Marketing of e-Procurement as A Tool in Curbing Corruption in Public Procurement

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ABSTRACT

This study looked into the insights of marketing of e-procurement as a tool in curbing the corruption tendencies that have besieged the procurement activities in the public sector in Nigeria. Procurement as an important function of government for infrastructural development, much is spent in Nigeria year-on-year. But the rate of corruption associated with the Nigerian public sector is very alarming. Data were sourced basically from secondary sources. The study identified the factors that undermine integrity in the public procurement process. It revealed the weak public procurement system and practices characterized by corruption and lack of accountability, transparency, competition and fairness. This paper proffers sound procurement automation in the public sector as a panacea to effectively curb corruption in the implementation of the public procurement process in Nigeria. It also listed the benefits of successful automated procurement system as corrective measures that can help curb corruption in the system.

Key words: Marketing of e-Procurement, Procurement Types and Stages, Curbing Corruption in e-procurement, Benefits

INTRODUCTION

Background to the Study

The basic tenet of marketing of e-procurement programs result into an improvement of the labour productivity of the public sector and as a consequence, contribute to a number of intermediate outcomes to economic rationality and to GDP growth (Corsi, 2006). The intermediate outcomes include better services, cost and time savings, organizational efficiency, simplification, transparency and accountability.

The marketing of e-procurement definition "is the term used to describe the use of methods, typically over the internet to conduct transactions between awarding authorities and supplies" (Corsi, 2006). The process of e-procurement covers every stage of purchasing (procurement) from the initial identification of a requirement, through the tendering process, to the payment and potentially the contract management.

According to in Nigeria, public sector procurements run into millions of Naira and yet those procurements are never always successfully delivered as intended. Most times, there have been upward reviews of contract prices and yet these contracts are never completed and delivered as planned. It is pertinent to mention here, that before the commencement of any procurement processes, it is believed that all the due processes in terms of the procurement planning stages as per table 1 have been adequately considered. However, at the end of the day, some of the envisaged procurements are never successfully carried out either in the right quality, time or price. Sometimes, contract are totally abandoned and the initial sum paid forfeited by the government, yet most of the questions are not asked.

As a result, the societal problems which the procurements were supposed to take care of are left unattended to. Thus, losses are incurred via expended costs as well as the lost opportunities through the misuse of societal reserves. On the other hand, private and Not for Profit organization's procurement needs are usually

achieved within the envisaged resource expenditure, time and quality. It is this waste of public resources in the process of public procurements that necessitated the enactment of Public Procurement Act, and gives credence to this study. It should be noted that government procurement involves a high risk of corruption mainly because of the huge size of money and the complexity of many of the procurement processes in which the player worked closely with politicians and civil servants. Often the personal interests of the public officials are not the same as the interests of the public. Such a conflict of interest problem, known as the principal-agent-problem, increases the risk of corruption. According to OECD and World Bank (2004), the highest percentage of bribery cases occur in the area of public procurement to influence the awarding of public contracts. Corruption in public procurement causes inefficiencies and high costs to the public. In order to prevent corruption and to ensure transparency and competition among suppliers, public procurement is subject to legal regulation.

Objective of the Study

The general objective of the study is marketing of e-procurement as a tool in curbing corruption in public procurement, while the specific objectives are:

exploring and understanding what marketing of e-procurement is all about; accessing the various steps involved in marketing of e-procurement; accessing the role of e-procurement (automation); identifying the role of e-procurement in curbing corruption; accessing and identifying how e-procurement system can help in curbing corruption in the public sector, and investigating the challenges and problems that might impact the effectiveness of procurement automation in the public sector.

Research Methodology

This study falls under the survey research typology. Data were sourced basically from secondary sources. Key descriptors and key words used include marketing of e-procurement, procurement types and stages, curbing corruption in e-procurement, benefits, agency lifecycle of procurement and functionality of e-procurement. Sources included in the review had direct relevance to marketing e-procurement, curbing corruption in e-procurement, benefits associated with e-procurement, electronic marketing and automation. Included in the references are academic and practitioner journals while a few sources include books and conference proceedings. Abstracts were not left out for they provided the initial support for sources to be selected.

Significance of the Study

The study seeks to provide an insight into the importance of technology in effectively implementing a corrupt free public procurement in Nigeria. More so, it seeks to look into the procurement systems in Public Sector administration in Nigeria. It will seek to contribute to knowledge and development of literature in the subject area under investigation and serve as a basis for further research to strengthen the knowledge base in this faculty.

Abbreviations and acronyms

ERP	Enterprise Resources Planning
EU Directives	European Union Public Procurement Directives
GPA	Government Procurement Agreement
OECD	Organization of Economic Cooperation and Development

SPA	State Procurement Agency (Georgia)
TI	Transparency International
UNCAC	United Nations Convention against Corruption
UNODC	United Nations Office on Drugs and Crime
UNCITRAL	United Nations Commission on International Trade Law
UNCITRAL Model Law	UNCITRAL Model Law on Public Procurement
WTO	World Trade Organization

LITERATURE REVIEW

Concept

Most senior executives of public sector are familiar with the invaluable role that marketing of e-procurement plays in the supply categories that directly contribute to the production of their goods and services or otherwise for the provision of their services. E-procurement has delivered measurable benefits in helping public sectors obtain the most appropriate materials at the best cost available assisting with the engagement of logistics providers for the production and distribution of their products and services and help in the sourcing of services for the sector to run as efficiently as possible (Joint Survey, 2010), According to Ibem, Aduwo, Afolabi, Oluwunmi, Tunji-Olayemi, Ayo-Vaughan & Uwakonye (2020), posited that e-procurement, refers to the use of internet-supported processes to support the execution of procurement activities, including the acquisition of deliveries, services, materials and equipment (Vitkauskaite & Gatautis, 2008 and Aduwo, Ibem, Tunji-Olayeni, Uwakonye & Owolabi, 2017). However, e-procurement has been described as consisting of tools that facilitate the acquisition of goods and services over the internet (Gunase-Kuran & Ngai 2oo8). Contributing, Oyediran and Akintola (2011) posited that e-procurements are e-tools that can be used at different stages of orijects to execute different tasks.

Adebayo and Evans (2015) and Moon (2005) observed that e-procurement is changing the way companies source their goods and services with increased utilisation of procurement methods such as electronic data interchange (EDI), enterprise resource planning (ERP) and the world wide web (www) being used by organisations and governments to conduct procurement activities. The use of different web-based information and communication technologies (ICTs) to carry out supply chain management activities is increasing in the e-procurement system (Aduwo, Ibem, Ayo-Vaughan, Uwakonye & Owolabi 2017). One aspect of marketing is the global acceptance by the organisations, industry and government is e-procurement. Accordingly, e-procurement is the use of electronic communication technologies and transaction processes to buy services, and goods or conduct tendering, bidding and awarding contracts. In this respect, e-procurement is the process through which contracts relating to the provisions of goods and services or any combination thereof are created, managed and fulfilled (International Organisation for Standards, 2010)

The research gap in this study is made good of by the work of Pani, Agrahari, De and Sahoo (2011), "Literature and Research Issues in e-Procurement" that supply market characteristics and product characteristics explain the emergence of various e-procurement and classifying the ownership and governance structures. They go further to posit that these e-procurement systems have different impacts on inter-organisational relationship and value generated from e-procurement. These impacts however are

modelled by adoption and implementation of risks.

Marketing e-Procurement: Buying Less for Less

In their ground breaking book "Buying Less for Less", Preece & Wohlworth (2013) lay out a convincing argument that marketing should be viewed as an investment and not as a cost centre. It is the job of marketing procurement to obtain optimum value from their organisation's portfolio of agencies, delivering the best, "Return on Investment" (ROI) for every dollar spent. It is this point that largely distinguishes marketing from other procurement categories and it requires application of specific tools and techniques. Procurement can best contribute to management marketing by application of specific tools and techniques while following the agency life cycle management (Preece & Wohlworth, 2013).

Agency Lifecycle of procurement

The study considers the five key stages in the lifecycle that marketers have with their agencies. The key five phases (Figure 1) agency lifecycle are Select, Scope, Brief, Produce, and Evaluate (Joint White Paper, 2013).
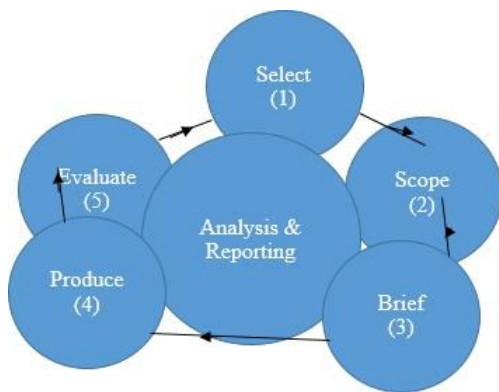

Figure 1: Agency Lifecycle of Procurement

Source: Joint White Paper (2013)

Phase 1–Select: The goal of every major procurement department is to ensure that they have the best portfolio of strategic suppliers working on their stakeholders' business and at the best price possible. In the direct supply categories many companies use refined techniques such as having approved panels of supplies and consistent request for proposal (RFP) processes. For price-sensitive decisions, they use tools such as reverse auctions to deliver the lowest cost to their organization.

Phase 2 – Scope: Once a supplier has been selected, the next job for procurement is to formally engage with that organisation, specifically looking at the product, budget and costs associated with what needs to be delivered. In direct supply, this often revolves around specifications, part catlogs and price lists. The more generic the type of supply being provided, the easier it is for clients to engage with their particular supplier.

Phase 3 – Brief: One of the fundamental differences between direct supply and marketing supply is found in the work itself. More often than not, direct supply is dealing with a tangible product. This means that clear specifications and engineering techniques can be applied to define the work product, and suppliers have a very clear undertstanding of what needs to be delivered.

Phase 4 – Produce: Procurement is often involved in the purchasing of the machinery utilized to manufacture products. An automotive production line is an impressive feat of engineering excellence, where advanced robotics produce high-quality cars at an incredibly rapid rate**.**

Phase 5 – Evaluation: One of the fundamental roles of supplier relationship management (SRM) is to measure the performance of suppliers. Most organizations will have a series of service level agreements (SLAs) with their strategic suppliers and will often utilize scorecards to measure the performance on a range of metrics. Suppliers who do not meet their SLAs may need to provide appropriate rebates.

The Enterprise Resource Planning (ERP)

According to Oracle (2022), "Enterprise resource planning (ERP) refers to a type of software that organizations use to manage day-to-day business activities such as accounting, procurement, project management, risk management and compliance, and supply chain operations. A complete ERP suite also includes enterprise performance management, software that helps plan, budget, predict, and report on an organization's financial results."

Looking further into understanding ERP, McCue (2022) sees ERP as an application that automates business processes, and provides insights and internal controls, drawing on a central database that collects inputs from departments including accounting, manufacturing, supply chain management, sales, marketing and human resources (HR).

In 1913, engineer Ford Whitman Harris developed what became known as the economic order quantity (EOQ) model, a paper-based manufacturing system for production scheduling. For decades, EOQ was the standard for manufacturing. Toolmaker Black and Decker changed the game in 1964 when it became the first company to adopt a material requirements planning (MRP) solution that combined EOQ concepts with a mainframe computer use of the ERP system.

MRP remained the manufacturing standard until manufacturing resource planning (called MRP II) was developed in 1983. MRP II featured "modules" as a key software architectural component, and integrated core manufacturing components including purchasing, bills of materials, scheduling, and contract management. For the first time, different manufacturing tasks were integrated into a common system. MRP II also provided a compelling vision of how organizations could leverage software to share and integrate enterprise data and boost operational efficiency with better production planning, reduced inventory, and less waste (scrap). As computer technology evolved through the 1970s and 1980s, concepts similar to MRP II were developed to handle business activities beyond manufacturing, incorporating finance, customer relationship management, and human resources data. By 1990, technology analysts had a name for this new category of business management software-enterprise resource planning.

Benefits of ERP Systems.

There are many benefits associated with the use of Enterprise Resource Planning System but for the purpose of this study we shall look at a few a written by McCue (2022). These are:

Cost savings: Perhaps the biggest value proposition of ERP systems is they can save organization money in a number of ways. By automating many simple, repetitive tasks, you minimize errors and the need to add employees at the same rate as business growth.

Reporting/analytics: Data is useful only if companies can analyze and understand it, and an ERP helps with that. Leading solutions have impressive reporting and analytics tools that allow users not only to track KPIs, but display any metrics or comparisons they can dream up.

Flexibility: While ERP software helps businesses follow best practices, it also offers the flexibility to support unique processes and objectives. The system gives administrators the ability to build out company-specific workflows and create automatic reports important to different departments and executives. An ERP

enhances your organization's innovation and creativity.

Risk management: ERP technology reduces risk in a few ways. Granular access control and defined approval workflows can strengthen financial controls and reduce fraud. Additionally, more-accurate data heads off mistakes that could lead to lost sales or fines. And finally, the ability to see the status of the entire operation enables employees to quickly handle risks posed by business disruptions.

Business insights/intelligence: Because ERPs can access real-time data from across the company, these systems can uncover impactful trends and provide extensive business insights. This leads to better decision-making by organizational leaders who now have easy access to all relevant data.

The Traditional Procurement Process; The traditional procurement processes involved the manual processes of conducting procurement as explained by Dema (2015). The most government agencies carry out the procurement in any of the above methods as appropriate and applicable. The Procurement process starts with the need assessment and demand aggregation. It is followed by the budget approval. The bid preparation is done by agencies using the Standard Bidding Documents prepared and issued by the Ministry of Finance and the opportunities are advertised in the mass circulated Newspaper to allow optimal competition.

Following the Advertisement, bids are submitted by the potential bidders at the time, date and place, and address designated in the Bidding Documents. The opening and evaluation of the bids are carried out by the Tender Opening and Evaluation Committees respectively. After the evaluation, the lowest evaluated bidder is notified with the letter of intent to award the work. A standstill period of 10 days is allowed in Bidding Documents for the aggrieve bidders to address their grievances. If no complaint is registered within the standstill period, the lowest evaluated bidder is invited to sign and conclude the contract. However, if there is any complaint from other bidders who have submitted the bid, the complaint is dealt with in accordance with the rules and procedures for the Independent Review Body established by the body responsible for procurement. However, the whole process is done manually.

Marketing of e-Procurement

As governments, individuals and companies seek to create and maximize their profits to improve their operations and service delivery, using the e-procurement process comes to mind and looks very convenient and lucrative option. According to Corsi (2006) marketing of e-procurement is the term used to describe the use of electronic methods, typically over the Internet to conduct transactions between awarding authorities and suppliers. The process of e-procurement covers every stage of purchasing, from the initial identification of a requirement, through the tendering process, to the payment and potentially the contract management.

As stated by Indeed Team (2021). Marketing of e-procurement or electronic procurement, is a digital transaction process that involves using the internet to buy and sell goods and services. This process employs a supplier's closed system, meaning that only their registered customers can use and gain benefits from it. Implementing e-procurement creates a direct connection between the supplier and buyer, helping to streamline business-to-business (B2B) or business-to-consumer (B2C) processes like emails, invoices, purchase orders and bids. Since e-procurement is an online business measure, it uses networked systems and web interfaces for supply chain operations.

How e-procurement works

For any process to work effectively as intended, there are procedures to follow and adhered to. Some of these processes and procedures as compiled by Basware (2012) are:

Selection and implementation of e-procurement solution: The first step in making e-procurement work in the organization is selecting and implementing an e-procurement solution. There are quite a few providers on the market to choose from and initial research may feel a little overwhelming. When the search begins for the perfect e-procurement solution, it is important to take into consideration all relevant stakeholders' needs. That means understanding where it can help and how it will be used by different teams.

Elimination of paper based processes: E-procurement eliminates the need for paper-based processes, and with its automated capabilities, it drastically decreases manual processes and the errors that come with it—even sometimes completely eliminating.

Employee-based technology: E-procurement solutions equip employees with the technology needed to search through online catalogs and select the items they want to buy. But e-procurement is more than just online buying. With it, employees can manage their own purchases based on user permissions, guided buying, e Catalogs, webshop punchouts, and smart searching.

Relevant purchase requisition: The e-procurement begins with a purchase requisition, which can be electronically approved by the user if he or she has the authority to do so. E-procurement solutions like Basware's ensure that the users get what they need quickly by using line level approval workflows. This means that as each individual item is approved, POs are automatically generated, and orders are placed – regardless if different approvers are involved.

Approval: Once a requisition is approved, it automatically becomes a purchase order (PO), which is then delivered digitally to the supplier. Once the item or service is delivered, it is marked as "received" in the system, and an invoice is created and sent to buyer's accounts payable for payment. Table 1 shows the role played by e-procurement at the different stages of the procurement processes end to end as presented by Szymansk (2007)

Table 1: Procurement planning stages and the role of e-procurement in curbing corruption

Procurement Stages	Role of e-procurement in anti-corruption
Project Planning	Avoid unnecessary projects
	Transparency in project planning
	Dicision making
Project Design and documentation	Avoid unnecessary tender document
	Easy bidding procedure
Tender Process	Increase tender competition
	Real time information
	Automation of tender process
	Reduce human interaction
Contract Award	Monitoring of contract execution
	Accountbaility
	Increase performance
Accounting and Auditing	Auditibility
	Transparent and open audit
	Co-operate with other agencies

Source: Szymansk (2007) in Arjun N, Jeffrey S, Kishor V. & Jianminng Y (2012).

Explaining the stages in the "Role of Public e-procurement trchnology to reduce corruption in Government Procurement" the author, Szymansk (2007) explains thus:

Project planning: Procurement planning is the first phase of procurement process used by the government or private companies, which relate the plan of purchasing activity for specific periods. It is the process of reviewing the existing procurement process, identifying the present and future needs, and effective way of procuring goods and services (Basheka, 2009)

Project design and documentation: Product design and documentation is the second phase of public procurement processes, which is related to technical specification to the product or project. Sometimes, procurement or government officers design the project and technical specification in a favour of a particular supplier. In some cases, they design an unnecessary complicated tender to hide corruption. Public e-procurement system can play an important role to provide all the project specification into web portal, so that all the bidders can view and evaluate all the project specification, and they can compliance with standard document.

Tendering and contract awarding: Tendering and contract awarding is one of the most vulnerable stages of public procurement process where most corruption occurs in developing countries (Mc Pheraon & Mac Searraigh, 2007). It is a serious problem in developing countries; for example, In Nepal, most of the government contracting processes use paper-based systems, which offers greater potential for corrupt behaviour (Bhattar 2011). The tendency is that the potential contractors, who use their coercive power, get the contract. In some situations, other contractors simply are not able to submit tender document because of perceived coercive threat from other influential contractors. Government officers can be involved indirectly and abuse their official power for their private benefits. This eventually leads to institutional corruption in public procurement where parties with vested interests have opportunities to play? their roles in public procurement for their own benefits.

Accounting and auditing: The accounting and auditing phase is also a vulnerable area for corruption. Audits are not regularly and systematically performed which makes it harder to detect corruption. Government audit reporting mechanisms are not clear, are dependent, and lack co-operation with other relevant agencies and institution to ensure transparent and effective flow of information for the audit.

To overcome these problems, public e-procurement can play an important role for minimizing the risk of corruption in public procurement process (OECD, 2008). It improves the transparency and integrity in public service such as tendering, sourcing, ordering, and auctioning. E-procurement has been recognised internationally as an important instrument for checking corruption and in misuse of power (Sohail & Cavill, 2008). Pictet and Bollinger (2008) pointed out that public e-procurement helps to fight against corruption by reducing face-to-face interaction where most requests for bribes take place. , Shahkooh, Saghafi & Abdollahi (2008) study concluded that governments are trying to find solutions for reducing corruption in public agencies. Electronic government is one kind of solution to the problems of corruption which removes the opportunities for arbitrary actions. It helps to reduce cartels, collusions, and riggings to the bidders where public procurement is politically influenced like Nepal, Bangladesh, Iraq, Sudan, and Myanmar. In many of the corrupt countries, public bids are awarded without fair competition (Thai et al. (2005). According to Neupane, Soar, Vaidya & Yong (2012), Table 2 discusses the types of e-procurement system and their originating authors.

Table 2: Types of e-procurement system

E-procurement system	Description	Authors(S) & Year
e-Informing	Gathering and distributing purchasing information both from and to internal and external parties using internet technology.	(Boer,Harink & Heijboer, 2001; De Boer,Harink & Heijboer, 2002; Essig & Arnold, 2001)
e-Sourcing	Process of identifying new suppliers for specific categories of purchasing requirements using internet technology.	(De Boer et al., 2002; Fuks, Kawa & Wieczerzycki, 2009; Knudsen, 2003)
e-Tendering	The process of sending requests for information and prices to suppliers and receiving the response using internet technology.	(Betts et al., 2010; De Boer et al., 2002)
e-Reverse auctioning	Internet based reverse auction technology which focuses on the price of the goods and services auctioned.	(Carteretal., 2004; Teich, Wallenius & Wallenius, 1999)
	The process of creating and approving purchasing requestions, placing purchase orders and receiving the goods or services ordered via a software system based on internet technology , e-MRO deals with indirect items (MRO) , web-based ERP deals with product-related items.	(Bruno et al., 2005; De Boer et al., 2002; Fink, 2006; Gunasekaran et al., 2009)
e-Ordering	The use of Internet to facilitate operational purchasing process, including ordering (requisitioning), order approval, order receipt and payment process.	(Harink, 2003; Reunis,Santema & Harink, 2006)
e-Markets	e-markets are meeting venues for component suppliers and purchasers, who use exchange mechanism to electronically support the procurement process.	(Block & Neumann, 2008; Fuks et al., 2009)
e-Intelligence	Management information system with spend analysis tools	(Eakin, 2003; Harink, 2003)
e-Contract Management	The use of information technology for improving the efficiency and effectiveness of contracting processes of companies.	(Angelov & Grefen, 2008; Yang & Zhang, 2009)

Source: Neupane , Soar, Vaidya, & Yong (2012),

Benefits of e-procurement.

Discussed are some of the benefits and advantages associated with the adoption of the e-procurement processes in government establishment, companies and non for profit organizations as indicated by Indeed team (2021):

Creates Information Transparency: E-procurement makes the transference of information and data more

transparent to the company and its supplier. You can use this information to view purchasing behaviours, leverage buying power, control non-compliant spending, and identify opportunities to consolidate suppliers.

Helps Companies Save Money: E-procurement can help a company save substantial amounts of money because it eliminates costly errors that may occur when handling manual orders and paperwork. The company can then use the money they save for other initiatives, like marketing and advertising.

Automates Procurement Processes: By automating procurement processes, companies are able to sustain more consistent and cost-effective operations. There is a diverse range of procurement software that you can use to help you achieve this goal, helping lower the need to perform monotonous activities, like data entry and analytics.

Shortens Procurement and Purchasing Cycle: The benefits of shorter process cycle is to obtain the goods and services that are needed at a much faster rate. This helps to limit operation downtime, which ultimately helps to increase productivity, save costs and increase profits.

Improves Inventory Management and Control: It is important for a company to manage its inventory because it enables it to gather accurate information about its current supply of goods and services. They can then use this information to make more informed business decisions.

Streamlines Operations: This is an essential benefit of using e-procurement because it helps to save time and increases productivity. Having all the on-line purchasing and selling processes functioning seamlessly creates a more uniform system and makes it easier to identify and resolve problems before they escalate.

Larger Product and Services selection: Because all the transactions and procurement processes occur online, the company has access to a broader range of products and services to choose from. This variety enables the company to make comparisons between what's available and select the goods that are best for company and most cost-effective.

Limits Maverick Spending: Maverick spending describes when an individual procures products that are not within the parameters of the designated contract and negotiations. Limiting these types of actions helps to ensure that all procurement processes meet compliance regulation set between the company and supplier.

Other Benefits of e-procurement

At different times and by different authors, there are numerous other benefits derived from e-procurement. E-procurement centralizes data in order to improve audit and analysis; eliminates the direct human interaction on bidding and other work and services; corruption is decreased significantly; internal efficiency increases in government departments; from the e-procurement system, government monitors all the works and services more easily and efficiently; procurement system provides better status monitoring and tracking of applications; it increases transparency in works and services and improves better interaction among suppliers, vendors, and citizens through online system and online bidding system automatically reduces the cartel, collusion and riggings among the bidders (Pathak, Prasad, Singh, Naz & Smith (2006); Adebiyi, Ayo, Adebiyi, & Marion (2010); Aman & Kasimin, 2011; Kaliannan & Awang, 2009; Ndou, (2004), and Gupta, Jha & Gupta (2009).

The role of e-procurement in curbing corruption

The public procurement is one of the major risk areas of corruption as found by most of the International organizations such as UNCAC, UNODC, and WTO. The following are the role of e-Procurement in curbing corruption at different stages/and processes (Dema, 2015),

Project Planning and Need Assessment: Procurement planning and the need assessment are the first phase of procurement process used by the government or private companies, which relate the plan of purchasing activity for specific periods. It is the process of reviewing the existing procurement process, identifying the present and future needs, and effective way of procuring goods and services (Basheka, 2009). Government wants processes that are more transparent and accountable. But, different issues such as unjustified or hidden procurement planning, lack of need assessments, political pressure, lack of monitoring capacity of government, inconsistent cost estimate are always there to create the corruption in developing countries.

Peoples'oriented project: In developing countries, there are more chances of corruption in planning phase rather than developed countries. For example, sometimes the minister, government, or the senior officer may plan the unwanted project for their private benefit. They may disclose confidential information or add extra requirements of the project. To address those issues, e-procurement can play an anti-corruption role to reduce the risk of corruption. The public or bidders can view and monitor all the procurement activities through the e-procurement government web portal. Public e-procurement helps to disclose all the procurement related information. The government officer or procurement officer cannot easily hide confidential information to others. All the project technical specifications are posted in e-Procurement web-portal so the officers or planning level officers cannot easily add extra specification for their private benefit.

Project design and documentation: Product design and documentation is the second phase of procurement processes, which is related to technical specification to the product or project. Sometimes, procurement or government officers design the project and technical specification in a favor of a particular supplier. In some cases they design an unnecessary complicated tender to hide corruption. The e-procurement system can play an important role to provide all the project specification into web portal, so that all the bidders can view and evaluate all the project specification, and they can compliance with standard document. So the project design and documentations becomes so transparent for the public.

Tender process and contract award: Tendering and contract awarding is one of the most vulnerable stages of public procurement process where most corruption occurs in developing countries. It is a serious problem in developing countries. The tendency is that the potential contractors, who use their coercive power, get the contract. In some situations, other contractors simply are not able to submit tender document because of perceived coercive threatening from other influential contractors. Government officers can be involved indirectly and abuse their official power for their private benefits. This eventually leads to institutional corruption in public procurement where parties with vested interests have opportunities to play their roles in public procurement for their own benefits.

Accounting & Auditing: The accounting and auditing phase is also a vulnerable area for corruption. Audits are not regularly and systematically performed which makes it harder to detect

corruption. Government audit reporting mechanisms are not clear, are dependent, and lack co-operation with other relevant agencies and institution to ensure transparent and effective flow of information for the audit.

To overcome these problems, public e-procurement plays an important role for minimizing the risk of corruption in public procurement process (OECD, 2008). It improves the transparency and integrity in public service such as tendering, sourcing, ordering, and auctioning. E-procurement has been recognized internationally as an important instrument for checking corruption and in misuse of power (Sohail & Cavill, 2008). Pictet and Bollinger (2008) pointed out that public e-procurement helps to fight against corruption by reducing face-to-face interaction where most requests for bribes take place. , Shahkooh, Saghafi & Abdollahi (2008) study concluded that governments are trying to find solutions for reducing corruption in public agencies. Electronic government is one kind of solution to the problems of corruption which removes the opportunities for arbitrary actions. It helps to reduce cartels, collusions, and riggings to the bidders

where public procurement is politically influenced like Nepal, Bangladesh, Iraq, Sudan, and Myanmar. In many of the corrupt countries, public bids are awarded without fair competition (Thai et al. 2005).

Recently many less developed countries have focused on e-procurement systems as a key tool to reduce the corruption by opening competition in government procurement processes to the public. There are many case studies in developing and developed countries in the use of public e-procurement system for reducing the risk of corruption. For example, e-procurement systems

implemented in South Korea, Singapore, New Zealand, Denmark, India (Andra Pradesh), and Mexico are some examples that demonstrate the innovative use of information technology to prevent and control corruption in public procurement (OECD 2005). The existing literature has identified the various benefits of using public e-procurement in the public sector. Some of the benefits are as follows:

Case study of the use of e-procurement in fighting corruption in Georgia according to review of literature by Dema (2015): The country Georgia is one of the first countries in the World which adopted electronic procurement. In Georgia, the introduction of e-procurement through the Georgian electronic Government Procurement (Ge-GP) system is a good example of how strong political will and commitment can be critical in the context of reforming public procurement. Within a year, the SPA designed, developed, and tested the e-procurement system and eventually moved to the mandatory use of e-procurement, fully replacing paper-based tenders.

The e-procurement system, which is broadly consistent with good public procurement practices, has increased competition among suppliers. In addition, by bringing processes online, it has made the procurement system more transparent, less bureaucratic, and less discriminative. As a result, the system has significantly minimized corruption risks and brought substantial savings to the government and Georgia's citizens.

The reform of e-procurement is clearly one of the most effective and efficient reforms undertaken in the last decade in Georgia. It has also been well received by procuring entities and the private sector alike.

The remarkable achievements of SPA have been explicitly acknowledged by different international organizations including the OECD, the UN and TI, the latter ranking Georgia as the best country

among the 19 countries of Eastern Europe and Central Asia in its 2014 Corruption Perceptions Index.

This success comes as a result of a longstanding partnership between the World Bank and the government of Georgia. In 2012, the World Bank started an assessment of the Georgian e-procurement system in order to explore the possibility of using the same system for World Bank-financed projects. The assessment identified improvements and modifications required to make the e-procurement system meet the World Bank's requirements for the procurement of civil works and goods.

SPA undertook these modifications and, after almost two years of extensive internal work and close cooperation with the government and the private sector, the World Bank started using Georgia's e-procurement system for the procurement of civil works with an estimated contract price below US$ 10 million, as well as for the procurement of goods below an estimated contract price of US$ 1 million. As of today, two major project implementation units have published 14

tenders with a total estimated value of more than US$ 22 million for the rehabilitation of roads, buildings, sewage systems, and similar.

Benefits of Reform

These reforms making electronic tender procedures the exclusive means aimed to promote have culminated to the following benefits:

Environmentally friendly procurement: Reduced paper-based procurement (bidders are no longer required to submit printed originals and copies of bids)

Transparency: Citizens across the world, completely free of charge, can observe the tendering process in real time and obtain essential information regarding bids (an example from Georgia)

Reduction fee for participation: Procurement conducted in a conventional way requires paying a non-refundable fee for obtaining bidding documents in the amount of $100-150, while Ge-GP system bidders obtain bidding documents free of charge and pay a nominal fee of $30 for their participation.

Simplified and accelerated review process by the World Bank: No need to obtain actual bids for review; the World Bank's procurement specialist is granted special access to download bids through the system.

Remote participation: Bidders (even if several hundred kilometers away from the capital) can submit bids remotely from their offices, thereby substantially reducing the time and cost associated with transportation

Substantially reduced risk of collusion among bidders: A bidder's identity remains confidential and is only disclosed after the bid opening. By using the Ge-GP system, Georgia is fully in line with the Bank's on-going procurement policy reform, which advocates using country systems to the extent possible and also with e-procurement under the Bank's projects, which is fully aligned with the Open Contracting Partnership, a group that aims to create a global movement advocating for disclosure of information across the contracting cycle (including disclosure of contracts) and across all sectors, and that promotes greater citizen participation around contracting organizations. Ultimately, the e-procurement system in Georgia has clear, measurable benefits, and is contributing in a significant way to the long-term development of the country.

CONCLUSION AND RECOMMENDATIONS

The Electronic Procurement is one of the tools among others used by many countries in the world as corruption prevention strategies and tool. The UNICITRAL Model Law on Public Procurement, UNCAC, EU Public Procurement Directives, WTO GPA and many other international organizations has adopted the eProcurement system as one of the very efficient tool in increasing competition and transparency, and can therefore greatly help in reducing corruption especially in Public Procurement. The electronic procurement tools such as e-communication, e-submission, and e-tendering eliminate or reduce the direct human interactions between bidders and procurement personnel interactions which are one of the major sources of corrupt behaviour in procurement. This electronic system is also very important in easy data generation and data management. The electronic database is useful in detecting overpricing or bid rigging.

The study has also delineated the risk areas in the public procurement, the capabilities of electronic procurement as an anti-corruption tool in fighting and preventing corruption.

Thus, considering all the benefits as outlined, government agencies are encouraged to adapt the electronics system as an anti-corruption in preventing corruption in public sector procurement at all levels.

Furthermore, there should be training and re-training for all procurement department on the best use of the e-procurement system.

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