CRITICAL ASSESSESSMENT ON EFFECTS OF E-PROCUREMENT IN ENHANCING PROJECT PERFORMANCE AMONG PRIVATE SECTOR ORGANISATIONS IN TANZANIA: A CASE OF APPLIED TECHNOLOGY CO. LTD. DAR ES SALAAM

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RESEARCH REPORT SUBMITTED IN PARTIAL / FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER DEGREE IN PROJECT MANAGEMENT OF THE OPEN UNIVERSITY OF TANZANIA

2015

CERTIFICATION

The undersigned certifies that, I have read and hereby recommends for acceptance by the Open University of Tanzania a dissertation entitled, "critical assessment on effects of E-procurement in enhancing project performance among private sectors organization: A case study of applied technology company Limited, Dar-es-salaam and Arusha". In partial fulfillment for the requirements of Master degree of project management.

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Dr. Salvio Macha

(Supervisor)

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Date

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DECLARATION

I, James Amani, do hereby declare to the senate of the Open University of Tanzania that, the content of this Dissertation is my original work, which has never been submitted for a similar degree in any other University.

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Signature

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Date

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ABSTRACT

This study aimed at assessing "the effects for using E-procurement system in enhancing project performance among private sector organizations, a case study of Applied technology Co. Ltd (ATL)" A case study approach was selected and used due to the nature of the study. Total sample of 30 which is 42% of the population was picked from Applied Technology Dar es Salaam and Arusha by simple random and purposive sampling methods. Data were collected by questionnaires, interviews, and review of documents with a response of 30 staffs which is 99.9% of the sample, and qualitative analysis method was used to process the data. The study revealed a number of factors that may lead to effective adaptation of E-procurement in private organization; but can mainly be grouped into two: - First, Organization factors such as, sufficient training to employees, high sensitization of employees on existing training program, adequate training budget, and high training programs evaluation; Second, Sociological interaction, such as; age characteristics, marital status, team building programs and high level of education. To enhance further effective improvement of training programs it is recommended to;- Develop a uniform TNA exercise improve the level of efficiency of training function and eventually have clarity in scope and objectives; Conduct evaluation after every training session and give feedback to trainees; increasing employee capacity by allocating sufficient budget; Implement training function openly and involve every individual in determining the kind of training they need and adapt the "Blended Learning Program Model". Garvey (2011) and Kirkpatrick's (1975) Evaluation Model as analyzed in the paper.

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ABBREVIATIONS

ATL	Applied Technology Co. Ltd.
B2B	Business to Business
E-BUSINESS	Electronic Business
E-COMMERCE	Electronic Commerce
EPS	Electronic Procurement System
E-PROCUREMENT	Electronic Procurement
ICT	Information and Communication Technology
IBM	International business machine
I T	Information Technology
PSPTB	Procurement and Supplies Professional and Technician Board
SPS	Standard Procurement System
S.A	South Africa

CHAPTER ONE

1.0 OVERVIEW OF THE STUDY

1.1 Introduction

This chapter involved overview of the research problem such as background of the study, historical background of the organization, statement of the problem and objectives of the study. The researcher further clarified the significance of the study together with its limitation.

1.2 Background of the Study

Project and Businesses face many challenges in today's fast uncertain global climate (Lee and Gebauer, 2006). Many organizations have turned their attention to Electronic Commerce (EC) technologies to improve the efficiency of their business processes. The most prominent form of EC system concerning interactions between businesses (business to business)that have recently received attention in the literature is called Electronic Procurement System (EPS) (Hawking and Stein, 2004). EPS automates an organization's purchasing process, reduces transaction costs, improves inter-organizational coordination within the supply chain, improves relationship with business partners and offers competitive sourcing opportunities for the buyer organizations (Subramaniam and Shaw, 2002).

The widespread adoption of EPS by organizations in both private and public sectors will lead to national performance improvement and productivity growth and it has the potential to increase the gross domestic products (GDP) significantly (Hawking and Stein, 2004). (Amitt & Zott, 2001) realized that in recent years internet had revolutionary effect on corporate purchasing practices, in both direct and indirect

purchases. The diffusion of new e-business technologies in the late 1990's has created new working practices and new business models for corporate business functions.

E-procurement system have been used by several organizations to purchase both direct and indirect materials for processes such as operations, sales, administration and maintenance, travel related items, cleaning, solvents and transportation services, among others this procedure allows the organizations to have a decentralized purchasing decision, in which only the accredited suppliers can be seen in their purchasing systems, through for example e-catalogues.

1.3 Historical Background of the Organization

Applied Technology is a private registered Company in Tanzania commonly known by the trade name Red n' White which was incorporated in 1993 by European shareholders. It was established under the Tanzania Investment Centre (TIC) as primary agency of Government to coordinate, encourage, promote and facilitate investment in Tanzania. ATL is one of the largest importers of wines into Tanzania which has a long standing commercial relations with major European and South African companies and hold exclusive distributors for Freixenet S.A, Felix Solis Avantis, Kwv International, Landskroon Wines, Overhex, Namaqua, Spier, Gruppo Italian Vini, Swartland Winery and Afrique Interlink.

ATL is also the exclusive distributor in Tanzania for all Philip Morris products i.e. owner of the Marlboro Cigarette brand, Nestle waters, San Pellegrino and Acquapana waters imported from Italy and Vacuvin (wine accessories) imported for

the Diageo spirits (Johnny Walker, Captain Morgan, Smirnoff, Gordon's Gin etc.). To facilitate its national wide network, ATL owns and operates offices, fleet, warehousing etc. in Dar es Salaam and Arusha, covering (geographically) the most important part of the territory. ATL customers' portfolio covers all segment of the Tanzania market including all major supermarkets, majority of the international hotels, lodges and restaurants.

1.4 Statement of the Problem

Electronic Procurement System (EPS) has been noted to be such a tool to improve the procurement function for many organizations both public and private sectors. Through utilization of the internet, Electronic procurement system improves the efficiency in various stages of procurement process including searching for sellers, processing (product request, approval and order generation), controlling procurement process and coordinating the exchange of information internally and externally with trading partners.

As a result, cost saving can be obtained through lower transaction cost, increase procurement process quality (accuracy), shorter cycle time, better inventory management while relationships with trading partners can be enhanced, risks can be better controlled and strategic sourcing can be exploited (Subramaniam and Shaw, 2002) and(Muffatto and Payaro, 2004). However, the adoption rate of Electronic procurement system has been much lower than the initial prediction (Da Vila et al, 2003). But more advanced application may not be achieved until substantial improvement in the basic infrastructure. (Knudsen,2003), states that despite of such advancement on adoption of e-procurement system, many entities put substantial low

use of electronic purchasing and opt for manual purchasing instead.

Procurement is an important and extensive business activity for organization; this is because organizations usually spend a large portion (even up to 70%) for their revenue or operational budget on purchasing goods, works and services. Despite of such importance procurement functions still suffers from two chronic problems; procurement is traditionally a labor-intensive activity and as such managers spend considerable time on non-value adding activities, and traditional procurement process- permits infamous maverick buying practices which present a situation where employees make unplanned purchasing from non-preferred suppliers at higher prices.

To combat this state, government advices the councils to enhance procurement efficiency using innovative internet- based information technology (IT) solution, (Batenburg,2007). Government and other pioneers put considerable efforts in pursuing the entities to use e-purchasing with a view to improve procurement function. Therefore the core question is how electronic procurement system will be equipped to foster efficiency and effectiveness of procurement system. The researcher aimed to assess the barriers for using electronic procurement system at Applied Technology Co. ltd (ATL) so as to search data which will help to bring the ideas for improvement of EPS adoption.

1.5 Objectives of the study

1.5.1 General objective

The general objective of this study was to assess the effects of using e-procurement system in private sector in enhancing project performance, with Applied Technology

Co. Ltd. (ATL) as a case study.

1.5.2   Specific Objectives

a) To evaluate the extent to which management supports EPS investment.
b) To assess technological competence of the project organization/company

   on EPS application.
c) To examine whether the private sector organization can full access the E-

   procurement System in reaching project goal/objective   .

1.6 Research Questions

1.6.1 General Research Question

To what extent does the e-procurement system can contribute on improving project

performance in private sector organization/specifically Applied technology ltd when

it is fully adopted?

1.6.2   Specific Research Questions

In this study the specific research questions are as follows;

i.   What are the current uses of internet-based technologies in the

   organization and to what extent does the management support the EPS

   investment?
ii.   What are the perceived benefits/ transformation resulting from e-

   procurement initiatives?
iii.   What are the E-procurement success factors in the organization which

   could contribute to reach the project goal effectively?

1.7 Significance of the study

The study was designed to understand how e-procurement barriers affect the adoption of EPS and further examined what could be done to cure the prevailing barriers hence to enable managers to have better decisions on EPS adoption and development therefore achievement of project goals. The study is of great significance to all public and private companies especially for strategic planning and successfully introduction of e-procurement system. The study is relevant for academicians, political agents and B2B software vendors and consultants. Furthermore the study will enable the politicians and their policies to foster the development of the ICT industry and the rate of digitalization to the country. Finally the study will enable the researcher to be awarded Master in project management (MPM) offered by the Open University of Tanzania (OUT).

1.8 Organization of the study

This study is configured into six chapters; the first chapter was introducing the study such as the background of the study, historical background of the organization statement of the problem, the research objectives, research questions and significance of the study. Chapter two contains the literature review. This included different authors' opinions about e-procurement. It consist the definition of the key terms and empirical studies on importance, barriers and benefits of adopting e-procurement system within and outside of Tanzania. The conceptual framework is also presented and discussed in this chapter.

Chapter three is about the discussion of research methodology which was used in this study. Presentation on research paradigms, research design, description of the

study area, type of measurement, research approach, research procedures and sampling, data collection techniques, reliability and validity of data, management and analysis of data, the expected results and limitation of the study were done.

Chapter four presents the facts finding and analysis. The collected data were presented in the light of research objectives. It was presented qualitatively and quantitatively, using tables, charts and figures. Chapter five presents discussion of the findings in relation to the research objectives and the literature review that justifies the research problem. Conclusion and recommendations chapter is the last chapter that summarizes the whole research according to the research objective and gives recommendations for further studies.

1.9 Limitation of the Study

The researcher faced the following limitation during his study

(a) Inadequate financial resources and time. Due to this the researcher based on theoretical part rather than practical so the sampling techniques were applied in order to represent the population in the study. Also in order to save time the researcher used both mobile phones and physical presence to speed up the respondents to fulfill the questionnaires.

(b) Problem in source of data. The researcher found difficult to get some of desired information since some of the respondents were not cooperative to give out some information hence some questions were left blank.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

The literature review included the analysis of the most relevant studies regarding the previous writings, experiences related to e-procurement system, researches done by previous researchers and developing theories. The information was collected from different sources such as textbooks, professional journals and internet. This enabled the researcher to acquire current knowledge about the study hence determined the research gap.

2.2 Theoretical bases of the study

The diffusion of new technologies in the late 1990's has created new working practices and new business models for corporate business functions. This has prompted the interest of companies in designing their relationship with suppliers of goods and services (Puschman & alt, 2005). While focus of companies is made in the reduction of cost of brought in goods and services, there has been a need for procurement manager in increasing their productivity and contribution to value creation (Smart, 2010).

2.3 Conceptual definitions of key terms

The key terms related to this study were explained here to make it easier for readers of this study to fully understand the topic.

Procurement is not just purchasing or selling of the product and services but it is the umbrella term including lots of functions in it. (MacManus's, 2002), recognition of

the differences in meaning between 'procurement' and 'purchasing is of relevance here.

Quoting the dictionary of purchasing terms, (MacManus's, 2002), explains procurement as denoting 'the combined functions of purchasing, inventory control, traffic and transportation, receiving and inspection, store keeping and salvage and disposal operations. Business dictionary (online) defines procurement as "combination of purchase planning, supplier research and selection, price negotiation, supply contract negotiation, inventory control and disposal" besides many other functions.

Procurement is the process of identifying and obtaining goods and services. It includes sourcing purchasing and covers all activities from identifying potential suppliers through to delivery from supplier to the users or beneficiary. Procurement is key activity in the supply chain. It can significantly influence the overall success of an emergency responses depending on how it is managed, procurement represent a large proportion of the total spend and should be managed effectively to achieve optimum value (Attaran & Attaran 2002).

Procurement Process; refers to the purchasing of goods and services, however it does not only comprises out of buying and paying but involves many other activities too, such as need clarifications, purchase order generating and so on. The goal of procurement process is to satisfy the need of the company by acquiring goods and services from preferred suppliers for the most valuable price (Mangan, 2008).

E-procurement, now if the function of E-procurement is talked about, as the name shows every process is done electronically which starts with placing the order by utilizing negotiation deals, purchase approval, online payment, invoicing and product distribution and some hi-tech system also provide facility of online ordering tracking.

E-business, it refers to any business conducted using electronic media, making some or all its revenue via internet technology.

E-commerce refers to the act of buying or selling goods or services over the internet.

Business to Business (B2B)- is the trading between firms, characterized by relatively large volumes, competitive and stable prices, fast delivery times and often, on deferred payment basis e.g. whole sale.

E-procurement system (EPS) is a web-based client/server application used to replace the manual procurement system. It supports procurement areas such as transaction, procurement management, market making, demand and supply sides and inter-organizational modules. EPS is used to communicate with both the buyer's and seller's information systems through the enterprise information systems gateway.

2.3.1 Core capabilities of the procurement system

(Lankford, 2004), put forward the core capabilities that are essential that a system should posses to be classified as an e-procurement system consist of up to ten steps depending in the complexity of the buying organization policy. The mentioned and the explained core capabilities are as follows;

Requisitioning: This functionality must be accessible to all individuals in the enterprises authorized to make purchases. This is where a buyer recognizes a need and place a request for good or services.

Approval routing and workflow: E-procurement system contain workflow capabilities and the ability to set up automatic approval routings by good, services, dollar value and any combination thereof. If one or more element of the requisition is not acceptable the requisition is denied and message is send to the requisitioner on why it is rejected.

E-purchase order: From the buyer perspectives the purchase order is probably the most critical component of the procurement cycle. Purchase order contains all relevant data pertaining to the order including the goods and services being ordered.

E-receipts: E-procurement system must also be capable of automatically producing and delivering goods and services receipt upon delivery when appropriate. To enable this, the system should integrate with barcode scanners to allow for automatic recognition of delivered goods.

E-Invoicing: This is document that defines and ultimately leads to payment. E-procurement should be capable of accepting and processing electronic invoices for those suppliers who do not have system that automatically generate electronic invoice, it should provide an easy means of online creation either through a supplier portal or document scanning.

E-payment option: E-procurement should support multiple electronic payment option such as purchasing cards, electronic fund transfer, electronic cheque and automatic cheque printing.

Taxation support: The system should be capable of understanding relevant taxation codes and linking into standard tax tables to allow the buyer to accurately compute tax, reconcile tax charged by suppliers and determine any exemptions the organization is eligible for.

Alerts: The system must also be capable of raising alerts whenever an approval is required, an invoice is received with associated goods an invoice contains inaccuracies a payment is due or another important user defined (and user definable) event occurs.

Self Service supplier portal: It is critical especially from adoption and maintenance perspectives that supplier is able to self register, self activate, self update and at the appropriate time self terminate. They should be able to automatically send electronic invoice through the appropriate interface or create them manually through the portal. Furthermore e-procurement systems drive collaboration between buyers and supplier visibility into invoice and payment status and decreasing processing time and errors.

2.3.2   Benefits of E-procurement

(Hawking and Stein, 2004), provide a synopsis of the benefits of e-procurement from various historical studies as:

    i)   Price reduction
    ii) Improved contract compliance
    iii) Shortened process cycle times
    iv)   Reduced administration costs
    v)   Enhanced inventory management
    vi)   Improved visibility of supply chain capacity
    vii)   Reduced operations and inventory costs
    viii) Negotiated unit cost reduction
    ix)   Increased accuracy of production capacity
    x)   Enhanced decision making
    xi)   Improved market intelligence

Sourcing of the product and supplier which include identification, evaluation, negotiation of products and supplies can be done very easily from the best place for the best of prices. Most of the companies want their procurement process to be privately and strategically hidden from the outsiders which is only possible if done online and on same hand gives full transparency to the insiders(Hawking and Stein, 2004), increasing efficiency in the supply process with time management is also one of the hallmarks of e-procurement. As the ordering process will be done online with all negotiation deals it will result in reduction of cost and inventory management.

It is noticed that most organizations spend more than 30% of their income on purchasing goods and services. This is leading them to adopt e-procurement to reduce strain on their budgets and make it more cost effective. It further helps in getting rid of disadvantages of the traditional paper-based procurement method like error-prone, expensive and resource intensive (mainly human resource). Last but not least is that e-procurement provides market intelligence to the companies which help them in their supplier selection and dealings. Furthermore it enhances effectiveness which comes from 'increased control over the supply chain, pro-active management of key procurement data and higher quality purchasing decisions within organizations'.

2.3.3 Importance of E-Procurement System

Among various categories of E-Commerce, B2B E-Commerce is the most important one as it accounts for the majority of electronic transactions in the business world and, therefore, has enjoyed a rapid progress in the last decade in terms of

applications development and the adoption rate (Forrester Research 2000). One of the relatively recent B2B E-Commerce applications developed in the past decade is e-procurement system. Through the utilization of the Internet, e-procurement system improves the efficiency in various stages of procurement process including searching for sellers, processing (product request, approval and order generation), controlling procurement process and coordinating the exchange of information internally and externally with trading partners.

As a result, cost savings can be obtained through lower transaction cost, increased procurement process quality (accuracy), shorter cycle time, better inventory management, while relationships with trading partners can be enhanced, risk can be better controlled and strategic sourcing can be exploited , (Subramaniam and Shaw, 2002). Turban *et al,* (2006). E-procurement system, therefore, has attracted organizations' attention particularly in the last few years and it has the potential to improve national productivity growth of any countries (Hawking and Stein 2004).

2.3.4   Barriers for E-procurement:

E-procurement is affected by some of the barriers which can be broadly categorized into three; Technological, Organizational and Environmental. (Galloway and Jamieson, 2003);

Technology always becomes a barrier if it is inadequate and insufficient. Furthermore, this situation become worse if there is no skilled staff to support or their information system knowledge is not up to the mark.

If the **organization's internal culture** is not technological welcoming, which means that there is no top management or employees' support, then it can be the biggest hurdle as this is the foot step in adoption of e-procurement. Lack of integration with business partners or suppliers can also resist adoption of e-procurement system.

Many researchers have highlighted that e-procurement benefits have not been fully delivered, and the main reason identified for this is the lack of tangible results is mainly because of the traditional resistance to IT-based process innovation.

Cost becomes a big issue whenever organization is heading to change; especially technological wise, as the implementation cost is too high and sometimes the amount of benefits accepted do not justify the amount of cost.

External environment has to be supportive from all sides if company wants the adoption to be success. External environment includes completion intensity, partner/supplier readiness and government regulatory and legal boundaries.

Security of transaction: Security is a major concern when working on the internet. (Edie et al, 2007), stated "The World Wide Web leaks such as a sieve. Data transmitted on it can be garbled and reassemble wrongly at the other end, or can display only partially because of incompatible software".

2.3.5 Impacts of E-procurement system:

The introduction of a new information system in an organization requires changes in the way that organization works. Indeed, EPS leads to changes at different levels: at

the organizational level, in the information system department, on the organizational culture and at financial level (Boer et al, 2001). Modifications at the organizational level refer to changes in the way people perform their work, particularly, when they want to buy goods and services they need. The availability of an EPS provides employees with the chance of introducing some atomization on specific buying activities, leaving paper forms, telephone calls, and faxes out of the acquisition process or at least, reducing their use significantly.

Meanwhile, new activities arise as a result of an EPS implementation. For instance, people in the information systems department have to deal with another type of technology, and new learning processes and maintenance activities have to be developed in order to use and manage the new system. Moreover, we must consider the fact that EPS maximize the level of operational efficiency when such system is integrated with legacy system (Frohlich and Westbrook, 2001). Such an electronic integration is a process that requires a great level of expertise, so hiring skilled people for the information system department may be necessary.

EPS may also induce a change in the organizational culture due to new organizational processes, e.g. order placing through computer instead of physical meetings. The impact of EPS have on financial accounts is also relevant because of the price reduction of goods and services, the necessary capital investment and the operational costs of the new system.

2.3.6 Achievements made by computerization in an organisation

Many experience show that the adoption of computerized functions have an immense impact in an organization's success, some organizations have automated

procurement processes to reduce transactional costs by reducing number of people involved in the process thus cutting down the cycle time from the order period to the receipt of goods and services. A vivid example is Scotland whereby a 7 year $60m e-procurement deal in public sector and according to its director Tom Wilson is proud of its achievement. 'Since the programme started in April 2002 has processed more than 180,000 orders and $500m worth of spend. Eight thousands users across more than 60 Scottish public sector bodies use the system buying goods and services from 12500 suppliers he says.

Also suppliers using it are impressed one of them is Steve Reeves who traders directly with 10 Scottish. Public sector organization using the technology, the system allows buyers to select directly in world electronic catalogue which carries 40,000 items. Mr. Wilson is proud of the fact that the Scottish executive has reduced its annual paper invoice tail from 320,000 to 50,000 (Coyle, 2003), computerization in procurement logistics and supply chain management has the following advantage. Improve control over management, reduce paper work, lower cycle time, reduce overall price paid, find new supply sources and improve planning, network and control.

According to Chopra and Meindl (2007) ICT is a key supply chain driver because it serves as glue that allows other supply chain drivers to work together with the goal of creating an integrated, coordinated supply chain. It's the key to the success of a supply chain because it enables management to make decisions over a broad scope that crosses both function and companies.

In another experience in 1999 IBM began doing business with 12,000 suppliers over the internet sending purchase order, receiving invoices and paying suppliers using World Wide Web, the internet simplicity reduced cost for IBM and its suppliers. IBM estimated that it saved $500m in 1999 by moving procurement to the web "that is only the tip of the iceberg". Much of the saving is came from eliminating intermediaries, IBM uses the web to manage multiple suppliers thus improve quality and reduces costs. The use of ICT leads to economies of scale as it combines all organizations data and reduces costs, in order for the achievement of computerization in the organization to be successful it need to get top management commitment in all stages and the subordinates as it was key factor in helping Wal-Mart.

2.4 Empirical studies

2.4.1   International studies

Despite the proven benefits of using electronic procurement, (Edie et al, 2007), showed that only 48% of the respondents indicated that they were able to conduct e-procurement effectively. This might be an indication that those barriers are really impacting the good results and benefits for the implementation of e-procurement. Many organizations are seeking new ways to reduce procurement costs which typically represent the largest cost item in business operations, Da Vila et al (2003). According to industry sources, the indirect procurement expenditure in Australia are about AU$150 billion per annum and each procurement process incurs about A$125 per transaction (Neef, 2001).

Most of the costs incurred are due to non-value added activities such as manual data re-entry, fixing errors, premium buys due to the inability to find competitive suppliers, inefficient search and evaluation of suppliers and their product offerings and the long process in reaching an agreement and obtaining approval before orders can be placed (Muffatto and Payaro 2004; Angeles and Nath (2007) presents the following challenges; Lack of system integration and standardization issues, e-procurement is still relatively new business application and is not usual to find a lack of benchmark able reference models, also challenge of software immaturity and lack of certain key features like invoicing, payment reconciliation or managing of different geographical jurisdiction tax structure.

Other challenges relate to immaturity of providers of e-procurement service and lack of supplier preparation and resistance of solution and users. Immature service providers may not be able to provide a complete suite of services, especially for more complex or advanced e-procurement implementation projects. Also immaturity of suppliers and lack of preparation is a big challenges for many companies after all supplier need to learn how to generate catalogs, process electronically purchase orders how to use invoicing mechanisms among other tasks.

According to Angeles & Nath (2002) Resistance of end users towards operating the e-procurement solution, this relate to behavior among the company employees. Some companies find it difficult to eliminate maverick buying even after implementation of e-procurement. This can be prevented by intensive end user training and educational programs. Companies also need to be aware of the problems

in integrating the e-procurement solution with other system. According to Davila, (2003) companies using e-procurement solution report savings of 42 percent in purchasing transactions costs. Another research by Croom and Brandon (2003) found that e-procurement implementation can have up to 75% cost reduction in procurement process costs and 16-18% reduction in purchasing price for indirect purchases.

Piotrowicz & Irani, (2010) stressed that there are many obstacles in implementing E-procurement, in some cases the benefit of implementing an e-procurement solution have been hard to evaluate. Companies should use various measuring methods in order to fully track and understand how benefits are distributed according to the level and area of their impact. At the moment, there has been little evidence on the realization of e-procurement benefits since the involvement of multiple parties/stakeholders in e-procurement systems presents challenges in measuring the impact (Subramaniam and Shaw 2002).

In addition, the meaning of success in the context of e-procurement is different from other contexts and, therefore, requires a unique measure which is not yet available (Seddon et al. 1999; Chua et al. 2005). As introduction of e-procurement systems requires significant investment to replace existing technologies, without clear evidence on the impact, many organizations are not motivated to adopt e-procurement systems (Subramaniam and Shaw 2002; De Vila et al. 2003). As per (Edie et al, 2007), some companies have a problem in acquiring the right platform to carry out e-procurement. The reason might be due to high costs involved in installing the proper IT system to have all the benefits of e-procurement process.

2.4.2 Local Studies

(Francis,2004), took a study on inefficiency of application of ICT in Materials Management, a case of Tanga city council, the researcher elaborated on the use of modern control equipments, the use of modern techniques like computers together with the qualified personnel have to be the cornerstone of stores activities. The researcher pointed out that there is hesitation of management to adopt ICT into their operations and advises the top management to be more active in the process of accepting the modern technology.(Mchopa, 2012), took a study on adoption of e-procurement in Tanzania, the researcher stated that e-procurement is a new phenomenon although some initiatives have already been undertaken by few private companies especially owned by foreign investors in large part.

In the public procurement context, there are various organizational, technical and governmental challenges on the ground that defies the full integration and adoption of E-procurement in public procurement. Once these challenges are addressed effectively, the country will make good progress towards full application on e-procurement especially in public procurement, the challenges include but not limited to poor technological infrastructure, inadequate funds for capital investment, risks, unsupportive legal framework and shortage of technical knowhow. Also there is shortage of technical support, security of data transaction, poor network infrastructure and unstable power supply, (Mchopa, 2012).

(**Yohana A Mutaba, 2014**), *took a study on adoption of e-procurement and its role on reduction of corruption and frauds in public procurement in Tanzania,* the

researcher stated that Adoption of electronic procurement in public is very crucial to the development and general success of procurement and supplies. It should be noted that despite the fact that e-procurement has positive contribution to the development and success of procurement, there are factors that constraints public sectors and government at large in adopting electronic procurement.

Factors constraining adoption of electronic procurement in public procurement may commonly include: Development of experts on e-procurement, Capital investment on technological infrastructure, Development supplier capabilities, many users believe that e-procurement will make their job more difficult or cumbersome (Resistance to change), Lack of common technology standards, Complicated procedures and extended Relationships. Chungu (2006) reported on "Effective using of E-procurement system in inventory Management" concluded that most of Central government, government offices are relatively weak in computerized procurement related functions. The researcher reveals that even though many junior staffs respond to computerized system in their operations, but respondents from senior and management staff proved that there is no high need for computerization of the procurement processes. The report continues to indicate that the government must train more people in the field of information technology (IT) so as to enable them to advance in technologies.

2.5 Conceptual Framework Model

The technology-organization-environmental framework by (Tornatzky et al, 1990) explains the adoption of technological innovations and identifies three aspects of a firm's context that can influence the process by which companies adopt

technological innovations: organizational context, the technological context and the environmental context.

The organizational context is typically defined in terms of several descriptive measures: firm size, the centralization, formalization and complexity of its managerial structure; the quality of its human resources; and the amount of slack resources available internally. The technological context describes both the internal and external technologies relevant to the firm. This includes technologies existing inside the firm as well as the pool of available technologies in the market. The environment context is the arena in which the firm conducts its business-its industry, its competitors, its access to resources supplied by others and its dealing with the government.

Implementing of E-procurement is not a simple thing as many businesses think. According to (Itoga & Lin, 2008), companies implementing e-procurement need to clearly understand the purpose of launching such a system. The researcher will examine all independent variables that drawback the implementation of E-procurement system in ATL. Despite of the above discussion by different authors and researchers, still the barriers for using e-procurement system is a big challenge to most of the organizations in Tanzania. This means that more research is needed focusing on this area; hence the researcher used this opportunity to assess the prevailing barriers.

Independent Variables:

E-procurement: Effects and efficient EPS Adoption.
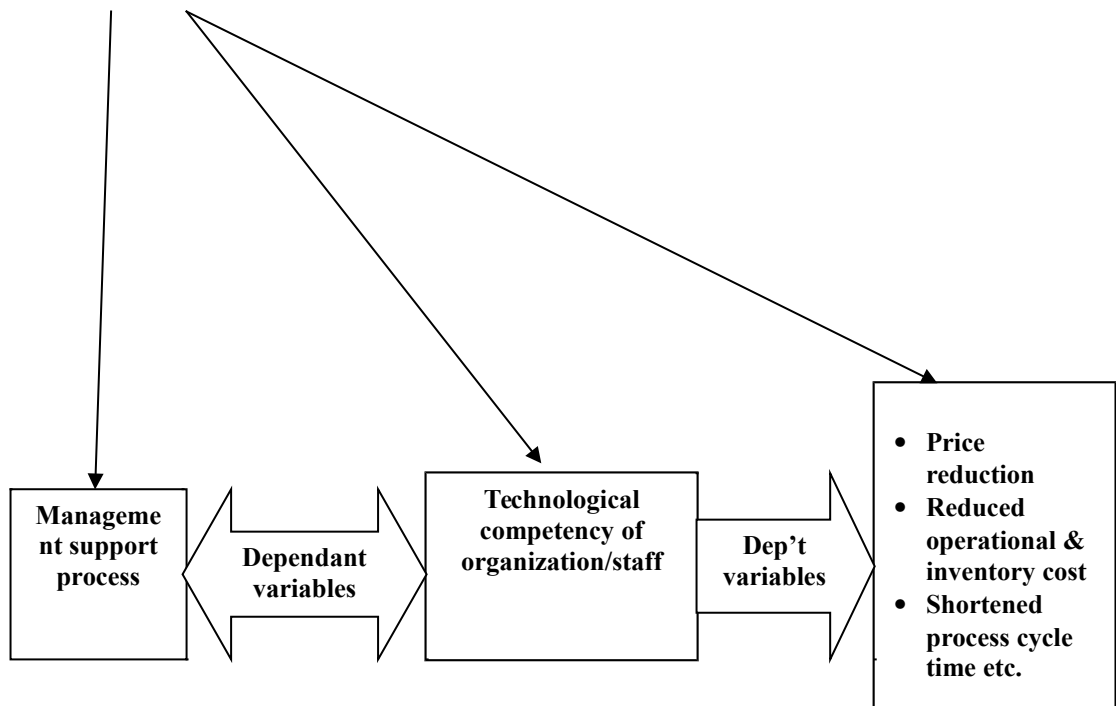
Figure 2.1: Conceptual Model for EPS Adoption

Source: Researcher, 2015

2.5.1 Accessibility of e-procurement system to all departments

According to (Davila et al, 2003), adopting EPS in a firm necessitates the integration of this system with another information infrastructure including systems such as accounting, human resources, inventory management, accounts payable, production planning and cash management systems. This means making investment only in purchasing system is not sufficient for deriving benefits, besides, this would cause undesirable results such as lack of information, dual entries leading to complications, and increasing time consumption. Fig. 2.1 shows the importance of the accessibility of different users for EPS adoption.

2.5.2   Top Management Support and Staffs Participation

Management support is highly needed in implementation of E-procurement system since this has a direct impact with level of process savings and also is an important determinant in achievement of organization goals. Active support of council management indirectly contributes to the acceptance of the system through its influence on different ways such as employees' involvement and customized training.

Management support is essential to allocate sufficient resources for IT investment (expertise and infrastructure), sponsoring training programs to staffs and allowing them to participate at various stages of IT system introduction (Fig 2.1). This also goes with creation of smooth rules and procedures, removing bureaucracy so as to support the EPS.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter consists of research paradigms, design, type of measurement, data collection methods, sources of data, sample size and sampling procedures, the description of the study area where data have collected, the reliability and validity, data management and analysis.

3.2 Research Paradigms (philosophy)

For the purpose of this study both research philosophies were used that was quantitative and qualitative. The researcher used quantitative design to obtain different measurements of data and qualitative design to obtain different views and opinions from people.

3.3 Research Design

(Kothari, 2004), presents it as a structural conceptual arrangement for collection and analysis of data, it constitutes a blueprint for the collection, measurement and analysis of data. Research design is a master plan of method, procedures that should be used to collect and analyze the data needed for decision making.

For this study it was suitable to use descriptive design as the research aimed at providing conclusive information from the established particular cause of action; whereby information was collected to get different opinions about the barriers for using e-procurement system. Causal research design was adopted to establish cause-effect relationship so as to allow the researcher to investigate changes in one variable

while manipulate one on the other variables under controlled conditions. Moreover, case study was also useful as e-procurement is a complex technology hence requires organizational context in order to understand the phenomena well and to have in-depth contextual information to interpret the barriers for using e-procurement system.

3.4 Measurements

The researcher used parametric type of measurement which included interval and ratio scales so as to have reliability and validity of data.

3.5 Data collection approach

The researcher used both qualitative and quantitative design so as to obtain reliable information and draw the conclusion easily. Quantitative design provides the fundamental connection between empirical observation and mathematical expression of quantitative relationships. Qualitative design provides opportunity to explore a subject in a real manner as possible. This approach involves an in depth understanding of the behaviors of the clients and the staff and the reasons that govern their behavior, (Kothari, 2006).

3.6 Data collection methods

3.6.1 Questionnaire

This is a method of collecting primary data where by prepared questions prepared to the respondents and request to complete them and return them to the researcher (Krishnaswami, 2003). This can be open ended type of questionnaire where by the

respondent is free to answer the question according to own opinion and closed end questionnaire this is where a respondent is been fixed to answer the particular type of question by using options provided (Kothari, 2006).

Open ended type of questionnaires were asked to the respondents to let them feel free to answer what they know, also closed type of questions was used so as to obtain a specific opinion. These methods help to obtain data at a lower cost and with minimum errors. The researcher adopted both open and closed ended questions to ensure sufficient data collection.

3.6.2   Interview Method

This technique includes structured interview or formal interview and semi structured interview. Structured interview where a list of specific question that guide the process is prepared prior to the interview. Semi-structured interview is conducted where a broad type of questions are asked to interviewers while proceeding with their own way.

Semi-structured interview is useful if the researcher has a clear theoretical understanding of the topic which allows the researcher to create an appropriate questionnaire Semi-structured interview means that there is some flexibility in the wording and order of the questions. The script of the interview is not preplanned and the order of the questions can vary, the interviewer can also ask for examples and so on to get more detailed answer (Eriksson & Kovalainen, 2008).

 The major advantage of semi-structured interview is that the materials are somewhat

systematic and comprehensive, while the tone of the interview is fairly conversational and informal (Eriksson & Kovalainen, 2008). The researcher preferred semi-structured interview for the IT and procurement heads of department.

3.7 Types of data

Data was collected specifically intended to suit the research questions. The sources of data were both primary and secondary.

3.7.1 Secondary Data

These are data which are resulted from secondary sources, so are data already exist (Mugenda, 2003). For the purpose of this study researcher collected the available information from different sources such as books, internet searching, journals and different research materials done by other researchers. The aim was to relate, compare and draw conclusion from existing problem.

3.7.2 Primary Data

These are first hand information collected through methods like observation and interviews (Krishnashwami, 2003). In other way these are kind of data extracted fresh from field through interview, questionnaire and observation. The researcher used questionnaire methods to collect primary data.

3.8 Sampling Techniques

This is a process of selecting a number of individual or objects from a population such that the selected group contains elements representative of characteristics found

in entire group (Kombo & Tromp, 2006).

(Kothari, 2004), defines a sampling as a definite plan for obtaining a sample from a given population. It is the process of selecting a sample items from the population. Sampling obtained from sample which is a fixed part of statistical population whose properties are studied to gain information from the wholes. Sampling is a process of drawing a sample (part of the population) from the large population so that population may be presented by few units (Krishnaswami, 2003).

The sample was selected using purposive and random sampling so as to have a targeted sample with required information. Purposive sampling was basically used to obtain the key respondents (head of Procurement and IT departments), also to choose data, documents and books that were related to the study. This technique allows items to be selected, deliberately as according to their suitability of the study.

Simple random was employed to select representatives from different departments because it gave equal opportunity to each element in the department to be selected.

3.8.1 Sample and Sample Size

It is the number of item to be selected from the universe constitutes a sample, the size of the sample should neither be excessively large nor too small, and should it be optimal (Kothari, 2004:pp56).

 The researcher chose another key informant who was the head of Procurement and IT department who believed to be a representative sample of e-procurement user community. And out of 150 from the organizational employees A reasonable sample

size was taken due to cost and time limit and effective management and control during the research study.

The study involved 30 respondents selected randomly and reasonably from different departments. Data were analyzed and expected to represent the views of all staff concerning the barriers for using e-procurement system.

Table 3.1: Indicates the Number of Employees Selected In Each Department

S.N	Department	Population (Targeted Staff)	No.Of Staff Selected
1.	Finance Department	5	3
3.	Marketing Department	10	7
4	Sales Department	10	7
5	Human Resource department	4	1
6	IT	5	4
7.	Store Department	30	4
8.	Imports/Procurement Dep.	6	4
	TOTAL	70	30

Source: Researcher 2015

3.8.2   Sampling Procedures

The researcher used purposive and quota non probability sampling in that way all the reliable information were likely obtained. Quota sampling is a judgmental sampling with the constraint that a sample includes a minimum number from each specified subgroup in the population.

Judgmental or purposive sampling, respondents were selected based on the reasonable judgment that they were the ones who were the most likely to provide the desired information. This is a non probability sampling whereby respondents were selected because of prior knowledge suggests that it is representative or because those selected have the needed information (Mugenda, 2003). Under this method

samples were obtained through deliberate researcher's judgment and depended on the demand of the situation such as impossibility, lack of sufficient resources, time constraints and so on.

3.9 Reliability and Validity of Data

Reliability, is the ability of the instrument to measure consistently the phenomenon it is designed to measure, the reliability can be tested by finding out such things said a) who collect the data b) what are the source of data? c) Whether they are collected by using proper method d) at what time they are collected e) is there any bias of the complier? f) What level of accuracy is desired and is it achieved? (Kothari, 2004).

Validity implies applicability and usefulness of the data obtained through such reliable design and all the way to conclusive findings (Kothari, 2004).To ensures reliability and validity of data, reliability was addressed by developing a case study protocol and the summary of definitions concerning the barriers for using e-procurement system. On the other hand validity was addressed using data collected from multiple sources from other employees who were the users of e-procurement system.

3.10 Management and Analysis of Data

Data management is systematically organizing mass of raw data collected in manner that will facilitate analysis of data, it includes identifying and correcting errors in data, coding and storing it in appropriate form (Kothari, 2004). The approach to qualitative data analysis included simplifying, focusing and reducing the rich data into its core ideas. The qualitative data was analyzed and reduced to the final part,

drawing conclusion out of qualitative data, they argue that there is a fine line in interpreting data in light of prior theory and researchers own ideas and biasing the conclusion.

Data we reanalyzed, summarized and organized in a meaningful way (through QDA minor lite, EPI info and SPSS statistics software); data were examined and drawn conclusion by using both quantitative and qualitative techniques. Qualitative data analysis in this study based on logical interpretation and explanation of the data that were collected. Quantitative data was analyzed and presented through tables, graphs and charts. The analysis of data in this research began with summarizing the data collected. Researcher identified if there was any similarities or other linkages between the answers. Once all data were carefully analyzed, the researcher tried to find all the appropriate information related to the research problem and sub question. By identifying the essential information related to the research problem the focusing and reducing of data was made much easier. Finally, the data was focused to answer the research questions and the last part was drawing conclusions.

3.11 Expected Results

The researcher expects this study to come up with barriers facing organization team members as they adopt and use E-procurement system and how do they manage those barriers in Applied Technology (ATL). The results will be of a great significance to the stakeholders inside and outside of the organization as it will give ways to overcome the prevailing barriers.

CHAPTER FOUR

4.0 DATA ANALYSIS

4.1 Introduction

In this chapter the research findings were discussed. After collecting different data concerning the barriers for using of E-procurement system at ATL, findings of the research were presented and analyzed according to the objectives and the research questions of the study. The findings of the research were addressed in two different groups. First group data were collected from staff members of different departments, second group data were collected from imports/procurement and information technology departments. The following were the findings;

4.2 Management Support on EPS Investment

At this variable data was collected basing on how the organization supported the EPS investment.

4.3 Management Support by Providing Enough Resources

Here the researcher wanted to find out if the management provides enough resources for EPS adoption whereby the findings show that 98% of the respondents said yes that ATL management supports EPS investment by ensuring that resources are available like hardware and software installations, alternative power supply, and any associate costs. The remained 2% of the respondents said no. See figure No. 4.1 for more clarification.
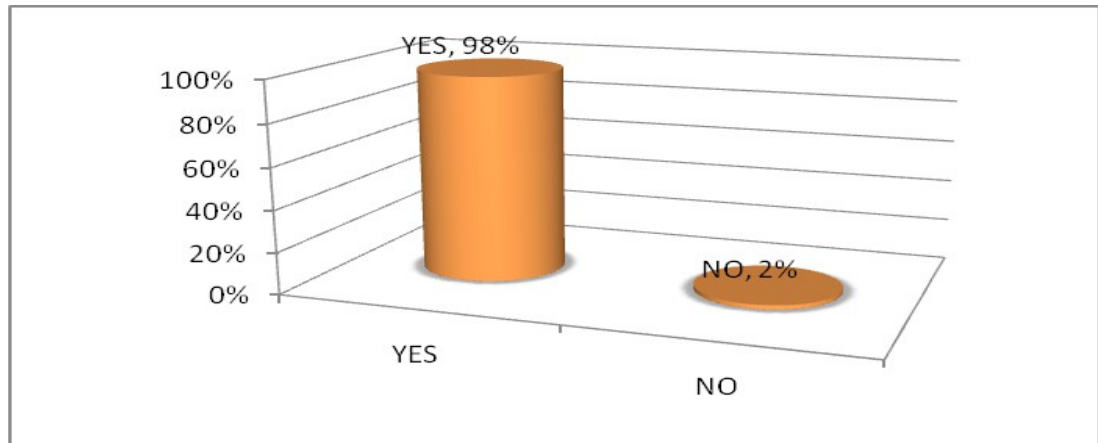
Figure 4.2: Management Support on EPS Investment

Source: Researcher 2015

4.3.1 Management Support to Ensure Enough Hardware and Software

The researcher aimed to examine whether the ATL management was capable to ensure enough hardware and software for EPS investment. The findings show that the hardware and software were well set where by 97.7% of the respondents said yes while 2.3% said no. So this reveals that the top management supported the e-procurement system through the budget allocated to the hardware together with software installations. The figure below gives more elaborations;
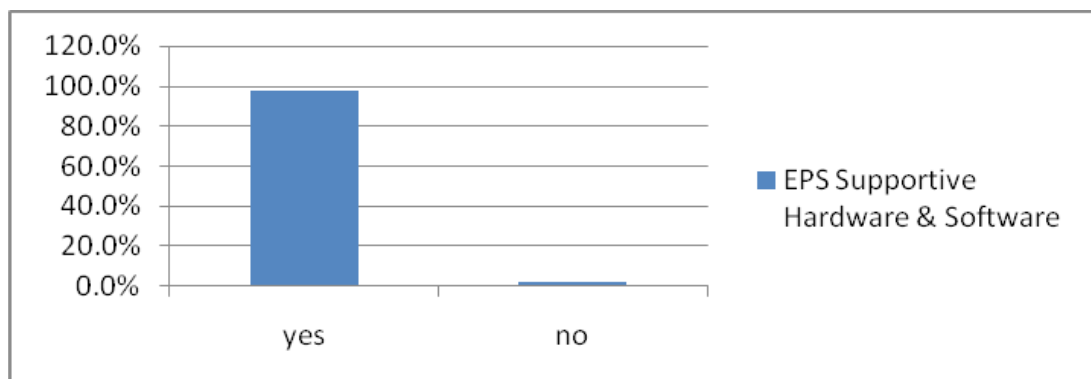
Figure 4.3: EPS Supportive Hardware and Software

Source: Researcher 2015

4.3.2   Management Support to Ensure System Safety

Here the researcher wanted to check if the management ensures system safety whereby, 90% of the respondents said yes and find the system is accurate and has no chance for fraudulent activities, while 10% of them said no as others have already presented the issue of editing the document after approval. The ATL management through the departments of IT and Procurement tries to improve the system to their level best to eliminate the weaknesses. Refer to the figure below.
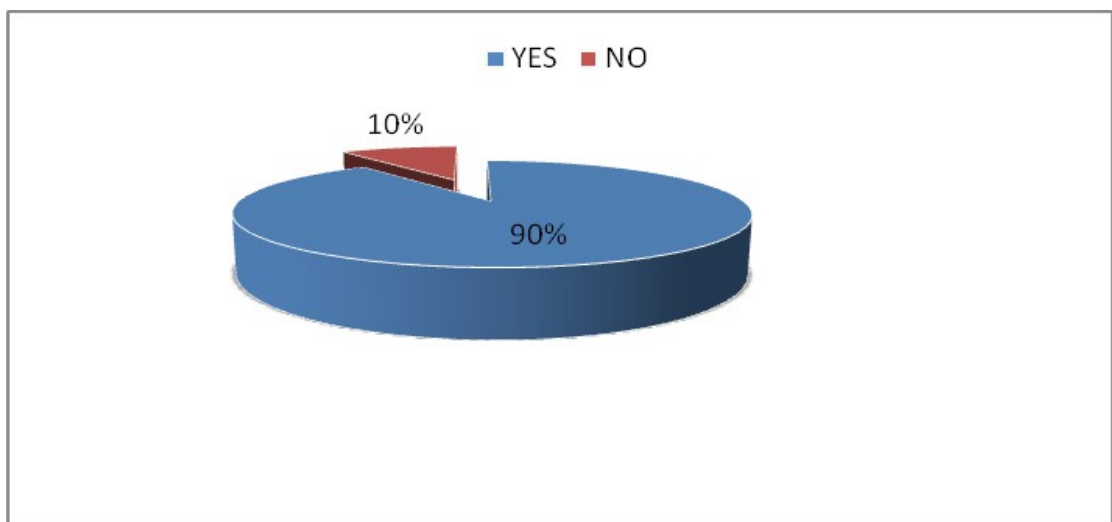
Figure 4. 4: System Safety
Source: Researcher 2015

4.4 Technological Competence of the Staff on EPS Application

The researcher aimed to find out if the users understand e-procurement system and able to use it, also to check if the users got enough training on how to use e-procurement system.

4.4.1 Users' Understanding on E-Procurement

The findings show that many users understand e-procurement well while few users just have a clue. 90.5% of the respondent's defined e-procurement well with the

necessary key terms, while 7.5% of them just have a clue and 2% of them did not fill anything, and left the space blank.
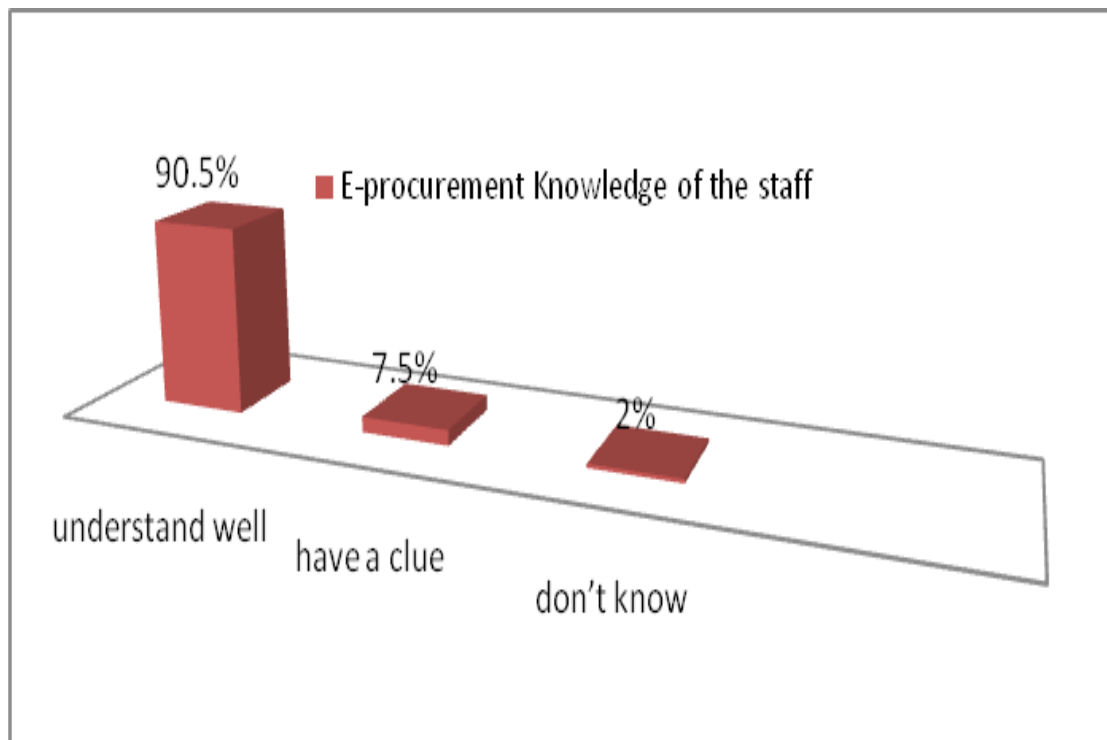
Figure 4.5: E-Procurement Knowledge of the Staff

Source: researcher 2015

4.4.2 Users' Training to Use E-Procurement System

Users from many departments got training on using e-procurement; the findings show that 99% of the respondents have acquired capacity building training on using e-procurement system and the training is conducted especially when the system is improved. While 1% of them didn't attend training and have acquired knowledge from other users. So Applied Technology co. ltd used to offer training to the users but very few of them did not attend because they were new employees, see the figure below.
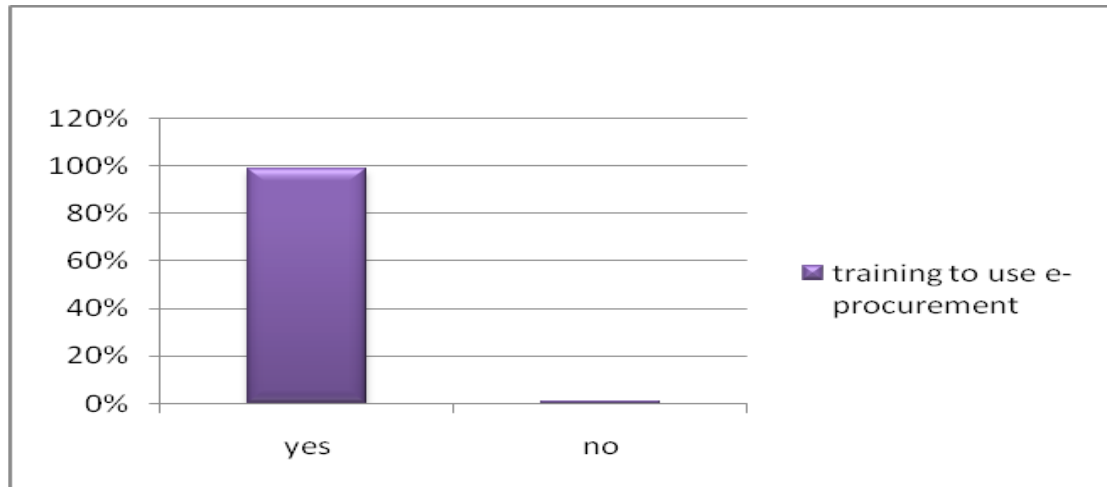
Figure 4.6: Training to Use E- Procurement

Source: Researcher 2015

4.4.3 To Check if The Users are Capable of Using EPS

The findings show that 90% of the respondents are capable of using e-procurement system while 10% of them are not capable and mostly the elder ones. E-procurement system needs to be established with adequate capacity for everyone in the organization to be able to learn and use it in an easy way. The figure below gives more details;
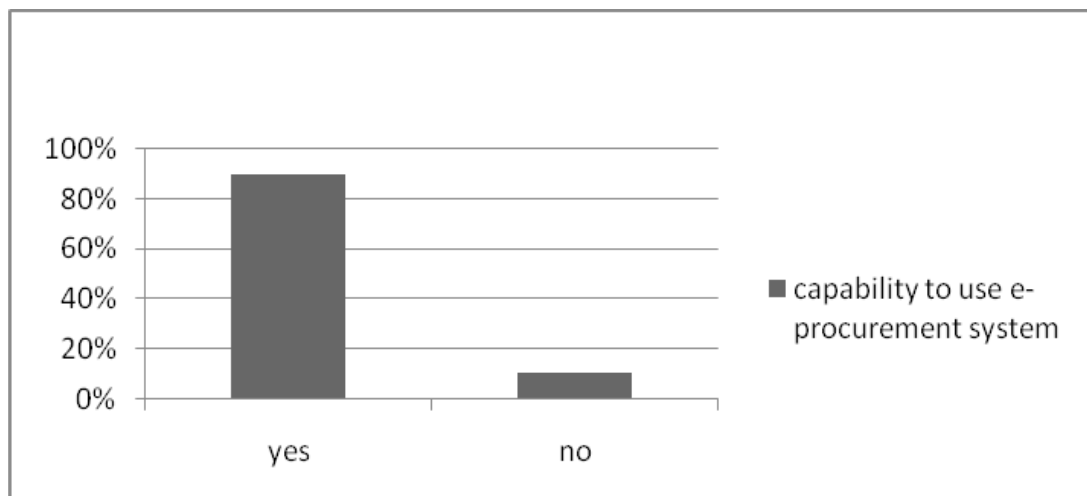
Figure 4. 7: Capability to use e-procurement system

Source: Researcher 2015

4.5 The Accessibility of E-Procurement System to All Departments

Here the researcher's purpose was to find out if all departments in ATL have the accessibility of using E-procurement system. The researcher realized that there is relationship between using e-procurement system and age and education level of the respondents, of which determines computer knowledge of the respondents and the training attained. Demographic characteristic of respondents created a link on data validity and reliability given the fact that significant information for the study would have high degree of reliance if it has given by a matured and literate people, with more exposure on using E-procurement Management system.

The findings showed that, total respondents were 30, where by 25% have bachelor degree, 60% have masters' degree, and 15% have PhD. This shows that the users are well educated. On the other hand age of the users was as follows 18-30 were 30%, 31-50 were 55% while above 50 were 15%. This shows that the users are well matured with enough experience. Figure 4.1 and 4.2 give more illustration;

Table 4.1: Education Level of the Respondents

Education level	Frequency	Percentage
Advanced/secondary	5	16.6%
Certificate/diploma	7	23.3%
Bachelor degree	10	33.3%
Masters degree	6	20%
PhD	2	6.6%
Total	30	100%

So the researcher found out that the knowledge of the staffs was satisfactory enough because having e-procurement system also need to have understanding on computer with its software, unless otherwise there could have no meaning of establishing electronic system while users do not know how to use computers.

Table 4.2: Age of the Respondents

AGE	Frequency	Percentage
18-30	12	40%
31-50	16	53.3%
Above 50	2	6.6%
Total	30	100%

4.5.1   Accessibility of EPS to all Departments

The researcher wanted to know if all departments can access EPS. The following data were collected, out of 30 respondents 95% they said yes while 5% of them said no, this depicts that many departments are accessing the e-procurement system though there are very few of them who do not have accessibility to e-procurement.
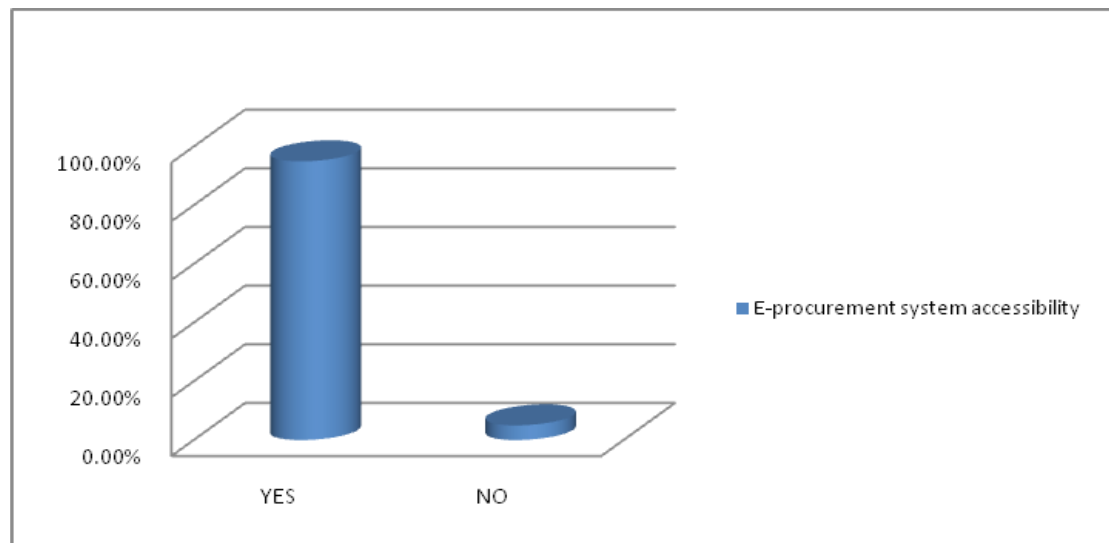
Figure 4.8: E-procurement System Accessibility

Source: Researcher 2015

4.5.2   Application of EPS

Here the researcher wanted to check if all departments were fully using EPS whereby the date revealed that 93% of the respondents said yes while only 7% of them said no. The researcher found out that some respondents opted for traditional procurement while many of them were fully using e-procurement system.
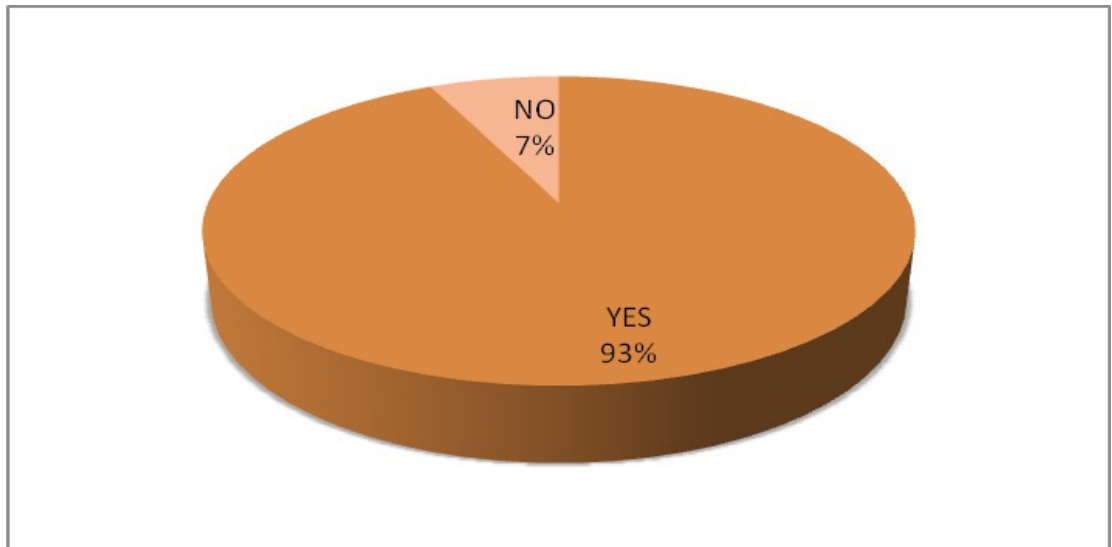
Figure 4. 9:   Using E-Procurement System

Source: Researcher (2015)

4.6 The Problems Facing E-Procurement System

The findings show that, there were some problems that users faced as they were using e-procurement system. However the ATL management was under control of some of them. Out of 20 respondents 45% said that the system was attacked by internet viruses (system safety), and there were times when the system was down hence could not perform well.

20% respondents said that in case the need was urgent some users opted for traditional procurement where by a hardcopy of the requisition form was filled and submitted for approval as it was easier to make follow up and ensure timely delivery. 35% of the respondents presented that some orders were delivered with some discrepancies hence wastage of time on solving the problem and sometimes lose of customers due to out of stock.
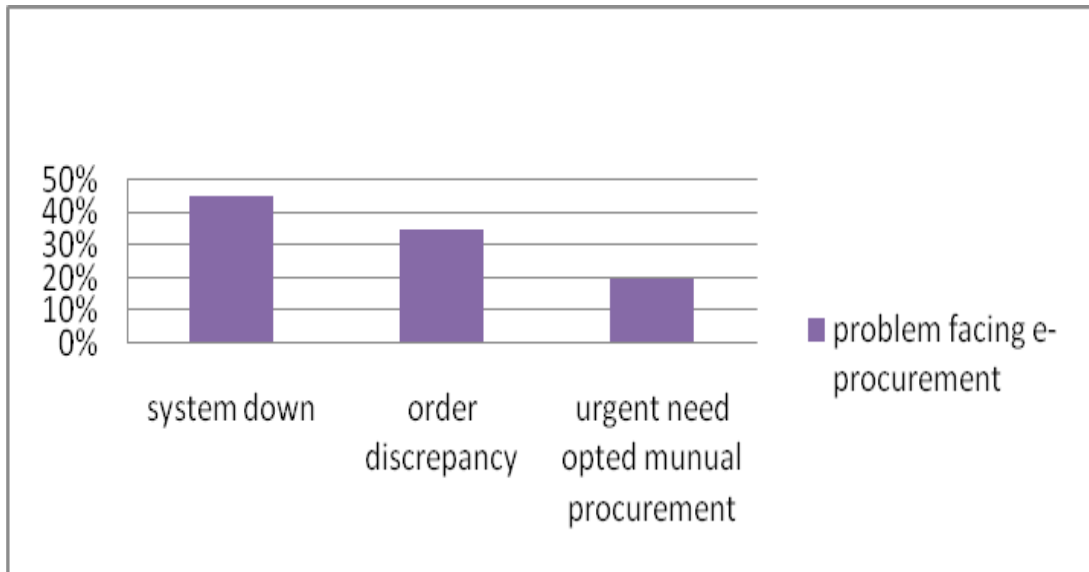
Figure 4.10: Problem Facing E-Procurement

Source: Researcher 2015

CHAPTER FIVE

5.0 DISCUSSION

5.1 Introduction

In this chapter the research results were discussed with consideration of the proposed literature review. After collecting different data concerning the barriers for using E-procurement system at ATL, different findings of the research were presented and analyzed according to the objectives of the study. The findings of the research were illustrated in two different groups. First group data were collected from staffs members of different departments, second group data were collected from procurement and information technology department. Below are different discussions after data collection;

5.2 The Extent to Which the Management Supports EPS Investment at ATL

Galloway and Jamieson, (2003); categorized clearly into three the main barriers for EPS adoption which are; Technological, Organizational and Environmental. According to the data collected this theory was revealed to be applicable at ATL since at organizational level the findings revealed the capability of the firm to support EPS investment technologically and by considering the environment. Below is the discussion on how the firm supported the EPS investment;

5.2.1   Management Support by Providing Enough Resources

Here the researcher wanted to find out if the management provides enough resources for EPS adoption whereby the findings show that 98% of the respondents said yes that ATL management supports EPS investment by ensuring that resources are available like hardware and software installations, alternative power supply, and any

associate costs. The remained 2% of the respondents said no. See figure No. 4.1 below for more clarification.

Moreover the findings show that resources like generators, private transformer and video conference provided a big assistance to run EPS by assuring power supply and conduction of electronic meetings respectively. See figure No. 5.1 below for more clarification.
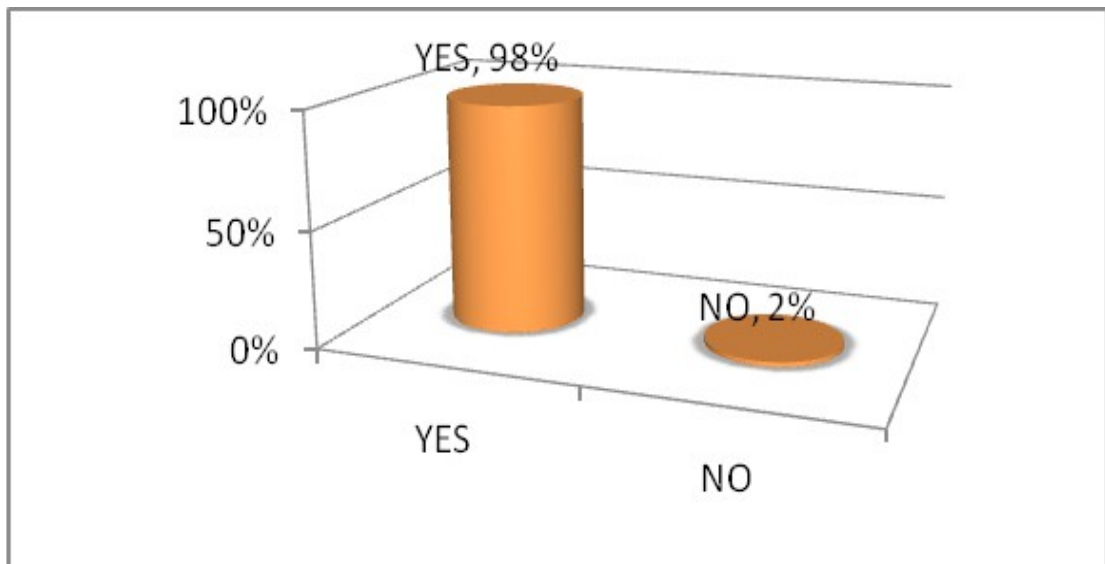
Figure 5.2: Management Support on EPS Investment
Source: Researcher 2015

5.2.2 Management Support to Ensure Enough Hardware and Software

The researcher aimed to examine whether the ATL management was capable to ensure enough hardware and software for EPS investment. The findings show that the hardware and software were well set whereby 97.7% of the respondents said yes while 2.3% said no. So this reveals that the top management supported the e-procurement system through the budget allocated to the hardware and installation. The figure below gives more elaborations;
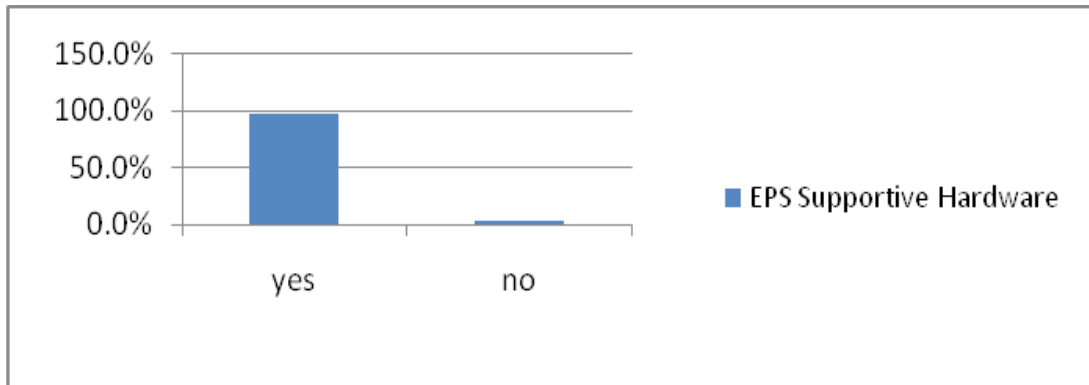
Figure 5.3: EPS Supportive Hardware and Software

Source: Researcher 2015

5.1.3 Management support to ensure system safety

Here the researcher wanted to check if the management ensures system safety whereby, 90% of the respondents said yes and find the system is accurate and has no chance for fraudulent activities, while 10% of them said no as others have already presented the issue of editing the document after approval. With reference to the proposed literature by Edie et al, (2007) who stated that "The World Wide Web leaks such as a sieve. Data transmitted on it can be garbled and reassemble wrongly at the other end, or can display only partially because of incompatible software when working on the internet".
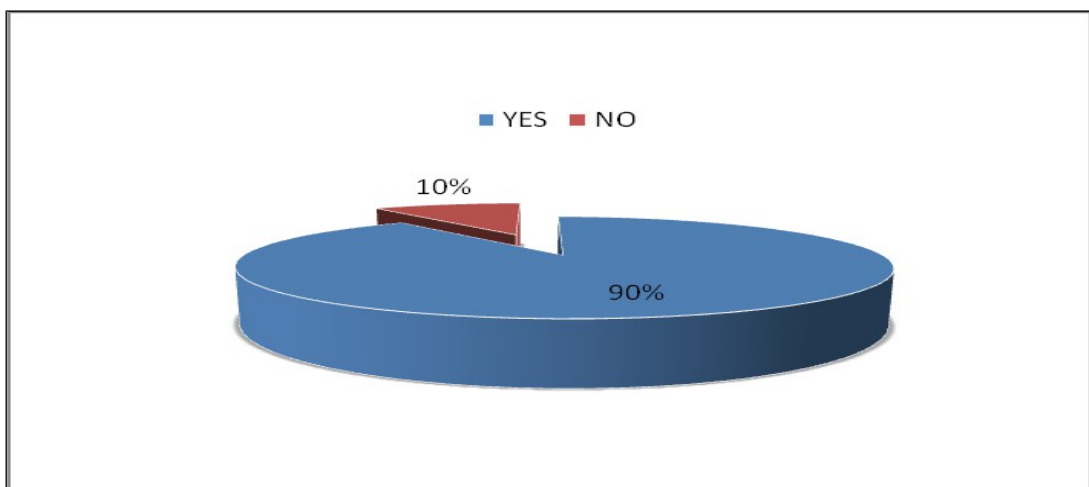
Figure 5.4: System safety
Source: Researcher 2015

The ATL management through the departments of IT and Procurement tries to improve the system to their level best to eliminate prevailed system weaknesses. Refer to the Figure 5.3.

5.3 Technological Competence of the Staff on EPS Application

The researcher aimed to find out if the users understand e-procurement system and able to use it, also to check if the users got enough training on how to use e-procurement system.

5.3.1 Users' Understanding on E-Procurement

The findings show that many users understand e-procurement well while few users just have a clue. 90.5% of the respondent's defined e-procurement well with the necessary key terms, while 7.5% of them just have a clue and 2% of them did not fill anything, and left the space blank.
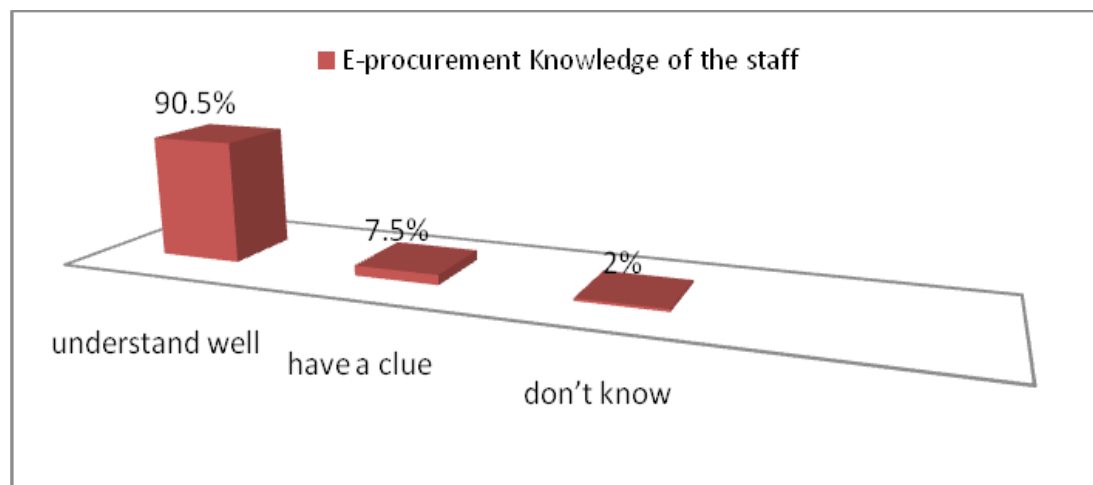
Figure 5.5: E-procurement Knowledge of the Staff
Source: Researcher 2015

The findings show that many users understand e-procurement well while few users

just have a clue. E-procurement is defined in different ways by different authors; Vesendaal & Brinkkemper (2003) said that is a technology designed in acquisition of goods over the internet. Jessop, (2008) said that it is the use of electronic method in every stage of buying from identification of requirements to payment process for required service.

5.3.2 Users' Training to Use E-Procurement System

Users from different departments like human resource, store, imports, sales, marketing, procurement, IT, Finance and so on got training on using e-procurement; the findings show that 99% of the respondents have acquired capacity building training on using e-procurement system and the training used to be conducted especially when the system is improved. While 1% of them didn't attend the training since they were new staff but they acquired the knowledge from other users.
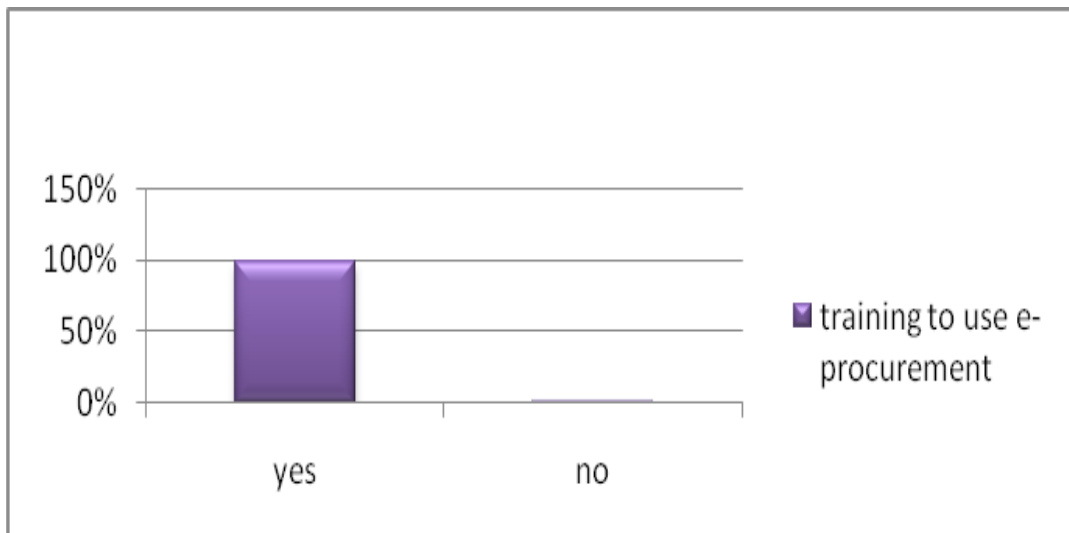
Figure 5.6: Training to use E-Procurement
Source: Researcher 2015

As said by Angels & Nath (2002) sometimes employees find it difficult to eliminate traditional buying even after implementing of E-procurement hence they suggested

that there should be intensive end users training and educational program. Knudsen (2003) states that despite of such advancement on adoption of e-procurement, many entities put substantial low use of electronic purchasing and opt for manual purchasing instead. According to the findings the above theory was not supported at ATL co. ltd because major of the purchases were done electronically and minor purchases like office stationeries was done manually. See the Figure 5.5.

5.3.3 Checking if the Users are Capable of Using E-Procurement System Well

The findings show that 98.5% of the respondents are capable of using e-procurement system while 1.5 % of them are not capable and mostly the new ones. E-procurement system needs to be established with adequate capacity for everyone in the organization to be able to learn and use it in an easy way. ATL staffs have enough knowledge to use E-procurement system except the few ones who are still trainee. The figure below gives more details;
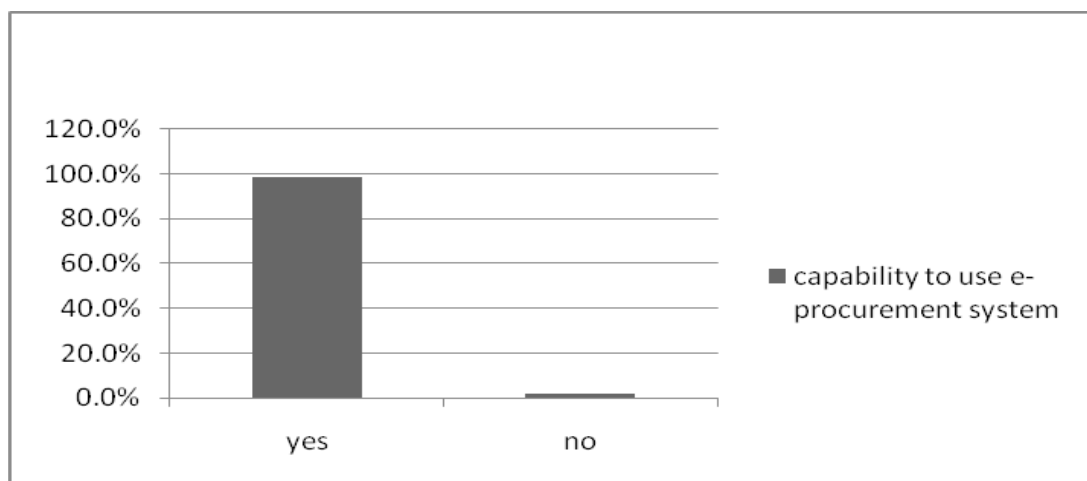
Figure 5.7: Capability to Use E-Procurement System
Source: Researcher 2015

5.4 The Accessibility of E-Procurement System to All Departments

Here the researcher's purpose was to find out if all departments in ATL have the accessibility of using E-procurement system. The researcher realized that there is relationship between using e-procurement system and age and education level of the respondents, of which determines computer knowledge of the respondents and the training attained. Demographic characteristic of respondents created a link on data validity and reliability given the fact that significant information for the study would have high degree of reliance if it has given by a matured and literate people, with more exposure on using E-procurement Management system.

The findings showed that, total respondents were 30, where by 16.6% have advanced secondary certificates, 23.3% have certificates/diplomas,33.3% have Bachelor degrees, 20% have Masters' degree and 6.6% have PhD. This shows that the users are well educated. On the other hand age of the users was as follows 18-30 were 40%, 31-50 were 53.3% while above 50 were 6.6%. This shows that the users are well matured with enough experience. Figure 4.1 and 4.2 give more illustration;

Table 5.1: Education Level of the Respondents

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So the researcher found out that the knowledge of the staffs was satisfactory enough because having e-procurement system also need to have understanding on computer

with its software, unless otherwise there could have no meaning of establishing electronic system while users do not know how to use computers.

Table 5.2: Age of the Respondents

AGE	Frequency	Percentage
18-30	12	40%
31-50	16	53.3%
Above 50	2	6.6%
Total	30	100%

5.4.1   Accessibility of EPS to the Departments

The researcher wanted to examine whether all departments were able to access EPS whereby the following data were collected, out of 30 respondents, 95% said yes while 5% of them said no, this depicts that many departments were accessing the e-procurement system though there were very few of them who did not have accessibility to E-procurement.

Mchopa (2012) said that, this accessibility is a challenge to various organizations on full integration on using e-procurement system. Applied Technology (ATL) has tried to reduce this problem and kept it to the minimum.
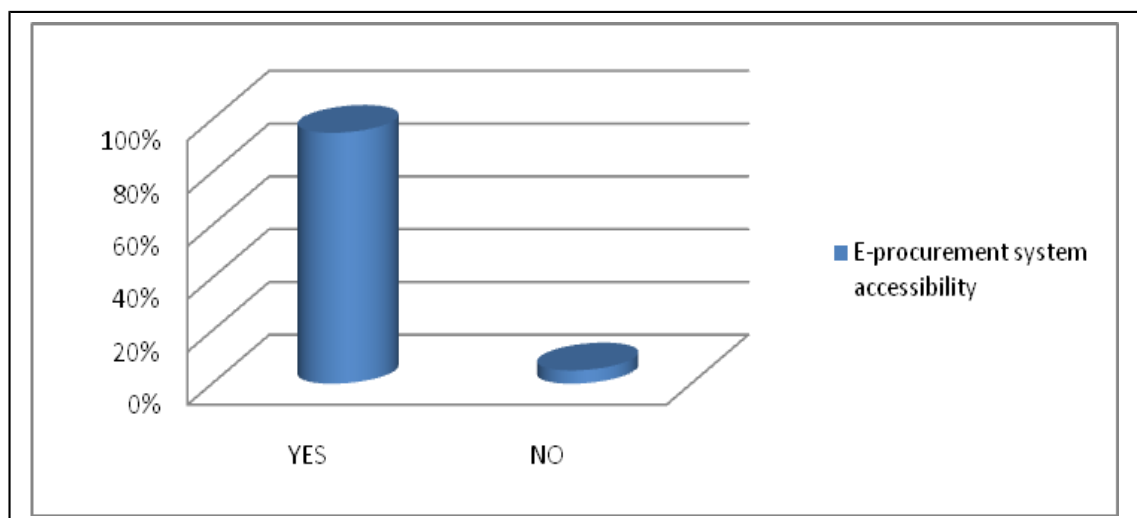
Figure 5. 8:   E-procurement system accessibility

Source: Researcher 2015

5.4.2   Application of EPS

Here the researcher wanted to check if all departments fully use EPS. Data revealed that 97% of the respondents said yes and only 3% of them said no. The researcher found out that some respondents opted for traditional procurement while many of them were using e-procurement system fully.

5.5 E-Procurement Activities and their Impacts to ATL Co. Ltd.

Here the researcher wanted to show briefly EPS activities and their related outcome to ATL. The data revealed that the main EPS activities performed at ATL were E-ordering, E-purchasing, E-payment, stock taking through tally system, searching for new suppliers, conducting the exchange of information internally and externally with trading partners, logistics management through E-communication, clearing and forwarding management, stock control and warehouse management and generally controlling all procurement processes.

L.Boer *et al,* (2001) said that, the introduction of new information system in an organization requires changes in the way that organization works. In deed EPS leads to changes at different levels like information system department, organizational culture and at financial level. The author above is revealed to be supported at ATL since most of the activities done are electronically based hence benefiting the company by price reduction, save time, improved supplier relationship, reduced operation and inventory cost, enhanced decision making, improved visibility of

visibility of supply chain capacity, reduced administration cost and improved market intelligence.
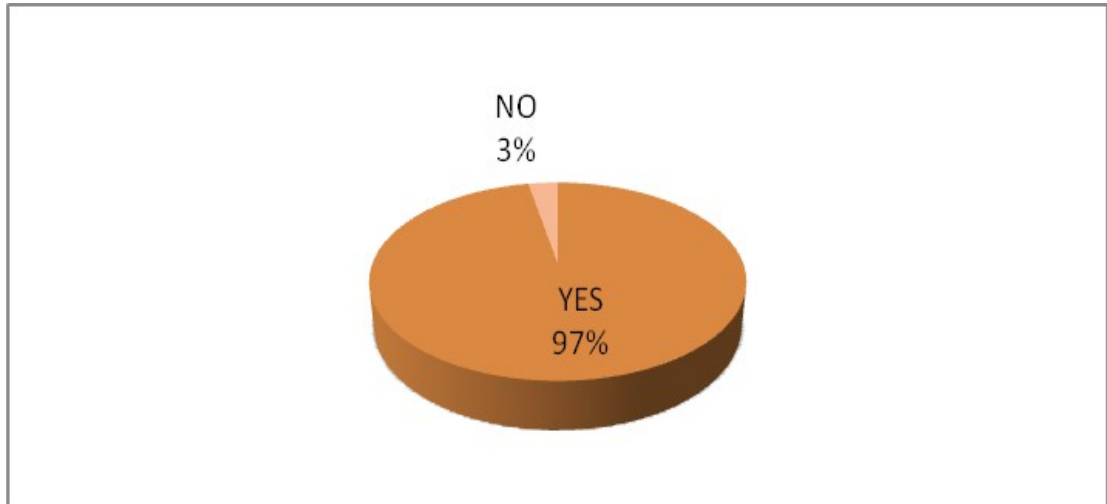
Figure 5.9: Using E-Procurement System
Source: Researcher 2015

5.6 The Procedures Used by E-Procurement System at ATL

Here the procedures used by e-procurement system at ATL are briefly shown whereby the requisition is prepared by the user then sent to the department supervisor for approval. If approved it sent to the procurement department to allocate the prices for each item from the selected suppliers, then posted to the budget controller to check if there is allocated fund for the item, if yes it is sent either to the director or chief executive officer depending on the amount of the requisition for authorization then to the procurement department to place an order. The supplier sends the items accompanied with delivery note and invoice for payment of which the accounting department prepares payments.

5.7 The Problems Facing E Procurement System

The findings show that, there were some problems that users faced as they were using e-procurement system however the ATL management was under control of some of them.

Out of 30 respondents 45% of them said, the system used to be attacked by internet viruses (system safety), and there were times when the system was down hence could not perform well.20% of them said that in case the need was urgent some users opted for traditional procurement where by a hardcopy of the requisition form was filled, then submitted for approval as it was easier to make follow up and ensure timely delivery.

35% of the respondents presented that some orders were delivered with some discrepancies hence wastage of time on solving the problem and sometimes lose of customers due to out of stock. As discussed by Angels & Nath (2007) that lack of system integration and standardization issues, immaturity of providers of e-procurement service and lack of supplier preparation are the most challenges faced. According to Chungu (2006) suggested that most of government offices are relative weak in computerized procurement related functions. Francis (2004) suggested that there is a lack of funds and lack of segregation of duties. While Mchopa (2012) find out that there are various organizational, technical and governmental challenges on the ground that defies the full integration and adoption of E-procurement in public procurement.

Once these challenges are addressed effectively, the country will make good progress towards full application on e-procurement especially in public procurement, the

challenges included but not limited to poor technological infrastructure, inadequate funds for capital investment, risks, unsupportive legal framework, shortage of technical knowhow, incapable suppliers, changes of responsibilities, shifting the mind-set of people. Also there is shortage of technical support, security of data transaction, poor network infrastructure and unstable power supply.

According to the research findings in contrary with the authors above EPS at Applied Technology (ATL) is well integrated, improved with standardized issues and managed by competent staffs, without the profit could not be justified hence EPS could not be invested.
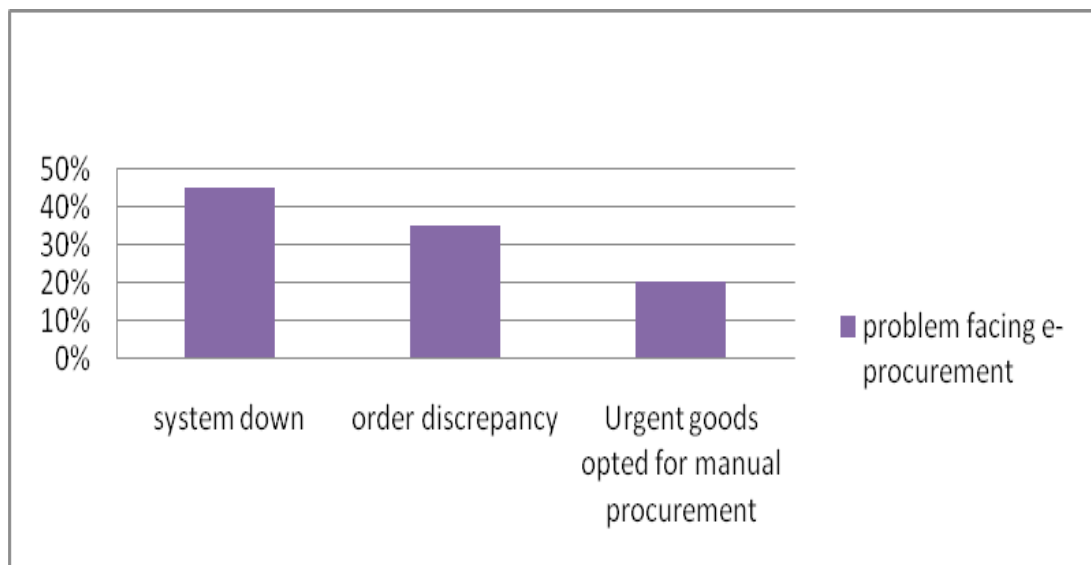

Figure 5.10: Problem Facing E-Procurement
Source: Researcher 2015

CHAPTER SIX
6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter summarizes the research and its most important findings together with suggestions from different authors from literature review discussed in chapter two, also present some topics for further studying.

6.2 Conclusion

The general objective of the study was to assess the effects of E-procurement in enhancing project performance in a private sector organization with Applied Technology Ltd as a case study, after identifying these effects, researcher move on evaluating the extent to which management supports EPS investment through assessing technological competence of the organization and examining whether the organization can fully access E-procurement system.

Using the mean scores in the responses, researcher realizes that the technological knowhow of the staff was satisfactory only to certain extent since all users were trained except the new staffs and some few who didn't attend the program (especially casual workers who are dealing with elevating goods in store and warehouse). However more training is still needed for improvement and to face new technological changes. Kalakota & Robinson, (2001) advises that e-procurement system needs to be established with adequate capacity for everyone in the organization to be able to learn and use it in an easy way.

In this world of science and technology, and business competition, the company needs to invest more in computer knowledge, good customer care and building

competence in skills and knowledge. The Company has to mould itself to a learning organization where as Senge (1990) points: learning…

> *…"organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together".*

In this the organization need to discover how to tap people's commitment and capacity to learn at all levels.

6.3 Recommendations

Top management support the researcher recommends that management should closely show their willingness to provide the necessary resources to the implementation of IT application that is assurance of the accessibility of e-procurement system to all departments, resolving disputes resulted from the introduction of the IT system and then encourage staffs on using new e-procurement technologies through intensive training, trainers' support and user involvement.

Availability of Video conferencing; this can enable individuals in distant locations to participate in meetings on short notice, with time and money savings. This technology can be used in conjunction with desktop video conferencing to enable low-cost face-to-face business meetings without leaving the desk, especially for businesses with widespread offices. Since EPS is among the businesses which involve communication with far distance offices, video conferencing is suggested to be more economic if it could be applicable as far as Applied Technology is

concerned.

Software selection, selection of the software must be carefully done; enough research on the advantages, disadvantages, strength and the weaknesses of the software should be well addressed and well understood even before installation so as to have a safe, accurate, fast and a reliable system with enough control for fraudulent activities.

Continuous training is needed. Regular training is recommended, users training refers to the process of providing employees with the logic and overall concept of a complex IT application or software that is being introduced within the organization. Training helps employees in two distinct ways; it helps in the transfer of knowledge from vendor consultant to employees about why IT system is needed and how it should improve their work, this in turn address courage to employees about the IT system and the software and thus create their confidence on using the system.

> *On the other hand training helps employees to know about the features of the software and thus help in developing a familiarity with the system, by facilitating their learning of the interface and appropriate use of the system process. Also adequate knowledge should be provided to staffs and suppliers developing a clear framework for e-procurement and proving enforcement and monitoring on such usage of e-procurement system.*

Readiness of the trainers, Trainer support is an important factor because a trainer plays a crucial role in shaping the ultimate success of any IT application by facilitating users' acceptance and knowledge.

Therefore the trainers should be well prepared before they give training to the users as they are the one who make the users' mindset to think either positively or negatively about the system. Also in case of breakdown should be readily available, full equipped and helpfully in a friendly manner

Readiness of suppliers; EPS investment is not satisfactory when the partners/suppliers are not using the same system hence supplier involvement in EPS investment is very important. For our country more capital is needed to be invested for EPS adoption especially for public agencies so as to enable most of the suppliers and their related purchasers to practice effectively this system.

6.4 Suggestion for Further Research

I suggest that other people who are interested to do the research on E-procurement in projects performance should do the research to governments/public/organizations like TANESCO, ARMY, and higher learning institutions to see if the same findings will be established since entire research on this topic has been carried out to the private organizations.

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APPENDICES

QUESTIONNAIRES

Research questions to all department

Dear respondents

I am **James Amani**, I am kindly requesting you to answer the under mentioned questions as part of the fulfillment of my research paper for academic award of Master in Project Management (MPM) offered by OPEN UNIVERSITY OF TANZANIA (OUT). The research is centered on **"Critical assessment on effects of E-procurement in enhancing Project performance among private sectors Organization in Tanzania**" A case of Applied Technology a traded name "Red n White" Co. ltd. The questions are purely for academic demand and not otherwise. So the information that will be provided will be used for the stated purpose and will be treated with confidentiality.

I wish to express my sincere appreciation for the assistance you will extend to me in this regard.

PART A: General Information; (Tick/Fill where appropriate)

i)   Gender a) Female ( )   b) Male ( )

ii)   Educational

        Level…………………………………………………………..

iii)   Age   ( ) 18 – 30   ( ) 31 -50 ( ) Above 50

iv)   Company

        Position/Designation…………………………………………

PART B: SYSTEM SUPPORT (Fill/Tick where appropriate)

i) The executive of the firm have sufficient resources to support EPS adoption
and management   a) Yes…..b) No……

ii) E-procurement system is accurate and secure.

a)   Yes…. b) No……….

iii) ATL system hardware and software are enough to run all electronic
procurement activities. a) Yes……. b) No……..

PART C: Other related Questions (Fill/Tick where appropriate.)

ii)   Have you got enough training and knowledge to support you using e-
procurement system?

iii) What problems you are facing when using E-procurement System?

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………………………………………………………………………
………………………………………………………………………

iv) Suggest what should be done to counter those problems

………………………………………………………………………
………………………………………………………………………

i)   Does your department have any access to E-procurement system?
         Yes (   )
         No (   )

ii) Are the users capable of using e-procurement system well?

Yes (   )

No (   )

iii)   What are the problems you are facing when using E-procurement system in

this organization?

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v)   What are the achievements obtained since the establishment of E-

procurement System?

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v)   Suggest what should be done to counter the mentioned problem

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