

The Prospects and Challenges of Electronic Government Procurement (e-GP) in Public Purchases

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Abstract: *E-procurement (electronic procurement) is the business-to-business or business -to- consumer or business- to government purchase and sale of supplies, work, and services through the Internet as well as other information and networking systems, such as electronic data interchange and enterprise resource planning. E-procurement projects are often part of the country's larger e-Government efforts to better serve its citizens and businesses in the digital economy. It has been observed the system or process of public procurement in Bangladesh evolved, modified and developed over time, but still there is space where large amount of contributions needs to advance this field. The research is an attempt to study the Electronic government procurement (e-GP) system in Bangladesh, identify the problems and provides practical solutions. A questionnaire has prepared and conducts user-study to number of personals at Roads and Highway department (RHD), a government authority in Bangladesh responsible for maintenance and development of roads and highways. In addition, key informant interview has been conducted to collect invaluable opinions of some senior officers and concerned contractors. Collection of primary data used to find out real problems and to figure out real solutions for this.*

Keywords: Electronic government procurement (e-GP), Centralized Registration System, Work Flow Management System, e-tendering.

1. Introduction

Public services across the world are now being made digital. The main objective of digitization is to make government services quickly accessible to the people in a hassle-free and transparent manner. People pay taxes and the government procures goods, works and services with public funds for their betterment. Therefore, ensuring value for money is an obligation on the part of the procuring agencies of the government. It happens when there is economy, efficiency and effectiveness in public procurement. The government of Bangladesh has operationalized the Public-Procurement-Act and Public Procurement Rules [1] for ensuring transparency and accountability in the process of public procurement. To save time, costs and make the process more competitive it has also implemented ICT-based public procurement process titled 'electronic government procurement' (e-GP) system operates under the law, rules and e-GP guidelines.

The Central Procurement Technical Unit (CPTU) of Implementation Monitoring and Evaluation Division (IMED), Ministry of Planning; is implementing e-GP with support from the World Bank. The digitization of tendering process is also a part of the government vision for Digital Bangladesh by 2021. However, the target for full digitization of public procurement is set for December 2016.

Public procurement through government contracts has always been the primary source of corruption. The manual tendering based public procurement system presents many opportunities for manipulation by corrupt civil servants and tender "mafias" [2]. Killing of tender rivals and cinema style kidnapping and violence have always been part of the tendering process become a normal phenomenon here. In some cases, cartels distribute the works within themselves and seek exorbitant price. Politicians and public employees

also collaborate to award contracts to the payer of the highest bribe or to their favored contractor. They also indulge in corruption by systematically leaking information and manipulating papers during the tender approval process. If e-Procurement systems have been introduced, fair businessman will participate in the tender. The tenderer also get original vendor to purchase the things. So, Government should take some steps to implement e-Procurement fully because of to save time and cost, enhance competition, ensure transparency and remove corruption in procuring goods, works and services.

The CPTU has been implementing e-Procurement since 2012 following its successful piloting at four large procuring agencies. These are Local Government Engineering Department (LGED), Roads and Highways Department (RHD), Bangladesh Water Development Board (BWDB) and Bangladesh Rural Electrification Board (BREB).

2. Literature Review

2.1 e-Government Procurement (e-GP) System In Bangladesh

National e-GP portal (www.eprocure.gov.bd) is developed, owned, being operated and maintained by the Central Procurement Technical Unit (CPTU), IMED of Ministry of Planning. The e-GP system provides an on-line platform to carry out the all procurement activities by the Public Agencies. The e-GP system is a single web portal from where and through which PAs and PEs will be able to perform their procurement related activities using a dedicated secured web based dashboard. It is hosted in the e-GP Data Center at CPTU. The web portal is accessible by the PAs and PEs through Internet for their use. This complete e-GP solution introduced under the Public Procurement Reform Program is

being supported by the World Bank and gradually used by all government organizations. e-Tendering and e-Contract Management System (e-CMS) is launched successfully on pilot basis and eventually being rolled out to all PEs of four sector agencies. It is now expanding to all government procuring entity dealing with public procurement.

- Media community for updates, announcements, news releases etc

2.3 Terms and Conditions of e-GP System User Agreement

National e-Government Procurement (e-GP) portal (<http://eprocure.gov.bd>) is developed, owned and operated by Central Procurement Technical Unit (CPTU), IMED, Ministry of Planning for carrying out the procurement activities of the public agencies (procuring agencies and procuring entities) of the Government of Bangladesh. For accessing and using this e-GP user services, users shall be deemed to have accepted to be legally bound by these Terms and Conditions of Use and comply with all of the Terms and Conditions given below, and the guidelines as stipulated in e-Government Procurement Guidelines:

a) Centralized Registration System:

Every stakeholder must be registered in the e-GP system in order to have appropriate access points and to get working dashboards with authorized functions in e-GP system. Registration should be done through the online registration page of the e-GP system followed by due diligent post verification if CPTU considers it necessary. The intended user must provide all required information, digital documents and accept the terms and conditions of e-GP system use.

b) Registration charges

Tenderers/ Applicants/ Consultants will be charged Bangladeshi Taka 5000 for the user registration, and annually it should be renewed and 2000 will be charged each year for renewal of their account. For international Tenderers and Consultants, registration fee is USD \$100 and annual renewal fee is USD \$30. Users must make sure the amount is deposited to CPTU designated account, or send bank draft in the name of Director General, Central Procurement Technical Unit (CPTU) before membership expires.

2.4 Procurement Manual Process & Electronic Process

e-Tendering is the carrying out of the tendering process using electronic means, such as the internet based specialist e-tendering software applications. The tendering process should be efficient, cost effective and transparent. It enables suppliers in different geographic locations to be notified of an opportunity, to express an interest, to download tender documents and to submit a response. This promotes competition for the tender, and provides a process that is efficient for both the purchaser and bidder and a selection process that is transparent to bidders.

There are mainly two types of users of the system. One is Buyers another part is Bidders those who are interested to bid their tender. The traditional tendering process first one tender is created and published for bidders with a certain closing and opening date and time. The then vendor collect tender in hard copy, so that bidders accept printing, copying and delivery costs. The traditional approach to tendering is often characterized as time consuming and expensive. The responses are held in a secure tender dropping 'box' and can only be viewed after the closing date has passed and at

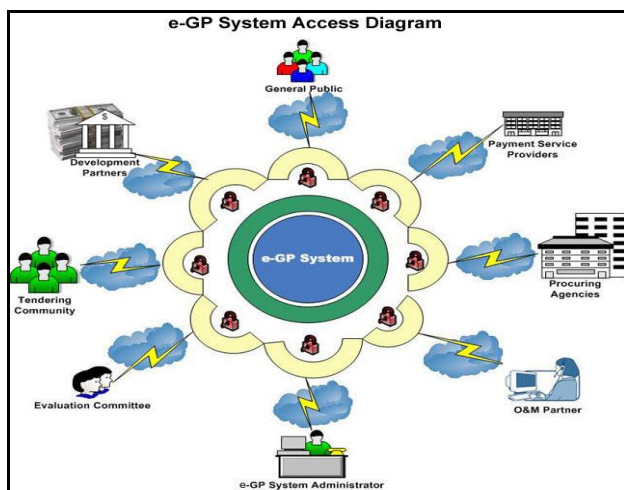


Figure 1: e-GP system access diagram

Central Procurement Technical Unit (CPTU), IMED, Ministry of Planning is developing the e-GP System using the cutting edge technology and global expertise complying with the Public Procurement Act 2006 and Public Procurement Rules 2008. Bangladesh e-Government Procurement (e-GP) system consists of a comprehensive set of interlinked modules. These modules are:

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

- Centralized Registration System
- Work Flow Management System
- e-tendering(e-publishing/e-advertisement,e-lodgment, e-valuation, e-contract awards) system
- e-Contract Management System
- e-Payment System
- Procurement Management Information System (PROMIS)
- System security administration
- Handling error and exceptions
- Application usability and help

2.2 Categories of e-GP Stake Holders/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:

- Ordinary Citizen/Public for procurement related general information
- Tenderers/ Contractors/ Applicants/ Consultants
- Procuring Agencies/ Entities
- Payment Service Providers (Scheduled banks and other payment service providers)
- Development Partners
- e-GP System Administrators (CPTU and PE administrators) and Auditors
- Operation & Maintenance partners
- Evaluation Committees

opening time. Closing time means when the tender will be close from bidders. Opening time is a particular time when or after that time a specific tender may be opened. Tender responses have to be opened by tender opening committee and evaluation committee processed and data collated for comparison and evaluation from the responses. Tender evaluation committee selected the responsive bidder.

In e-tendering system buyer's side at first tender is invited and online system is created for bid offering to the buyers. There are some subsystems in this system. Bidders need to make a registration entering their necessary information in the system. After inviting and creating the tender then bidders can log on to the system using the user id and password and can submit their bid into the system. All data and corresponding information is stored in database as cipher text. After a finite period tender is opened by a group of member in buyers end and sent to tender evaluation process. In the e-tender system received of tender, preparation of opening and comparison sheet and all other formalities done electronically and all documents are available online so printing, copying, distribution etc. cost can be eliminated.

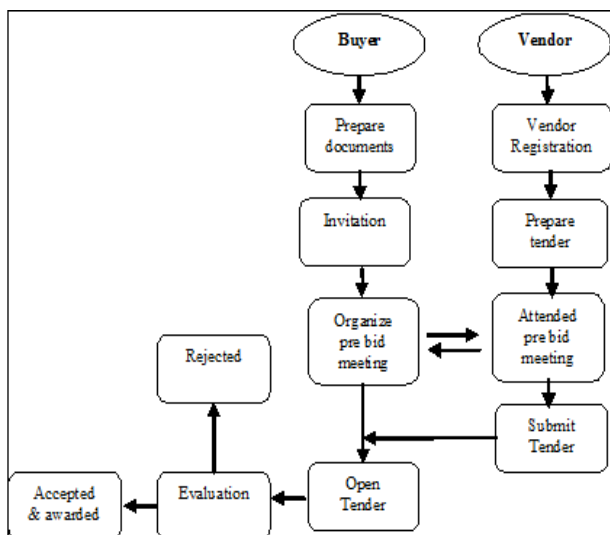


Figure 2: Basic procurement process

2.5 Deficiencies in Manual Procurement System

Prior to the introduction of an e-Procurement platform, procurement in Government departments was carried out through a manual tendering process. The manual tender system was suffering from the following deficiencies:

- Discrimination and delay in issue of tender schedules to suppliers
- Cartel formation to suppress competition
- Physical threats to bidders
- Tampering of tender files
- Delays in finalization of tenders
- Human interface at every stage
- Lack of Transparency
- Details Tender notice published in the daily newspaper which is costly
- Preparation of tender schedule time consuming process. Sometimes need to re-tender and the notice to publish in the newspaper. Pre-tender meeting required declared place

and time the tenderer required to be physically present at the pre-tender meeting.

- In the purpose of purchase and submission tender schedule, the tenderer require to come physically and submit the tender. The name of the tenderer, who purchase tender schedule, is declared by unauthorized person and there is a possibility of collusive practice.
- Political and other barrier may occur in manual tendering system.

2.6 Benefits of e-Procurement

- In tender submission purposes, The tenderer prepare tender documents and submit online, so the tenderer is not require to come physically for purchase and submit the tender.
- The winning bidders are informed automatically by e-mail and published in the concern website which reduce the time for prepare contract award and related documents.
- As the process is completed through on line, so no political and others interfere is occurred in the process of Government purchases and it is easy to ensure competition, accountability transparency in the tender process which ensured best value for money.
- In e-Procurement Process, it is easy to ensure efficiency in procurement and provide equitable treatment of bidders and fairness in bidding offers.
- Additional benefits include savings on time, efforts and money involved in the procurement cycle for both the supplier and the contractor.

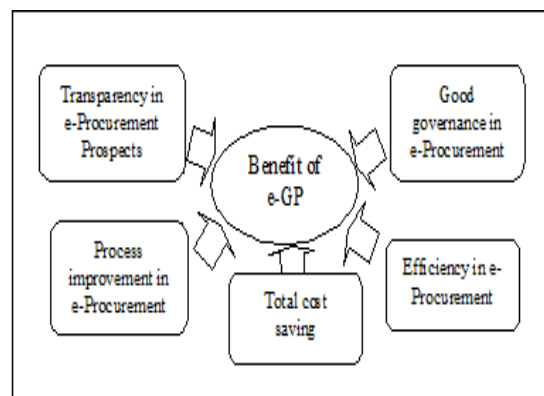


Figure 3: Conceptual framework for benefits of e-GP

2.7 Challenges of e-Procurement

There are important challenges to e-procurement implementation:

- **Technological challenges:** Internet speed, Power supply, uninterrupted access to e-GP server and Internet connectivity, 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) are technological challenges for proper implementation of e-Procurement.
- **Administrative challenges:** Computer knowledge of bidders and Training of contractors, bankers about e-GP are administrative challenges for proper implementation of e-Procurement. Bidders do not have adequate logistic support. It is difficult for bidders to buy computer, scanner, printer etc.

- **Challenges of awareness:** Acceptability of new system and awareness of all stakeholders are the challenging factors for proper implementation of e-Procurement
- **Challenges of security:** The two factors such as (1) Protection against computer virus etc. (2) Maintenance capability of CPTU for e-GP software problems are the two challenging factors for proper implementation of e-Procurement.

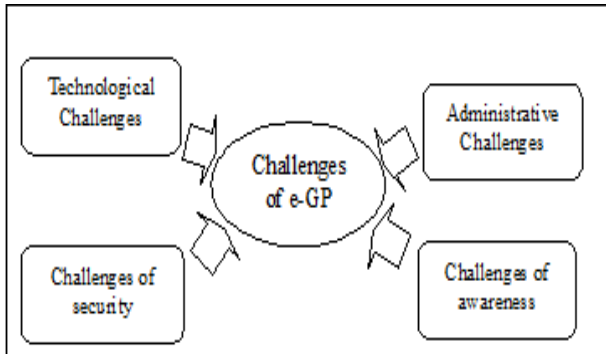


Figure 4: Conceptual framework for challenges of e-GP

2.8 e-Tendering Accelerate Public Procurement:

e-Tendering process introduced to expedite public procurement registered a total of 31,121 bidders and 291 PEs of those 4 sectoral agencies & 44 Banks to receive e-payments till March 2017. These are all meant for making public procurement transparent, efficient and accountable to best utilize the limited public resources[4][5].

Table 1: Tender Period wise No. of Bidders & No. of Bids invited

e-GP Trends		
Tender Period	# of Bidders	# of Bids invited
Jun/12	294	14
Dec/12	525	144
June/13	1067	498
Dec/13	7459	4548
June/14	9238	8436
Dec/14	12700	126781
June/15	15559	26102
Dec/15	18794	291260
June/16	22183	411440
Dec/16	27258	75983
Mar/17	31121	88555

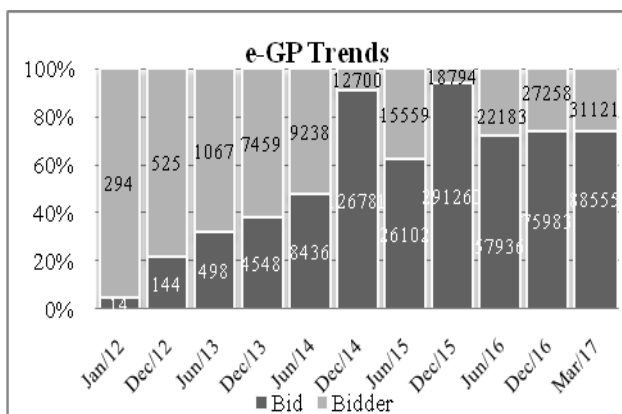


Figure 5: Bar Graph: No. of Bidders & No. of Bids invited

3. Methodology

This paper is based on primary and secondary data. Primary Information was collected through structured interview in questionnaire. Thirteen officers from Roads and Highways Department (RHD) were interviewed to collect qualitative data. Focus group discussion was done with 10 (Ten) bidders in order to identify prospects and challenges of e-GP. The interviews are semi-structured and the questionnaire used in the interviews included six questions. The sources of secondary data include CPTU, different books, journals, articles, newspapers and different publication of websites and web resources were adequately consulted.

4. Thesis Questions

- e-procurement definition, uses, benefits, shortfalls
- Problem finding mechanism
- Find out the pros and cons in between e-Procurement and manual tendering process
- Challenges for proper implementation of e-Procurement in Bangladesh
- Solution approach

5. Results

Based on the answer of the questioner e-procurement ensured the following competitive advantages in compared to manual:

- **Freedom:** E-Procurement System eliminates the political and law order situation threats.
- **Fair:** System eliminates the human intervention in e-procurement.
- **Transparency:** “Secrecy of bidder’s information” and “Openness of information regarding procurement” has ensured after introducing e-Procurement.
- **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. Total cost in e-GP system has reduced 77.35% as compared to manual tender. Total time in e-GP system has reduced 49.46% as compared to manual tender.
- **Security Challenges:** e-GP server has SSL (Secure Sockets Layer) certificate to protect hacker. In SSL certificate data transmission has done in encrypted and decrypted form. So, hacker cannot hack the data.

6. Conclusions

Despite a challenging environment, Bangladesh has been transforming its procurement environment for better outcomes in public contracting with improved efficiency, effectiveness, and transparency at key sectoral ministries and agencies.

Transparency in e-GP: Secrecy of bidder's information and Openness of information regarding procurement have ensured after introducing e-Procurement. Thus e-Procurement is playing important role for ensuring transparency in procurement process.

Good Governance in e-GP: Tender box snatching problem in manual tendering has solved in e-GP system. Collusion among the bidders has reduced significantly after introducing e-Procurement system. Competition among the bidders has increased. Thus e-Procurement is playing important role for ensuring good governance in procurement process.

Efficiency in e-GP: Total tendering process has improved after implementation of e-Procurement. e-Procurement process is faster and easier than manual tender. Thus, e-Procurement system is efficient than manual tender.

Process Improvement: e-Procurement increases availability of tender notice and necessary tender documents through online. Thus, e-Procurement has ensured process improvement in "Good" level in procurement activities. In the e-GP the bidders need not be physically present to submit their tenders to the PEs. They can submit tenders online from home. This will widen the opportunity for competition. There are some infrastructural problems, like low internet connectivity and shortage of power. The power situation has been a big challenge, but the government has to overcome it to materialize its promise to the people to build a Digital Bangladesh by 2021.

The Second Public Procurement Reform Project (PPRP II) has introduced electronic procurement and on-line performance monitoring (PROMIS) system at four sectoral agencies. So, any violation in the process will automatically be detected from the data provided by the PE's to the PROMIS. PPRP II is working to improve performance of the public procurement system, particularly in sectors that hand out large or many contracts the results found that,

- 100% tenders invited through electronic procurement in four key agencies in 2017
- 99.91% contracts awards were published at the Central Procurement Technical Unit (CPTU) website in 2017.
- 100% of the bids invitations were published in newspapers in 2017
- Over 20,000 officials provided 3 week, 5 day, 3 day, 2 day, 1 day procurement training.

The use of modern information technology makes public procurement easier and more transparent. Anyone can get all bidding information from online, and the application can be sent from anywhere with the click of a button.

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Author Profile



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