Internal challenges of adoption of e-procurement in higher education institutions in Uganda: A case of Makerere University.

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Introduction

E-procurement has been widely recognized for carrying the potential to significantly increase the buyers' and sellers' benefits. The Deutsche Bank research (Meyer, 2011) established that a full transition to e-procurement could generate savings of between 50 billion and 70 billion Euro. Earlier research had shown that the extent of e-procurement infrastructure integration between organizations had a direct impact on the savings and benefits obtained by an organization (Min and Galle, 2003). Implying that lack of or poor integration of e-procurement infrastructure lowered benefits and could increase costs, while a good integration had yielded the opposite effect. As a result of this promise, business today has focused on the supply function to a greater extent than it previously did (Purchase & Dooley, 2005).

E-procurement which has been offered varied interpretations simply refers to the process of purchasing goods and services electronically required for an organization's operation (Mitchell, 2000). It involves electronic interaction between or among parties involved in the procurement process rather than physical exchange or contact. While there are an array of opportunities and advantages e-procurement offers, adoption of e-procurement systems in organizations especially Higher education institutions is not happening as quickly as predicted. User organizations are faced with a complex decision to make as to whether along to digitalize their purchases and procurement function or remain traditional (Davila, Gupta & Palmer, 2003). Some reasons have been presented by researchers to explain the delayed adoption of e-procurement by many of organizations. While some organizations have opted to adopt a 'wait and see' approach to e-procurement, others are faced with a complexity of decision resulting from an array of software programs available on market (Osmonbekov, Bello and Gilliland, 2002).

Since the organizational decision to adopt e-procurement is often taken by boards and managers who assess information on both the alternatives and the consequences (Batenburg, 2007) ; it can be noted that internal factors have a significant role they play in determining speed and efficiency of e-procurement adoption. This study will therefore be limited to the internal challenges of adoption of e-procurement instead of the potential benefits and prospects. It will also focus on internal challenges other than external challenges.

Background

Historical perspective

Historically, the development of procurement as a discipline can be traced to the emergence of trade about 5000 years. Its necessity was brought about by the need for some types of procurement policies and practices by the then growing organizations and their bureaucratic rules (Callender, 2003). Hence the need for standardized procedures and documents, the separation of owners and managers in private sector business and the requirements for transparency of public sector decisions and operations called for development of procurement standards. Procurement has been conventionally regarded as the practice-based administrative process of buying the goods and services required to meet the functional needs of managers, not until the technological development 20 years ago that changed the way procurement is handled to e-procurement.

The development of electronic data interchange (EDI), a technology that has been in use in organizations since the 1960s (Tonkin, 2003) gave way to the emergency of e-procurement in the early 1980s. EDI provided opportunity for customers and suppliers to send and receive orders via call-forward networks. By the 1990s, electronic catalogues for sending and receiving orders by buyers and suppliers were already in place (Kolenko, 2014). Literature documents a number of evidences for use of e-procurement since then. For example in the areas of retail industry (Bamfield 1994; & Cunningham and Tynan 1993); and in the public hospital operations (Carabello 2001; Fields 1989; Hansen 1996; Liu et al. 2001; Meyer 1967; Schuweiler 1997). Bamfield (1994), examined the processes leading to the adoption of EDI by a sample of large UK retailers drawing on a range of perspectives originating in innovation theory. He analyzed the factors which have led to the rapid adoption of EDI by UK retailers since the late 1980s; the EDI decision-making process; and the organizational and systems changes required to optimize the strategic benefits of EDI by retailers. Cunningham and Tynan (1993) studied the importance

of electronic trading systems with particular reference to the retail supply chain. They focused more on the diffusion of electronic trading technology and the implications of the technology and the nature of buyer-seller relationships from a network perspective.

More recently, Shukla, Khan, & Shah, (2016) conducted a literature review study of adoption of e-procurement practices and indicated that the major challenges emanate from these major categories: Management barriers; organizational barriers; Information technology (IT) barriers and user barriers. They also established that e-procurement adoption faces challenges of Unwillingness to change; Security concern about portal; and acquiring digital signature certificate. These challenges are evident in many institutions of higher education in Uganda that have attempted to adopt e-procurement including Makerere University. These will constitute the major area of focus for the proposed study.

Theoretical perspective

In studying the internal challenges of adoption of e-procurement, this study will be guided by Krumbholtz, Galliers, Coulianos and Maiden (2000) enterprise resource planning (ERP) implementation model for culture-sensitive ERP implementation. In the period around 2000 when the world was experiencing an explosion of web-based technologies, Krumbholtz et al studied the impact of culture on the implementation of ERP in organizations. They adopted a case study design where they investigated the implementation of the German ERP package in large Swedish and UK pharmaceutical companies. The model they developed was based on six assumptions. These were: 1). the current corporate culture clashes with the future culture; 2). the supplier's culture, which is implicit in the ERP package, clashes with the customer's corporate culture, 3). the new business processes (configured using the ERP solution) clash with the existing corporate culture; 4). Critical determinants of corporate culture that reside more in a customer's observable practices have causal associations with problems that arise during ERP package implementations; 5). Critical determinants of national culture residing more in an organization's deeper values influence the critical determinants of corporate culture that have causal associations with problems that arise during ERP package implementations; and 6). ERP implementation will be less stressful and more acceptable to employees in the Swedish organization and more collaboration rather than competition will occur in order to ensure success of the implementation.

Their study revealed that many of the ERP implementation challenges were related to issues of (corporate) culture, especially when there was a mismatch of core values. The study by Krumbholtz et al presents a clear example of the influence of organizational (corporate) culture on the aspects of ICT in a business. In the context of this study, three elements of Krumbholtz et al (2000)'s model will be adapted to guide the study. Thus the study will seek answers to three critical questions: 1). How will the new procurement processes (e-procurement) clash with the old procurement culture of Makerere University? 2). What critical determinants of the Makerere University corporate culture that reside more in its customer's observable practices will affect the adoption of e-procurement practices? 3). What is the acceptance level of e-procurement by employees of Makerere University?

Conceptual perspective

E-procurement adoption relates to the integration of specific technology solutions such as integrated catalogues, reverse auctions or e-market systems in the entire process of procurement (Williams & Hardy, 2006). According to Gunasekaran & Ngai (2008), e-procurement adoption has two dimensions (1) behavioural control which include things like perceived understanding of the benefits and challenges; and (2) process control which relate to things such as critical success factors and performance assessment of adoption. have t In this study, e-procurement adoption will refer to the process of integrating information and communication technologies to the entire procurement process of Makerere University from the need identification to the delivery of the supplies. The study will address both adoption dimensions through its three critical questions raised in the previous section, that is: 1). How will the new procurement processes (e-procurement) clash with the old procurement culture of Makerere University? (*Relating to process control).* 2). What critical determinants of the Makerere University corporate culture that reside more in its customer's observable practices will affect the adoption of e-procurement practices? (*Relates to behavioral control).* 3). what is the acceptance level of e-procurement by employees of Makerere University? (*Relates to both behavioral and process control*).

In this study, internal adoption challenges will be the independent variables and they related to those barriers to adoption of e-procurement enshrined in the institution's corporate culture and behavior (Krumbholtz et al, 2000) and the internal process assets (Gunasekaran & Ngai (2008). In the proposed study internal adoption challenges will relate to corporate institutional culture,

behavioural aspects and process aspects of the internal operation of Makerere University that would pose a barrier to adoption of e-procurement.

Contextual perspective

This study will be conducted in Makerere University, Kampala in Uganda as a case for the higher education institutions in Uganda. Makerere University is one of the oldest Universities in Africa that was established in 1922 as a humble technical school, and was affiliated to the University College of London in 1949. It became an independent national university of the Republic of Uganda on July 1, 1970 offering undergraduate and postgraduate courses leading to its own award. The university's vision is to be the leading institution for academic excellence and innovations in Africa. Its mission is to provide innovative teaching, learning, research and services responsive to national and global needs. The University Council is the supreme governing body of the University (Bailey, Cloete & Pillay, n.d.; Makerere University, 2017).

The Procurement and Disposal Unit (PDU) at Makerere University is under the docket of the University Secretary who is the Accounting Officer of the University. Being a public institution, Makerere University is a procuring and disposal entity and it derives its mandate from the Public Procurement and Disposal of Public Assets Act PPDA 2003 (as amended) IN 2014. Prior to the enactment of the PPDA, the procurement and disposal unit of Makerere University functioned as a purchasing section under the Finance Department of Makerere University. The Procurement and Disposal Unit (PDU) of Makerere University is located on the Linclon House, Flat A5 (Makerere University, 2014).

Problem statement

Whereas it was ignored in the past, today, it is becoming increasingly recognized globally that procurement occupies a salient role in organizations worldwide in that it plays a role "old-fashioned" purchase managers would not handle today (Baston Consulting Group, n.d).

At national level for example, "public procurement may account for 45% of government expenditure and up to 20% of the Gross Domestic Product for any country" (World Bank, 2007). Procurement has become a common point of contact for all departments in an institution and acts

as a central repository for corporate knowledge on acquisition of goods and services (Newman, 2005). Despite its important position in an organization, the traditional procurement system is marred with a number of inefficiencies. For example, it is often criticized for being slow and cumbersome due to its use of manual approach (Subramaniam, Qualls & Shaw, 2003). The system also lives a large lope hole for corruption tendencies and it has been estimated that where corruption is systematic it can be expected to account for 20-30% of government procurement, and even more (World Bank, 2007).

As a solution to the above inefficiencies in the procurement system, e-procurement (procurement of goods, works and services through internet-based information technologies) is being adopted worldwide in attempt to reform processes, improve market access, and promote integrity in public procurement. It is believed that well designed e-procurement system has the potential to significantly reduce the cost of information while facilitating information accessibility. It also has the potential to provide a tight check on corruption tendency, lower transaction costs, fasten ordering, offer wider tendering options, and lessen paper work among others (Gunasekaran & Ngai, 2007; World Bank, 2007).The government of Uganda launched a five year (2014-2019) e-procurement strategy that was aimed at promoting accountability and transparency especially in public procurement (PPDA, 2015). The Public Procurement & Disposal of Public Assets Authority (PPDA) is implementing the e-procurement system with support from the World Bank. This e-procurement system is expected to roll out in all public institutions to improve efficiency in public procurement practices and Makerere University is one of the public institutions expected to embrace e-procurement.

Given that public institutions and Makerere University in particular have been operating a traditional manual procurement system for quite long, it is expected that adoption of e-procurement will face a number of internal challenges that will likely result from the institution's corporate culture; already established procurement processes; and behavioral controls. An empirical study in Australia showed that adoption of e-procurement in organizations was faced with a variety of challenges which included: *security of transactions; lack of supplier e-procurement solutions;* high cost of technology; lack of legal framework; lack of technical expertise; lack of e-procurement knowledge; no real benefits being identified; lack of data exchange standards; and lack of business relationship with suppliers (Hawking, Stein, Wyld, & Foster, 2004). These findings however, possess a geographical gap because the study was carried

out Australia and in non educational institutions, a context different from that of Uganda and Makerere University in particular. The proposed study will therefore examine the internal adoption challenges of e-procurement at Makerere University, the context of Uganda and Higher Education Institutions.

Rationale / motivation

The motivation for conducting this study is based on my prior experience with adoption of technological change at Makerere University. Makerere University Management in the past has not had a good record of readily accepting and adopting e-technology. This is based on the previous resistance and delay to the adoption of the e-learning policy at Makerere University, which only happened in 2015. Despite its known potential benefits as earlier indicated, adoption of e-procurement in the procurement processes at Makerere University is bound to be faced some challenges due to the established and long organizational culture of the institution. With that in mind, it is imperative that a study is conducted prior to the adoption of the e-procurement system at Makerere University to establish the possible internal challenges of adoption and to recommend the possible ways of overcoming them.

Aims and objectives

The overall aim of this study will be to identify key internal challenges that would face adoption of e-procurement at Makerere University prior to its official adoption and implementation and to develop pertinent hypotheses for further research. The study will be guided by four research question.

Research questions

1. What are the major perceived barriers to the adoption of e-procurement in Makerere University?

2. How will the new procurement processes (e-procurement) clash with the old procurement culture of Makerere University?

3. What critical determinants of the Makerere University corporate culture that reside more in its customer's observable practices will affect the adoption of e-procurement practices?

4. What is the acceptance level of e-procurement by employees of Makerere University?

Method

Proposed source of data

Two major sources, that is secondary and primary sources will be sought to provide data for this study. Secondary data will be collected from reviewing relevant documents which will include reports, textbooks, manuals, peer-reviewed articles; government and institutional websites among others. Some of the secondary documents that will be reviewed include: The government of Uganda e-procurement strategy (2014-2019); Makerere University Procurement and Disposal Manual (2014); The PPDA Act (2012) among others. Primary data will be collected from respondents selected from the different units (both user and procurement units) around Makerere University.

Method of data collection/instruments

Data will be collected quantitatively using survey questionnaires and interviews. The study will begin with reviewing background literature on adoption and implementation of e-procurement which will be followed with relevant conceptualization of the study for purposes of developing a theoretical framework for determining internal challenges of adoption of e-procurement. The survey questionnaire and interview questions will be generally structured to allow room for detailed analysis of what the different respondents perceive as the potential barriers for adoption of e-procurement at Makerere University. A thorough survey of the relevant literature will be conducted to ensure content validity and the survey questionnaires will factor in the use of standard techniques like reliability analysis.

Method of analysis

Empirical findings will be analyzed statistically using the statistical package for Social Scientists (SPSS). Simple descriptive statistics like frequency counts and percentages will be used to present the findings.

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