



**FACTORS HINDERING THE ADOPTION OF ELECTRONIC PROCUREMENT SYSTEM IN PUBLIC SECTOR ORGANISATIONS IN MALAWI**

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**Abstract**

*The study aimed at assessing the factors that hinder the adoption of E-Procurement systems in the Public Sector organisations in Malawi. The study adopted a survey method. The study established that poor supplier readiness, lack of end user training, bureaucracy in the public sector, failure by the ODPP to provide a suitable environment for the adoption of e-Procurement, users' lack of knowledge to the benefits of the system, resistance to change by procurers system incompatibility, lack of staff motivation, low or lack of data security and lack of proper legal framework affect the adoption of E-Procurement. It was recommended that Public Sector organizations should be staffed with well-qualified IT professionals. The Government should encourage innovations at the ODPP and that this Directorate should initiate studies that will foster the establishment of E-Procurement Portal.*

**Keywords:** E-Procurement, Internet, Transparency, Public sector, Benefits

## Introduction

Public procurement is becoming more dynamic due to the emergence of new technologies and demand for better ways of utilizing public resources. Thai (2009) argued that in a constantly changing environment, public procurement has become more complex and demands utilization of new technologies as a way of enhancing procurement efficiency and transparency. According to Kirimi and Shalle (2014), public sector procurement is large and complex, accounting for between 20% and 30% of gross domestic product and traditionally attempts to meet many economic, social and political objectives of a country. One of the challenges in public procurement is the utilization of information technology (IT) in an age of communication revolution (Thai and Grimm, 2000). Procurement professionals, therefore, have no plausible excuse but to accept the modern technological realities sweeping through the procurement industry. They have to accept the fact that technology does have an impact when undertaking any procurement process. According to Arrowsmith (2000), sound public procurement systems are regarded as an important aspect of governance, which can help to facilitate the effective delivery of public goods and services.

A number of organizations all over the world identified e-procurement as one way of improving procurement processes. Such organizations have either implemented or are in the process of implementing an e-procurement system. The main objective of adopting an e-Procurement system by organizations is to take advantage of the benefits that it offers (Engstrom, Wallstrom and Salehi-Sangari, 2009). Muinde and Shale (2014) argued that e-procurement offers numerous benefits to organizations by reducing the transaction costs, improving transparency and is it operational efficiency.

Malawi, being part of the global market, cannot afford to be left behind but consider adopting the e-

Procurement system if she is to be competitive when undertaking a procurement transaction. It is with this understanding that the Government of Malawi (GoM) enacted the Public Procurement Act (2003) to create an enabling environment for better procurement procedures. The Act aims at providing guidance to all Procuring Entities (PEs) as well as regulating the procurement process. The Act emphasizes on openness and PEs are encouraged to be transparent and create an environment that enables all players to have equal access to information. It is therefore necessary for PEs to adopt better communication systems that provide timely sharing of information to all interested parties without any biasness or favouritism. E-procurement therefore would be seen as the means to betterment of communication systems and create a transparent procurement environment.

Section 5(l) of the Act empowers the Director of the Office the Director of Public Procurement (ODPP) to establish a data and information base concerning procurement terminology and legislation. The Director is also empowered to set policy for, and promote the application of, modern information and communications technology to public procurement. Again, Section 17 of the Act also requires the Director of Public Procurement to devise strategies for promotion and application of modern technology in public procurement and additionally Section 31 (8) of the Act provides for the submission of tenders electronically. The emphasis however is on putting measures to protect the confidentiality of tenders and integrity.

Although the framers of the Act provided sufficient grounds for the use of modern technologies, public procurements in Malawi are still done using the traditional paper-based processes. According to the World Bank Malawi Country Procurement Assessment Report (2004), the public sector in Malawi has the potential to initiate the first steps of e-procurement that involves exchange of information through the Internet.

Considering the importance of e-procurement to the procurement process in the public sector, this study was intended to investigate the factors preventing the adoption of an e-Procurement system and their influence on the adoption process.

## Literature Review

### E-procurement Systems

E-procurement is defined as the use of Internet based ICTs to carry out individual or all stages of the procurement process (Subramanian and Shaw, 2004). The definition suggests that the use of the Internet can be done at any level of a procurement process and be considered as an e-procurement transaction. Vaidya (2012) consider e-Procurement system to include e-tendering, e-catalogue management system and e-market place.

The e-Procurement system has become one of the study areas owing to the contribution it provides to both the public and the private sectors. The advancement of the ICT revolutionized the activities of many organizations and it has become the de facto platform for doing business (Shoniregun, 2005). ICT has the potential to redesign the business process and improve the operations of the public sector through the introduction of better and efficient ways of undertaking business transactions including procurement processes. As argued by Aboelmaged (2010), organisations that adopted e-Procurement have drastically reduced the time and cost required to generate a purchase order, improved the selection of the correct suppliers as well as management of payments. According to Grant (2011), the focus of e-procurement is double sided and of much interest is its ability to control purchases, reduce the costs incurred during the procurement processes resulting in realising some saving.

The public sector considers e-Procurement as the most reliable system that can be used in realising critical procurement goals such as value for money, transparency and accountability. Quinot and

Arrowsmith (2013) contend that transparency and competition are the two mechanisms to realize many of the objectives in public procurement. E-Procurement system has been one of the effective tools for introducing public procurement reforms and establishing a transparent and open procurement environment. It is therefore considered to be most useful in attaining organizational objectives that include improved public administrative processes, an increase in the public program effectiveness and better control in public purchases. It is, however, argued by Feinstein and Stefanelli (2002) that reliance on technology should be done with care as technology will never have the power to replace a good manager. A good manager is a key factor in fostering innovative ideas and ensuring that the organization has the right strategies to drive productivity and growth. Good managers will decide on the type of technology to be used in the organization. The use of modern technologies therefore only enhances management's effectiveness and not replacing the role of good management practices.

According to Manoharan and Holzer, (2012), countries that successfully adopted the e-procurement system have managed to improve market access and reduction in marketing costs. It is however not easy to adopt an effective e-Procurement system due to its complexity and need for huge investment requirement. Rajkumar (2001) also argued that managerial challenges might affect the successful adoption of an effective e-Procurement system. Contrary to the need for large investment requirement by the public sector, Thai (2008) recommends the use of the private sector through the public private partnership arrangement in implementing technologies that require high investments in the public sector such as an e-Procurement system. Thai (2008) further emphasized that the public sector may benefit from the financial muscle and pool of knowledge in the private sector to successfully implement an e-Procurement system.

## **Factors Affecting the Adoption of an E-Procurement System**

Whilst the benefits of an e-Procurement system are clearly stipulated, its adoption remains a challenge in most of the public institutions all over the world. According to Melidi (2013), organizational culture is a leading factor affecting the successful adoption of an e-procurement system. Alves de Sousa (2012) identified five factors that were noted from different studies to be preventing the successful adoption of an effective e-procurement system and these were: training, integration with current systems, top management support, business process reengineering and process adoption support. According to Alves de Sousa (2012) adoption of an e-Procurement system could yield better results if an organization finds ways of mitigating these factors.

Ward and Peppard (2002) argued that successful implementation of a new system in any organization requires understanding and using the required mixture of planning approaches. Understanding possible hindrances in the implementation of a system is one way of achieving the set goals as proper actions could be taken to mitigate the challenges. Most public institutions lack such an understanding of the expected benefits due to lack of information sharing mechanisms.

## **Methodology**

The study adopted a descriptive research design. According to Saunders, *et al.* (2009), a descriptive study portrays an accurate profile of persons, events or situations. In the study, the population was the public institutions that were under the supervision of the ODPP in Malawi. The targeted population was mostly involved in making decisions in a procurement process in the public sector in Blantyre and this comprised the Internal Procurement Committees (IPC) Chairpersons, Procurement Officers, Information Technology Specialists, Heads of Finance and Heads of Administration from Blantyre District. According to the

ODPP, there were 201 PEs in Malawi constantly monitored by the Directorate. 70 PEs were based in the southern region representing 35% and 31 were in Blantyre representing 15% of the target population.

A simple probability sampling technique was used in selecting the institutions. As argued by Bajpai, (2011), in a simple probability sampling, each member of the population has an equal chance of being included in the sample. Further a lottery method was applied to come up with the final sample. By using an equation developed by Watson (2001), a sample size of 25 PEs was selected from a total of 31 PEs representing 81% of PEs in Blantyre district that were constantly monitored by the ODPP. Five respondents were drawn from each institution giving the total number of respondents to 125.

The study used a structured questionnaire in collecting primary data. The questionnaire was considered as an appropriate data collection tool considering its ability of identifying and describing the variability in different phenomena (Saunders, *et al.* 2009). The questionnaire had both open and closed questions to allow respondents express their views on other factors that prevent the adoption of an e-procurement system in the public sector in Malawi. The questionnaires were self-administered.

## **Results**

### **General Attributes of the Respondents**

This study achieved an 89 per cent response rate. Almost 73 per cent of the respondents had worked in their organisations for a period of over three years. In terms of gender, 78 per cent of the respondents were male while 22 per cent were female, conforming the patriarchal society of Malawi.

### **Factors Hindering E-Procurement Adoption in the Public Sector**

The objective of the study was to establish the factors that prevent e-Procurement adoption in the public

sector in Malawi. The respondents were requested to indicate their agreement as to whether a give range of seven factors was hindering the adoption of e-Procurement in the Public Sector. These factors were: lack of training, lack of top management support, high costs, lack of knowledge of benefits of e-Procurement, resistance to change, bureaucracy in the public sector

and the failure of the regulatory body to provide a conducive environment for the adoption of e-Procurement system. A likert scale was used with 1 representing Strongly Disagree (SD), 2 Disagree (D), 3 Neutral (N), 4 Agree (A) and 5 Strongly Agree (SA). The responses have been indicated in Table 1.

**Table 1: Factors Hindering E-Procurement Adoption in the Public Sector**

Factors	SD	D	N	A	SA	Mean
Lack of training	7	19	6	59	20	4
Lack of Management support	22	58	9	15	7	2
High costs of implementation	17	56	5	21	12	3
Knowledge of the benefits of e-Procurement	9	23	6	50	15	3
Resistance to change by users	10	24	8	53	16	3
Bureaucracy in the Public Sector	10	19	9	56	21	4
Failure of ODPP to provide conducive environment	9	19	8	52	23	4

The respondents were also given an opportunity to state other factors that hinder the adoption e-

Procurement system. The responses have been shown in Table 2.

**Table 2: Other Factors Preventing the Adoption of an e-Procurement System**

Factors	Frequency	%
Supplier Readiness	88	79
Lack of Political Will	77	69
System Integration	64	58
Staff Motivation	45	41
Data Security	25	23
Legal Framework	12	11

### Discussion

The results shown that lack of training was one of the major factors that affected the adoption of e-Procurement in the Public Sector. This factor had a mean of 4. The findings agreed with Alves de Sousa (2012) who asserted that failure to train the users prevents organizations from adopting a new system. This is due to the fact that the use of new systems in an organization requires well skilled people capable of

managing and understanding such systems. New technologies present a lot of challenges to the users hence the need for proper training before the actual implementation. According to Sitar (2011), people within an organization are the major factor that prevents the adoption of an e-Procurement system. Abu-Elsamen, Chakraborty and Warren (2010) also argued that insufficient in-house skills prevent organizations from adopting an e-Procurement system. Zolait, (2012) is of the view that training

should always be considered as one of the organization's top agenda in order to mitigate the effects of lack of knowledge. Employee training should be considered as a way of improving performance thereby minimizing the gap between performance levels and standards of performance (Gomez-Mejia, Balkin and Cardy, 2012). Singh and Punia (2011) posit that training is capable of influencing user attitudes, behaviour and performance.

In terms of management support, it was established that lack of management support was not hindering the adoption of e-Procurement in the Public Sector. This factor had a mean of 2. The implication of this outcome implied that there was management support in this sector towards the adoption of e-Procurement systems and that the non-adoption was due to other factors other than lack of management support. Top managers in the public sector in Malawi could be assumed that they fully understood the benefits of an e-Procurement system. These findings, however, agreed with Gunaserkaran and Ngai (2008) and Mambo (2015) who stated that top management support was a critical success factor for e-Procurement adoption. To this end, World Bank (2004) noted that it was the responsibility of the top management to collectively bring about change in the organizational setup and formulate policies and strategies necessary for the adoption of an e-Procurement system. Pani (2007) noted that when top management demonstrates their willingness and support to ensure successful implementation of a strategy, it becomes easier to allocate enough resources to implement the proposed activity.

Generally, implementation costs of any new system have a bearing on the successful implementation of the system. The cost factor had a mean of 3 but the majority of the respondents were of the view that the high costs of implementation were not necessarily a hindrance to adoption of e-Procurement in the Malawian Public Sector. Moore (2007) observed that organisations are still using the paper-based procurement processes due to the high

implementation cost associated with e-Procurement system.

The results indicate that lack of knowledge of the benefits of e-Procurement systems affected the adoption of e-Procurement systems in the Public Sector. This factor had a mean of 3. The results implied that lack of knowledge of the benefits of an e-procurement system was a factor preventing its adoption in the public sector in Malawi. The findings agreed with Angeles and Nath (2007) who noted that it is necessary to continuously communicate the benefits of the new system to the organization and the end users in order to successfully influence the end-user behaviour towards new procedures and business rules. Providing adequate civic education on the benefits of an e-Procurement system will lead to an increase in user acceptance thereby increasing the success of the system. Employees should be provided with the necessary information on the benefits of an e-Procurement system to facilitate its adoption.

The respondents were requested to indicate whether resistance to change was a factor that prevented the adoption of an e-Procurement system in the public sector in Malawi. The findings showed that this factor had a bearing on the adoption of e-Procurement systems in the country. The results were in line with those of Kalakota and Robinson (2001) who indicated that one should expect resistance where change is being introduced and it is the responsibility of the management team to deal with such resistance by communicating and encouraging the employees to comply with the new guidelines. The findings also agreed with the observation by Mose (2013) who noted that people would resist adopting a new system if they were not sure of the benefits. Involvement of the stakeholders in the early stages of an innovation therefore minimizes the level of resistance. Bryman and Bell (2013) emphasized that changes must take place if electronic solutions such as e-Procurement were to become a reality and remain competitive.

The other factor that the respondents were expected to comment on was the effect of bureaucracy in the

Public Sector. This factor had a mean of 4. The results implied that bureaucratic system of management in the Public Sector was a factor preventing the adoption of e-Procurement system in Malawi. The findings agreed with the assertion of Torrington, Hall and Taylor (2008) that excess of bureaucracy and over control of organizations frustrate the efforts of employees to capitalize their potential. Public entities by their nature were not flexible when it came to making structural changes. The red tape syndrome in the public sector demotivated employees from pursuing an innovative idea that improves productivity. Information Technology is more dynamic and requires flexible decision making process if organizations are to benefit from technology advancements.

The results showed that the ODPP failed to provide a suitable environment for the adoption of an e-Procurement system in the public sector in Malawi. This outcome was in line with the observation contained in World Bank 2004 Report on the performance of ODPP in 2004. The World Bank observed that failure by the ODPP to operate independently could prevent the directorate from making decisions that could have the potential to revolutionize the procurement system in Malawi. The World Bank (2004) report further noted that the reporting system followed by the ODPP could experience more political interference thereby hindering the adoption of new technologies such as an e-procurement system.

In addition to the above-mentioned factors the respondents also listed other factors preventing the adoption of an e-Procurement system in the public sector. They were: supplier readiness, lack of political will, failure to integrate the system, lack of political motivation, fear for security of the data and failure to have a proper legal framework are the other factors that hinder the adoption of e-Procurement systems in

Malawi. Similar factors were also noted by Croom and Brandon-Jones (2007); Dza, Fisher and Gapp (2013); Mose (2013); (Kalakota and Robinson, 2001); Mgidlana (2014); Henrisksen and Mahnke (2005).

### **Conclusion and Recommendations**

The study revealed that the factors that prevented e-Procurement adoption in the public sector in Malawi were supplier readiness, lack of training, decision making process in the public sector, lack of political will, ODPP's failure to initiate the process of e-Procurement adoption, lack of civic education on the benefits of the system, resistance to change by users, system integration, lack of staff motivation, fear of data security and lack of proper legal framework. Whilst it had established in different studies that cost and top management support prevented e-procurement adoption in the public sector (Vaidya, Sajeev, and Callender, 2006; Eadie, 2007; Henrisksen and Mahnke, 2005), the results of the study established the contrary.

It was recommended that Public Sector organizations should be staffed with well-qualified IT professionals to manage the available IT infrastructures and that employees should be given adequate training on ICT for them to make use of the available computers and other software packages. Management should still continue supporting the adoption of e-Procurement systems. Management can achieve this by providing adequate resources. The Government should encourage innovations at the Office of the Director of Public Procurement and that this Directorate Procurement should initiate studies that will develop models for the establishment of e-Procurement Portal.

This study focused on the factors that hindered the adoption of e-Procurement in the public Sector in Malawi. It would be important to ascertain the suppliers' readiness to adopt e-Procurement system.



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