

E-Procurement and Performance of Service Organizations in Uganda

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Abstract

Aiming at establishing the relationship between E-procurement on the performance of selected service organizations in Uganda; researchers used survey design on 202 employees and found that there is a significant relationship between E-procurement and performance of the organizations. This proposition comes as a result of penetration of IT in all aspects of life to the effect that today everything tends to rotate around use of technology. Also to note is that competition compels one to devise means to beat others and technology is the way to go. The researchers thus recommend: i) Government to support service organizations in regards to regulating cyber related vices; ii) Other organizations, other than service organization, should invest wisely in IT to reap its potential profitability; and iii) The whole procurement process should involve as many people as possible as a potential means to human resource planning in an effort to overcome future embarrassments of retrench and labor turn over.

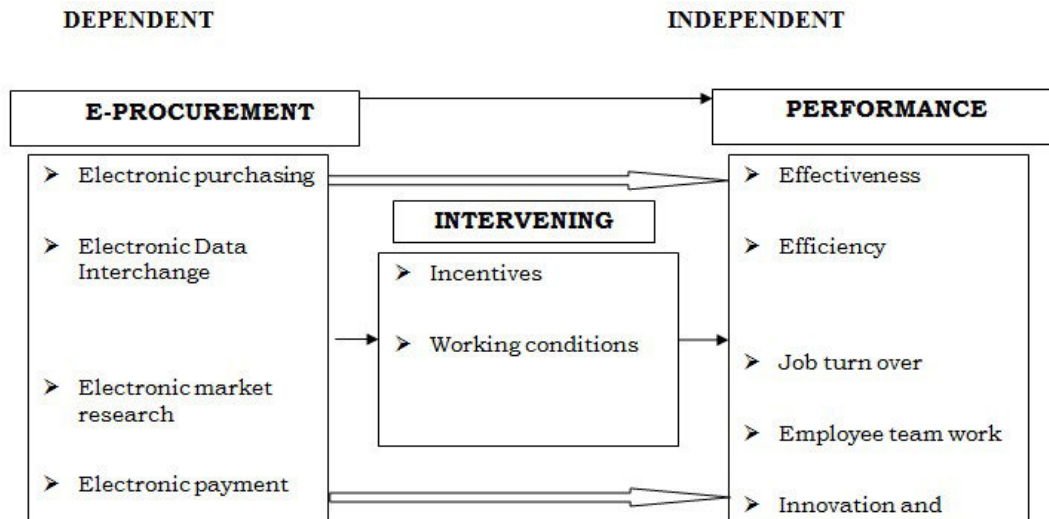
1. Introduction

The practice of supplies and procurement has existed since time immemorial at various levels; personal, home and organizational levels. The procurement process has evolved from its primitive sense to a modern one where physical purchases and negotiations have been replaced by electronic means. This may have a significant effect on the way organizations perform. Information Technology (IT) has evolved over time ranging from simple calculation to decision making. The invention of IT intended to support workers in reducing their work time complexities and optimal consolidation of storage space; rather than bulky, tedious and manual storage of information. IT grew to greater heights where new innovations like talking on phone, paying school dues, paying utility bills and buying and selling of goods and services were realized. These innovations spread world over and Uganda was not any exception. Though, IT literacy levels are reportedly low in Uganda, E-Procurement is practiced to some significant levels. Patrick and Robert (2009), contend that, by now, most companies have ridden one or more strategic sourcing waves that have collectively saved their organizations billions of dollars. Yet even after having benefited from these initiatives, the average company still leaves on the table unrealized savings equaling 5 to 10 percent of its total spending. These savings are not lost because of ill-conceived strategies or organizational incompetence; rather, their loss is inherent in flawed or incomplete procurement operating models. Similarly Carter and Grim (2001), Postulate that in almost every country in the world today, any government purchasing or procurement amounts almost one fifth of Gross Domestic Product that is a significant amount of money. As a direct consequence of this, there is a considerable increase in concern by purchasing professionals to manage effectively, transparently, and fairly large annual government purchasing volumes of goods and services. On the other hand, enterprises have tried to gain the benefits e-procurement can deliver: cost reduction, process streamlining, improved contract compliance, increased speed under management, and more. However, many challenges stood in the way, and only in recent years have leading enterprises have taken full advantage of the value of e-procurement.

Raju Sheth (2009) further says that, the broad spectrum of e-Procurement is much more than just a plain vanilla system for making purchases online. It is a comprehensive platform - using the Internet to make it easier, faster and cost effective for businesses to source their requirements on a timely basis, and in a way that is aligned with organizational goals and objectives. In the current scenario, characterized by focus on key strategic initiatives, lesser time-to-market and increased global competition, e- Procurement aids organizations in streamlining their entire purchasing process, so that they can focus on core business activities and increase profitability.

In addition (Chaffey, 2002) in Mohini and Doug conceptualize E-procurement as an electronic integration and management of all procurement activities including purchase request, authorization, ordering, delivery and payment between a purchaser and a supplier. Rayport and Jaworski (2002) refer to e-procurement as a B2B e-commerce application with Web-based functions that allow employees of a buying organization to purchase goods and services and allow suppliers to manage and communicate the fulfillment of the purchase orders submitted. It includes catalogue management, requisition, control and approval, receiving and exception processing, and financials and payment processing. Thomson and Singh (2001) advocate that e-procurement processes include sourcing of buyers and sellers, a digital catalogue of products, online bidding, ordering, payments, goods dispatch notices (fulfillment), logistics and supply chain management. Therefore there is a need to establish an E-procurement management information system to avert in advance the challenges of unclear accountability, streamlining the entire purchasing process and increase the level of profitability since is recognized as a private organization.

In reference to the procurement processes in the Uganda the following aspects tantamount to the problem: If well utilized E-procurement saves time and costs. However, many organizational workers know how to log on to face book, twitters, read news Papers and send E-mails; little is known on how to negotiate, purchase and deliver services on line. This affects the organizational progress since competitors who put to full use of IT may supersede them because their services will be in time, accurate and convenient. This study thus wishes to look into E-Procurement procedures; hence a need to establish the relationship between E-procurement on the performance of selected organizations in Uganda.



2. Literature Review

With ever-increasing competitive pressures, growing numbers of firms use electronic procurement (e-procurement) in an attempt to reduce costs and increase profitability. Academicians and practitioners alike agree that one of the most important benefits of e-procurement is its ability to facilitate integration within the firm and across the supply chain (Dawn, Delvon and Larry, 2010). However, there is much to be discovered about the prevalence of actual implementation of e-procurement. The purpose of this study is to empirically examine the extent to which firms operating in diverse industries use nine different e-procurement tools that differ in their ability to facilitate supply chain integration. The survey data were provided by a sample of 142 members of the Institute for Supply Management (ISM). Factor analysis revealed that the group of nine e-procurement tools could be categorized into two types: basic, single-process tools and integrative tools. A t-test of the mean differences between each type of e-procurement tool revealed that firms used basic, single-process tools to a greater extent than they used integrative forms of e-procurement. To further explore firms' use of e-procurement, we attempted to ascertain whether the industry in which a firm operates impacts use. Logistic regression revealed that firm sector has an effect on the use of integrative e-procurement tools, with firms operating in the petroleum and the transportation equipment sectors being less likely to use them than their manufacturing counterparts. These findings are important, as previous research indicates that effective supply chain integration is associated with improvements in production planning, inventory management, distribution, and overall supply chain performance.

Wojciech and Zahir, (2010) aimed to present electronic procurement benefits identified in four case companies from the information technology (IT), hi-tech sector. Multi-case study design was applied. The benefits reported in

the companies were analyzed and classified according to taxonomies from the information systems discipline. Finally, a new benefits classification was proposed. The framework was developed based on information systems literature. The research confirmed difficulties with benefits evaluation, as, apart from operational benefits, non-financial, intangible benefits at strategic level were also identified. Traditional evaluation methods are unable to capture all benefits categories, especially at strategic level. New taxonomy was created, which allows evaluation of the complex e-procurement impact. In the proposed taxonomy, e-procurement benefits are classified according to their level (operational, tactical, strategic), area of impact, applying scorecard dimensions (customer, process, financial, learning and growth). In addition the benefits characteristic is captured (tangible, intangible, financial and non-financial).

At first sight the “big (or all-you-can-eat) deal” seems excellent value for libraries and their users, and represents the shining possibilities of the electronic age (David, 2004). A more thorough-going evaluation, however, exposes dangers for universities, their funders and publishers. This paper examines the big deal in the light of fundamental market conditions and suggests alternative models for procuring electronic resources. The roles and strengths of the players in the information supply chain are defined and traditional hard-copy procurement is analyzed in terms of these roles and the concepts of authority, branding and monopoly. The fundamentals of procuring electronic resources and prevalent purchasing models are discussed in terms of the same roles and concepts. The advantages of the big deal are laid out - access to resources, low unit costs etc. The dangers are also discussed. These arise mainly from the publishers’ position as monopolists. The possible long-term effects, on library budgets and academic publishing, of dealing with monopoly suppliers are examined. Means of avoiding or minimizing these dangers – consortia, alternative publishing methods, new economic models to promote competition – are examined.

Public procurement is one of the principal instruments used by the Commission to open up the European Single Market. This paper presents a critical assessment of public procurement policy in the context of developing policies on electronic commerce and the Government Procurement Agreement (GPA) within the World Trade Organization (WTO) (Andrew and John, 1998). The paper focuses on how business can access public procurement opportunities in Europe, and what opportunities exist for improved electronic means of access to information. The proposed future for electronic tendering in Europe, SIMAP, is discussed and compared to similar systems in the USA. The paper suggests that a new legislative framework is required for public procurement and electronic commerce in Europe to ensure that governments and businesses do not suffer a competitive disadvantage in the electronic future of world trade.

Recent rapid pace in the introduction of innovations has made adopting new technologies, such as those used for electronic procurement, a routine practice (Arash and Jeffrey, 2010). But successful technology adoption depends on a multitude of factors, including those related to the adopter, to the technology, to the provider and the network within which they operate. Without careful consideration of these factors, effectiveness of benchmarking of technology adoptions may be remiss of predictable outcomes. The paper aims to aid in understanding when and how benchmarking applies to technology adoptions by introducing a new conceptual framework. The study combines facets of established theories of innovation adoption to develop a new broad-based framework. It then applies the framework to develop propositions on the adoption of two distinct types of e-procurement technologies (EPT), namely electronic data interchange and online auctions. Three prominent adoption theories that explain innovation adoption are highlighted and it is noted that while useful, on their own, these theories may have limited explanatory power. These paradigms are leveraged to develop an interlocked framework that helps better explain the factors that influence innovation adoption. The factors are categorized into four groups, namely that of the technology, the adopting firm, its trading partners and the network within which it operates.

An electronic business to business procurement marketplace is an inter-organizational information system through which multiple buyers and sellers interact to accomplish market-making activities for corporate purchases. In this study, the extent to which organizations had plans to utilize electronic marketplaces for purchases was investigated. A survey was conducted in Norway. Survey results indicate that most organizations had plans, only 3 percent had no plans (Petter and Anne, 2002) while 34 percent had concrete plans to utilize electronic marketplaces for purchases. Responding organizations planned to purchase significantly more indirect goods than indirect services on electronic marketplaces. The main benefit expected from utilizing electronic marketplaces for purchases was reduced transaction costs. Strategic importance of business to business electronic markets can significantly predict the extent to which responding organizations had plans to utilize electronic marketplaces for purchases.

Talai, Daniel and David (2002) assert that modern procurement is being shifted from paper-based, people-intensive buying systems toward electronic-based purchase procedures that rely on Internet communications and Web-enhanced buying tools. Develops a typology of e-commerce tools that have come to characterize cutting-edge industrial procurement. E-commerce aspects of purchasing are organized into

communication and transaction tools that encompass both internal and external buying activities. Further, a model of the impact of e-commerce on the structure and processes of an organization's buying center is developed. The impact of the changing buying center on procurement outcomes in terms of efficiency and effectiveness is also analyzed. Finally, implications for business-to-business marketers and researchers are discussed.

Helen and Christine (2008) intended to examine the factors influencing e-procurement adoption in the United Nations (UN) system of organizations are examined. They used an extended multi-method case study of e-procurement in the UN. A three stage methodology is adopted – a questionnaire survey of UN organizations, case studies of e-procurement issues in three UN organizations, and an interactive workshop with the heads of purchasing of UN organizations. The Study found that e-procurement is being used in the UN for transactions of routine, non-strategic purchases. UN development agencies are more likely to adopt e-procurement than humanitarian aid agencies as their operations are more predictable. The intention of the majority of UN organizations to adopt e-procurement within three years has been reversed following the workshop, which revealed that adoption of e-procurement would run counter to UN policies of supporting less developed nations, regions and organizations. A more cautious, “wait and see” approach has been taken rather than to unilaterally promote e-procurement across the UN system.

Liyi, Pinghao and Qihua (2011) aimed to report on users' information behavior in China, a topic which has not been researched extensively. The aim is to help producers and providers collect and develop more electronic resources. The study investigated users' information behavior at seven “211 Project” universities in Wuhan, a city in central China. These universities all have access to the resources of the National Science and Technology Library (NSTL). The questionnaire includes questions about respondents' basic identifying information (educational level, job, etc.) and their information service requirements. Correlations among users' education level, users' jobs, users' retrieval methods, literature use, etc. were analyzed. The results show that most NSTL users are graduate students and young staff members. And the number of male users surpasses female ones slightly. The purpose of the utilization of electronic resources for customers is scientific research, teaching and the need for self-development. During a year, the demand of users is the highest in March and the lowest in August. The users' knowledge service types include learning the progress of science and technology, citation retrieval and analysis, statistical analysis, intelligent retrieval and knowledge aggregation.

Morteza, Daniel and Jose (2011) wanted to examine the factors within the technology-organization-environment (TOE) framework that affect the decision to adopt electronic commerce (EC) and extent of EC adoption, as well as adoption and non-adoption of different EC applications within small- and medium-sized enterprises (SMEs). A questionnaire-based survey was conducted to collect data from 235 managers or owners of manufacturing SMEs in Iran. The data were analyzed by employing factorial analysis and relevant hypotheses were derived and tested by multiple and logistic regression analysis. Findings show that EC adoption within SMEs is affected by perceived relative advantage, perceived compatibility, CEO's innovativeness, information intensity, buyer/supplier pressure, support from technology vendors, and competition. Similarly, description on determinants of adoption and non-adoption of different EC applications has been provided.

3. Methodology

The study employed a descriptive survey design with quantitative and qualitative approaches. In this study the target population involved the 202 employees of the selected organizations who had worked in those companies for at least two year; administrators who had held offices for at least one year.

4. Findings

Results showed that the employees are largely dissatisfied with the current procurement management system. The majority of the employees agree that the procurement system is periodically inspected to keep them going with work (3.5); closely followed by its serving the right purpose and so boosting their performance (3.3). However, they disagree that the current procurement system is understood by the users (1.7); closely followed by its support to their work performance (2.1). The four aspects align well with an information system and special attention suffices to them. The total mean also supplements this observation to the effect that the who system was assessed as being fair which further suggests that more can be done to make it better as supported by Chaffey (2002), Rayport and Jaworski (2002) and Dawn, Delvon and Larry (2010).

Furthemore, they show that accuracy, convenience and smooth work flow (3.6) and accepting vast amounts of data which facilitates growth and expansion (3.5) were ranked first and second respectively; and It's design matching the modern state of art systems relevant for our work (2.4) and Its working well even in stressful situations thus maintaining steady performance (2.4) were ranked the least respectively. This is in same line of thought as David (2004), Arash and Jeffrey (2010), Helen and Christine (2008) and Morteza, Daniel and Jose (2011).

Table 1:
 Significant Relationship between E-procurement and performance

| | Computed r-Value | P_Value = 0.05 Interpretation on H ₀ |
|------------------------------|---------------------|--|
| E-Procurement Vs Performance | 0.67 | Rejected |

In summary, Table 1 shows that the computed sig value (0.67) is larger than the popular sig value (0.05) which suggests that the null hypothesis was rejected to the effect that there is a significant relationship between E-procurement and performance of the organizations. This finding is supported by Daniel and Jose (2011), Chaffey (2002) and Carter and Grim (2001).

6. Conclusion

E-procurement has a significant relationship with performance of service organizations. This proposition comes as a result of penetration of IT in all aspects of life to the effect that today everything tends to rotate around use of technology. Also to note is that competition compels one to devise means to beat others and technology is the way to go. The researchers thus recommend: i) Government should support service organizations in regards to regulating cyber related vices as E-procurement is likely to attract such challenges; ii) Other organizations, other than service organization, should invest wisely in IT to reap its potential profitability for it is the most suitable way to maneuver through this world of competition; iii) The whole procurement process should involve as many people as possible as a potential means to human resource planning in an effort to overcome future embarrassments of retrench and labor turn over.

References

- Andrew, E. R. F & John. M. (1998). *European Union public procurement policy and electronic commerce: problems and opportunities*, European Business Review, Emerald Publishers. Vol. 98 Iss: 5, pp.252 – 259
- Arash,A. & Jeffrey.T. (2010). *Effective benchmarking of innovation adoptions: A theoretical framework for e-procurement technologies*, Benchmarking: An International Journal, Emerald Publishers. Vol. 17 Iss: 4, pp.472 – 490
- Chaffey, D. (2002). *E-Business and E-Commerce Management*, Prentice Hall, Great Britain.
- David, B. (2004). *What's the "big deal", and why is it a bad deal for universities?*, Interlending & Document Supply, Emerald Publishers. Vol. 32 Iss: 2, pp.117 - 125
- Dawn, H. P., Delvon. B. P. & Larry. C. G. (2010). *Using Electronic Procurement to Facilitate Supply Chain Integration: An Exploratory Study of US-based Firms*, American Journal of Business, Emerald Publishers. Vol. 23 Iss: 1, pp.23 – 36
- Helen, W. & Christine. H. (2008). *E-procurement in the United Nations: influences, issues and impact*, International Journal of Operations & Production Management, Emerald Publishers .Vol. 28 Iss: 9, pp.831 – 857
- Joseph, G .C. (2009). *Approach to Management Information System Design*
- Liyi, Z. Pinghao.Y, & Qihua .L. (2011). *A survey of the use of electronic resources at seven universities in Wuhan, China, Program: electronic library and information systems*, Emerald Publishers. Vol. 45 Iss: 1, pp.67 – 77
- Morteza, G, Daniel A. A, & Jose. B. (2011). *Adoption of e-commerce applications in SMEs", Industrial Management & Data Systems*, Emerald Publishers. Vol. 111 Iss: 8, pp.1238 – 1269
- Patrick, W. and Robert, H. (2009). *Procurement's New Operating Model*. USA.
- Petter,G & Anne. F.A. (2002). *Plans to utilize electronic marketplaces: the case of B2B procurement markets in Norway*, Industrial Management & Data Systems, Emerald Publishers. Vol. 102 Iss: 6, pp.325 – 331
- Procurement', CollEcTeR Conference*, Coffs Harbour, December 3-4.
- Raju, S. ('2009). *E – Procurement The Future of Supply Chain, Head -Technology & Research Group March*
- Rayport, J. and Jaworski, B. (2002). *introduction to e-commerce*, McGraw-Hill /
- Talai, O. Daniel .C. B, & David. I. G. (2002). *Adoption of electronic commerce tools in business procurement: enhanced buying center structure and processes*, Journal of Business & Industrial Marketing, Emerald Publishers. Vol. 17 Iss: 2/3, pp.151 – 166
- Thomson, D. and Singh, M. (2001). *A Macro Level Business Model For E-Enabled procurement*. PrenticeHall
- Wojciech, P and Zahir .I. (2010). *Analysing B2B electronic procurement benefits: information systems perspective*, Journal of Enterprise Information Management, Emerald Publishers. Vol. 23 Iss: 4, pp.559 – 579