THE IMPACT OF E-PROCUREMENT PRINCIPLES ON SERVICE DELIVERY

CASE STUDY: NATIONAL MEDICAL

STORES ENTEBBE

BY

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:

DECLARATION

I **Mukoya Prisca** declare that this is my own original work and has never been presented to any institution for any award in bachelor of supplies and procurement management

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Signed............................... 3rd/07/2014

APPROVAL

The student named above has been under my supervision at Kampala International University.

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Signature ....

Date : ....04.../..07.../..2014.........

DEDICATION

I really dedicate this research report to my mum Ngituku Mary, Brothers Dennis, Benon and Edwin, sisters Esther Becca and Juliana my uncles Joseph and John. Also to my friends Erisa, Julius, Margret, and Tom

ACKNOWLEDGEMENT

I want to thank the almighty GOD for the gift of life and for enabling me to reach this level education.

I wish to acknowledge my mum Ngituku Mary for the financial, moral, emotional support rendered to me throughout my life and mostly education because without her this could have just remained a mere dream.

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On a special note I would love to thank the entire Kampala International University for the services rendered to me in my three year course.

To my friends, brothers and sisters who have been on my side throughout my education may GOD bless you abundantly.

ABSTRACT

The study looked at the impact of E-procurement principles on service delivery at National Medical stores. The study objectives were;

To examine factors influencing adoption of E-procurement at National Medical Stores. To determine different forms of E-procurement used at National Medical Stores. And To determine the relationship between E-procurement and service delivery.

A sample of 30 respondents were determined using Krejcie Morgan (1970). The findings of the study were the following according to respondents. The forms of e-procurement were e-ordering; web-based ERP; e-sourcing; e-tendering; e-reverse auctioning; and e-informing.

The factors influencing e-procurement adoption were Managerial Factors and e-Procurement Implementation, Environmental Factors and e-Procurement Implementation, Technical Factors and e-Procurement Implementation, Presence of legal support ,Supplier Capability Development, Development of experts on e-procurement, and Capital investment on technological infrastructure

The recommendations of the study were, The modernization of the e-procurement legislative framework. Develop e-suites aimed at standardizing information availability from the suppliers. Develop simplified, consistent, interoperable and secure technology systems to drive the e-procurement functions.

The paper recommends further research on the impact of other variables such as language barriers, experience curves, cultural factors and digital divides on e-procurement implementation.

the researcher came up with the following recommendations; national medical stores should optimize benefits of e- procurement by increasing the proportion of expenditure on e-procurement by widening the scope of supplier sourcing thereby justifying use of e-procurement, national medical stores need to increase the e-procurement capability in terms of IT expertise and IT infrastructure injecting regular upgrading of IT system and management of firm to expand the use of e-procurement by incorporating most of e-procurement processes as well as all e-procurement models. The researcher recommends that national medical stores to expand e-procurement models put in use by national medical stores in order to optimize the benefits of e-procurement.

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LIST OF ACRONYMS

EP	Electronic Procurement
MSC	Multimedia Super Corridor
NMS	National Medical Store
IT	Information Technology
ERP	Enterprise Resource Planning
E-ordering	Electronic Ordering
Web-Based ERP	Web Based Enterprise Resource Planning
E-sourcing	Electronic Sourcing
E-tendering	Electronic Tendering
E-reverse auctioning	Electronic Reverse Auctioning
E-informing	Electronic Informing
SPSS	Statistical Packages for Social Sciences

LIST OF KEY TERMS

Procurement is the acquisition of goods, services or works from an outside external source. It is favourable that the goods, services or works are appropriate and that they are procured at the best possible cost to meet the needs of the purchaser in terms of quality and quantity, time, and location.

E-procurement is defined as the automation of an organization's procurement processes using web-based applications for example E-payment, E-sourcing, E-tendering and E-ordering

Service delivery refers to the function of an organization's ability to meet5 its goals and objectives by exploiting the available resource in efficient and effective way (Eccles, 1991).

A principle refers to the rules or guidelines used during the procurement policies in organizations for example proper accountability, efficiency, effectiveness and value for money.

Impact. Measure of the tangible and intangible effects (consequences) of one things or entity's action or influence upon another.

CHAPTER ONE

INTRODUCTION

Introduction

This chapter contained the background, purpose of the study, research objectives, research questions, scope of the study, and significance of the study

1.1 Background to the study

Globally Electronic procurement (EP) has become one of the most successful of electronic commerce applications in the world. It has been widely adopted by companies seeking better business processes and an improved bottom line. These advantages have not been lost on governments which also engage in extensive buying activities and are major customers for a wide range of goods and services. Electronic procurement (EP) can be a powerful tool in the government activity although this was not acknowledged as a major driver of its development. That is the important benefit of Electronic procurement (EP) to the Government Sector as a whole. Electronic procurement (EP) can reduce transaction costs, lead to a better decisions and get better value in the procurement output. Electronic procurement (EP) also known can assist small businesses through the reduction of red tape and providing access to small businesses to Government electronic market places.

In Africa, Electronic procurement (EP) (also known as *e-commerce*) was initially implemented at the Federal Government level in year 2000 as one of the projects under the Electronic Government Flagship of Multimedia Super Corridor (MSC). MSC will accelerate Africa's entry into the information Age and realize the vision 2020. The MSC brings together, for the first time ever, an integrated environment with all the unique elements and attributes necessary to create the perfect global multimedia climate .The Electronic procurement (EP) system streamlines government activities and improves the quality of service it renders. By subscribing to the Electronic procurement (EP) system, suppliers were able to participate in the procurement exercise by the government. Electronic procurement (EP) converts traditional manual procurement processes in the Government machinery to electronic

Procurement on the Internet. Electronic procurement (EP) is an end-to-end electronic procurement system that enables Government Agencies around the country to procure products and services electronically from both local and international suppliers. It uses Internet technologies to bring Government Agencies in the country and Suppliers around the world together into a virtual trading environment. Its comprehensive and extensive functionality also creates an interactive and secure trading environment. Upon final implementation of the Electronic procurement (EP) system, full services was available to all four types of procurement that is Central Contract, Direct Purchase, Quotation and Tender (Zaharah, 2007).

In Uganda E- Procurement is part of a broader concept called information technology which has provided organizations with vast opportunities to operate beyond their traditional physical boundaries, McGregor and Vrazalic, (2005). In particular, e- Procurement has increased professionalism in the skills of procurement staff by encouraging greater use of information technology systems which has provided firms with more efficient solutions to drive significant value into their business Neef, (2001). Indeed in 2003, one of the major advocates of internet based business strategies, Michael Porter stressed that if firms' intent is to remain competitive, they should let their business modes adopt and accommodate more effective and efficient internet based business approaches. He further states that the internet was only become a powerful source of competitive advantage if it is integrated in a firm's overall strategies.

Such adoption has however, produced both positive and negative effects for firms in relation to commercial relationships and e-procurement deployment Vrazalic, (2005). The knock-on effect is that e-procurement has led to a situation where firms have felt obliged to focus their attention on streamlining inter and intra organization procurement functions. The downside is that for those firms that have chosen to ignore the positive impact e-procurement can provide, or at least, have only half hazard embraced the technology, much unnecessary and inefficient duplication of work efforts remains Gattiker, Huang and Scharz, (2007).

E- Procurement has been defined differently by various scholars. For example, Wu, Ross and Zsidisin, (2007) define E- Procurement as the use of information technologies to facilitate business purchase transactions for materials and services. It utilizes electronic commerce (internet) to identify potential sources of supply to purchase goods and services, to transfer payments and to interact with suppliers Min and Galle, (2003). E- Procurement solutions include e- cautions, e- tendering, e- marketing, and e- buying and e- commerce.

At National medical stores (NMS) has the responsibility of delivering pharmaceuticals and medical supplies to over 70 district health offices and hospitals spread throughout the nation. Mountainous terrain throughout the country, the fact that some health facilities are located on islands and the poor condition of roads all serve to complicate the distribution operation. Add to this the disproportionately high complications of e procurement and the limited resources of the government's health budget and the need for efficient transport management becomes clear. Tran said was invited by National Medical Stores of Uganda to undertake an assessment of their E- procurement in order to provide a series of recommendations as to how they could reduce costs, increase efficiency and improve E-procurement.

The result of the operational assessment was the development of a report detailing recommendations for improvement of the existing NMS E- procurement activities. The recommendations include suggestions for an appropriate policy and system implementation, resolution of organizational process issues, which had been adversely affecting E-procurement operation, and the subsequent execution of an outsourcing study to determine an effective solution for ongoing expansion of the delivery network. With the adoption of these recommendations NMS was expected to benefit from reduced E- procurement costs, and many other associated costs.

1.2. Statement of the problem:

The accelerating pace of change in technology demands that organizations be more flexible and adoptive in the business world. Evolutions in information technology have become paramount to the business world and thus various strategies such as e- commerce, e-

marketing have been adopted by organizations in a bid to improve their competitiveness and efficiency in the supply chain both internally and externally.NMS Procurement officers have adopted new strategies like e- auctioning and e- tendering in an attempt to achieve sound supply chain performances. However, the adoption of these new technologies, such as use of the internet to source for suppliers as well as purchasing goods and services by firms has often proved to a big challenge due to the failure to put in place structures for effective monitoring and trucking hence organizations' supply performances have continuously declined.NMS has over time experienced delays in service deliveries of the drugs to the intended Hospitals mainly perpetuated by system failures and bureaucracy associated with the paper work and manual handling of the process .This has necessitated the adoption of e-procurement so as to consolidate and quickening the delivery of medical supplies. This research therefore seeks to find out whether e- procurement is a deliverer of real value in terms of quality goods and services, timely delivery and great savings in the supply chain.

1.3. Purpose of the study:

The purpose of this study was to determine the impact of e- procurement on organizational performance.

1.4. Objectives of the study:

1. To examine factors influencing adoption of E-procurement at National Medical Stores.

2. To determine different forms of E-procurement used at National Medical Stores.

3. To determine the relationship between E-procurement and service delivery.

1.5. Research questions:

1. What factors influencing adoption of E-procurement National Medical Stores?

2. What different forms of E-procurement used at National Medical Stores?

3. What is the relationship between E-procurement and service delivery?

1.6. Scope of the study:

1.6.1 Content scope

The study was limited to the impact of E-procurement on service delivery

1.6.2 Geographical scope

The study was conducted at National Medical Stores in Entebbe district located in central Uganda

1.6.3 Time scope

The study was covered in the period of six months that was from Jan to June 2014.

1.7. Significance of the study:

- The study added knowledge to the field of procurement through the use new technological methods like the use of internet.
- The research provided reference material for upcoming researchers by adding on the existing literature in related studies.

The study helps the researcher to improve and build on their research skills.

1.8. Conceptual frame work

IV (E- Procurement)   **DV (Service delivery)**

IV (E- Procurement)
• E-ordering
• Web-based ERP(enterprise resource planning)
• E-sourcing
• E-tendering
• E-reverse auctioning
• E- informing

DV (Service delivery)
• Reduced Lead time
• Value for money
• Good customer Relationship
• Good quality products
• Increased service delivery
• Reduced bureaucracy

Intervening variables
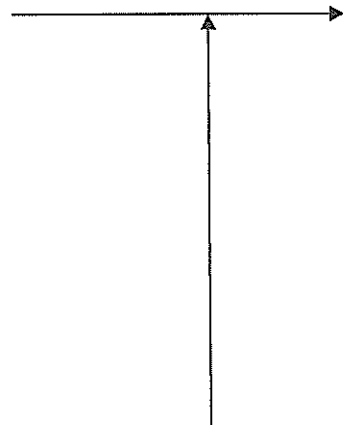
Intervening variables
• Government Policies
• NMS' Policies
• Public perspective

Source: Researcher's data

Figure 1 showing the diagrammatic conceptual framework

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CHAPTER TWO

LITERATURE REVIEW

2.0. Introduction.

This chapter deals with various topics and sub topics about e-procurement and supply chain performance. It includes the definition of e-procurement, significance and drivers of e-procurement, implementation of e-procurement and the relationship that exists between e-procurement and supply chain performance.

Procurement is the acquisition of goods, services or works from an outside external source. It is favorable that the goods, services or works are appropriate and that they are procured at the best possible cost to meet the needs of the purchaser in terms of quality and quantity, time, and location. Corporations and public bodies often define processes intended to promote fair and open competition for their business while minimizing exposure to fraud and collusion.

E-Procurement

In simplest terms, electronic procurement defines the automation of an organization's procurement processes using web-based applications. Unlike enterprise resource planning (ERP) systems that enable businesses to automate their internal processes, e-procurement enables widely dispersed buyers and suppliers to come together, interact, and execute purchase transactions directly over the Internet

A **performance**, in performing arts, generally comprises an event in which a performer or group of performers behave in a particular way for another group of people, the audience. Choral music and ballet are examples. Usually the performers participate in rehearsals beforehand. Afterwards audience members often applaud. After a performance, performance measurement sometimes occurs. Performance measurement is the process of collecting, analyzing and/or reporting information regarding the performance of an individual, group, organization, system or component. According to Brown, Ju; Brown, John (2006).

2.1 E-Procurement.

E-procurement has been defined differently by various scholars. For example Wu, (2007) defined e-procurement as the use of information technologies to facilitate business purchase transactions for materials and services.

This research recognizes the extensive nature of e-procurement and uses the definition by Min et al, (2003) where e-procurement is referred to as business to business purchasing practices that utilize electronic commerce to identify potential sources of supply, to purchase goods and services, to transfer payments and to interact with suppliers.

Many companies have adopted the use of internet with an aim of improving their supply chain performance both in the internal and external processes and those processes beyond their boundaries Bartezzaghi and Ronchi, (2005).

2.1.1. Categories of e-procurement.

E-procurement is divided into two categories namely indirect and direct e-procurement Minahan and Degan, (2001). Direct e-procurement includes the acquisition of raw materials, parts and assemblies and all components that are used in the manufacturing process of finished products such as sheet metal, semi conductors and petrochemicals Lamming, (2002).

Indirect e-procurement includes the acquisition of non production goods and services such as office supplies, advertising, casual labour etc. Laudon and Traver, (2004) and it usually consists of 30 – 60 percent of the firm's expenditure. Much of the literature on e-procurement has focused on indirect purchases maintenance, repair and operating supplies – MRO[s]) as stated by Orr, (2002)

Implementation of e-procurement may initially be more suitable to certain contexts within procurement Bartezaghi et al, (2004). Usually companies adopt e-procurement systems to manage the supply of critical products and services and as such, the indirect purchases (MROs) tend to be transferred to an electronic platform of the supply stage Min and Galle, (2003).

The internet in this case can maximize supply chain performance by ensuring steady flow of supply both internally, externally and other global processes Bartezzaghi et al, (2004). In a

general e-commerce context, it is widely suggested that services rather than products are more suitable for e-procurement Harris and Cohen, (2003).

Another issue is the frequency of use of MROs: while being the most common e-procurement purchase, it is also the most frequent organizational purchase due to their intangibility and high transactional costs. This is explained by the fact that service providers fall under the umbrella of MROs which leads to a struggle for competitive advantage Reason and Evans, (2007). As a result electronic media works to support the relationship between suppliers and buyers which in turn improves the supply performance through exchange of information.

2.1.2. Drivers of e-procurement

The transition to modern e-procurement calls for strategic adoption. It is one strategy, though, that requires much organizational change McGregor et al, (2005). Common e-procurement tools include online catalogues, e-auctions, e-sourcing and e-collaboration and the ever advancing capabilities of technology are all important drivers of e-procurement implementation for businessmen Graham. G.Hardaker (2000).E-procurement can facilitate improved accuracy, reduce clerical work and order-cycle time as well as increase productivity Heywood, (2002).

2.2 Factors Influencing adoption of e-procurement

There are five main factors that appear to influence the adoption of e-procurement which include the following;

The main organizational factors that appear to impact on the likely adoption of e-procurement are size and type of operation; e-procurement is more evident in bigger organizations than smaller enterprises Power. D, Singh.P (2007). Reasons for this include owner's attitude, resource poverty, limited IT infrastructure, limited knowledge and expertise with information systems in the small enterprises and organizations Harland, (2007). However, e-procurement can be viable for SMEs through web-based enterprise cooperation or through the use of the business case for e-adoption Berlak and Webber, (2004).

Some types of organizational operations seem to lend them to e-procurement. The use of e-procurement applications often goes hand in hand with certain purchase – supply forms or systems which require reduced human intervention and paper work and often resulting in improved performance for buyers and suppliers, Melville (2005); Sanders, (2004). Operations with high usage of MRO supplies are more likely to vary in the number of buyers and suppliers, their connectivity and purpose of trading Cullen and Webster, (2007). Make-to-order supply chains differ from make-to-stock supply chain. Logistics requiring regular tracking of items are more likely to use e-procurement Lancioni, (2000).

Organizational readiness is another factor that impacts on e-procurement strategy Mehrtens, (2001). Many firms are experiencing a number of major problems of considerable media and software vendor type and often no theoretical basis behind the determination of which application are most appropriate Cox, (2001). To attain the greatest benefits, purchasing processes should be evaluated and improved before adopting e-procurement tools. Internet technologies enable integration with trading partners, yet amplify the need for fundamental organizational change Power and Singh, (2007). Internal barriers to e-procurement adoption are more significant than customer or supplier barriers. Lack of organizational readiness has been attributed mainly to human readiness. This implies that there is need for supply firms to exhibit professionalism to ensure that their own organizations are ready for e-procurement adoption, Hartley (2006); Frohlich, (2002).

E-procurement can be used to support broader public or government procurements through both traditional and e-commerce processes. E-procurement through public domain can be seen as a policy tool to support the delivery of public procurement policy, improving transparency and efficiency Carayannis and Popescu, (2005). It can assist government in the same way it does to business to make better decisions by improving supply performance and getting more value Croom and Brandon, (2005).

Strategic factors, where a company may adopt E-technologies as part of its overarching strategy, contributing to improving the firm's performance and increasing competitive advantage. The strategic use of e-business has been considered in several studies, and how

e-business strategy aligns with the overarching business strategy of a firm. The internet was only become a powerful source of competitive advantage if it is integrated in the firms' overall strategies Porter, (2001). The role of IT has evolved from a productivity tool to a more strategic level Wu et al, (2003). An e-business strategy should specify the aims, goals and context of the application Soliman and Youssef, (2001); these choices should be aligned processes Graham and Hardaker, (2000). These studies suggest that if organizations are being strategic in their e-procurement adoption, they should have a specific e-procurement strategy and that this was align with broader organizational strategies.

Different factors in supply chain performance have got different powers, legitimacy and urgency. E-procurement can have an effect on trust in supply chain relationships Gattiker et al, (2007); Lack of assistance and structural inertia of large organizations in supply chains can be a disincentive to implement e- business Zhu, (2006). Different industries show different propensities to e-procurement adoption, related to use of existing information exchange infrastructures prior to the advents of the internet Caglliano, (2005). The greatest benefit of e-business occurs when its application is fully integrated throughout the supply chain of a firm Currie, (2000). E-procurement is more likely to be adopted if it is perceived that suppliers have capabilities to deal with it; there are difficulties in integrating information systems across firm's boundaries in supply chains if suppliers lack capability Bagchi and Skjoett-Larsen, (2003).

2.3 Benefits of e-procurement

Heywood, (2002) believes that e-procurement offers enough benefits to a firm to be considered a strategy for competitive advantage.

There is potential for organizations to realize numerous benefits from e-procurement implementation. Cost savings can be achieved where buyers report an average reduction in purchase price of up to 17 percent Bartezzaghi et al, (2005). An interesting point is made by Barrat and Rosdhal, (2002) who claim that the internet actually reduces "maverick" buying.

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Prices are also lowered through aggregate buying which allows multiple buyers form one organization to buy as one customer and makes it easier to monitor expenditure within an organization Barrat et al, (2002).

Improved process efficiency is a key benefit of e-procurement where order fulfillment time can be shortened by up to 80 percent Minahan, (2001) and reducing inventory cost by as low as 50 percent. E-procurement has the potential to streamline inefficient procurement process by removing the manual, paper-based administrative and bureaucratic elements inherent in procurement systems Bartezzaghi et al, (2005) thereby ultimately improving an organization's returns on investment.

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; Da Vila 2003; Muffatto and Payaro 2004).

Many organizations are seeking new ways to reduce procurement costs which typically represent the largest cost item in business operations (Vaidya et al. 2006; Da Vila et al 2003). According to industry sources, the indirect procurement expenditure in Australia is 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; 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).

At this stage, very little rigorous research has been put into evaluating e-procurement systems including the use, impact and the realization of benefits and, hence, there is a lack of information that can be used as a basis for assessing costs and benefits involved (Subramaniam and Shaw 2002; Da Vila et al. 2003; Tonkin 2003). Most benefits of e-procurement systems have only been qualitatively expressed without a systematic analysis, because measuring the impact of IT, especially when the impacts created are beyond the organizational boundaries as in the case of e-procurement systems, has proved to be difficult (Martinsons and Chong 1999; Mollah and Licker 2001; Pather et al., 2003; Khalifa and Liu 2004). As a consequence, many organizations are still reluctant to adopt e-procurement systems, since an e-procurement system requires significant investment in infrastructure, technology, integration and expertise (Hawking and Stein. 2004).

A framework is, therefore, necessary to guide researchers and practitioners to systematically assess e-procurement systems, which assists in developing better understanding and gaining rich insights into the use and impact of e-procurement systems. In addition, an instrument that can be used by organizations to measure success of e-procurement systems and to identify areas for improvement was valuable for practice. The proposed research framework for evaluating e-procurement systems and the arguments on why existing success models cannot be applied in the context of e-procurement systems are discussed in the next section.

Electronic procurement encompasses several forms

Electronic procurement (EP) can be defined as using Internet technology in the purchasing process. It is important to note that this definition is narrow in the sense that it excludes old applications like ordering by telephone or by fax. On the other hand, this definition is relatively wide, because it not only encompasses the use of Internet applications in the

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purchasing process, but it also includes the use of intranet and extranet applications. For example, using this definition ordering office supplies by using a supplier catalog on a website is a form of EP.

Based on this definition of EP a large number of forms of EP can be distinguished. Some of these forms have received a lot of attention already and they are by now quite well-defined and relatively well-developed. Other forms of EP are still quite young and immature. Some of them will be mature, others may never reach that state. In this paper we focus on the forms of EP that

seem quite well-defined and relatively well-developed. We distinguish between the following forms:-

- e-ordering;
- web-based ERP;
- e-sourcing;
- e-tendering;
- e-reverse auctioning;
- e-informing.

2.4 The different forms of E-procuement

In the following we shall briefly define the six forms of EP.

E-ordering as well as web-based ERP is the process of creating and approving purchasing requisitions, placing purchase orders as well as receiving goods and services ordered, by using a software system based on Internet technology. In the case of e-ordering the goods and services ordered are indirect goods and services (i.e., non-product related goods and services). The supporting software system (an ordering catalog system) is usually used by all employees of an organisation. In the case of web-based ERP the goods and services ordered

are product-related. These are called direct goods and services. Usually only the employees of the purchasing department (or the planning department) are using the supporting software system (a web-based ERP-system (Enterprise Resource Planning)). It maybe clear that ordering of indirect goods and services usually takes place on an ad hoc basis, whereas ordering of direct goods and services usually is plan-based.

E-sourcing is the process of identifying new suppliers for a specific spend category, using Internet technology (usually the Internet itself). By identifying new suppliers a purchaser can increase the competitiveness in the tactical purchasing process for this spend category. E-sourcing is a way of decreasing the supply risk associated with this spend category (Kraljic, 1983).

E-tendering is the process of sending RFI's and RFP's to suppliers and receiving the responses of suppliers back, using Internet technology. Usually e-tendering is supported by an e-tendering system. Often the e-tendering system also supports the analysis and assessment of responses. E-tendering does not include closing the deal with a supplier. As a matter of fact, e-tendering smoothens a large part of the tactical purchasing process (Van Weele, 1988), without focusing on the content (i.e. spend category) of that process.

In practice an auction enables a supplier to sell (surplus) goods and services to a number of (known or unknown) buying organizations. During a relatively short time frame the buying organizations involved submit bids for the goods and services that are auctioned. The auction operates with an upward price mechanism or a downward price mechanism. A reversed auction is the opposite: it enables a buying organisation to buy goods and services needed from a number of (known of unknown) suppliers. E-reverse auctioning is the Internet technology based equivalent of reverse auction. Usually e-reverse auctioning focuses on the price of the goods and services auctioned. In most cases, other criteria are neglected during the e-reverse auction. Of course, other criteria can be used in a previous phase in order to determine which suppliers should be invited to join the e-reverse auction.

E-reverse auctioning does really close a deal between a buying organization and a supplier, if parties agree on the price.

Unlike the previous forms, e-informing is a form of EP that is not directly associated with a phase in the purchasing process like contracting or ordering. E-informing is the process of gathering and distributing purchasing information both from and to internal and external parties, using Internet technology. For example, publishing purchasing management information on an extranet that can be accessed by internal clients and suppliers is a way of e-informing. This form is also called purchasing intelligence or spend control.

Figure 1 shows the six forms of e-procurement plotted in the purchasing process according to (van Weele, 1988). E-sourcing supports the specification phase: it identifies suppliers that can be used in the selection phase. E-tendering supports the selection phase: it facilitates the RFI- and RFP-activities, usually including support for the analysis and assessment activities. E-reverse auctioning supports the contract phase: it enables closing a deal with a supplier. Additionally, we have included a separation between *transaction* oriented forms and *information* oriented forms. The transaction oriented forms are separated in *indirect* transactions and *direct* transactions.

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tactical procurement process   operational procurement process
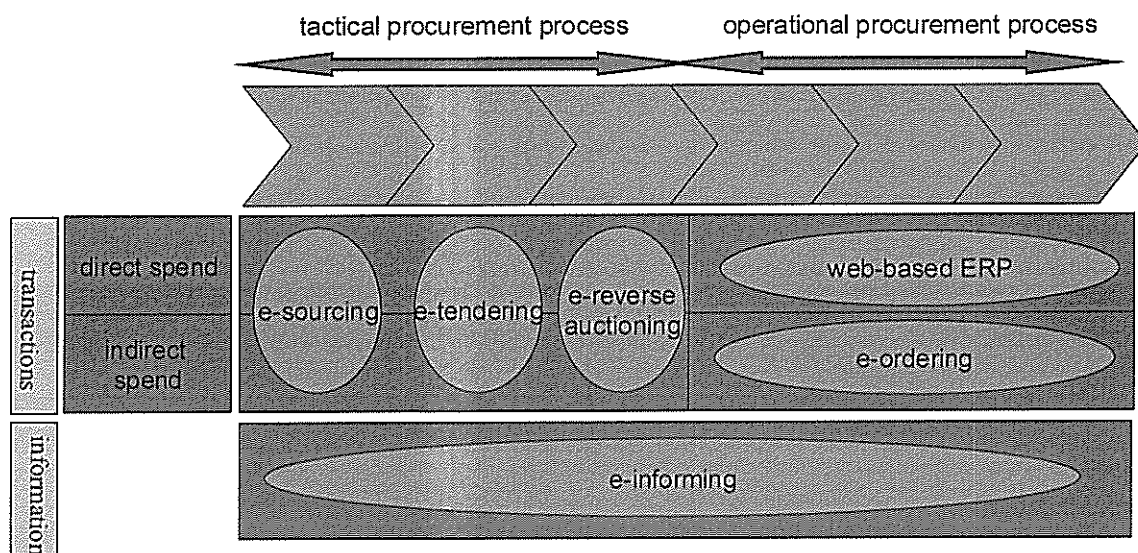
figure 2 showing the diagramatic forms E-procurement process

2.5 Service delivery:

Service delivery is taken to be function of an organization's ability to meet5 its goals and objectives by exploiting the available resource in efficient and effective way (Eccles, 1991). Service delivery the entails effectiveness, which refers to the firm's ability to serve and produce what the market require at a particular time and efficiency, which means meeting the objective at the lowest possible cost with the highest possible benefits (Grassing, 2002). In order assess service delivery, managers use action designed to generate suitable long term improvement, (Kapland, 1992).

2.5.1 Factor affecting service delivery in public organization.

Availability and level of resources can also be used to analyze the service delivery of an organization.

Resources which may include assets, finance, employ skills and organization process are key dimensions/indicators of organizational service delivery over time (Rumelt, 1994) Service

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delivery dimension/measures in organization are those which enable organization to direct their action towards achieving their strategic objective (Brown, 1996). Organization service delivery dimension/measures used should be those which support business objective. This is because according to him, organizational services delivery is central future wellbeing and prosperity of any organization (Dutici, 199 The group term compliance as a plethora of red tape that affects organizations of all complexions.

(Davis et al, 2005).

Effective information systems may also affects the level of service delivery.

The focus should be on enhancing value for money, achieving fairness, openness, and transparency without restricting public servants in a tangle of rules. A culture of ethics, and innovation should cultivated (Dye, 2005). Effective and accurate information enables smooth operation of activities.

Efficiency and effectiveness.

Efficiency is defined as maximizing in puts for the required output, on the other hand effectiveness is defined as the extent to which the defined task has been accomplished and is consent with nations of national accountability. Effectiveness may be measured in terms of quality services, customer satisfaction and achievement of goals (Drucker, 1999).

Corruption is one of the causes for poor service delivery.

According to Evenet (2003), one of the contractors revealed late and inadequate funding for most LG contracts. He said they have to borrow money to complete the projects and yet the interest rates are very high. Some late contracts are renegotiated and prices adjusted upwards. "Every wise contractor must consider tokens to district officials, and other side costs in the contract price thus the high cost for most contracts." he said. The contractors prefer timely execution of contracts, to save costs. The delays are mainly attributed to government bureaucracy, and management weaknesses at LG level induced by corrupt tendencies.

Market power

This is another factor which affects the level of services,. Market power is indicated by the level of scale economies of scale and reduction of transaction costs. Organizations should continuously improve its service through innovation and input value. Therefore in order to asses service delivery an organization should be examined in terms of quality services, flexibility, resource utilization and innovations. (poder, 1998).

Management practices.

Steane et al, say that, procurement system implemented with sound management practices in place ensure successful service delivery to stakeholders. (Gelderman, 2006).

The sound practices demand that those responsible for implementing procurement should ensure that the objectives are clear and that quality services are sustained. There should be sound client and contract deliverer competencies in communication, team building relationships and sound planning for control (Walker and Sidwell 1996). He also says that performance quality should not be measured on the basis of time and cost only but also service quality as well plus other relevant measures (Boer, 1998).

Competition also affects service delivery in public organization.
The procedures encourage competition like use of open domestic or open international bidding method of procurement. In these methods many potential suppliers both locally and internationally are invited which encourage competition which leads to better quality services to the organization.

2.6 The relationship between e-procurement and service delivery
Since procurement is very important element in supply chain. In order to understand the concept in more details, this study is using these factor as constructs to study the relationship of e-procurement methods on supply chain performance.

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According to (Malcon Wheattly, 2000), procurement is not just a system of making purchases on line. if properly implemented, it can connect companies and their business process directly with the service delivery while managing all interactions between them.

Lee (2004) specifies that to make a supply chain more a gile, it has to react to short term changes in demand or supply quickly and to handle external descriptions smoothly. The use of e-procurement enables fast responses, creating high responsiveness and cuts costs right through the focus of a company's e-procurement will be making its supply chain more efficient through paperless processing of order, receipt and invoices. Increasing costs, competition and customer pressure will drive companies to review their supply chain processes and tap into the enormous savings potential from indirect spending (E-procurement L Staven, R Leonard, 2001).

According to Leenders and Fexion, 1997; the major part of service delivery is traditionally supported by information technology with the use of enterprise resource planning (ERP), manufacturing resource planning (MRP) or electronic data interchange connections with service deliveries that were established in 1980s. .

Gebaner and Seger, 1998 identifies that the diffusions of e-procurement systems in the late 1990s has created the potential for reorganizing supply chains. Compared to enterprise resource planning, these systems were considerably less expensive and more flexible due to increased standardization on a tactical level. More or less all studies on e-procurement, report large efficiencies regarding supply chain management.

The main idea of e-procurement is to include the end-user in the procurement process via an electronic multi-vendor catalog and to close the process gaps in the supply chain for indirect According to (Dalmalch et al, 2000), e-procurement deals with the management of supply chains in the procurement of indirect goods that is based on internet information systems and Croom and Johnson (2003) identified five main improvements in the supply chain that e-procurement enabled supporting managers" budgetary control offering robust process performance with fewer failures, offering far greater transparency and accessibility across the whole process and improving management information reinforced user compliance, improving systems reliability and ensuring compliance to process.

The study discovered that firms should implement e-procurement systems in supply chain for better communication and performance improving. E-procurement undoubtedly promotes information sharing and improves supply chain performance. Furthermore, there was no literature reviewed that concern the operations of National medical stores Uganda. This further made it imperative for the researcher to carry out a study in order to establish the impact of e-procurement on service delivery of National medical stores Uganda

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents methods and procedures that the researcher used when assessing the findings of the study. And it also presents the important information (data) and specific fields of the survey carried out in national medical stores.

3.1 Research Design

The research will be designed in such a manner, which enables the researcher to meet the objectives of the study, the researcher was therefore use both qualitative and quantitative research designs, which was descriptive and analytical in nature. The descriptive aspect of the research design was used in establishing the company service delivery and the analytical research design was to establish relationship E- procurement and Service Delivery.

3.2 Survey population

The survey population was staff members of national medical stores comprising of purchasing officers, store keepers, accountants, medical managers and the general managers of National Medical Stores who was just enough to represent the medical fraternity in Uganda.

A total of 60 staff members from different departments was proposed/selected. The composition was as follows; 10 store keepers,5 medical managers,5 accountants and 40 general officers.

3.3 Sampling method

The researcher will use purposive sampling to select the samples from the population. Simple random sampling was to limit on the biasness of purposive sampling. Numbers was allocated, written on small pieces of paper, shuffled and randomly picked by respondents until all the required respondents was over.

3.4 Sampling Size

The sample size of 30 staff members was used determined by formulae of Krejcie Morgan (1970) shown below

$$S = X^2 \, NP(1 - P)$$

$$d^2(N - 1) + X^2 P(1 - P)$$

S= Sample Size

X^2 = the table value of chi square for 1 degree of freedom at the confidence level of 3.841

N= the population

P= population proportion assumed to be 0.50 which provides the maximum sample size

d= the degree of accuracy expressed as a proportion in this case was 0.050

Having the population set to 0.5   ensured a significant sample size

3.5 Data collection

3.5.1 Source of data

Data was both primary and secondary. Primary data was collected by the use of questionnaires and secondary data was got from reports, journals, and internet.

3.5.2 Instruments:

Quantitative data was collected using questionnaire. A self – administered questionnaire was designed using Likert scale and they was distributed to staff members of National Medical Stores who will fill them within 4 days of research period.

3.6 Data processing, analysis and presentation

Quantitative data was collected by the questionnaire which was first coded. In the coding process, a coding sheet was constructed. A number   then assigned to each answer in the questionnaire with a corresponding number on the coding sheet. Then the same questionnaire was constructed on the computer using excel. Frequency tables, and graphs

was worked out basing on the data entered into excel. In these frequency tables, and graphs analysis was done with a corresponding percentage. However statistical packages for social sciences (SPSS) was used to determine the relationship between the two variables.

3.7 Limitations and anticipated solution

Respondents were not be able to give confidential information, which was sufficient to the researcher. However, the researcher will convince them that research was intended to help them improve on their problems.

There was too much pressure as a result of limited time for the researcher. However, the researcher was devoted most of the time on the research.

Financial constraint since research requires money for printing and transport. However, the researcher minimized the costs as lowest as possible.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0. Introduction

This chapter presents findings from the study about the impact E-procurement principles and service delivery . The study intended to achieve of to find out the following objective

To examine the factors influencing the adoption of E-procurement at National Medical Stores.

To determine different forms of E-procurement used at National Medical Stores.

To determine a relationship between the impact E-procurement and service delivery.

4.1 Demographic characteristics of Respondents

The study put into account the sex of the respondents and their academic qualification which were considered relevant to this study. Table 4.1 presents the background information of respondents.

Table 1: Sex Distributions of Respondents

Gender	Frequency	Percent (%)
Male	20	67
Female	10	33
Total	**30**	**100**

Source: primary data

Table 4.1 is about the sex distributions of the respondents. It is evident from this gender frequency distribution table that the majority of respondents were males at 67%) while (33%) were females. This tentatively implies that the national medical stores employed mainly more male employees than female employees.

4.2.1 Respondent's Age

Table 5 shows that most respondents were in the age group 29-35 comprising 33 percent followed by age bracket of 36-50 with 27 percent, the age bracket 18-28 with 23 percent

and 51 and above comprising 11.6 percent this implied that most of the employees are aged 36 years and below. This gave the implication that the majority were able with enough experience in matters of Contracts Management and Service Delivery.

Table 2: shows the ages for all the respondents.

Age of Respondents	Frequency	Percentage (%)
18-28	7	23
29-35	10	33
36-50	8	27
51 And Above	5	17
Total	**30**	**100**

Fig 3: The pie chart representation of the Ages of the Respondents.
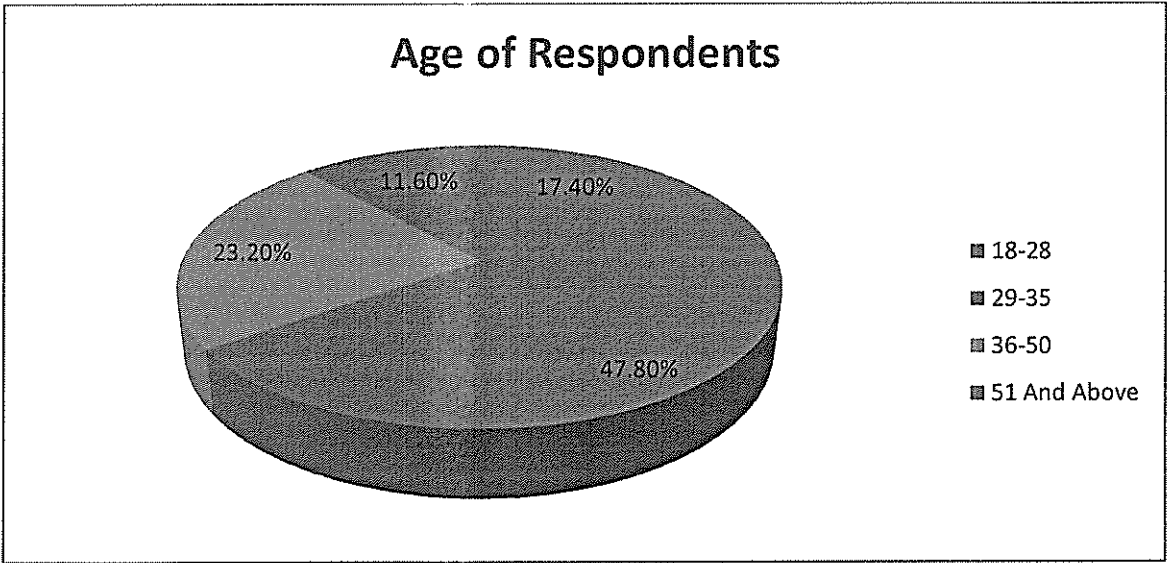
From the pie chart above, the blue portion represents the respondents aged 18-28 years, the red portion shows respondents aged 29-35 years, purple stands for those aged 51 and above and Green represents respondents aged 36-50 years.

Table 3: Respondents by position held

Position Held	Frequency	Percent (%)
store keepers	5	17
accountants	3	10
purchasing officers	3	10
Doctors	14	47
General managers	5	17
Total	**30**	**100**

Source: primary data

Table 4.2 shows respondents by various positions they held in their respective companies. Out of the 30 total numbers of respondents, 47 were doctors with the greatest percentage, both store keepers and general managers 17% were employees and last but not least 10 percent were both accountants and purchasing officers implying that there were many doctors in the stores because they are specialist in managing drugs.

Table 5: Respondents by terms of service

Experience	Frequency	Percent (%)
Permanent	15	50
Fixed Term	8	27
Temporary	7	23
Total	**30**	**100**

Source: primary data

Results in Table 4.3 revealed that most of the respondents (50%) were in the permanent category. 27% and 23% were in the fixed term and temporary categories respectively. The study noted from the above results that majority of staff in National Medical Stores Entebbe were permanent since this stores need expertise on managing them effectively for given time period.

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Table 6: Respondents by work experience permanent basis.

Period Worked	Frequency	Percent (%)
Less than a year	4	13
1-2 years	5	17
2-5years	10	33
5-10 years	3	10
10 years and above	8	27
Total	30	100

Source: primary data

Table 4.4 shows the respondent's work experience in the company. The results indicates the majority were in the category of 2-5 years represented by 33% of the total respondents.10% were in the category of 5=10 years, and 13% and 17% in 1 year and below.1-2 years categories respectively. Only 27% were in 10 years above category. This may be true because most of the respondents were fresh graduates whose work experience was short. It was realized that most of the respondents had worked for not more than 10 years. However, since majority was on permanent job basis, they had relevant information needed for this study as individuals who had stayed in one place.

Table 7: Respondents by Levels of Education

Educational Levels	Frequency	Percent (%)
Diploma	2	7
Bachelors Degree	18	60
Post Graduate Degree	10	33
Total	30	100

Source: primary data

Results in Table 4.5 revealed that the majority of the respondents (60%) had University Bachelor's degrees. The study noted that this was very important that National Medical Stores should employ and retain competent and qualified staff because most of their activities are technical in nature and requires the use of knowledge, skills and abilities.

4.2 The findings on the factors influencing E-procurement

Organizational Factors and e-Procurement Implementation

The research findings point to a strong correlation between e-procurement implementation and user involvement. Where the users within the buying units are involved in the e-procurement structuring the benefits gained are maximized. The customer interaction levels also serve to enhance and optimize the benefits of e-procurement implementation within the automobile companies. These findings agree with (Davila et al , 2002) who enumerated several organizational variables, supplier-related issues, user understanding, etc, as affecting successful implementation of e-procurement.

Managerial Factors and e-Procurement Implementation

The research findings suggest a strong linkage between top management support and knowledge levels as key in determining the level of success in the e-procurement implementation. E-procurement implementation rides on knowledge advantage and the goodwill from top management. These factors play a role in the success of e-procurement implementation. These findings echo the World Bank (2004) assertion that e-procurement implementation is affected by commonly low awareness, understanding, or skill in relation to evolving technologies in management.

Environmental Factors and e-Procurement Implementation

The e-procurement does not exist in a vacuum and hence environmental factors play a role in the successful implementation of e-procurement. External legal pressures, industry competition and external stakeholder support play a role in the successful implementation of e-procurement. A supportive legal environment ensures a smooth implementation of e-procurement as opposed to a bottlenecked legal environment. These findings tally with the thoughts of Reddick (2004) who stated that that companies and governments have to overcome existing legislative, regulatory and organizational barriers in order to succeed in the e-procurement implementation. The research findings also agree with the European Union who blamed lack of creative e-procurement laws as hampering e-procurement implementation.

Technical Factors and e-Procurement Implementation

Technical factors including technical compatibility, employee expertise and perceived advantages affect the success of the e-procurement implementation. Incompatible technical architecture slows the operability of the e-procurement infrastructure, slowing down the systems and leads to user frustration.

These findings tally with Schoenherr et al (2007) who indicate the right technological environment is the pre-condition for successful e-procurement implementation in the automobile industry.

Presence of legal support

The inappropriate introduction of e-procurement carries high risks of market fragmentation. The legal, technical and organizational barriers that may result from procurement online are one of the greatest challenges for policy makers (Commission of the European Communities, 2004). Despite that, the Public Procurement Act 2004 (PPA 2004) and ICT Policy of 2003 do not provide adequate legislative framework for the application and harmonization of e-commerce and e-procurement in the country. However, the newly enacted Public Procurement Act 2011 (PPA 2011) has included some provisions mandating PPRA to initiate e-procurement in the country but they are not adequate enough to fast track the process. For this reason, e-procurement needs legal support on how the exchange of information was secured, payment system and exchanges of bidding documents harmonized electronically while data confidentiality and authentication maintained in the country. Therefore, the current legal frameworks in the country in terms of laws, regulations and policies have to be changed by the government in order to support the efforts geared towards the adoption of e-commerce and e-procurement in the country. Presence of Legal Support E-Procurement Experts Development Capital Investment on Technological Infrastructure

Supplier Capability Development Adoption of E-Procurement in Uganda Public Procurement . For example, the new PPA 2011 and Public Procurement Policy (PPP) that are still on preparation should come up with the mechanism to regulate key activities of procurement such as sourcing, payment and tendering proceeding from manual operation to e-sourcing, e-payment and e-tendering where tender documents was issued, submitted and evaluated online while maintaining confidentiality, data security and authentication.

Development of experts on e-procurement

. The implementation of e-procurement techniques requires personnel who are experts in the e-procurement issues at the country level and organizational level both in the procuring entities and the supplier entities. Hence, to be successful in the application of e-procurement at the country level there is a need of having adequate e-procurement experts at PPRA,

supplier organizations and PEs who was in charge of the day to day implementation activities and harmonization of the e-procurement system. The country has inadequate experts on the subject matter; therefore efforts should be taken by the government and the respective entities to train their experts on e-procurement techniques and technologies so that they may become competent and conversant on e-procurement and in return participate actively on the whole process of installing e-procurement infrastructure.

Capital investment on technological infrastructure

E-procurement application requires good and supportive soft and hard technological infrastructure across the country for it to be effectively applied. To mention a few, there should be stable power supply, undisputed network infrastructure, e-procurement software, adequate servers and backups. A country e-procurement readiness report evidenced that few of these do exist in the country but the Government is trying to make changes such as the installation of the national broadband. Therefore, adequate funds should be set aside in the Government budget that was specifically utilized for capital investment on e-procurement technological soft and hard infrastructure in the country. Hypothetically, it is believed that there is a direct relationship between supportive technological infrastructure and the application of e-procurement in the country, hence priorities towards capital investment should be changed and be channeled towards constructing e-procurement technological infrastructure.

In order for e-procurement to be effectively applied in the country, there should be a common system that was harmonizing the procurement transactions between the buying organizations and the selling organizations. Therefore, both ends of the procurement system should be adequately equipped with the necessary e-procurement technology and techniques. Currently, most suppliers are not well capable of being integrated into the e-procurement in terms of competent personnel and technological well being. Hence, initiative should be taken to develop our local suppliers technologically so that when the right time comes they can be able to access procuring entities inventory reorder levels and stock updates online, obtain requests for quotations and submit them online, receive payments online, review and assent procurement contract online and share other data through EDI.

4.2.1 Findings level of e-procurement adoption

Different organizations use different approaches in the adoption of information systems. The e-procurement system of adoption among manufacturing national medical stores can be at different levels depending on the number of years since its adoption, past experience, the success or failure in the implementation of such systems and the automation level of activities within the procurement unit.

E - Procurement Adoption Policy:

National medical stores are expected to develop their e-procurement adoption strategy to guide their implementation. The respondents were asked to indicate whether they have adopted e-procurement systems in their large scale manufacturing national medical stores. From the research data, majority (100%) of the large scale manufacturing national medical stores in Kampala, Uganda have adopted e-procurement. This is an indication that the organizations that participated in this study have knowledge of what e-procurement systems are.

Years of e-Procurement Usage:

The number of years an organization has used the e-procurement system can determine the assessment index of the system's failure or success. Equally it can also determine efficiency and effectiveness within the procurement systems. It will also influence the level of adoption among several other activities within the procurement unit. The respondents were asked to indicate the number of years that have elapsed since the time their national medical stores had adopted e-procurement systems and the results are as shown in table 2 below.

Table 8 : Years in e-procurement usage

Years	Frequency	percent
1-5 years		
6- 10 years		
Total		

The findings in table 2 above indicate that majority (72.7%) of the large scale manufacturing national medical stores in Kampala, Uganda have adopted e-procurement systems for

duration of 1-5 years. This is an indication that majority of the national medical stores that participated in the study have not adopted information systems for a long time hence don't have a detailed understanding in the usage of e-procurement systems.

E-Procurement Adoption Level:

The level of automation among the key activities in the procurement unit will determine the level of adoption of e-procurement system. The respondents were asked to indicate the extent to which they have adopted e-procurement systems among key activities in the procurement function using a five likert scale (1= Very small extent; 2 = Small extent; 3 = Moderate extent; 4= Great extent 5= Very great extent) and the results are as shown in table 3.

Table 9 E-Procurement Adoption Level

E-Procurement adoption levels	N	Mean	Std. Deviation
Advertising tenders online	44	3.91	.910
Online submission of proposals	44	3.75	1.222
Short listing of suppliers online	44	3.70	1.212
Company staff make requisitions online	44	3.66	1.098
Call for proposals done through company website	44	3.50	1.191
Existence of functioning website	44	3.48	1.338
Posting item specifications on company website	44	3.00	1.398

Source: Research Data

From the findings in table 3 above, the large scale manufacturing national medical stores in Kampala were to a great extent (mean ≥3.5, with a significant standard deviation) advertising tenders online, allowing suppliers to submit proposals online, short listing of suppliers online, allowing company staff to make requisition online and call for proposals through company website. This indicates that the large scale manufacturing national medical stores Kampala, Uganda have adopted e-procurement to a great extent. The data agrees

with the observations by Croom and Brandon-Jones (2004) who assert that e-procurement systems enable organization to carry out individual or all stages of the procurement process such as searching for suppliers, sourcing, negotiation, ordering and posting of purchase review using internet-based (integrated) information and communication technologies.

On the other hand, the existence of functioning website and posting item specifications online among the large scale manufacturing national medical stores in Kampala have been adopted to moderate extent (mean ≥ 3.0). This may be attributed to challenges like usage of decades-old equipment and parts whose documentation is paper-based and lacks the digital format necessary for e-Procurement systems as noted by Moore (2003).

There are number of factors that can determine the successful adoption of e-procurement systems. These are the most important factors that a firm needs to pay attention to in their efforts of implementing electronic procurement systems and practices aimed at improving their competitiveness. The respondents were asked to indicate the extent to which they agreed with various factors that contribute to the success of e-procurement among large scale manufacturing national medical stores in Kampala, Uganda using a five likert scale of 1= Very great extent; 2 = Great extent; 3= Moderate extent; 4= Small extent and 5= Very small extent. The results

4.2.3 The findings on different forms of electronic procurement

Do you agree that, these are the main forms of e-procurement in National Medical Stores?

Table 10: Descriptive statistics on respondents forms of e-procurement

Form of e-procurement	Category	Number (Percent)
E-sourcing	SD	19 (18.3)
	D	26 (25.0)
	NS	16 (15.4)
	A	32 (30.8)
	SA	11 (10.6)
E-web based ERP	SD	9 (8.7)
	D	31 (29.8)
	NS	24 (23.1)
	A	32 (30.8)
	SA	8 (7.7)
E-tendering	SD	13 (12.5)
	D	37 (35.6)
	NS	15 (14.4)
	A	25 (24.0)
	SA	14 (13.5)
E-reserve auctioning	SD	18 (17.3)
	D	36 (34.6)
	NS	16 (15.4)
	A	31(29.8)
E-Informing	SA	3 (2.9)
	SD	10 (9.6)
	D	28 (26.9)
	NS	44 (42.3)
	A	22 (21.2)
	SA	0 (0)

SD = Strongly disagree, D= Disagree, NS= Not sure, A=Agree, SA = strongly agree

The forms of procurement

E-sourcing

While over 90% of businesses do use e-procurement strategies to some extent, most lump e-sourcing in under the terms wider umbrella of meaning: using the Internet to assist in the purchase of goods and services needed by a business. The reality is that e-sourcing is actually a separate category of techniques that focuses primarily on the quality and price of products used in the creation of a business's product. Since for many companies these direct materials make up a sizable chunk of their purchasing budget, it is in their best interest to implement some e-sourcing best practices. After all, one research group concluded that e-sourcing could save businesses in the United States almost $700 billion a year.

Obviously, e-sourcing can save money, but there are other equally important benefits as well. For example, e-sourcing can improve worker collaboration because these web-based applications can be accessed by all of the departments in a company. So if an RFP is being prepared in order to purchase the direct materials needed for a new project, then all of the teams and departments involved in the project can use the applications to contribute to the RFP. The end result is a clearer, more exact explanation of what the project entails. And because everyone is involved at that level, there is less resistance to the project in later stages.

Another important benefit of e-sourcing is that it does help companies find the ideal suppliers for their materials. Normally it is difficult for businesses to sort through all of the information about potential suppliers and to compare one with another in order to make a final decision. Even judging by proposed cost alone may be difficult because one must take into consideration delivery time, quality of the product, and other factors. E-sourcing applications, however, provide tools which let businesses organize and compare supplier information more effectively.

E-sourcing also encourages the development and use of best practices. Because most of the processes involved in e-sourcing will become templates, successful practices was easily carried out each time those templates are used. These templates will also be accessible by

other areas of the company so they, too, can implement the strategies that have worked well for other departments.

Finally, e-sourcing can improve training and efficiency. The majority of e-sourcing applications available can easily be used as off-line training tools to give employees hands-on experience with the application without jeopardizing the company's actual data. Using these simulations have proven to be more successful at not only teaching employees how to use the software but also in making them feel more comfortable with it. Furthermore, by automating many of the tasks associated with e-sourcing, these applications significantly cut down on the time the processes require. Some studies indicate that e-sourcing software can reduce the time involved in the procurement cycle by as much as one-fourth while it can also shave up to 15% off the time it takes to get a product out into the market.

To reap these benefits, however, businesses must first develop e-sourcing best practices. These practices include defining and developing a procurement strategy for these direct materials, taking the time to prequalify suppliers in order to minimize the time spent on that area of the process when it comes time to actually make the purchase, establishing contracts for the necessary products in order to save time later, and developing strong relationships with suppliers, particularly those who provide the most key items.

While software can help with all of these areas, the company itself must take the initiative on establishing these practices and following through with them. E-sourcing software can deliver many benefits for a business, include tremendous cost and time savings, but it cannot ever replace a solid groundwork of practices that lay the foundation for a business's success.

E- Web Based ERP

Enterprise Resource Planning (ERP) often describes a broad set of applications that assist companies in running efficiently and effectively by helping them do everything from track orders to purchase parts to provide customer service. In the late 1990's, ERP projects received a bad reputation because many of them were extremely costly were not well thought out. One well-known company spent over $100 million on its ERP project only to

have such severe problems with the software that revenues fell by almost 20% in one quarter. Thankfully, the ideas behind ERP projects have changed and developers have learned enough from the mistakes of others to have vastly improved the way these systems are implemented today.

One of the biggest mistakes companies made with their ERP projects in the past was over-customization. Instead of finding a model that worked for a particular industry and applying that model of best practices to other companies in that industry, ERP developers wanted to often work from scratch and come up with a company-specific ERP system. While specialization is often an excellent idea in business, over-customization simply made it more likely that mistakes would be made in the finished product. This is what happened in some projects.

Today, more ERP developers are focusing on templates of best practices for certain industries. When a business wants to implement ERP, they simply use that proven-effective model without any additional bells and whistles. Of course there are drawbacks to using one template to cover every company in an industry, but overall the change has resulted in a reduction in ERP implementation problems and greater project efficiency.

Another common problem many ERP projects used to face was resistance from employees and those that would be working directly with the applications once these applications were live. Many of these people had spent five, ten, even twenty years developing their own systems for doing their job, but when ERP was introduced, they were essentially being told that their way simply wasn't good enough and that they need to adjust. This attitude created resentment and apathy among workers and often caused production and efficiency problems.

ERP implementations are large and now must include all employees; not only in the training aspects but also in preliminary discussions of how a prospective application should work. ERP specialists have come to realize that the key to getting workforces to accept these new

business practices is to explain that they aren't simply different but they are better and that they will make their jobs easier in the long run.

Pricing is another pitfall that companies often fall into when implementing ERP systems. Originally, an ERP system's cost was based on how long it took for the applications to be readied and the staff to be trained. Depending on the ERP's developer, the process could last for months and the cost could skyrocket. Millions of dollars were spent of ERP projects that were not completely finished; many of those businesses simply ran out of money and couldn't continue to pay for something that was not done.

Now, however, most ERP implementations involve a contract that sets a specific price and often a specific time table for the project as well. Companies know how much they are going to have to pay upfront, so there are few surprises. Occasionally, additional costs do arise that are outside of the scope of the fixed-cost contracts, however, the price for these is minimal when compared to the costs involved before the safeguards that these contracts offered. By also setting a time line for the work, companies are able to make better plans for their business future. They won't be left hanging around and waiting while the ERP implementations goes on for months or even years.

Before implementing an ERP, company decision-makers need to talk to their workers and get their feedback about the idea in order to minimize future resistance, then they need to set a budget for the project and sign a fixed-price contact that fits that budget. But to be truly success, they must recognize that what's worked before is most likely to work again.

E-Tendering

is the process of sending RFI's and RFP's to suppliers and receiving the responses of suppliers back, using Internet technology. Usually e-tendering is supported by an e-tendering system. Often the e-tendering system also supports the analysis and assessment of responses. E-tendering does not include closing the deal with a supplier. As a matter of fact,

e-tendering smoothens a large part of the tactical purchasing process without focusing on the content (i.e. spend category) of that process.

E-Informing

is a form of EP that is not directly associated with a phase in the purchasing process like contracting or ordering. E-informing is the process of gathering and distributing purchasing information both from and to internal and external parties, using Internet technology. For example, publishing purchasing management information on an extranet that can be accessed by internal clients and suppliers is a way of e-informing. This form is also called purchasing intelligence or spend control.

E-Reserve Auctioning

is the Internet technology based equivalent of reverse auction. Usually e-reverse auctioning focuses on the price of the goods and services auctioned. In most cases, other criteria are neglected during the e-reverse auction. Of course, other criteria can be used in a previous phase in order to determine which suppliers should be invited to join the e-reverse auction. E-reverse auctioning does really close a deal between a buying organization and a supplier, if parties agree on the price.

The findings on which E procurement contributes to service delivery in national medical stores

Table 11 showing the extent of E-procurement contribution

Statement	Frequency	Percentage
Lesser extent	10	33
Greater extent	20	67
Not sure	0	0
Total	30	100

Source: primary data

The above shows the extent at which e procurement contributes to service delivery to an organization or national medical stores. 67% were saying that it contributes to the greater

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extent. Followed by 33% who said that , at the lesser extent with 33% whereas o percent were not sure anything about the contribution.

4.5The relationship between e-procurement and service delivery

E-business has radically altered the ways in which national medical stores interact with their suppliers. Continued improvements in Internet technology connectivity provide an opportunity to make procurement for goods and services more transparent and efficient. This reminds researchers that e-procurement is not a single application but consists of many different tools. As organizations seek to enhance market efficiencies six forms of e-procurement applications have been noted. Knudsen cites; e-sourcing, e-tendering, e-informing, e-reverse auctions, e-MRO and web-based enterprise resource planning. In addition, e-collaboration is an important enabler. view e-procurement not only as a strategic player in the value chain but as a major driver in the extended supply chain. Over the last decade e-procurement has emerged as a major component in the Supply Chain Management field. At its most basic level, e-procurement has changed the ways businesses purchase goods. At a strategic level it is anticipated that e-procurement will free purchasing resources from transaction processes to strategic sourcing activities. How the performance of a purchasing department can improve remains uncertain. In many commercial organizations the business case for e-procurement is predicated on being able to deliver a variety of benefits, which include: lower prices, lower transactional costs, better compliance and speedier processing and delivery. However, recent research has questioned whether e-procurement is really an ugly duckling. In one of the first empirical studies, Carr and Pearson confirmed that strategic purchasing has positive effect on company's financial performance. Encouragingly, national medical stores that do long-term planning and consider purchasing to be strategic are also likely to build long-term cooperative relationships with their key. Electronic commerce (e-commerce) tools provide the opportunity to enhance two elements of procurement process: communication and transaction aspects. Surveys have confirmed that e-commerce tools and IT solutions have an influence on procurement-related processes. Companies have reported:

•cost reduction (Croom and Johnston 2003, Davila et al. 2003, Lin and Hsieh2000, Radovilsky and Hegde 2004, Subramaniam and Shaw 2002)

•reduction in purchasing cycle time or order time (Davila et al. 2003, Lin and Hsieh 2000, Radovilsky and Hegde 2004),

•reduction in number of suppliers (Davila et al. 2003),

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•increase in the number of products supplied by main suppliers (Muffatto and Payaro 2004),

•inventory savings (Subramaniam and Shaw 2002)

•reduction of purchasing prices (Davila et al. 2003).Surprisingly very few papers have considered the internal customer. An exception can be found in Croom and Johnston (2003) who noted an increase in internal customer service levels, achieved as a result of cost reduction, process compliance and customer satisfaction. Some companies have created very close links with their suppliers, closer than just long-term cooperation. Companies have taken an interest in improving their suppliers 'performance by exchanging staff, providing the necessary training, tools, technologies and performance evaluation. The key roles in business relations provide two-way communication, cross-functional teams and larger purchasing power. These factors were analyzed by Humphreys et al. (2004) who highlighted that supplier developments associated with buyer-supplier performance improvement. Carr and Pearson (1999),reported links between supplier-buyer relationship and firm's financial performance. According to their research results, national medical stores may achieve competitive advantage from long-term relationships rather than merely short-term.

CHAPTER FIVE:

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a discussion of the findings of the study, conclusions derived, recommendations given and areas of further research based on research findings in chapter four. Research results are discussed according to the objectives of the study in line with the research questions.

5.1 Summary of findings

The general research objective was to establish the impact of e-procurement on service delivery. The response rate was 94% which is viewed as sufficient to conduct the study. The study established that many of the procurement officers lie in the age group of between 25 years and 35 years. The respondents' highest academic level was mainly degree and that majority of the respondents had stayed in procurement process for a short time of less than 5 years.

The period of stay by respondents is too short to gain advantage of experience in discharging their duties in procurement processes. The research objective one was to find out the factors affecting e-procurement on service deliver. The tally from the data collected indicated that the value of e-procurement affects use of e-procurement in national medical stores being that majority of respondents strongly agreed with the statements.

The finding agrees with Lysons and Gillingham (2003) assertion that national medical stores have made considerable gains as a result of having electronic integration system installed. This is because the use of internet and technology based systems in procurement has led to lower costs and efficiency in the process. The study found out that the benefits above normally drive managers of national medical stores to invest in e-procurement thereby realizing cost saving, improved quality, better relationship with supplier thus registering high profitability.

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The research objective two was to the form of e-procurement. The findings confirmed that e-procurement capability is an important determinant of use of e-procurement. This was evident in the strong agreement by majority of respondents. This is in agreement with Kauffman and Kriebel (2008) that the contribution of IT systems depends on other resources, such as people and investments in associated processes. They agreed with these form of e-procurement namely

E-sourcing, E- web based ERP, E-tendering, E-reserve auctioning and E-Informing whereby if national medical stores adopt all these forms of electronic procurement will fasten the level of service delivery in the shortest time possible

The objective three was to determine the relationship between electronic procurement and service delivery. The findings of the study show that procurement contributes to faster delivery of the service to far and near people from different destination hence making the good relationship between the two variable

5.2 Conclusions

The study established that the factors affecting e-procurement implementation in the automobile industry are organizational, managerial, environmental and technical factors. The organizational factors are majorly to do with user involvement and customer interaction. Top management support and knowledge also affect the rate and speed with which users uptake the e-procurement technology. A myriad environmental factors affect e-procurement implementation: legal factors, competition and external support for e- procurement. Technical bottlenecks can retard the speed with which an automobile industry can implement e-procurement. Technical compatibility and expertise of the implementation team are key determinants in the e-procurement implementation.

5.3 Recommendations

The research recommends the following with respect to e-procurement implementation:

The modernization of E-procurement legislative framework. The automobile stakeholders should lobby governments to enact such legislation to ensure adequate insulation in the procurement processes. These laws include those that govern digital signatures, recognition of e-agreements and transactional documentation relating to e-market places. Companies engaged in e-procurement of automobiles should lobby parliament for the enactment of such laws to ensure that the process is well anchored in the laws.

Develop e-suites aimed at standardizing information availability from the suppliers. This will make the supplier selection process more efficient, effective, controllable and predictable. Subject the e-procurement purchasing contracts to a one hundred and eighty degrees shift. This is with a view of ensuring that they are not driven by paper-based thinking and hence ensure workability in web-driven environments and Managers within the automobile industry need to be sensitized on the advantages of e-procurement. This will ensure that they support the drive towards digital purchasing platforms. Companies engaged in automobile e-procurement can also engage in the process of recruiting techno-savvy managers capable of navigating the digital divide and fully optimizing the benefits conferred by electronic procurement.

Develop simplified, consistent, interoperable and secure technology systems to drive the e-procurement functions. Companies should work towards developing uniformity in techno-platforms with respect to transactional systems, e-market search engines and quotation templates.

The paper recommends further research on the impact of other variables such as language barries, experience curves, cultural factors and digital divides on e-procurement implementation. These factors featured in the literature review research and it would be useful if a detailed study is carried out to establish their impact.

Based on the establishment of factors affecting use of e-procurement in national medical stores, the researcher came up with the following recommendations; national medical stores should optimize benefits of e- procurement by increasing the proportion of expenditure on e-

procurement by widening the scope of supplier sourcing thereby justifying use of e-procurement, national medical stores need to increase the e-procurement capability in terms of IT expertise and IT infrastructure injecting regular upgrading of IT system and management of firm to expand the use of e-procurement by incorporating most of e-procurement processes as well as all e-procurement models. The researcher recommends that national medical stores to expand e-procurement models put in use by national medical stores in order to optimize the benefits of e-procurement.

5.4 Suggestion for further research

This study was centered on national medical stores operating in Entebbe in Uganda which is a small district in Uganda. The researcher proposes that similar studies be conducted in other major towns or county headquarters in the entire country to ascertain the factors affecting use of e-procurement as well as stimulate level of investment in e-procurement.

In addition, studies should be conducted to assess the level of use of e-procurement in government institutions to consolidate Public Private Partnerships in Uganda.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE

FOR STAFF MEMBERS OF THE NATIONAL MEDICAL STORES ON THE IMPACT E-PROCUREMENT PRINCIPLES ON SERCVICE DELIVERY

Dear respondent.

The questionnaire below has been designed by a student of procurement Kampala International University for her research on the above topic. The information you are going to give is purely for academic purpose and was treated and regarded as confidential. Therefore, you are kindly requested to give positive responses to the questions asked below so as to assist the researcher accomplish the task. Your cooperation is highly appreciated.

SECTION A: BIODATA

1. What is your gender?

   a) Male ☐   b) Female ☐

2. What age bracket do you belong to?

   a) 21-30 ☐   b) 31-40 ☐   c) 41-50 ☐   d) 51and above ☐

3. State the highest educational level attained.

   a) Diploma ☐   b) Bachelor's degree ☐   c) Master's degree ☐

   d) PHD ☐   e) others (specify)..

4. What post do you hold in the company?

   a) Contract committee member ☐   b) Procurement officer ☐

   c) Evaluation committee member ☐   d) IT officer ☐

e) Others (please specify) ....

5. For how long have you worked in this company?

a) Less than a year ☐   b) 1-5 years ☐

c) 5-10 years ☐   d) above 10 years ☐

SECTION B: E. PROCUREMENT NATIONAL MEDICAL STORES

This section seeks your opinion on e-procurement practices in place. Please tick in the box against which you feel is most appropriate by selecting; *strongly agree (S/A)e, agree (A), not sure(N/S), disagree(D) and strongly disagree (S/D)* by the boxes provided.

	S/A	A	N/S	D	S/D
i. The firm implements e-procurement as a strategy due to increased competitor activity.					
'. E-procurement is still in its early stages of adoption in this company.					
i. The firm continues to rely on mainly traditional procurement systems even through more advanced technologies are available.					
The firm has faced a number of challenges in implementing E-procurement.					
). The firm's procurement staff have the necessary knowledge and experience in information technology systems to handle e-procurement					

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SECTION C: THE SERVICE DELIVERY.

	S/A	A	N/S	D	S/D
.The company develops sets of standards to guide the practice of measuring supply chain service delivery.					
.The organization normally develops good systems for tracking customer requests and makes sure these requests get a timely follow-up.					
.As way of building trust and personal relationship with customers and supplies, mechanisms are put in place to encourage smooth flow and exchange of information.					
.The organization has greatly invested in technology to keep track of its suppliers as a basis for making continuous improvements.					
5.Quality is emphasized as one way of ensuring customer satisfaction in the supply chain.					

SECTION D: THE FORMS OF E-PROCUREMENT

	S/A	A	N/S	D	S/D
rdering;					
ɔ-based ERP;					
ɔurcing;					
ɛndering					
ıforming.					
ɛverse auctioning;					

APPENDIX 2: INTERVIEW GUIDE

What is the meaning of e-procurement?

What are the forms of e-procurement?

Do you believe that there are factors influencing e-procurement?

What factors do you believe affect the e-procurement?

What is the relationship between e-procurement and service delivery

APPENDIX 3: WORK PLAN

Activity	DURATION					
	Jan	Feb	March	April	May	June
Proposal Writing	███	███				
Data collection			███	███		
Data analysis					███	███

APPENDIX 4: BUDGET

The research was self-sponsored and the cost is as follows

ITEM	AMOUNT
Transport	40,000
Data analysis	40,000
Research helpers	40,000
Stationary	35,000
Welfare	50,000
Proposal and final write up	50,000
Dissertation	50,000
Other costs	50,000
TOTAL	**355, 0000**

COLLEGE OF ECONOMICS AND MANAGEMENT
DEPARTMENT OF HUMAN RESOURCES AND SUPPLY MANAGEMENT

June, 10th, 2014

Dear Sir/Madam,

**RE: INTRODUCTORY LETTER FOR MUKOYA PRISCA.
REG NO. BSP/34871/113/DU**

This is to introduce to you the above named student, who is a bonafide student of Kampala International University pursuing a Bachelor's Degree in Supplies & Procurement Management Third year Second semester.

The purpose of this letter is to request you to avail her with all the necessary assistance regarding her research.

**Topic: - THE IMPACT OF E-PROCUREMENT PRINCIPLES IN SERVICE DELIVERY.
CASE STUDY: NATIONAL MEDICAL STORES ENTEBBE.**

Any information shared with her from your organization shall be treated with utmost confidentiality.

We shall be grateful for your positive response.

Yours truly,
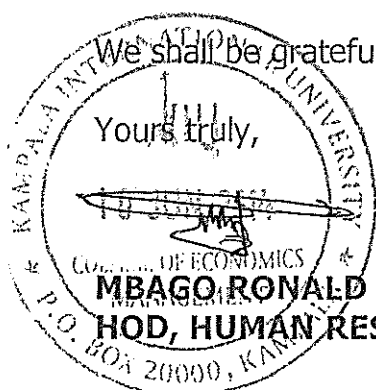
**MBAGO RONALD
HOD, HUMAN RESOURCES & SUPPLY MGT.**