

A Critical Literature Survey on Factors that Effecting E-Procurement Software

Surabhi Saxena
Ph.D. Research Scholar,
Department of Computer Application,
Babu Banarasi Das University
Lucknow (U.P.)India

Dr. Devendra Agarwal
Head Of Department ,
Department of Computer Science,
Babu Banarasi Das University
Lucknow (U.P.) India

Abstract - E-Procurement is an important practice if implemented might lead to efficiency, transparency and reduced cost. However, it's slowed implementation raises concern as to determinants of implementation of E- Procurement. Its correct measurement or evaluation always facilitates and improves the efficiency of e-procured software. Current e-procurement technologies are in their developmental infancy and a dominant design of software is still unavailable. This paper also examines the existing trends and challenges of web-based e-procured software and discusses that with the adoption of cloud computing as present trend, such ongoing issues of e-procurement can be addressed. The identification of research gaps and possibilities of further research were explored. Next we do a comparative analysis on e-procurement proposed by various experts/researchers including their contribution and limitation

Keyword - E-Procurement , Effectiveness , factors of E-Procurement .Effectiveness of E-Procurement, E-procured Software Quality

I. INTRODUCTION

Extensive research has been conducted on electronic procurement over the past fifteen years. This topic has been an outstanding feature of the statistics structures studies landscape over this period with a rapid growth and later consolidation in marketplace numbers. The term Electronic Procurement (E-Procurement), according to the definition from the NIGP Dictionary of Terms, means **“Conducting all or some of the procurement function over the Internet; it implies that point, click, buy, and ship Internet technology is replacing paper-based procurement and supply management business processes”**[1].

This paper highlights state practices and key elements of existing solutions, presenting benefits and drawbacks. In order to guide the decision-making process for choosing an appropriate solution for your procurement. Enterprise Resource Planning (ERP) and E-Procurement systems more widely used in Local organization . It's implementing ERP and large scale is implementing E-Procurement systems[23].

The systematic literature review assessment here explores and presents the interrelationships among e-procurement and their implementation and the changes and recognizance inside the various domains and characteristics considered important.

In this dynamic context, in order to be responsive to changes in environments, e-procured software must provide high quality, services and procedures that allows you to benefit marketplace presence and competitive area [2][10].

One could infer that marketplace quality and security issues are required to meet the quality needs of a various range of customers. Given that just over a decade of e- procurement research has been conducted, we argue that it is timely to

take of research on procurement process in terms of software, understand the evolution and analyze the need for future research within this field.

II. BACKGROUND

The advent of e-procurement creates significant potential for reduced purchasing costs in relation to transaction costs and the price paid for goods and services. Building on literature E-procurement can be used to describe various forms of communication technology at different stages of procurement. Author Wangare investigated that the adoption of e-procurement in Singapore and presented stumbling blocks to this initiative from the point of view of Singaporean firms. First, there was concern about security and privacy of procurement transaction data. Second, required significant investments in hardware, software, and personnel training to participate in e-procurement are prohibitive [3][24] .

According to the author Lee and Clark (1997) invoked transaction cost economics in pointing out a number of risks associated with setting up electronic market mechanisms such as opportunism by unscrupulous market participants and asset specificity. The latter has to do with the need for a firm to commit certain resources to deploy IT applications and infrastructures needed to link its internal business processes with those of the e-marketplace trading platform. The more complex and idiosyncratic these integration links are, the more difficult it is to transfer use of such connections with other trading platforms or trading partner networks [13]. According to the author Wanyama (2012) on Contribution of E-procurement in Enhancing Procurement Process states that, application of IT helps to ensure a continuous production and distribution of goods and services in an organization. It guarantees on timely delivery and this creates a real life environment between buyer and supplier [8][25].

According to the Jose P Miguel, David Mauricio and Glen Rodriguez [26] suggest that the all quality factors enhance the e-procurement software system . Many other experts and researchers in the area recommended that procurement is the ability of a system or component to continue normal operation despite the e-procurement fault and the similar is

concise in the table 1. Consolidated charts for e-procurement issues identified by various experts are concluded in table2. It is visibly evident from this table that effectiveness, security, flexibility, reliability, and usability are common accepted issues at procurement process.

Table 1. Contribution Taxonomy

Sr. No.	Expert/ Researchers	Contribution with E-procurement
1.	Roth, R.T. (2001) [14]	Introduced the E-procurement for cutting costs, adding value, financial executive
2.	Erasto,W. (2005) [9]	Highlighted the role of Customer/Supplier Chain
3.	Wangare, R. (2005) [3]	Measured the Performance through E-procurement
4.	Lysons, K. and Farrington, B. (2006) [7]	Discussed with supply chain management
5.	Chepkonga, C. (2010) [6]	Introduced to affecting factors for Procurement process
6.	Algava, E. and Amira, S. (2011) [11]	Highlighted to impact of e- procurement
7.	Wanyama, W. (2012) [8]	Introduced to contribution of e-procurement in Enhancing Procurement Process
8.	Atieno, J. (2013) [5][23]	An evaluation of challenges defined for e-procurement process
9.	Eunice Waruguru (2015) [4]	Focused on establishing factors affecting effectiveness of e-procurement

Table 2. A Critical Look Of Commonly Accepted E-Procurement Issues By Various Experts

E-procurement Issues	Effectiveness	Security	Flexibility	Reliability	Usability
Expert /Study					
European Dynamics S.A. (2005) [16]	√	√			√
Anyango (2005) [15]	√				
S. Fong (2009) [17]	√			√	√
Chepkonga (2010) [6]	√		√		
Algava, E. and Amira, S. (2011) [11]	√		√		√
O. Pablos (2012) [18]	√	√			
Atieno, J. (2013) [5]	√		√	√	√
Eunice Waruguru (2015) [4]	√		√	√	√

III. E- PROCUREMENT: A NEW PERSPECTIVE

The generally common definition of e-procurement is ease of performing the web based application. E-procured software is external software as an Enterprise Resource Planning (ERP). Electronic Procurement (E-Procurement) can be defined as the use of electronic communication to perform business process between sellers and buyer. It is a powerful tool in business field for facilitating the acquisition of commodities through internet [23] .

E-procurement focuses on main activities of purchasing operation such as supplier selection, defining the product requirement, negotiation and contracting with suppliers. Although e-procurement is known to be the system that has several benefits for the organization, some of the organizations do not use such system. Those organizations might face some of the barriers when switching from the traditional procurement to the e-procurement. Technology have been developed and applied to several organizations to maintain their competitiveness E-procurement is another IT system to improve processes in the procurement procedure as software.

The successful implementation of E-Procurement in organization needs to be supported by the top management team. Before going for further discussion we will discuss about procurement and try to drive relation between e-procured software and process. The readiness for the adoption of e-procured software system would begin with the basic IT system to share information of the organization to other partner such as company's website. Programming methodology is based on aims that involved functions and procedures, this concept allows individual aims to organize and group themselves together into software of procurement.

The website should provide general information of the product /service of the company and contain contact channel to the organization e.g .email or message box. Additionally, if the company website provides function for business transaction, it would be a big step for e-procurement adoption. It is clearly evident that e-procured software has given the solution for e- procurement process. There is need to develop a new approach to deal with a word of e-procurement in software. Some other issues of process are shown in figure1. It's very hard to produce a truthful view on all the issues of procurement. The attributes that have impact on procurement process but at the source level effect.



Fig 1 E- Procured Quality Outlook

IV. CHALLENGES IN E-PROCUREMENT

E-Procurement has been widely described as using electronic means (the internet, web, e-mail) to buy products and services over the internet. It involves digital ordering, bidding and rendering through portals, extranets, private structures, marketplaces, and/or EDI. It could also involve the use of purchasing cards, opposite auctions, and/or incorporated automated procurement systems to facilitate,

the company shopping for manner. In order to maintain a synchronized rapidity with the difficult technological adoption by various software and their users, it is necessary to identify the issues and impediments towards growth or enhancement of show in e-procurement system or e-procured software. As discussed in prior section that e-procurement system must adhere to the best possible security standards to ensure privacy and confidentiality, integrity, availability, and stability of the transactions.

One important necessitate is to use the time stamping technique of all events (major or minor transactions) in order to have better recovery and study of the purchase history. It is also quite essential that e-procurement system must also adhere to the general software standards. Primarily the acceptance of e-procurement software system mainly target to minimize the cost of purchasing and ensure highly standard process for placing online purchase. Other advantages are minimized judgment in the cycle of procurement with minimized cost of organizational task further attractive the productivity. There are various sorts of challenges.

- ❖ Effectiveness of E-Procurement System
- ❖ E-Security with E-Procurement System
- ❖ Approach, techniques, and tools used to perform system integration is highly incompatible
- ❖ Capability to perform integration of the existing e-procurement applications

V. CRITICAL OBSERVATION

After successful completion of the systematic literature review some of the important Critical observations are as follows:-

- ❖ Effectiveness , Security, flexibility, Reliability, And Usability has been recognized as a key factor to effect the e-procurement software .
- ❖ An efficient and accurate estimation of e-procurement system is highly recommended by researchers and practitioners.

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VI. CONCLUSION

The literature review paper has attempted to exhibit that the E-Procurement is not simply an utility to make on line purchases, but it has many different contributory functions. It turned into visible that until date there are not any works which claims approximately benchmarked consequences, or supported by means of computational model to testify the effectiveness of the presented work till date. Proof of those findings is summarized in research gap, which is supposed to put forward a real picture of the existing implement.

This paper has initially discussed about the background of the e-procurement system stating the most essential components as effectiveness, e-security, flexibility, reliability, and usability, responsible to successfully operate on E-Procurement system and slowly the discussion was inclined towards briefing the problems in this area.

VII. FUTURE WORK

In future work we plan to propose a model to check the effectiveness of factors model in the E-Procurement process . Subsequently proposed model will be validated and verified using available methods / tools

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BIOGRAPHY



Surabhi Saxena received the MCA degree from Rajasthan Technical University , Jaipur in 2013. She is enrolled as Full time research scholar in BBDU , Lucknow in Department of Computer Application . His research interests include Software Engineering , Quality Models , ISO Standards, E-Commerce , E-Governance , E-Procurement , ERP .



Dr. Devendra Agarwal is currently working as HOD , Department of Computer Science in BBDU , Lucknow. He has over 18 years of teaching & 5 years of industrial experience. He has done his B.Tech in Computer Science from Mangalore University in 1993, M.Tech from U.P. Technical University, Lucknow in 2006, and Ph.D. from Shobhit University, Meerut in 2013. He has over 12 research papers with 4 students pursuing Ph.D.