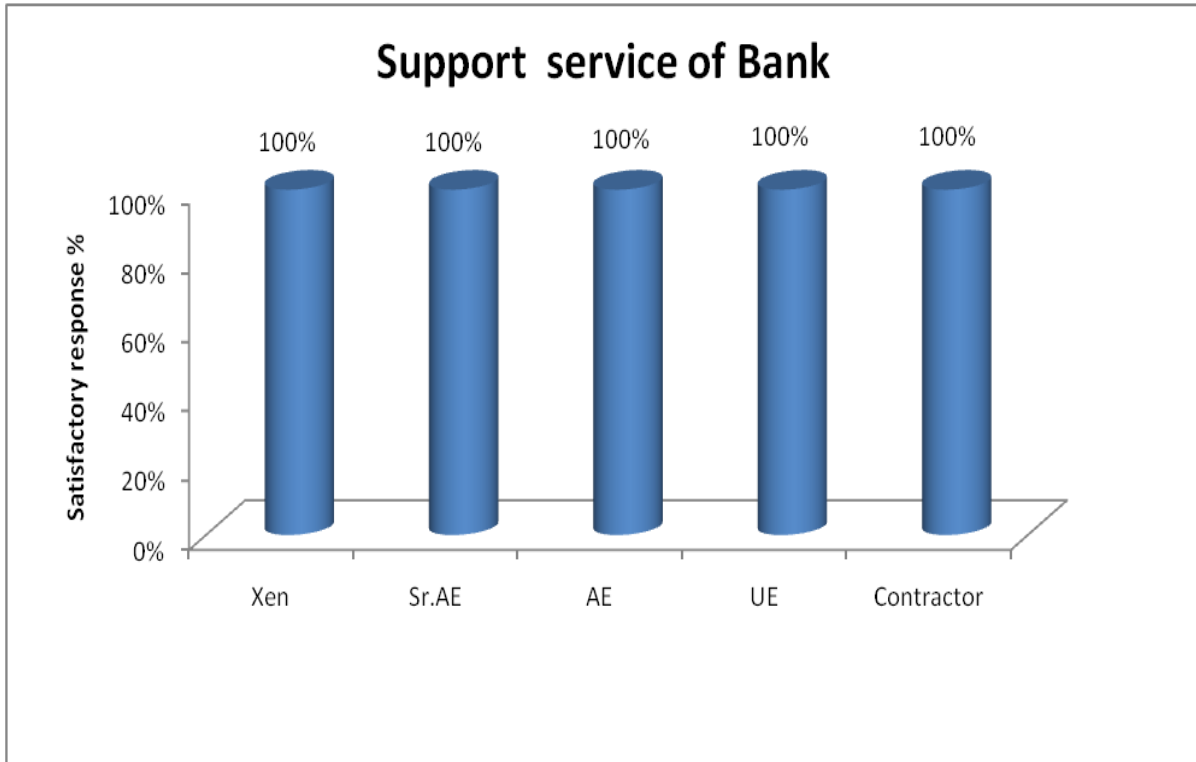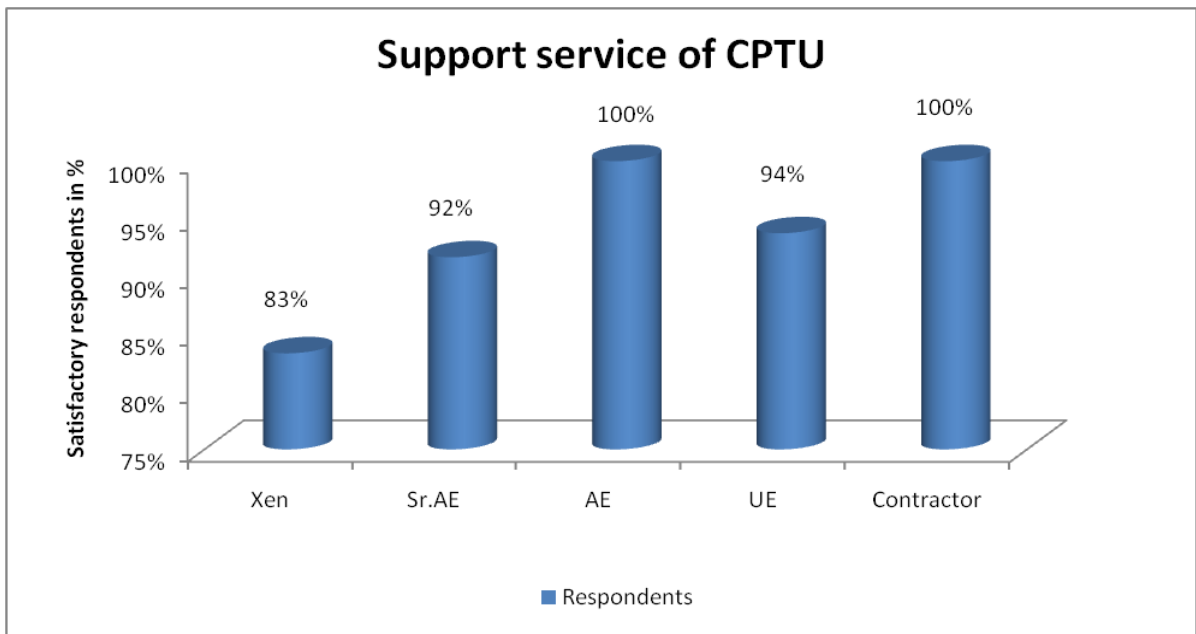

Chart 11-Respondent's satisfaction on support service of CPTU to implement E-GP system
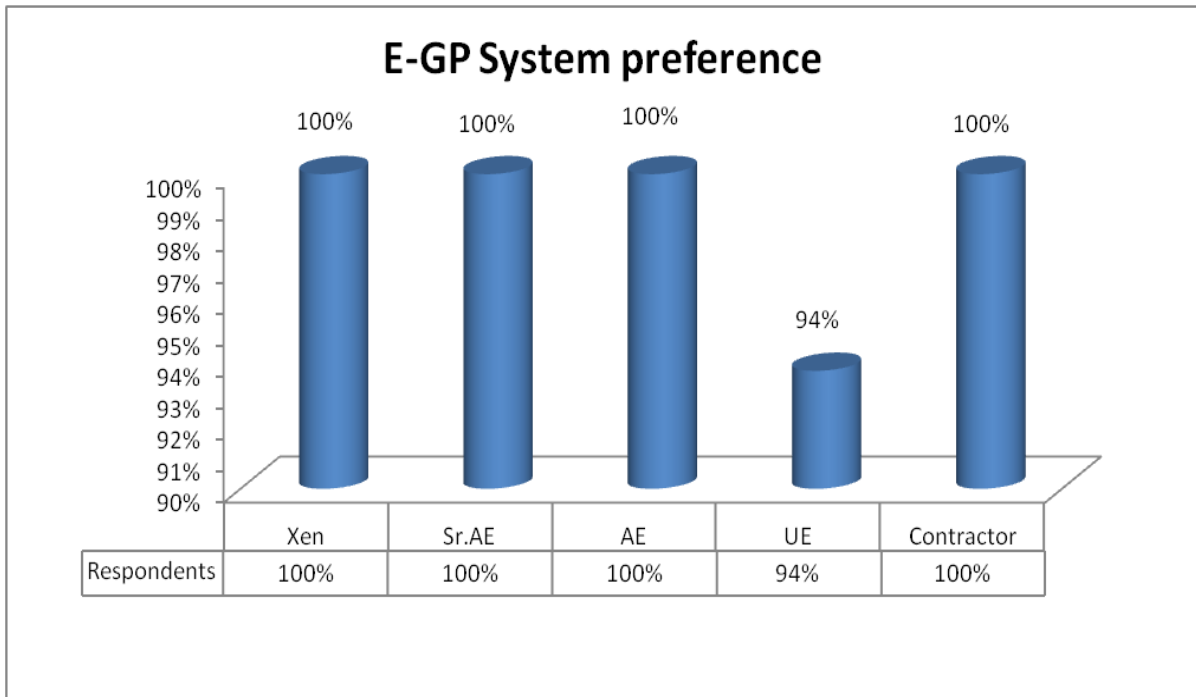
Chart 12-Percentage of respondents who prefers the E-GP system in tendering process.
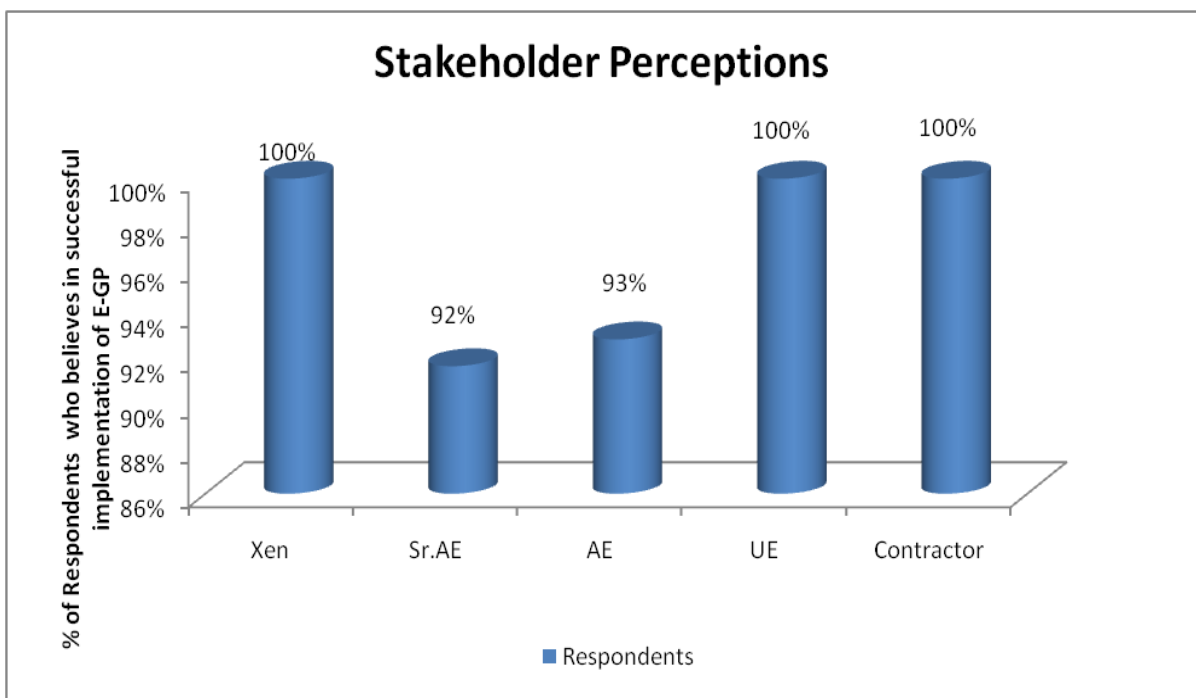

Chart 13- Stakeholder's perception on successful implementation of E-GP system.

4.2 Findings of secondary data collected

Secondary data related to the E-GP are collected from procurement unit and Training unit, LGED head quarter. The progress of E-GP implementation that is, how many tenders have been executed through E-GP System in LGED is obtained from Procurement unit. Because all tenders proceedings are monitored and controlled by procurement unit. The performance of LGED is monitored by CPTU through the built in system in E-GP software. On the other hand capacity building of the concerned officials through training is done by training unit head quarter.

To achieve the target set up by PPRP-II (PROMIS) and considering all challenges LGED set up the policy as follows

- The entire tender will be invited through e-GP if otherwise mentions in donor funded project.

- Within the LGED, top down approach (strong authority) and intensive monitoring are being conducted to the personnel involved in procurement

- Outside the LGED, who are directly involved to implement e-GP (Tenderer, registered bank and CPTU), motivation and sharing approach are adopted.

Few of the strategic actions of LGED are

- All the district executive engineers are instructed to take initiative at least 15 nos. tenderers to bring into registration process by September 2013.

- All the Upazila Engineers are instructed taking initiative at least 10 nos. tenderers to bring into registration process by September 2013.

- Directives to the procuring entity offices to invite all tenders through e-GP portal.

- Directives to the procuring entity offices to have social session with the bank people.

- Continuous interaction with CPTU

4.2.1 Present status of electronic-tendering (E-GP) in LGED

LGED started the electronic tendering in 2011-12 FY pilot bases in some selected district offices. After successful implementation of electronic tendering, later LGED decided to implement the E-GP all over the country. They made a target plan to implement the e-GP successively. We look at the progress and comparison among them.

Comparision of E-GP targets of LGED with PROMIS

	Jul 12-Jun13	Jul13-Dec13	Jan14-Jun14	Jun14-Jun15	Jul15-Jun16
LGED	100	400	1000	2400	4000
PROMIS	200	800	1200	2800	4000
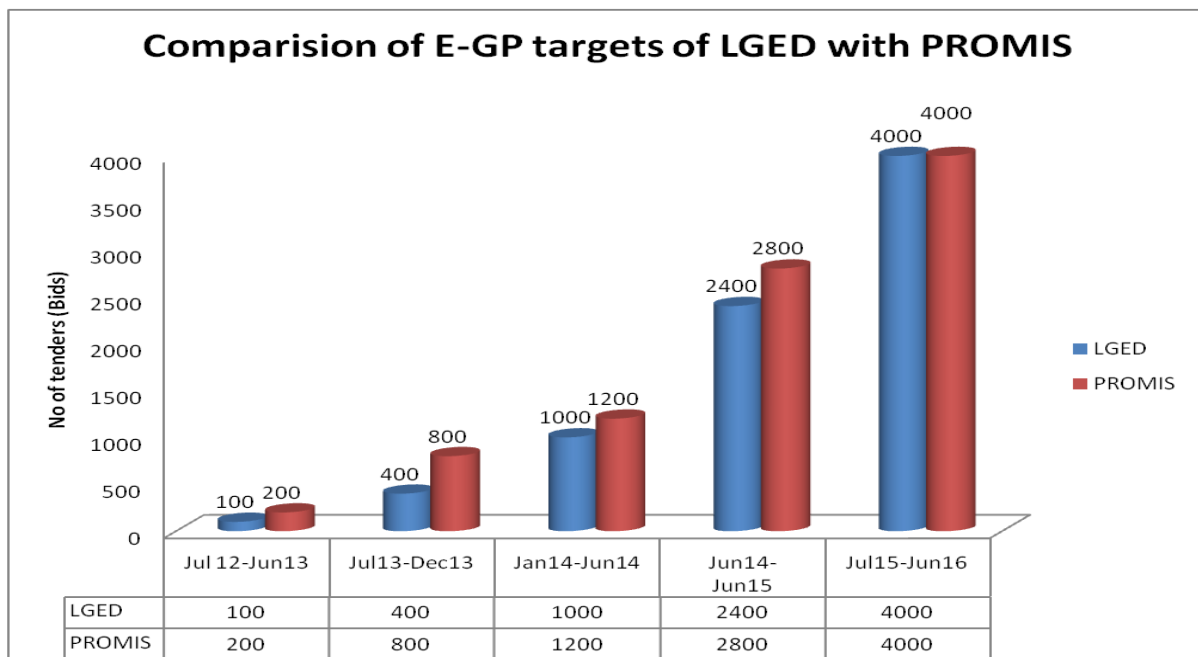
Chart 14- Comparison of Targets of LGED and PROMIS
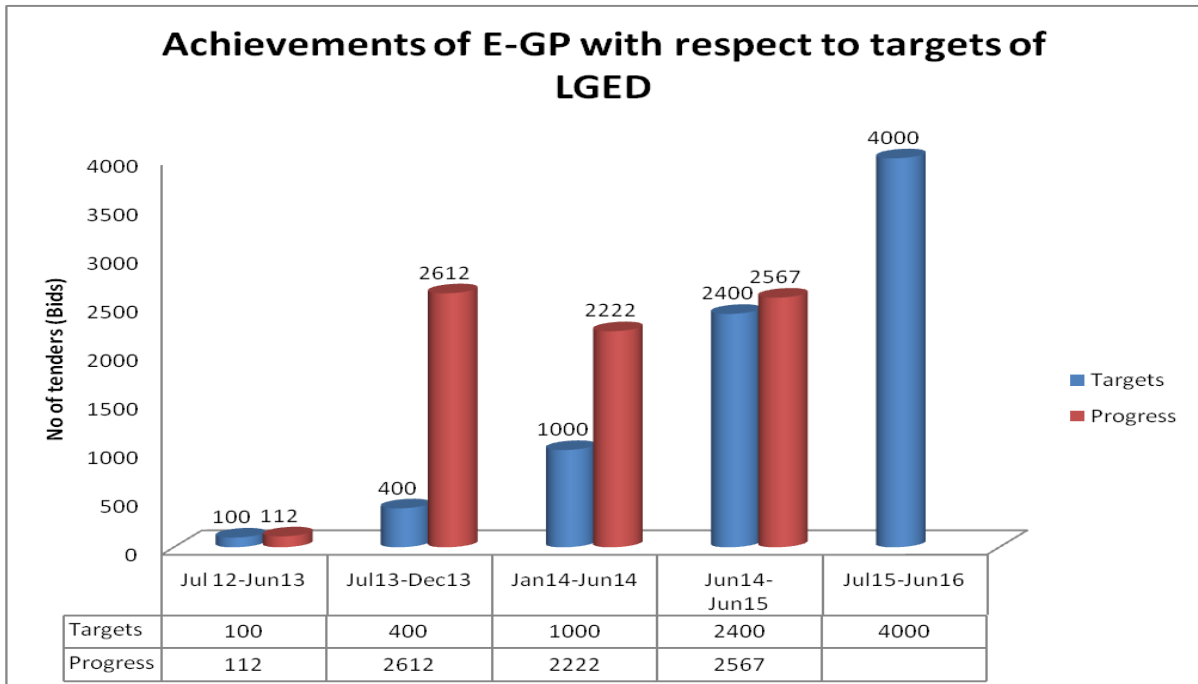
Chart 15-Progress of E-GP with respect to Targets in LGED

	Jul 12-Jun13	Jul13-Dec13	Jan14-Jun14	Jun14-Jun15	Jul15-Jun16
Targets	100	400	1000	2400	4000
Progress	112	2612	2222	2567	

	Jul 12-Jun13	Jul13-Dec13	Jan14-Jun14	Jun14-Jun15	Jul15-Jun16
Percentages progress	112%	653%	222%	107%	
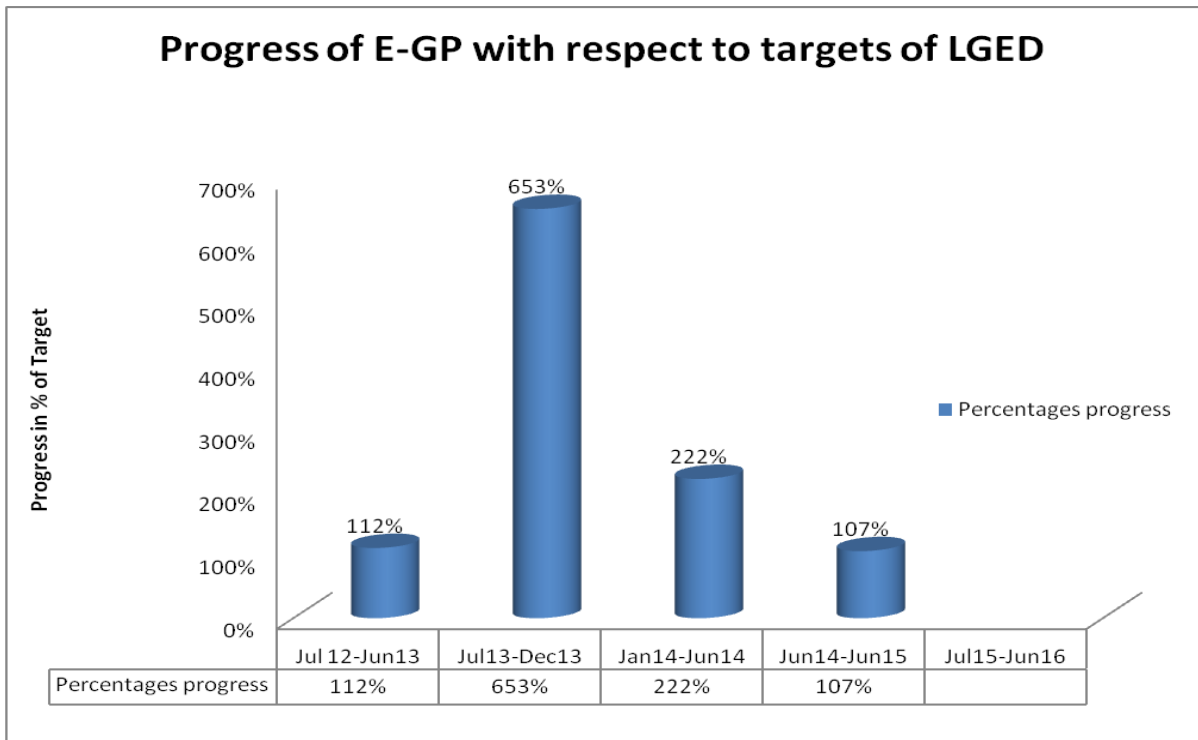
Chart 16- Progress of E-GP with respect to target in percent value in LGED.
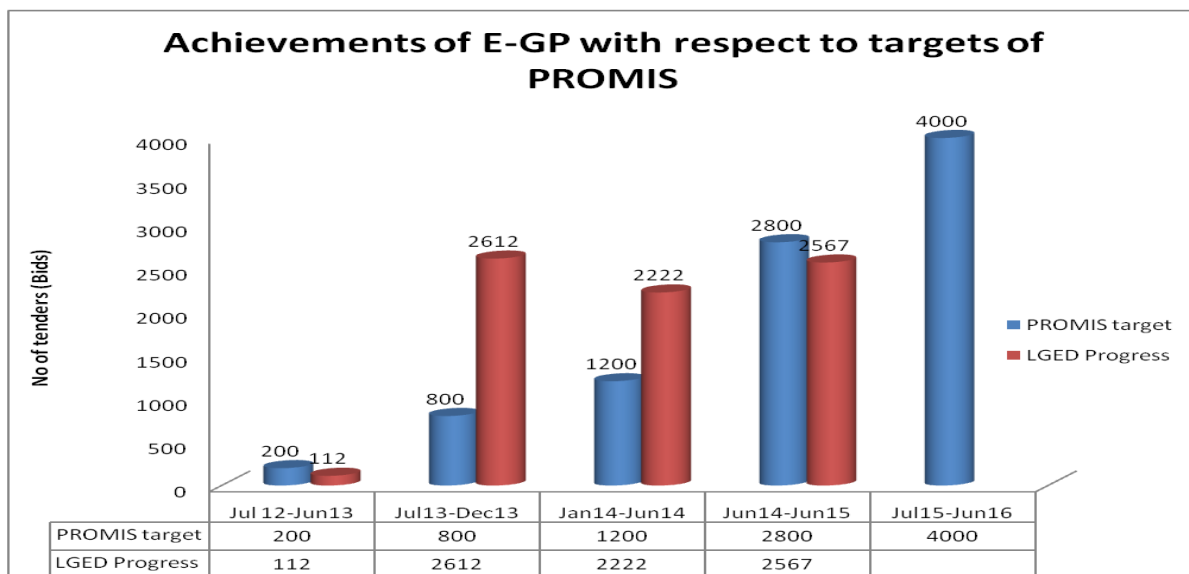
Chart 17-Progress of E-GP in LGED with respect to PROMIS targets.

	Jul 12-Jun13	Jul13-Dec13	Jan14-Jun14	Jun14-Jun15	Jul15-Jun16
PROMIS target	200	800	1200	2800	4000
LGED Progress	112	2612	2222	2567	
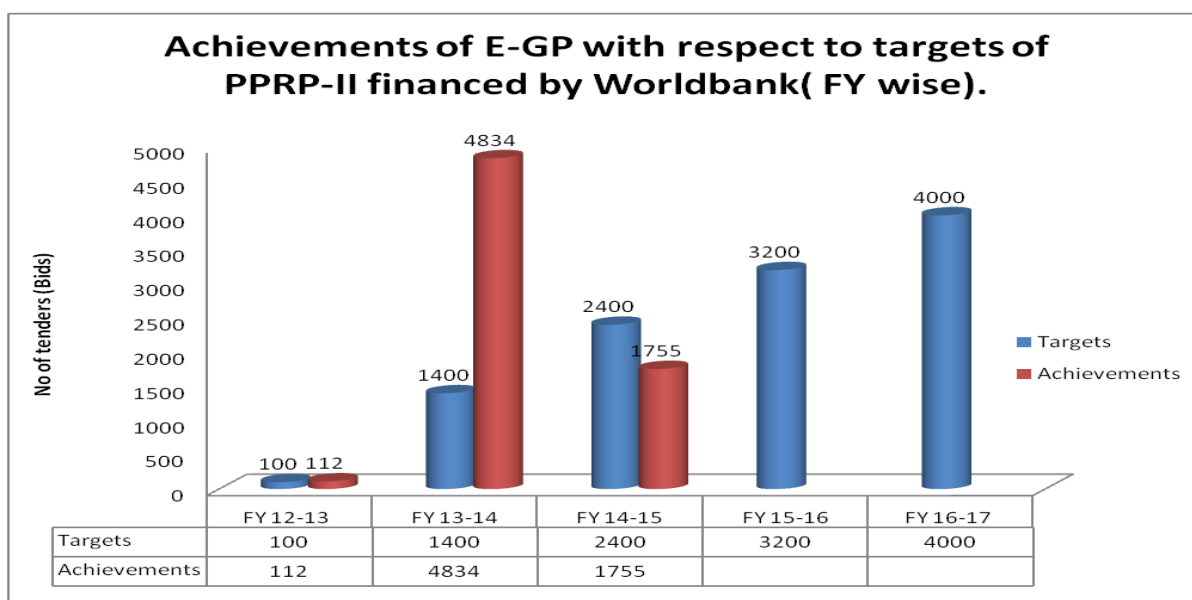
Chart 18- Progress of E-GP in LGED with respect to PROMIS target Fiscal year wise.

	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17
Targets	100	1400	2400	3200	4000
Achievements	112	4834	1755		

4.2.2 Present status of capacity building of LGED staff by training in E-GP system

Realizing social, political and economic conditions of the country, Local Government Engineering Department decides that the e-GP implementation by the organization will not come to true unless all the persons involved in procurement are brought under extensive training in this area within certain time line. LGED has meanwhile established a pool of

smart trainers from potential officers those have keen interest in this area. It is envisaged that in each PE office minimum 5 persons inputs (1 PE, 4 TOC, TEC and AU) are needed in tender management and 4 persons inputs (1 PM, 3 Accountant, Account assistant, AU) are needed in contract management. Considering estimated 700 nos. of PE offices, LGED needs to train about 6000 nos. staffs within project Period .But up to this LGED has only trained 1200 staff and rest 4800 staff need to be trained as early as possible. LGED is continuing the training course for the concerned officials.
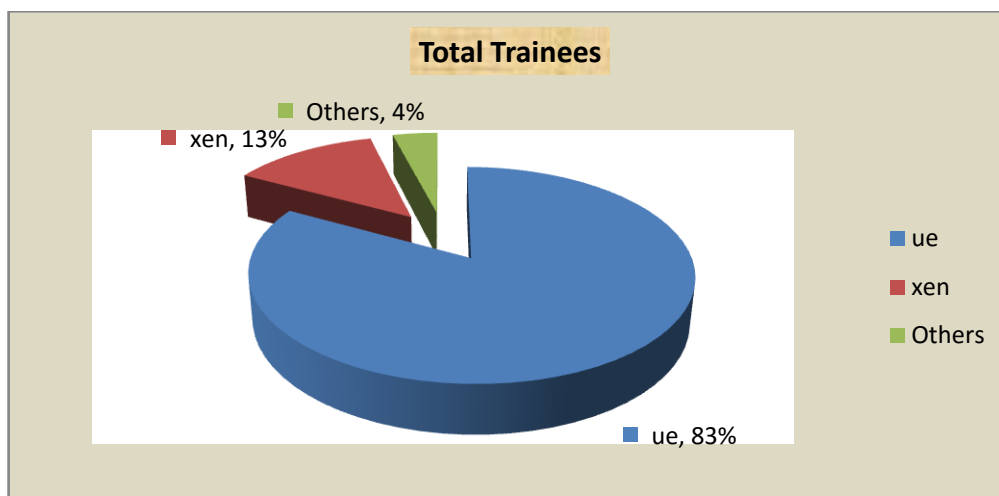

Chart 19-% of human resource to be trained in Upazila Engineer and Executive Engineer office

4.3 The challenges faced by LGED to implement the E-GP system

LGED faced the following challenges to execute the E-GP system that is electronic tendering

- Capacity building of the officials concerned in electronic tendering. Because the system is unknown to every officials and tenderers/ bidders. But LGED has taken the challenge successfully and implementing the e-GP system.

- Around 100% of bidders are not trained in E-GP as well as internet based tendering system;

- Most of the Bankers are not trained and interested to provide support service in E-GP system;

- Network support for internet facility, because the total system is web based and CPTU controlled and monitored.

- Power supply through the country. Interrupted power supply hampered the progress of E-GP. LGED has managed by alternative captive power supply in most of the cases.

- Building awareness of E-GP system among the other stakeholders like Contractors, Banks and other secondary stakeholders about the positive outcome of E-GP system.

- Software problems like frequently session expire (sometime expires before the scheduled time of 30 minutes)

- From tenderer end, while a tenderer desires to decline NOA proposal , warning message should be incorporated through a message box as such mistakenly putting the declined button could be avoided

- Incompatibility of web browser with latest version - The system support only specific version of Internet explorer and Mozilla Fire Fox (Mozilla Firefox 3.6x, 13x, 14x)

- HOPE is not able to see the overall procurement related report. It is only available under organization admin. It may be included. Furthermore, organization admin can't summarize the procurement Statistics Report according to organization level. He shows the APP according to PE offices. An organization level summary report of APP is required.

- When a clarification is made from AA to TEC, the TEC chairperson can only answer the query. He can't upload any documents, as there is no option to upload.

- After signing the TER reports system will show a status that the report is signed.

- E-GP server is very much slow. After clicking one icon, system takes sometimes four/five minutes for next steps (not 100%)

- Verification mail of reset password reaches to the user in slow pace (not 100%)

- ATM card option for purchasing tender document is not functioning properly.(only one bank)

- PE can't work/edit on previous tender's document (which was prepared for his earlier tender) for preparing the new tender document; this is also same for retendering case

- Issue no. 10 is also applicable for Tenderer

- Non-availability of copying facility of BOQs for similar packages resulting huge time for typing same BOQs in different contract packages

- At BOQ form, every item is filled up by tenderer. But sometime it is required for PE to fix up some items (provisional some, fixed amount or supplied items from PE etc.) with amount. This facilities need to be incorporated

- In the TER2 (Technical Responsiveness Report), Details information of Experience, Turnover and Liquid Asset can't be separately inserted, the tenderer is qualified or not this kind of information is required. Detail information should be incorporated.

- If AO is selected for 'END BY' in workflow then only name & designation of the AOs are shown but no office name of the AOs is found. Problem arises when more than one AOs of same name and same designation exists.

- The locking of access of any password holder in case of three times mismatch of password. In some cases the contender intentionally locked the access to E-GP system so that the party could not attend the tender in time. Because the CPTU does not open the access before three days. In the meantime last time to submit tender has been passed.

4.4 Summary of Findings

LGED has been implementing the E-GP system very successfully withstanding the all possible challenges. They are very sincere and motivated to do that. They are giving training to the staff and simultaneously implementing the system. They administered the tendering activities following the e-GP system in progressively. In Fiscal Year 2012-13 target was 100 nos. but achieved 112 nos. which was 112%, in 2013-14 target was 1400 nos. but achieved 4834 nos. which was 345% and in running FY 2014-15 the target was 2400 nos. but up to the November 2014 the progress was 1755 nos. of tenders which was 73% of target. The trend is very impressive and praiseworthy. The training coverage for the LGED respondents was 95% on PPR-2008 and 85% on E-GP system. About 97% respondents believe that the E-GP will be implemented successfully. At the same time 99% respondents desires the E-GP system for the free, fair and transparent administration and participation in tender. But 87% of the respondents needed E-GP training either refreshing or fresh training course. Among the respondents 63% were not satisfied with internet browsing speed and 28% were not satisfied with Bankers support services.

4.5   Discussions

The rising progress of E-GP implementation in 2012-13 was 112% and in 2013-14 was 345% of target and similar in 2014-15 evinced that LGED   will be successful in E-GP implementation within their time frame 2016-17 in 400 contracts. The challenges faced by LGED found here were also mentioned in previous study " Operational Risk in e-GP Implementation of Bangladesh Perspective" by Md. Mahboob Hassan, Executive Engineer, LGED for the Master Program on Public Procurement Management for Sustainable Development", under International Training Centre of ILO, Turin Italy and "Challenges of Implementing electronic Government Procurement: A case study on Bangladesh Water Development Board" conducted by Syed Rafiqul Alam, for the Masters ion Procurement and Supply Management", under IGS ,BRAC University and many others report.

Therefore the results of the research work are acceptable and validated for the future development of E-GP system implementation in LGED. This will help LGED to address the challenges in proper manner to make it easy implementation of E-GP system for the acceptability and accountability of the department as well as Bangladesh Government. In my research work there might have some errors in data, collected by questionnaire survey regarding training needs, internet speed satisfaction, educational qualifications and power supply continuity. Some of the respondents might have hidden some information.

Chapter-5
Conclusions and Recommendations

5.1   Conclusions

Local Government Engineering Department (LGED) is one of the four public organizations selected to implement the E-GP system on pilot basis by PPRP-II Project under CPTU, IMED, Planning Ministry, The Government of Bangladesh. LGED was highly motivated and committed to implement the system as per requirement. So LGED took it as one way avenue to succeed took measure accordingly. The main objective of this research work were to find the challenges / obstacles to the way of E-GP implementation and finding the progress to check the appropriateness of the measures taken to materialize the system.

The main challenges found were capacity building of staff, Contractors, Bankers, Slow speed of internet connectivity as well as coverage, uninterrupted power supply and many e-GP system software problems like server speed, response time , session out and some other problems and social perception on E-GP system. But LGED's concerned officials somehow managed the maximum problem as per strong command and guidance of Chief Engineer and other senior Engineers devoted to LGED head quarter.

The implementation results showed that in Fiscal Year 2012-13 target was 100 nos. but achieved 112 nos. which was 112%, in 2013-14 target was 1400 nos. but achieved 4834 nos. which was 345% and in running FY 2014-15 the target was 2400 nos. but up to the November 2014 the progress was 1755 nos. of tenders which was 73% of target. The trend is very impressive and praiseworthy. The training coverage for the LGED respondents was 95% on PPR-2008 and 85% on E-GP system. About 97% respondents believe that the E-GP will be implemented successfully. At the same time 99% respondents desires the E-GP system for the free, fair and transparent administration and participation in tender. But 87% of the respondents needed E-GP training either refreshing or fresh training course. Among the

respondents 63% were not satisfied with internet browsing speed and 28% were not satisfied with Bankers support services.

Despite all challenges LGED will converge to the final goal of full implementation of E-GP system. Because despite a very strong 'legislative & regulatory framework' in procurement system; it is not possible to earn the absolute confidence of the neutral body in integrity point of view in manual procurement. But it is possible by E-procurement system. E-procurement ensured the following competitive advantages in compared to manual:

- Free : E-Procurement System eliminates the political and law order situation threats t;
- Fair: System eliminates the human intervention in e-procurement;
- Transparency. System ensures compliance;
- Efficiency: E-Procurement is highly efficient with documented track to monitor and control.
- Economy: It is more or less paperless document preparation and submission. So it is economical;
- Remote operation: Limitation exists in optimum use of time resource and place. System eliminates time and space barrier;
- Internal Control: Manual procurement is very cumbersome. But it is very easy to manage in e-procurement.
- Tender Challenging

    Many complaints were received in manual. Lot of time and human resources were used to manage. But it is less in E-Procurement system.

Limitations: In this research work there were many limitations in survey work as well as in interviewing the respondents. Since the time limitation for this work was very prominent. The time for this work was three months. Within this time I had to appear at examinations for

three courses. Sample selection would have been more rational to the entire population i.e. total stakeholders in procurement activities. But the population size is not fixed because they are open ended. Any one either local or abroad can attend the tender. So the sample size is verily flexible to time and opportunities.

5.2   Recommendations

5.2.1   Recommendations for LGED

The recommendations made after this research works are as follows:

- Accelerate the training of E-GP and PPR-2008 to all procurement related staff within a time frame. In some cases seconding and apprenticeship may be exercised;

- Take initiatives to build awareness of contractors/bidders ;

- Ensure the procurement knowledge management for the procurement unit LGED;

- Make continuous dialogue to CPTU to integrate the Rate Schedule and Estimate Preparation Software (RSEPS) of LGED to E-GP system;

5.2.2   Recommendations for CPTU

The recommendations made after this research works are as follows:

- CPTU needs to quick respond to the difficulties faced by the organization; should not be absolutely dependent on consultant operating the e-GP software. Core competency must be owned by CPTU;

- Should integrate the RSEPS or other similar software used by concerned procurement department to E-GP system software which will motivate staff and accelerate the efficiency;

- Should update the software to be compatible to latest browsing engine software, like Mozilla Firefox, Internet Explorer and so on;

- Should address the claim and complains of users quickly; CPTU should work collaboratively with all client organizations and stakeholders;

5.2.3 Recommendation for the Government

- Government should take proactive role to develop the quality internet connectivity

- Government should widen the electricity coverage area with reasonable continuity of power supply;

5.2.4 Future work:

Separately a research work could be done for e-CMS (Electronic Construction Management System) operation.

Reference

Alam, Syed Rafiqul (2012), Challenges of implementing Electronic Government Procurement; A Case Study on Bangladesh Water Development Board

Alam, Shafiul (2011), E-tendering: Right step at right time, The Daily Star [Online]: http://www.thedailystar.net/ (date: June 10, 2011)

Aman, Aini and Kasimion, Hasmiah (2011), E-government Evaluationm and Organizational Learning, International Journal of Digital Society, Vol.2

CPTU, Central Procurement Technical Unit (2006), Public Procurement Act 2006 [pdf] Available at, http://www.cptu.gov.bd [Accessed 20 November 2012].

CPTU, Central Procurement Technical Unit (2008), Public Procurement Regulation 2008 [pdf] Available at, <http://www.cptu.gov.bd [Accessed 20 November 2012].

CPTU, Central Procurement Technical Unit (2011), Bangladesh e-government procurement (e-GP) guideline. [pdf] Available at, <http://www.cptu.gov.bd [Accessed 20 November 2012].

Hassan, Md.Mahboob (2014), Operational Risk in e-GP Implementation of Bangladesh-LGED Perspective

Hoque, Dr Shah Mohammad Sanaul (2010), "E-Government Websites in Bangladesh: A study on Citizens' Benefits"

Hoque, Ridwanul (2011), Public Procurement Law in Bangladesh: From Bureaucratisation to Accountability

Islam, Md. Zohurul and Khair, Rizwan (2012), Preparation of E-Government in Bangladesh: an Exploratory Analysis, Journal of Information Technology (JIT), Vol. 1

Kotter, John P (1995), Leading Change, Harvard Business School

Mahmood, Shakeel Ahmed Ibne (2010), Public procurement and corruption in Bangladesh confronting the challenges and opportunities

Mahmood, Shakeel Ahmed Ibne (2011), Public Procurement System and E-Government Implementation in Bangladesh: The Role of Public Administration

Mahmood, Shakeel Ahmed Ibne (2010), Public Procurement and Corruption in Bangladesh Confronting the Challenges and Opportunities, Journal of Public Administration and Policy Research, Vol. 2(6)

MOSICT, Ministry of Science and Information and Communication Technology (2010), "National Science and Technology Policy", Government of The People's Republic of Bangladesh.

Office of Government Commerce (OGC). (2002). a Guide to e-Procurement for the Public Sector.

SICT (2005), "Towards an e-Society-Status of e-Government in Bangladesh", Ministry of Planning.

Munir, Siddiquee (2013), Implementation of Electronic Government Procurement (e-GP): An Assessment on Organisational Capacity of Local Government Engineering Department

The World Bank (2003), Electronic Government Procurement (E-GP), World Bank Draft Strategy

The World Bank (2006), Electronic Government Procurement (e-GP), Opportunities & Challenges

The World Bank (2006), Report on Electronic Government Procurement (e-GP) Readiness Assessment, The Government of the People's Republic of Bangladesh.

The World Bank, Asian Development Bank and The Inter-American Development Bank (2004), Electronic Government Procurement Roadmap

United Nations (2011), E-Procurement: Towards Transparency and Efficiency in Public Service Delivery, Report of Expert Group Meeting.

Vaidya, Kishor, et el (2006), Critical Factors that Influence e-Procurement Implementation Success in the Public Sector, Journal of Public Procurement, Vol. 6

Yazdani, Md Golam (2013), Comparison of Procurement Performance of Rural Transport Infrastucture Project and Construction of Large Bridge on Upazila & Union Roads Project in LGED

www.eprocure.gov.in

www.ec.europa.eu/information_society

www.peppol.eu

www.slideshare.net/Celtrino/what-is-peppol

www.ec.europa.eu/information_society/apps/projects/.../index.cfm

www.docbox.etsi.org/workshop/2012/201202_esiworkshop/peppol.pdf

Institute of Governance Studies (IGS), BRAC University
Survey Questionnaire

Research Topic: Electronic Tendering in Public Procurement: A Case Study on Local Government Engineering Department (LGED)

*(*This questionnaire is solely for research purpose. The aim of this research is to find out the difficulties faced by the stakeholders of e-GP that needs to be addressed properly. Your honest responses are valuable for the researcher. The researcher assures you that the information given by you will be kept confidential & will be used only for the academic purpose.*)*

Respondent type: PD/Xen/ Sr.AE/ UE/AE/ Banker/ Bidder/ Other (please tick)

1. Name: (Optional)

2. Name of Organization/ Firm :
    Address:-

3.. Position (For bidder only) : Owner ☐ Manager ☐ others ☐ (Please Tick)

4.. Sex: (Pls tick) Male ☐ Female ☐

5. Age: ☐ Years (Pls put figure)

6. Total years of experiences: ☐ Years (Pls put figures)

7. Education: (Optional) SSC/HSC/Bachelor/Masters/Others (Put tick)

8 Do you have training on Yes ☐ No ☐
    PPR-2008? (Pls tick)

9. Do you have training on e-GP? Yes ☐ No ☐
    (Pls tick)

10 How many tenders (Packages) Paper based ☐ Nos.
    did you manage in last two e-GP system ☐ Nos.
    years? (Pls put nos.)

11 How do you manage your access By yourself ☐ By other ☐
    to e-GP system? (Pls tick)

12 Do you need training on e-GP? Yes ☐ No ☐
    (Pls tick)

13 What internet support system do
    you use? (Mobile/Broadband/BTCL)

14 Is the internet speed acceptable Yes ☐ No ☐
    to doing e-GP? (Pls tick)

    If not, what do you suggest?

15 What tendering system do you Paper based ☐ e-GP ☐
    like? (Pls tick)

16.	How much is e-GP system user-friendly to you? (Pls tick one.)	Very high user-friendly		
		High user-friendly		
		Average user-friendly		
		Poor user-friendly		
		Not user-friendly		
17	Are you satisfied with supports of LGED officials regarding e-GP? (Pls tick)	Yes		No
18	Are you satisfied with supports of CPTU officials regarding e-GP?(Pls tick)	Yes		No
19	Are you satisfied with supports of Bank officials regarding e-GP?(Pls tick)	Yes		No
20	Do you think e-GP will be implemented successfully? (Pls tick)	Yes		No

21. What are the problems you face while using e-GP?

1.0

2.0

3.0

22. What do you suggest to implement e-GP successfully?

1.0

2.0

3.0

23. Any other comments