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FACULTY OF COMMERCE

DEPARTMENT OF RETAIL AND LOGISTICS MANAGEMENT

EXAMINING SUPPLY CHAIN MANAGEMENT PRACTICES AT KAROI DISTRICT HOSPITAL

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SUBMITTED TO THE RETAIL AND LOGISTICS MANAGEMENT DEPARTMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE BACHELOR OF COMMERCE HONORS DEGREE IN RETAIL AND LOGISTICS MANAGEMENT

NOVEMBER 2017

GWERU, ZIMBABWE

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DEGREE PROGRAM	BACHELOR OF COMMERCE HONORS DEGREE IN RETAIL AND LOGISTICS MANAGEMENT
YEAR GRANTED	2017

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The undersigned certify that they have supervised the student, R141838J's dissertation entitled: "examining supply chain management practices at Karoi District Hospital" submitted in partial fulfillment of the requirements of the Bachelor of Commerce Honors Degree in Retail and Logistics Management at Midlands State University.

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Dedications

This research study is a dedication to my family especially my mother Ms S Kapotwe and Ropafadzo, my niece for their encouragement, support and being my pillars of strength throughout the course of this study.

Acknowledgements

First of all I would like to thank the Almighty God for his eternal grace, wisdom and giving me understanding and strength to write this research study.

I would like to extend my heartfelt gratitude to my supervisor Mr S Mlambo for his guidance and devoting his time to support this study.

I would like to thank also, Nyasha Mayavo for being a dear friend and helper who was there for me always and all my colleagues who were a crucial referral panel and my MSU family since day one.

Finally I would like to thank the District Health Executive and the employees at Karoi District Hospital I greatly appreciate their expertise and support.

Abstract

Supply chain management is a crucial aspect in the operations of an organisation. Supply chain management is a multidimensional study that can yield a number of results to an organisation. The research study examined the supply chain management practices at Karoi District Hospital. In this study supply chain management (SCM) practices were being examined to see their effects on the overall performance of the hospital. It was conceptualized that SCM practices positively affects organizational performance. This was guided by these objectives: to determine the influence of strategic supplier partnership on organizational performance, to assess the influence of information sharing in supply chain, to determine the impact of improved record management in the supply chain on the performance of the organisation and to examine the contribution of supply chain (internal) lean practices on organizational performance. This was a census survey and a descriptive research design was used. Data was collected by administering 48 questionnaires to different categories of employees at KDH. Mean and Cumulative Frequencies were used to analyze the data. Tables, graphs and charts were used to present research findings. Study findings showed that there is a positive linear relationship that exists between supply chain management practices and organizational performance. The study recommends internal and external collaborations to ensure long term relations, simple and detailed records to be kept and training of the procurement and logistics staff to ensure easy transition to new technology.

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Acronyms

CPU- Central Procurement Unit

DHE- District Health Executive

KDH- Karoi District Hospital

MCAZ- Medical Authority of Zimbabwe

SPB- State Procurement Board

SCM- Supply Chain Management

SCMP- Supply Chain Management Practices

Chapter 1: General introduction

1.0 introduction

Nowadays organizations no longer compete with each other with the quality of products or services that each organisation is offering. They have stopped competing with own capability and now use the whole supply chain to do so (Karimi and Rafiee, 2014). This study is aimed at looking at the adoption of supply chain practices and how there can be beneficial to Karoi District Hospital. SCM practices can influence the overall performance of the hospital.

1.1 Background of the study

Supply chain management (SCM) has surfaced into view as a widely used phenomenon for improving performance in the business sector in recent years. Supply chain is a process that is in charge of the organizations planning, sourcing, making and delivering of products and services. The planning stage is responsible for demand forecasting, stock management and the pricing of the services. Sourcing involves purchasing, suppliers and practices used. Delivering looks at order management, delivery schedules and transport management (Spina, 2014). Supply chain management is the planning and controlling all of the business processes that link together partners in supply chain in order to serve the needs of the end consumer (Mahulo, 2015). SCM is more than just an integrator of processes, it embraces long term strategic partnerships with suppliers and buyers, information sharing, inventory control and joint planning (Mustefa, 2014). The ultimate goal for supply chains is satisfying the needs of customers.

Organizations all over the world have noticed the importance of involving suppliers and their customers into its operations so as to achieve a competitive advantage (Mahulo, 2015). Stiff competition exists amongst organizations these days that they no longer base on their own unique abilities but have to use the whole system of SCM to fight off the competition. Moslem *et al.(*2013) stated that understanding and implementing supply chain management is of high importance for a business to remain competitive and improving its profitability. Implementation of supply chain practices can increase the level of organizational performance in terms of the medical services offered to the public.

The supply chain of a public sector compromises government or state owned/ controlled institutions. Procurement in the public sector includes public supply chains and numerous network levels in operations which can be centralized at provinces, districts or local authority (Kingoo, 2013). The difference between the procurement levels in this sector is the focus on the value, volume and the amount of annual goods and services procured. The public sector has supply chains focusing on different areas which differ from sector to sector. However all these sectors are standardized and regulated by one body. In Zimbabwe all public sector procurement are regulated by the State Procurement Board (SPB).

Karoi District Hospital (KDH) is a government owned (public) medical institution which is responsible for 33 clinics in the Hurungwe District in Zimbabwe. Administrative decision making for all the medical policies and strategic operations of the whole district is centralized at KDH as the clinics get their supplies through the hospital. The performance of the district hospital is seen in all the clinics under its care as critical patients are transferred from the clinics to KDH. There are also transfers of patients from KDH to Chinhoyi Provincial Hospital or national hospitals i.e. Parirenyatwa Hospital and Harare Central Hospital. Drugs surgicals and other necessities that are required at the hospital are bought in Harare thus the need for proper supply chain management. SCM creates value for the organisation by creating a competitive advantage. This aspect of the business is not being fully utilized and improvements are needed for the betterment of KDH's performance be it operational or organizational.

Since KDH is a public medical institution, it gets funding from the Health Services Fund (HSF), the Government of Zimbabwe (GOZ) Fund and sometimes donor funds. These funds are provided to KDH as subsidies from the government. The GOZ Fund comes from the treasury. Donors also fund the hospital by providing drugs, surgical items and equipment. The current economic situations in Zimbabwe have caused fewer funds to be allocated to the public health institutions. This has increased pressure on the supply chain to perform extremely well so that the hospitals can operate effectively and efficiently.

The quality of services being offered at KDH is decreasing. It was reported that the hospital has been having difficulties in managing and providing constant and quality services to the public and the prescribed drugs will be unavailable most of the time (Karoi District Hospital, 2015). The use of SCMP will help the organisation to improve on its performance. SCM practices are defined as the strategies that are undertaken in the supply chain of an organisation. This problem was emerging as there was lack of proper SCM practices being implemented. Bowersox, Closs and Cooper, (2010) suggested that ignoring the importance of SCM practices affects the organisation negatively.

There were conflicts of interest between medical departments like x-ray, laboratory and rehabilitation which should be working together. This caused inefficiencies. Although the hospital was trying to mitigate this problem by taking a representative of each department for the Central Procurement Unit committee (CPU) meetings as per the circular from the State Procurement Board (SPB), tension still existed between the departments. The SPB is a government board that is in charge with coming up with policies and enforcing procurement regularities in the public procurement sector. The circular suggested taking a representative from each department for the CPU meetings. The committees were to decide and agree on what was to be purchased and decide on the procurement plan for the year. This was there to ensure that a consensus was achieved on the plans before they were passed for approval. But there was still little improvement as to the level of problem solving as anticipated as there was still a shortage of vital instruments that were needed for there to be efficient provision of services. Departments like x-ray, laboratory and rehabilitation still had conflicts over the available resources. Strategic alliances with the suppliers need to be implemented for better performance to exist. Organizations need to review and deliberate on current SCMP so as to ensure smoother operations (Nidelea and Alpopi, 2014)

Sometimes the unavailability of basic items like gloves for the staff to use was becoming a huge problem. As from 2015 there were a lot of recorded cases where the medical staff i.e. nurses, nurse aids and general aids were unable to attend to patients or had them buy their own gloves as the hospital pharmacy ran out of stock (Procurement unit committee 2016). Latex gloves are crucial items that need to be available always so that proper medical examinations are done and at the same time protecting the person doing the examination. This has been so just because the stock levels of

the gloves have gone way beyond the buffer stock up until the point when it was late and the procurement team was unable to come up with a plan to replenish the stock in a short time, but if strategic alliance was being applied the situation will be different.

Late purchase of items needed for cleaning accelerates the problem of poor performance as the hygiene levels of the hospital were affected. For instance items like gumboots and heavy duty gloves are very crucial and are needed for cleaning, when their purchase was delayed departments like the mortuary, the outpatients' bay and the toilets were extremely dirty that it gave a negative picture about the operations of the organisation. These sub-standard hygiene levels negatively impacted the picture of the overall performance of the hospital and the quality of the services being offered to a great extent.

1.2 Statement of the problem

Public institutions face a number of challenges related to procurement and providing supplies needed for services to be offered. Public procurement needs to be applied together with efficient and effective SCM practices so that public services offered will be of significant value as it will be of higher quality (Kenyachui, 2014). KDH was not performing to its potential capacity. This was reflected on the current services that it was offering to the community. This problem can be mitigated by introducing and employing effective SCM practices such as strategic supplier partnership, quality and level of information sharing and supply chain record management. Supply chains for the hospital needed improvement as the hospital had been ineffective sometimes to a point where drugs, surgicals and ambulance services were unavailable to the society. Kingoo (2013) said that no matter the efforts and interests invested into public institutions, more work on the implementation of supply chain practices still need to be done compared to the private sector. There is a consensus (Kingoo, 2013) that management of public institutions give rise to many research questions that are always left unanswered hence this research is established to examine SCMP on performance of the public medical organisation specifically emphasizing on Karoi District Hospital (KDH).

1.3 Research objectives

- to determine the influence of strategic supplier partnership on organizational performance
- to assess the influence of information sharing in supply chain
- to determine the impact of improved record management in the supply chain on the performance of the organisation
- to examine the contribution of supply chain (internal) lean practices on organizational performance

1.4 Significance of the study

The motivation of the study came from the fact that the researcher did a year of internship at KDH and realized that there is need for such a study. KDH is the district hospital in Hurungwe which is the biggest district in Mashonaland west province with a population of 329 197 in 2012 (Zimbabwe National Statistics Agency, 2012). There was need for the hospital to perform very well in order to meet the needs of its demanding population. The implementation of SCM practices aids the overall performance of the hospital. The level of performance was measured by the number of patients treated and the ability to provide required drugs and surgicals without running out of stock in any of the wards and treatment rooms. The hospital had been performing negatively in a number of ways that range from drug shortages to lack of variety in the types of food offered. Effective supply chain enhanced KDH's organizational performance. The findings of the study were helpful to all those who needed an insight and understanding into how SCM practices gives rise to organizational performance. To academics this was my personal contribution to the study of SCM practices and organizational performance. To scholars this research is there to shed light to the ill researched areas of the topic that do need further researching.

Chapter 2: Literature Review

2.0 Introduction

This section of the research will be looking at the crucial concepts, theoretical frameworks and

empirical review related to the topic. It includes definitions of information relevant to the understanding of terms like supply chain management, SCM practices, operational and organizational performance. This will be achieved by mainly focusing on areas covered by previous researchers as well as present reviews on the relevant issues in this study.

2.1 Theoretical framework

The theoretical framework looks at the adoption of theories and concepts from distinguished authors that are related to the study of implementation of SCM practices and how it connects to organizational performance. The Resource Based View and Relational Based View theories were used. These theories try to explain how the concept of SCM practices influence the performance of an organisation.

2.1.1 Resource based view theory

Resourced based view (RBV) is a theoretical framework that aims at explaining the connection that exists between supply chain management practices and performance. According to Rothaermel (2012) the resource-based view (RBV) is a model that sees resources as key to superior firm performance. If a resource exhibits VRIO (value, rarity, immutability and organisation) attributes, the resource enables the firm to gain and sustain competitive advantage. Below are the VRIO attributes

- Valuable: the resource must be of a strategic value to the organisation. In this case the SCM practices must create or add value to KDH
- rarity: this is the uniqueness of a resource, it has to be unique and rare
- immutability: the resource has to be inimitable, it must not be easy to imitate
- Organisation: this is how the organisation can benefit from the resource. Non substitutability has to be considered as the resource should not be easy to be substituted by the competition

The original research into RBV was done by Dyer and Singh (1998). In their paper they said the main contribution was that the RBV outlined links and networks of firms as key units of analysis for explaining superior individual performance.

Applying this theory in the real world, RBV is applied to show the relation between SCM practices and organizational performance. This link is there as SCM practices directly impacts the competitive

advantage of the organisation which in turn promotes the overall organizational performance. The application of the SCM practices then becomes the organization's resources which contributes to SCM excellence in (Mollel, 2015). The SCM practices are the internal resources that are used to create value for the organisation (Spina, 2014). The assumption of this theory postulates that the hospital will be able to serve more patients in a short space of time and have an order fill rate that is desirable, as it will now have resources offering value to its operations in the midst. The RBV can provide the organisation with superior performance in its operations.

The application of the RBV theory in this study entails that supply chain management practices will reinforce the overall performance position for the hospital. Public medical institutions can benefit if resources (SCM practices) and capabilities are developed for the purpose of improving the SCM process and overall organizational performance. However if these resources are not properly conditioned the hospital will not benefit from this.

2.1.2 Relational based view theory

The relationship between supply chain practices and organizational performance can also be explained using the relational view (RV). It is an extension of the RBV. The RV considers relationship as the core potential source of superior performance. Mustefa (2014) identified four sources of supernormal profits ie investments in relation specific assets, substantial knowledge exchange, complementary and rare resources and lowers transaction costs. The success of all these factors need to be aligned with effective governance mechanism based on informal safeguards such as trust and reputation (Dyer and Singh, 1998). Information sharing and the quality of information enable accurate and timeless knowledge exchange. Strategic supplier partnership/ alliance and supply chain lean practices can help in reducing the transaction costs as there is creation of relationships, trust and reputations (Mustefa, 2014). RV can help develop knowledge exchange and also promote lean practices which in turn will help the organisation reduce operating costs as waste is kept at a minimum thus enhancing the performance of the organisation by giving the firm a competitive advantage.

Both the RBV and RV resources and capabilities should have the VRIO effects in order to provide sustainable competitive advantage that will in turn promote the performance of the organisation. The

differences in operational performance between firms are explained by the combination of each resource in the supply chain (Spina, 2014).

The relational view is applied to the study as it considers the existence of relationship in the supply chain as a core fact that contributes to excellent organizational performance. SCM practices such as strategic supplier alliance, information sharing and the level of information sharing are there to build long term relationships which promote the performance of the organisation.

2.2 Supply Chain Management

A supply chain is a key component in thinking of a definitive cost and how medicines can be accessible. When the supply chain of a medical institution is very functional this enables the institution to offer affordable, high quality services and products and also reliable services. More so a well laid and highly functional supply chain can offer the organisation a sound financial integrity. Public medical institutions are having difficulties in their daily operations and are operating below their optimum capacity in terms of the availability of drugs and services being offered (Mungu, 2013). There is need to maximize the rewards that the supply chain can offer to help generate more disposable funds for the institutions.

A supply chain is a group of independent organizations linked together by products and services that are separate or joint together to add value to the to the products or services delivered to the final consumer (Lu, 2011). There are 3 essential procedures in the SC: plan, source and delivery. Plan is concerned with the processes that look at the demand and supply and ways to deliver (Mahulo, 2015). Source is the processes that transform the product or service into a finished product. Deliver is when the final product or services is made available to the customer i.e. delivered.

Public supply chains corroborate with the health system as a whole and are crucial so that there is dependable accessibility of top notch diagnostic and treatment products which will be affordable and accessible to everyone that is in the catchment area of the health institution. Mungu (2013) said that supply chains are in charge of carrying information about demand and supply of medical products to the policymakers and planners. More so supply chains are in charge of handling the flow of finances to ensure that resources are adequate in the system. The ineffectiveness of a supply chain

can undermine the positive health outcomes and can weaken the health system at large (Mungu, 2013).

A number of authors have defined supply chain management. Larson and Rogers (2015) defined SCM as the effort involved in producing and delivering a final product from the supplier's supplier to the customer's customer. Lu (2011) defined it as essentially and ultimately the business management, whatever it may be in its particular setting which is perceived and enacted from the relevant supply chain perspective. SCM is a business practice in which improving the way an organisation operates is the main aim, it is concerned with how the business source for raw materials and how the final product is delivered to the end user (Mungu, 2013). It is then safe to say supply chain management is the overseeing of the business internally and including external organizations in the decision making to ensure that business objectives are met. SCM has a number of practices such as lean practices, record management and strategic supplier alliance. These practices when used together will aid the organization in how it sources products, deliver services and also the availability of drugs needed at the hospital.

Many organizations nowadays in this highly globalized and technical world are adopting ways and strategies to effectively manage their supply chains so as to achieve competitive prices from suppliers and be able to minimize operation cost (Ab Rahman, et al. (2008) ; Mollel, 2015). This implies proper usage of SCM practices will promote organizational performance through competitive advantage (Mollel, 2015). KDH as a public medical institution operating in an environment that expects it to adjust to the regularly changing conditions so that sufficient medical services are offered, it needs to apply and implement SCM practices with the goal that it can have the capacity to offer relevant, quality and satisfying services to the general public.

Shukla, Garg and Agarwal (2011) said that SCM is a process of managing material, money, information and personnel across the supply chain as to expand the rate of customer satisfaction and gain competitive advantage as well. SCM practices are the strategies and tactics applied in the SCM of an organisation to guarantee extended outcomes can be yielded from the process. The SCM in context of KDH it is responsible for coordinating procurement, transportation, storage and distribution of drugs, surgicals, medical equipment, cleaning materials and stationery for the hospital and clinics under its care.

According to Chen and Paulraj (2004) in Spina (2014) the performance of an organisation is not influenced by a single item in the supply chain yet by every one of the members involved in the chain. According to Kingoo (2013) there is no universally established strategy used for measuring the value created in a supply chain since performance cannot be measured by means of one key performance indicator from a single side of the business. However different and many sides have to be used. Thus the tendency of many firms nowadays that competition ought not remain concentrated in firms but rather need to incorporate the whole supply chain. The supply chains will now be competing with each other and the SCM practices will offer diverse assets that will make each chain unique in its own way (Mwale, 2014). The above points are there to demonstrate that the performance of the hospital cannot be measured by using one aspect alone for example by expecting the procurement department alone to be effective. There is need to combine the operations of the procurement, transport, accounting and stores departments that the overall performance of the hospital increases.

The researcher conceptualized the definition of SCM as the strategic and tactical coordination of the business operations into a network chain and the supervision of movement of the materials, funds, inventories and information. These factors will be moving in a monitored process from the organisation to the suppliers and back. In case of KDH the supply chain extend to the distribution of the material such as drugs, surgicals and medical equipment to the clinics. More so the movement of patients to and from the clinics to bigger hospital is also in the mix

2.2.1 Public health care supply chains

Supply chain management in public health institutions can be said to be the coordination of information, funds and provisions acquired from the suppliers and their movement from the place of origin to the end user to improve clinical outcomes at the same time controlling costs (Tan and Yap, 2012). This shows that public sector supply chain like any other chain incorporates integration of processes. In medical institutions the integrated processes see to the movement of drugs, surgicals (pharmaceuticals), and medical equipment and health aid kits. Processes involved with the flow of patients movements are included in the supply chains (Tan and Yap, 2012). Supply chains in the public medical institutions are similar are characterized by various modes of

integration. There is integration and coordination of processes, information flows, planning processes, transfer of funds, intra and inter-organizational communications and market development processes (Karimi and Rafiee, 2014).

In this study, supply chain management is a concept built on the belief that intensive coordination and integration between operational processes might improve the performance of public health care supply chains through the use of SCM practices.

Procurement in the public sector is sometimes centralized at the provincial, district or at local authority levels. This is so as public sector supply chain have multi-layered network designs and bureaucratic decision making processes (Kingoo, 2013). The buying decisions of the hospital are regulated by the SPB. The hospital is only authorized to procure items with a maximum amount of $10 000, purchase of equipment that goes up to $15 000 the Provincial Medical Board have to be notified and approves first. Anything above $20 000 the Board needs to regulate the purchase. The policies governing public procurement were introduced to ensure fairness and competition among suppliers of goods and services thereby restoring confidence in the public procurement of Zimbabwe (SPB, 2012). This also enables the government to obtain the best value for its money.

Incorporating supply chain practices in the public sector plays an important role in optimizing logistics support and improving the management of inventory (Kingoo, 2013). Customer needs are satisfied by either directly or indirectly involving different parties in the public supply chain, for example accountants, policy makers and private organizations that supply the institutions with supplies. Integrating these parties in public supply chains increases the efficiency of the system.

Public health sectors have a number of various stakeholders hence the need for adopting supply chain practices that accommodate these stakeholders. In this sector, supply chain management practices that are ideal are those that allow the existence of relations and accommodate these stakeholders. Practices that build relationships, organize interface processes and enable the allocation of responsibilities and authorities need to be implemented (Tan and Yap, 2012).

2.3 Supply Chain Management Practices

Annan and Otchere (2013) defined supply chain practices as an arrangement of activities undertaken in an organisation to promote effective management of its supply chain. Supply chain practices are the strategies and processes employed in the supply chain to achieve effective and efficient SCM. Daveshwas and Rathee (2008) in Mungu (2013) said that the main push for SCM is the elimination and reduction of wasteful aspects, unnecessary costs and the inventory being hold. This is achieved by employing several SCM practices so that the organization will perform well.

Omain et al (2010) in Mollel (2015) argued that the implementation of SCM strategies vary depending with the organisation being referred to and country. This means each organisation applies different practices as there are different resources, managerial styles and also different visions. KDH as a public medical institution it implements SCM practices that align with the regulations of the SPB, its bureaucratic leadership styles whilst aiming to provide affordable and efficient medical services.

However there are several studies that argue the fact that SCM practices vary but suggest that there exist similarities in the practices. For example Mwale 2014 (Kenya), Karimi and Rafiee 2014(Iran), Mollel 2015(Tanzania), Mohammed Mustefa 2014(Ethopia). These studies have similarities in the practices used in their respective countries. The similar strategies are strategic supplier relationship, customer relationship, lean practices, information sharing and out sourcing. Every one of these researchers showed positive results that do agree with the certain practices that they used in their respective countries. Regardless of differences in culture, economic factors, management styles, type of industries in the different countries and continents, geographical background and philosophies, SCM practices influences overall organizational performance. This therefore shows that there exist similarities between countries when it comes to SCM practices compared to the differences that were earlier suggested. Below are some of the SCM practices dimensions used by other researchers.

Supply chain practice is a concept that has a multi dimensional construct. This study will only be concentrating on 4 and these dimensions are strategic supplier partnership/ alliance, information sharing, quality of information sharing, supply chain record management and SC lean practice.

2.3.1 Strategic supplier partnership

A number of organizations are now limiting and cutting down on their supply base (the part of the supplier network that is active) so that they can concentrate on strategic suppliers (Karimi and Rafiee, 2014). According to Salazar (2012) the Global Supply Chain Forum (GSCF), a group of non-competing firms and a team of academic researchers, defined strategic supplier alliance management as the SCM process that provides the structure for how relationships with suppliers are developed and maintained. Strategic supplier partnership is a long term relationship that an organisation has with its suppliers. This relationship offers strategic and operational capabilities as separate operations are combined to offer an advantage. Mungu, (2013) said that procuring organizations have seen the emergent importance of being cooperative and having mutually beneficial relationships with suppliers and to view suppliers as virtual extensions of their firm. The concept of strategic relationships with suppliers entails that the organisation should take its strategic key suppliers who are 'partners' in a sense that there exists an alliance that is mutually beneficial to both parties. Strategic supplier partnership will enhance long term based benefits to be achieved by the organisation.

Strategic supplier partnership means that KDH will have long term strategic agreements with its suppliers. These agreements entails that the organisation and its suppliers will become partners in supply chain proceedings. Partners in an alliance are usually willing to share risk and rewards as they are able to keep the relationship for a long time (Lascelles and Dale 1989; Mustefa 2014). This will influence the strategic and operational capabilities of each individual participating organization in gaining noteworthy benefits (Mustefa, 2014).

This means that KDH will have alliances with its suppliers so that they will share ideas and come with solutions to situations which will in turn benefit both parties. For example this alliance will enable the hospital to get items needed on credit from its strategic suppliers and the suppliers will have a loyal business partners who will always come to them. This will affect the performance of KDH positively as its inventory will be replenished on time always whether the funds necessary are there or not. Kenyanchui and Margaret (2014) said that this SCM practice makes the organisation cost effective as it will be focusing on a few key suppliers. In addition the hospital will be able to

save and reduce costs by concentrating on a few suppliers thus enhancing its operational performance.

2.3.2 Information sharing in the supply chain

Information sharing is an essential aspect for the survival of the organisation, it enables supply chain integration. Information sharing allows supply chain flows to be responsive (Tan and Yap, 2012) as there will be adequate, reliable, timely and relevant information flowing within it. Information sharing is made up of 2 elements ie quality and level of information sharing. Karimi and Rafiee (2014) said that both these factors are crucial for successful supply chain operations and there is need for individual implementation yet applying them together. Studies by Mollel (2015) Mahulo (2015) and Spina (2014) have all agreed on the assertion that information sharing is a dual dimensional aspect.

Lofti *et al.* (2013) said that the real importance of sharing information within a supply chain can be seen clearly as the benefits obtained are more than the costs involved. The costs are information systems investment and charges by customers or suppliers for providing the information. The information shared can differ. It can either be tactical or strategic or just mere information affecting the logistical operations of the firms. This will promote transparency between suppliers and the organisation enabling a stronger relationship to be built. Information sharing between organizations can be a strategic asset that when utilized carefully can benefit the organizations. The information shared should be accurate to ensure that the most effective SCM solution is obtained (Mungu, 2013)

Information sharing enables KDH to access confidential data from its strategic business partners making it possible for the hospital to check for developments on the orders and products moving through the supply chain. Kingoo (2013) said overall performance of the organisation will be enhanced as it will be able to plan, manage inventory and make contingency plans whenever there are delays in the supply chain. More so supply chain risk management is enabled by making room for counter measures to be thought of before the consequences get out of hand and hard to manage (Mwale, 2014). Stiff competition has made numerous organizations opt for information sharing as it offers competitive advantage hence a positive effect on the overall performance of the organisation (Mwale, 2014).

2.3.2.1 Level of information sharing

The level i.e. the quantity of information sharing is the degree to which basic and critical information is communicated between trade partners (Mwale, 2014). Level of information sharing enables accountability and competence. If an organisation take information available to it and share with its partners in the supply chain, this information will be a strategic asset (Mungu, 2013). Sharing information is a crucial aspect in creating a strong supply chain relationship with trade partners. According to Karimi and Rafiee (2014) trade partners who share information usually functions as one entity. This collaboration enables organizations to better understand the needs of their clients better and be able to react promptly to market changes. Mustefa (2014) considers the effective utilization of timely and reliable information by all functional elements in the supply chain as a phenomenal distinguishing factor and a strategic asset. Information is a critical element in integrating the various functions of the supply chain and the level (quality) of the informational actually shared determines intensity of results to be achieved.

2.3.2.2 Quality of information sharing

It incorporates perspectives such as credibility, timeliness, accuracy and adequacy of the information shared (Karimi and Rafiee, 2014). Although information sharing is crucial, the importance of its effects on SCM relies upon what, when, how and to whom the information is shared (Lofti *et al.* 2013) . Information that is inaccurate, delayed and inadequate is of no help to the supply chain management. Opportunistic behavior and informational irregularities between trade partners lead to poor quality information being shared in the supply chain. In some cases trade partners will purposely twist/ distort information that can possibly reach their rivals as well as their own customers and suppliers just to have a competitive advantage (Lofti *et al.* 2013). This is so as many organizations regard sharing information will dilute their power and reduces the impact of their strategic asset (Mollel 2015). With these inclinations in mind guaranteeing the quality of information being shared turns into an important part of a viable SCM (Karimi and Rafiee, 2014). There need for organizations to ensure that information is flowing in the supply chain with the least amount of delays and distortion.

2.3.3 Internal lean practices

Mwale (2014) defined supply chain lean practices as the process of eliminating time and resource wastages in business operations. Internal lean practices refers to the system of using less resources to achieve high value services for consumers (Mollel, 2015). Lean practices can be a beneficial asset which enables the organisation to maximize its return on investment as there is elimination of waste and returns achieved are in greater margins. For public medical institutions lean practices will mean increased customer service level and effective utilization of resources. Supply chain lean practices will further on encourage economies of scales to be gained as frequent small ordering costs are replaced by bulk buying (Mwale 2014). With the growing concern for using plastic money in Zimbabwe these days several small bank charges can be reduced and aim at making transactions when they are of large sums. Postponement of orders and other projects can be added to the lean practices.

Internal lean practices signify the removal of unnecessary costs that do not add value to the final products or services in the supply chains (Mustefa, 2014). For this study lean practice entails reducing costs from lead times, continuous improvement, supply chain postponement and just-in-time. Kenyanchui and Margaret (2014) said there is need to minimize the amount of stock, small lot sizes and eliminate the majority of waste in the SCs so as to maximum returns achieved by lowering costs incurred. For example the hospital minimizing on the amount of drugs, surgicals and food provisions it keeps in its warehouses and storerooms. This can lead to funds being allocated where there is urgent need and not have those (funds) tied up in stocks that are just lying idle.

2.3.4 Supply Chain Record Management

Supply chain record management entails proper documentation of inventory, purchase orders and log books of patients. Proper documentation of files is crucial in a supply chain (Tan and Yap, 2012). This will help the organisation in planning and forecasting demand hence enabling the organisation to perform well as it can now reference past performance and records to make current decisions that are more beneficial to the organisation (Kingoo, 2013). Inventory management is effectively achieved through proper record management (Spina, 2014). Stock outs and overstocking will be eliminated when there exist proper records of what is available on the ground (Mungu, 2013). Problems emanating from late procurement will be reduced and buffer stock zone clearly

maintained. Effective supply chain record management will ensure that the organisation is in sync as the administration and the shop floor workers will be fully aware of the actual daily proceedings. Technology can be used to reinforce record management and also monitor the records (Zygiaris, 2014). For instance the Systems Applications and Products (SAP) which is a data management program, it shrinks costs and increase profits as there is automated record keeping. The procurement department as a custodian of all the supplier related documents ie contracts, leases and purchase orders need to be very careful and effective in storing these records. Supply chain record management need to be effectively and efficiently done all the time so as to maximize the results it can bring to the hospital (Kingoo, 2013).

2.4 Organizational Performance

Organizational performance refers to how well an organization achieves its market-oriented goals as well as its financial goals (Karimi and Rafiee, 2014). Measuring organizational performance is a very difficult process (Dess and Robinson 1984; Venkatraman and Ramanujam, 1986; Mollel, 2015) as there is a number of definitions agreed on over the years and how to measure it also vary (Perry, 2012). A numbers of studies have tried to measure organizational performance and many are pointing at different SCM practices to use. One thing many of these studies have in common is the use of financial and market indicators as the major measures for organizational performance (Mollel, 2015).

The supply chain may aim at increasing productivity, reduce stock and its holding cost in the short run but over time it will aim at making the organisation stand up among others over time. The supply chain will eventually lead to enhanced organizational performance both financially and market criterion (Spina, 2014). Karimi and Rafiee (2014) went on to say several prior studies have measured organizational performance through financial and market criteria which are ROI, market share, number of customers served and overall competitive position.

Organizational performance of the hospital is measured by looking its overall performance (how well it achieves its goals) and operational performance (how precise it is in managing its operations). Operational performance is the positioning of all business units in an organisation to make sure that they are functioning well together so that the business goals are met (Spina, 2014). According to Mustefa (2014) efficient operational performance entails an organisation is able to supply superior

services at a low cost. For this study operational performance encompasses tangible elements like costs and intangibles like time factors. Kenyachui (2014) said by improving the position of these elements in the supply chain, an organisation will be able to react promptly to customer needs.

2.5 Supply Chain Management Practices and Organizational Performance

Several empirical studies have looked at the effects of SCM practices and organizational performance, studies by Karimi and Rafiee (2014), Mahulo (2015), Kingoo (2013), Mustefa (2014) and Kenyachui (2014) all looked at the relationship that does exist between these 2 factors. A major fact to notice is that these researchers agreed on the fact that there is a positive relationship between SCM practices and organizational performance. They all agreed on the fact that the more an organisation is focused on implementing SCM practices the higher will be its organizational performance.

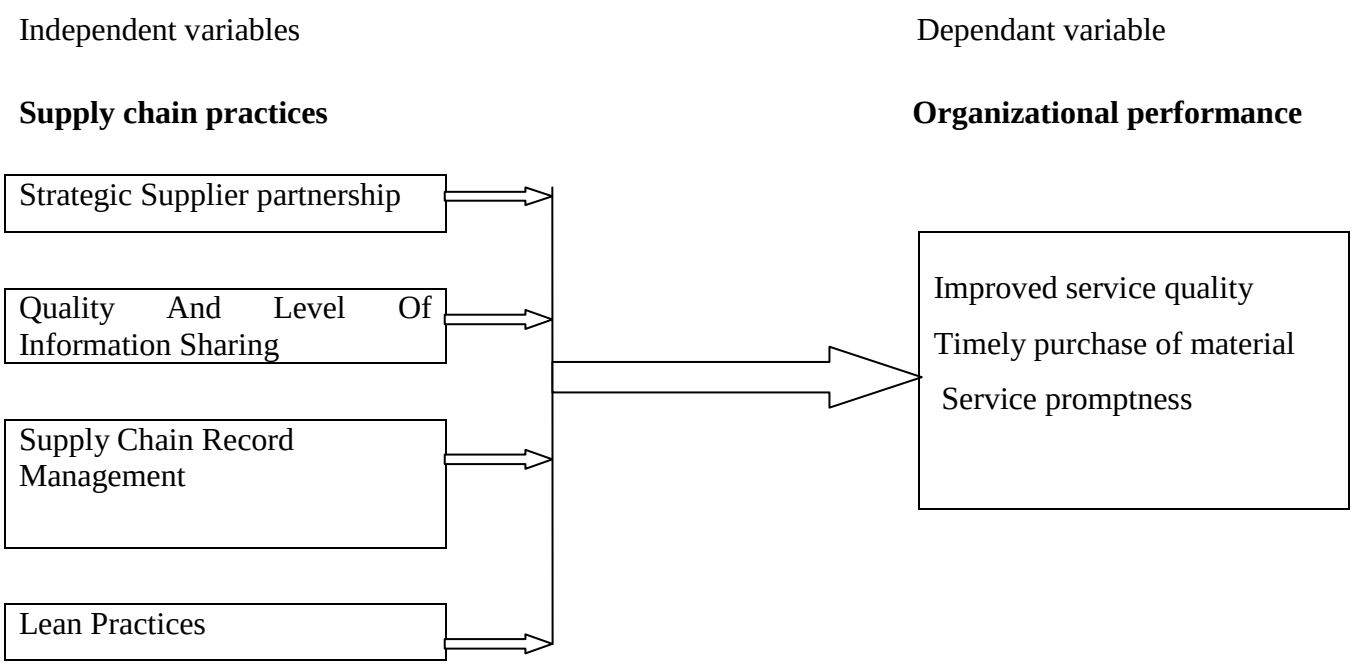
The study aimed to assess organizational performance that applies and is relevant to a public medical institution. According to the WHO World Report (2000);Council of Medical Specialty Societies (2014) performance for public medical institutions is defined according to the achievement of specific targets either clinical or administrative. The organizational performance of the hospital is considered by looking at quality of the overall health services provided, service promptness, cost, safety, reduced process time, diagnosis effectiveness and efficiency and treatment, internal customer satisfaction, patient relationship management, patient satisfaction, speed of recovery and being able to provide efficient services (Tan and Yap, 2012). These measures are then streamlined to the key performance outcome measures such as customer satisfaction, reliability, sustainability, responsiveness, assets, safety, revenue and cost (Acharyulu and Shekhar (2012); Tan and Yap (2012). It is very crucial to identify and be knowledgeable of all the potential areas in the supply chain that can yield more rewards to the public medical institution so that they can be maximized fully.

Supply chain management practices can create value for customers by effectively managing data, reducing medical errors and enable speedy processing of patients care through improvements and efficiency in the supply chain (Tan and Yap, 2012). These improvements entails that the organizational performance of the hospital will be positively affected.

2.6 Conceptual Frame Work

This is the idea that the researcher came up with on how to answer and explore the research problems. It was founded from the theoretical framework. The RBV and RV suggest that an organisation must have resources that portray the VRIO effect. These resources are the SCM practices which are the independent variables. These independent variables when implemented effectively and efficiently will affect how the dependant variable in this case the organizational performance will react.

Fig 2.1 conceptual framework



Source: Author

The framework developed in this study shows that SCM practices have direct impact on the overall organizational performance. Muhammad, Ali and Shazad (2013) said that the practices of SCM aim and are there to increase the market share of an organisation and the return on investment. The practices will affect organizational performance indirectly as they will help improve the competitive advantage of the organisation hence impacting the organizational performance. This is so because having a competitive advantage enables the organization to stand out among its competitors proving its superiority in the business environment.

2.7 Summary of literature review

This chapter is there to review all the relevant literature for this study. The theoretical framework of the study is resourced based view and the relational view theory which try to explain the relationship that does exist between supply chain practices and organizational performance. The concepts were used to theoretically explain how the performance of the organisation is determined by supply chain practices. Different definitions of supply chain management were offered, SCM can conclusively be said to be the different activities and strategies that an organization can employ to manage its supply chain. Different scholars and academics have come up with a number of definitions each unique in its own way. The researcher tried to cover several of these definitions.

SCM can then be mashed with a number of practices to effectively manage it. Strategic supplier partnership, SC lean practices, information sharing and SC record management are the practices that have been concentrated on to review how they affect organizational performance. Different researchers chose to look at different practices depending with which suit the topic of their study best and the above mentioned practices were deemed best by the researcher for a public medical institution. The conceptual framework tried to show supply chain practices as the independent variables and organizational performance as the dependant variable. This means that the study will be monitoring the latter as to how to reacts to the former. In this study the dependant variable react to the influences of the practices and not likely on its own. The SCM practices directly influence the performance of the organisation.

From the literature above it can be noted that several researchers agreed on the factor that the implementation of SCM practices influences positively the overall performance of an organisation. However the relationship that do exist between these two factors cannot be said to be conclusive (Mustefa, 2014). Although there has been an increase in the empirical research over the recent years, differences in the SCM practices and research design weaken the possibility of a comparison; lack of a universal definition and dimensions of SCM construct, different approaches to measuring the overall performance and different units of analysis being used

Chapter 3: Research Methodology

3.0 Introduction

This chapter gives the methodology applied in this study, this include the research design, target population, data collection and data analyzing procedures. The researcher will describe and justify these instruments and procedures,

3.1 Research design

Cooper (2011) said research design is made up of the blue prints for coda accumulation, measuring and data analysis. Research design is a extensive outline used to coordinate the study towards its targeted objectives (Aaker *et al.*, 2011). It can be referred to as a structure of the research that holds components in a research together. The study adopted the quantitative approach that involves the accumulation of information that can be measured and statistically treated to help and tackle research problems (Creswell 2003; Mollel 2015). This study used descriptive research design which uses questionnaires for data collection. The descriptive design was used as it evaluates the idea of the prevailing conditions (Anastas, 1999). According to Koul (1992) in Mungu (2013) a descriptive survey is the best means through which conclusions, mentalities, recommendations and views on ways practices can be improved from information gathered. This design was used as there is need to gather data to ensure that the question of how and what is the bearing of supply chain practices on organizational performance. This design made is possible to shed light into the topic and conclusions were made as research questions were answered.

3.2 Target population

Target population refers to a precise group of people or objects that is to be observed or asked questions so that data and information essential to the study can be obtained (Hair *et al.* 2010) . Thus the target population was made up of 56 individuals.

There were 8 personnel members in the procurement and logistics department. These were all the individuals that were responsible for the daily policy implementation and supervision of the supply chains and logistical operation of the hospital.

The management of the hospital was made up of 5 individuals, the district accountant, District health services administrator (DHSA), district nursing officer (DNO), district environmental Health officer (DEHO) and the district medical officer (DMO) all these individuals made a committee called the District Health Executive (DHE).

There were 3 CPU committees involved in the tendering and procurement dealings namely the Tender Adjudication Committee, the Procurement Unit Committee and the Procurement Committee. These committees were made up of a panel of 6 people each and made up of different people from different departments, they were either from the medical departments or administrative departments. These members were available to the procurement department to provide lucidity in the department as they were included in the operations of the department. Each committee members was only a participant/ member in only one committee, this was beneficial to the study as the problem of overlaps during data collection was eliminated.

Members from different administrative departments like Human resources, Accounting, Transport and Records were also participants in the study. These individuals were included in the study as they were involved in the administration functions of the hospital hence involved indirectly in the SC operations, making their views helpful. These participants made a total of 25 people.

Fig 3.1 Target Population

Targeted groups	**Population**
Procurement and logistics staff	8
District health executive (management)	5
Employees from administrative departments	25
Committees under the procurement and logistics department	
Tender adjudication committee	6
Procurement unit committee	6
Procurement committee	6
total	**56**

Source: author

3.3 Census survey

A census survey was used in this study. This is the use of all the participants of the study; it is effective when their (participants) numbers are small and manageable. According to Mungu (2013) there is no problem in applying all of the population members as a sample for the study. In this study all the 56 participants were involved either directly or indirectly to the SCM were used.

3.4 Data Sources

In the study both primary and second data were used. This is so as both have their own advantages and disadvantages and utilizing both will minimize the disadvantages of one by the advantages of the other. The secondary data was collected from text books, internet journals and past records of the hospital. The primary data was collected from the employees, CPU committee members and the management of KDH specifically for this study.

3.4.1 Secondary Data

Refers to all the data used in the study that was collected earlier and for other related purposes yet not specifically for this study (Homer, 2016). In other words this means the use of already existing data for the study. Past records, minutes of meeting, text books and even memos used in this study make up the secondary data. This data is inexpensive to obtain and it also saves time thus the researcher can get access to an obscene amount of information regarding the study from other sources.

3.4.2 Primary Data

This is the data that was collected specifically for this study by the researcher. This is the data that was collected to answer certain questions relating to the study and there has not been any data gathered particularly for that certain topic in an organisation before (Homer, 2016). In other words this was the data collected specifically for the study. Questionnaires were administered so that this primary data can be collected.

3.5 Research Instrument

The data was collected using questionnaires. A total of 56 questionnaires were administered in this study.

3.5.1 Questionnaires

A questionnaire is an instrument used for collecting data on which a set of prepared questions are designed to collect data which is needed for a study. Aaker *et al.* (2011) defined a questionnaire as a formalized schedule or a form which is made up of an assembly of carefully formulated questions for the purpose of gathering information. It is a very efficient and effective tool when it is designed to best suit the aims of the research and it can arouse participation and cooperation from the respondents. The self administration mode was used; this refers to when delivery and collection is done in person by the researcher. The use of this mode means that there are 2 options of administration that can be used, either drop and collect the questionnaire sheets later or obtain answers using the face to face tactic. Either way, the option to be used depended on what the researcher deemed necessary and convenient to all the parties involved

Questionnaires have been chosen for this study given that they are able to provide large amounts of data from quite a number of respondents over a short period of time and it is also cost efficient. Structured questionnaires with close-ended questions will be used with closed questions to ensure that data collected is relevant to the study as the questions will be direct. They are made of questions that are easy to answer and there are fixed responses that the respondents can choose from which will shorten the time taken to answer the questions

Due to the nature of the type of questions used in the questionnaires i.e. direct and structured questions, data that is relatively easy to record and analyze is collected. This is so as the information is readily available on a form that makes it easy to group. However some questions will tend to be difficult and will be understood differently than what was intended by the researcher leading to a different answer thus the intended meaning and answer not tallying

3.6 Data collection procedure and administration

In this study structured questionnaires set with a 5 point Likert scale format with closed questions were designed and administered to extract detailed responses for data analysis and to collect primary data. The questionnaires had 3 sections; the 1st part was for general information, the 2nd for supply chain management practices and lastly the 3rd section which was for organizational performance. The questionnaires were distributed in person by the researcher to enable the researcher to ask if the respondents understand all the asked questions. More so the researcher left the respondents with the

questionnaires to be collected the following day. This was done to give the respondents enough time to answer with putting them under pressure and in a hurry.

3.7 Data presentation and analysis

The collected data was edited to ensure that it is inclusive and for consistency. The data was analyzed using the descriptive statistics with mean scores was used for structural analysis of the objectives. Frequency tables were used for data presentation, and the data was analyzed using frequency counts and cumulative percentages. The organized and analyzed data was then used to examine the SCM practices effects on organizational performance, using and grouping the perceptions of the respondents accordingly. For there to be a clear understanding of the data as to the extent which SCM practices affect the performance of the organisation, mean scores of the overall opinions of the respondents were calculated and presented to be used as central measure of tendency.

The collected data was analyzed by using these techniques:

- The researcher used tables, pie charts and graphs to show and present the pictorial views on the findings from the research
- Mean was used as the central measure of tendency.
- The Microsoft Excel was used to analyse the data and to come up with relevant diagrams electronically that were used in the analysis of the researched work.

3.8 validity and reliability

Validity refers to the amount of information which an instrument is expected to measure and reliability refers to the exactness and how accurate the data instruments used are. The validity and reliability of the study was tested and promoted by implementing the following:

- A pilot study was done to make sure that the data collection instruments are well written and understandable. Before the data collection instruments were subjected to the targeted population there was a pilot test study to ensure that the questionnaires and interviews were understandable. The researcher tested 2 fellow students and1 procurement officer at KDH This promoted clear communication between the researcher and the participants as they will the understanding each other.

- The supervisor was given the questionnaires to proof read before they were used in the field.

3.9 Summary

This chapter was done so to give answers to the research questions. This was a though descriptive research that aims to assess supply chain management practices on organizational performance at KDH. The data was collected using questionnaires. This chapter aimed at revealing all the necessary information needed for the research to be successful and enabled various SCM practices effects to be analyzed and determine how they affect the operations and organizational performance of KDH

Chapter Four: Data presentation, Analysis and Interpretation of findings

4.0 Introduction

In this chapter the focus was on data presentation and analyzing the researched data emanating from the research objectives created in the first chapter of the study. In addition there is analysis of the variables and conceptual model formulated and described in the second chapter.

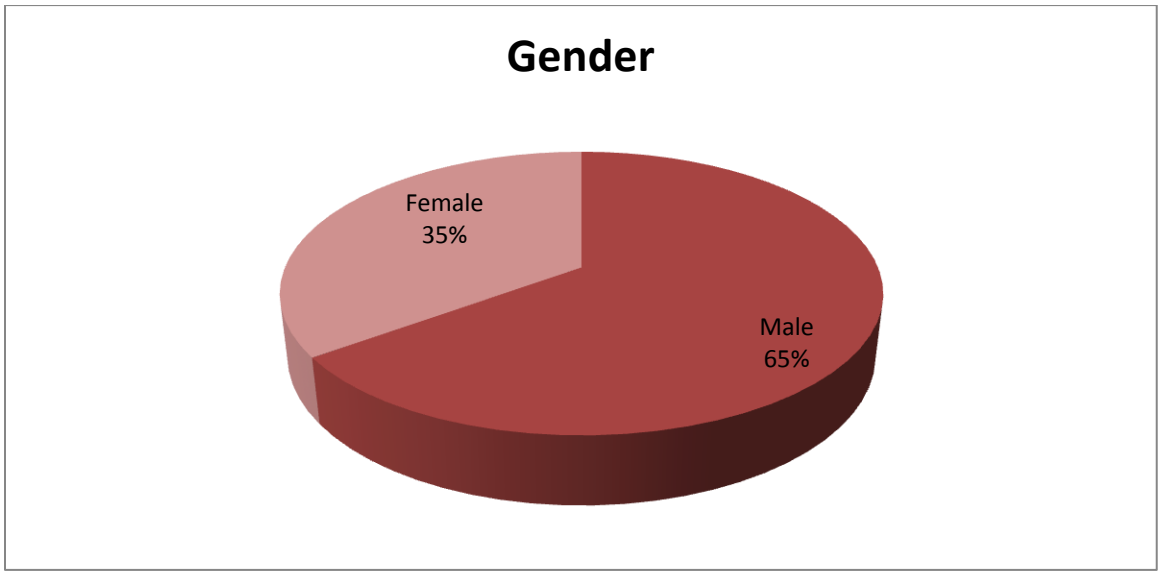
4.1 Response rate

In the study, 56 questionnaires were distributed to the target population of KDH, 48 were fully answered and 8 were not returned as some of the respondents had busy schedules. This means that there is a response rate of 86 % from the target population. According to Edmonds and Kennedy (2016) for a census study a response rate that is above 80% is considered ideal for analysis to proceed.

Demographic characteristics of the respondents

The demographic information collected was made up gender and educational qualifications of the respondents involved in the supply chain operations and the length of the service one has been with the hospital. Below are tables and a chart showing the demographic information of the study.

Fig 4.1 Gender of the respondents



Source: Primary data (2017)

Of the 48 questionnaires that were returned, 17 were from females and 31 males, in the chart the figures are expressed as a percentage.

Academic levels and roles of respondents

The respondents were asked about their qualifications and the roles they play in the SCM operations of KDH.

Table 4.1 Academic levels and positions of respondents

Characteristics	**Category**	**Frequency**	**Percentage %**
Educational levels	A level	3	6
	Diploma	28	58
	Degree	17	36
Roles of respondents	Procurement and logistics staff	8	17
	District health executive	4	8
	Administration employees	22	46
	Procurement Unit committee	5	10
	Procurement committee	5	10
	Tender Adjudication committee	4	9

Source: Primary data (2017)

Work experience of the respondents

This is the level of experience one has. It was determined by asking how long respondents had been working at KDH.

Table 4.2 Work experience of the respondents

Work experience	**Frequency**	**Percentage**	**Cumulative frequency**
Less than one year	10	21	21
1-2 years	7	14	35
3-4 years	9	19	54
5+	22	46	100
Total	**48**	**100**	

Source: Primary data (2017)

The tables above shows 21% respondents have been with the hospital for less than a year, 14% range from one to two years and 19% have been with the hospital for three to four years. The majority of the respondents have at most 4 years experience i.e. all those that have the experience from less than a year up to 4 years all have a cumulative frequency of 54%. This shows that the majority of the respondents have been with the hospital for 4 years and less, a total of 46% are those that have been with the organisation for more than 5 years.

Supply chain management practices

In this study, four particular objectives related to supply chain management practices were created. These practices are strategic supplier partnership, level and quality of information sharing, internal lean practices and supply chain record management. These practices were scrutinized to uncover how they affect organizational performance. Below are the findings of the study which were collected by using a questionnaire. The questionnaire used a Likert scale and the respondents were asked to rate their opinions using a 5 scale criterion with 5- Strong Agree, 4 – Agree, 3- Neutral, 2 Strongly Disagree And 1 Agree

4.2 The influence of strategic supply chain partnership on organizational performance

The aim in the study was to determine the influence of strategic supply chain partnership as a supply chain management strategy. The influence of this practice on organizational performance was sought after asking the respondents to rate the different factors which they deemed crucial for the assessment of this SCM practice. Below are the responses that were collected.

Table 4.3 strategic supplier partnership

Strategic supplier partnership	**5**	**4**	**3**	**2**	**1**	$\sum f$	$\sum fx$	$\frac{\sum fx}{\sum f}$
Quality importance in supplier selection	10	35	0	0	3	48	193	4.02
Meeting user specifications	0	8	2	20	18	48	96	2
Sound supplier relationship	0	23	0	25	0	48	142	2.96
Timely delivery enhanced	11	34	0	3	0	48	197	4.10

Source: Primary data (2017)

The above table shows that strategic supplier partnership affects the performance of KDH by selecting suppliers that provide quality products to partner with, this is seen by a mean score of 4.02. The respondents mildly agree with the fact that strategic supplier partnership will improve organizational performance of the hospital by having its specifications met. This had the least mean of 2. The respondents were not very amenable to the idea that sound supplier relationship can influence organizational performance by being in a strategic partnership. This is due to the fact that the suppliers are not actively involved in the planning and goal setting process, the relationship that does exist is not helping the hospital in terms of its performance. Timely delivery had the highest mean score of 4.10. This shows that a number of respondents agreed on the fact that strategic partnership can influence the performance of KDH by promoting timely delivery of supplies.

4.3 The influence of information sharing in the supply chain

In order to determine the influence of information sharing, the objective has 2 crucial aspects that i.e. level of information sharing and quality of information shared. Level of information sharing is an internal aspect whereas quality of information sharing is an external aspect. Information sharing is all about internal and external collaboration thus separating level and quality information sharing to study each separately (Shukla, Garg and Agarwal, 2011).

4.3.1 Level of information sharing

Respondents were asked to rate the level of information sharing. They were asked to rate the fact that the hospital and its trade partners inform each other fully on all the issues that affect the operations of the hospital.

Table 4.4 level of information sharing

Trading partners inform the hospital fully on issues that affect operation?	frequency	percentage	Cumulative percentage
Strongly agree	15	31	31
Agree	21	44	75
Neutral	2	4	79
Disagree	7	15	94
Strongly disagree	3	6	100
	48	**100**	

From the table above, it is seen that the majority of the respondents agreed that there is some level of information sharing. A cumulative frequency of 75% agreed with this fact that information is shared and that there exist relationships between trade partners that favors sharing information. This shows that the hospital communicates well and exchange information that helps in planning. However, 4% were neutral to the idea, they did not agree nor disagree. This is so as the hospital does not inform its trade partners on all issues and so does the trade partners sometimes. However a total of 15% disagreed that there is no transparency between trade partners and 6% were confident that there is definitely no transparency. There is no transparency as the trade partners do not inform each other on all things as there is a part that wants to gain more than the other party always.

4.3.2 Quality of information sharing

Here the aim was to determine how the actual and real information shared between the trade partners can influence the performance of the hospital. Respondents were asked if they think the information shared between the hospital and its suppliers is reliable, timely, precise and adequate. A 5 point Likert scale was used on the questionnaire where 5 stands for Strong Agree, 4 for Agree, 3 for Neutral, 2 for strongly disagree and 1 for Agree

Table 4.5 Quality of information sharing

Quality of information sharing	**5**	**4**	**3**	**2**	**1**	Σf	Σfx	$\frac{\Sigma fx}{\Sigma f}$
Reliable information	5	37	0	0	6	48	179	3.73
Timely information	5	21	0	3	19	48	133	2.78
Precise information	6	32	0	0	10	48	168	3.5
Adequate information	14	27	0	0	7	48	185	3.85

Source: Primary data (2017)

The table above shows that the majority of the respondents agreed with the notion that sharing quality information affects the performance of the hospital. This is shown by an overall minimum frequency score of 2.78. This shows that when quality information is shared, the hospital can improve in its SCM operations as it will be having valid information thus improving its performance. The reliability of information shared has a mean of 3.73. Respondents agreed that the information

shared is reliable and affects the operational performance of the hospital as planning and goal setting is made easier. The timely aspect of the information was the one with the least mean of 2.78. This show that respondents thought the information does not arrive when it is still relevant. Sometimes the information is received when it is no longer offering a competitive advantage, relevant or when there is no need for it. Precise and adequate information have a mean of 3.5 and 3.85 respectively. These numbers are quite high showing that several respondents do agree that they information being shared is of quality and that it promotes and influence the performance of KDH. This is so as adequate and precise information will help in sourcing decisions such as use of Just-in –time method which reduces inventory and its holding cost

4.3.3 Combined effect of level and quality of information sharing

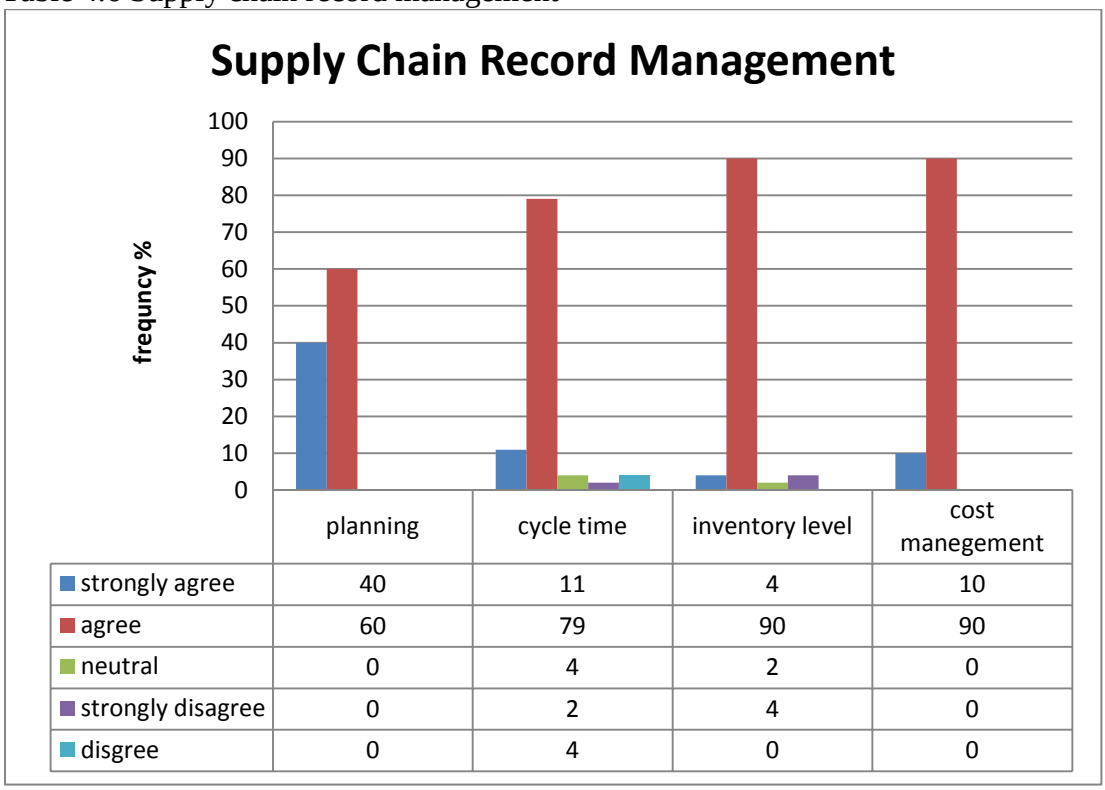
From the above 2 diagrams, there is a consensus that the majority of the respondents agree with the fact that information can influence the performance of the organisation. In the first diagram a cumulative percent of 75 agreed that a certain desirable level of sharing positively impacts the operations of the hospital. In addition the second diagram have all positive mean showing that quality information indeed is crucial as it makes planning very effective. Combining these results entails that the level and quantity information sharing is all about the quality and quantity of the information being shared. This further shows that trade partners need to share a substantial amount of information which is timely, reliable, adequate and precise to ensure that the decision making process is well laid. More so this will mean that the SCM process will perform exceptionally as it will have quality information flowing within thereby influence organizational performance.

According to Lofti *et al (* 2013) well laid information sharing proceedings can improve how an organisation performs as information will aid in effectively integrating the functions of the SCM. Information sharing is a crucial aspects that promotes supply chain performance (Prajogo and Olhagen, 2012). Information sharing can lead to strong supplier relationships thereby influencing how the organisation operates.

4.4 Impact of supply chain record management in supply chain

The findings of supply chain record management are illustrated on the bar graph below. There are four series showing how organizational performance is promoted by this practice through improvement in planning, cycle time, inventory levels and effective cost management.

Table 4.6 Supply chain record management



	planning	cycle time	inventory level	cost manegement
strongly agree	40	11	4	10
agree	60	79	90	90
neutral	0	4	2	0
strongly disagree	0	2	4	0
disgree	0	4	0	0

Source: Primary data (2017)

The above diagram shows that proper supply chain record management will enhance operational and organizational performance as planning, cycle time and cost will be effectively managed. This is so as planning will be enhanced by easy information access. All respondents agreed to this. A cumulative percent of 90% (10% and 80%) agreed to the fact that improved record management reduces cycle time by enabling easy supplier allocation. More that 50% of the respondents agreed to the importance of proper supply chain record management as can be shown on the diagram.

However some respondents did not agree with this SCM practice as it can have a weak influence on the overall performance when it is not managed efficiently. Mere record management has a lesser impact on performance but efficient and well laid record management systems have a greater influence on performance.

4.5 Contribution of supply chain (internal) lean practices on organizational performance

Study findings were sought after by using a 5 point Likert scale on a questionnaire where 5 is Strongly Agree, 4 for Agree, 3 for Neutral, 2 for strongly Disagree and 1 for Agree.

Table 4.7 Internal lean practices

Responses on internal lean practices	5	4	3	2	1	Σf	Σfx	$\frac{\Sigma fx}{\Sigma f}$
Incremental lean practice	0	41	0	7	0	48	178	3.71
Just-in-time	0	1	0	13	34	48	64	1.3
postponement	19	27	0	0	2	48	204	4.25
inspection	0	6	0	13	29	48	79	1.65

Source: Primary data (2017)

The table above shows the frequency and responses of the respondents. All their responses have a positive mean showing that they do agree with the idea that internal lean practices can influence organisation performance positively. Postponement has the biggest mean of 4.25. This shows that the hospital postpones procurement by prioritizing what is really needed. Incremental lean practices followed with a mean of 3.71 this shows that incremental lean practices were agreed on. The hospital aims to provide the best medical services to the communities thus thriving to improve in all areas it can always. This will affect the organizational performance of the hospital as there are schemes to keep improving quality continuously. Just-in-time had a mean of 1.3. This shows that it is not practiced fully, since the hospital is located far away from its suppliers and that funds are not readily

available always thus the need to hold inventory. More so there are a lot of uncertainties on the hospital that requires it always keep safety stock for maximum effects on the overall performance of the hospital. The hospital always inspects supplies before receiving them. Inspection has a small mean of 1.65 showing that the respondents did not agree that there is no inspection of suppliers. There is inspection which helps the performance of the hospital as this eliminates poor quality products to be included as inventory.

4.4 Chapter summary

This chapter looked at the findings of the study. The findings showed that there is a linear relationship that does exist between supply chain management practices and organizational performance. Strategic supplier partnership, information sharing, supply chain management and internal lean practices all positively affect the overall performance of the hospital. Each objective was analyzed and data presented in various forms, this enabled the study to show the finding obtained. All the research questions had one finding in common that is all the four supply chain management practices were found to be positively linked to organizational performance this means that they all affect the level at which the hospital performs.

Chapter 5: Summary, Conclusions and Recommendations

5.0 Summary

The intention of the study was to examine the supply chain management practices at Karoi District Hospital. For this study to be achieved, objectives set in the first chapter were used in relation to the conceptual framework devised in chapter 2. The study further on focused on how SCM practices affect organizational performance. The target population for this study was initially 56 but 8 did not return their questionnaires due to busy schedules. This gave the research a response rate of 86% with now 48 respondents.

Study findings revealed that strategic supplier relationships positively affect the performance of the organisation as this partnership promotes long term relationship that are beneficial and helps in goal setting and planning. This will also help in the tendering proceedings as only suppliers with quality products are selected and suppliers will made available on time.

In addition information sharing is positively linked to the performance of the institution. Since every supply chain needs the flow of funds, inventory and information; information sharing will enable relevant and timely information to be gained thus positively influencing how the organization will perform.

Supply chain record management was connected to organizational performance positively. This shows that the hospital should practice significant and proper record management to aid in reducing lead time by reducing supplier allocating time; thus promoting organizational performance.

Finally internal lean practices were also connected as having a positive impact to organizational performance as postponement enables the hospital to focus on projects that are more important and be able to reduce inventory stocked. This means that costs will be reduced thereby improving its operational performance.

5.1 Discussions

The findings of this study revealed that supply chain management practices influence the organizational performance of the hospital. There is positive linear relationship that does exist between these two variables. Previous studies by Karimi and Rafiee (2014) on the impact of SCM practices on organizational performance through competitive priorities in Iran pump companies. Mwale (2014) looked at SCM practices in large manufacturing companies in Kenya. Both studies agreed with these findings and the conclusions drawn.

The study findings revealed that strategic supplier relationships influence organizational performance at KDH as it promotes the creation of long-term relationships. This is so as it ensures that quality products are procured by only dealing the suppliers of quality products. More so the planning process and goal setting are made easier. Strategic supplier partnership ensures that reliable information is gained so much the hospital can make plans that promote goal fulfillment in time without a lot of changed occurring thus influencing the overall performance of the hospital. The findings revealed that the quite a number employees agreed to the assertion that timely delivery of supplies is promoted. Research by Karimi and Rafiee (2014) also supports this assertion. They went on to say organizational performance will be affected positively by having long term relationships with reliable players and save time costs of dealing with new players.

On the aspect of information sharing, this objective has 2 parts ie level and quality of information sharing. This enabled data to be collected that looks at quality and quantity of information. This was done so that quality and quantity can be analyzed differently and be able to assess one aspect and not marsh them together. Mustefa (2014) in his study agrees with the assertion that sharing information positively affects the overall performance an organisation. Information is a crucial item in the supply chain, sharing information with trade partners simplifies the planning and decision making process (Kenyachui, 2014). A supply chain with valid information makes the operations easy as there is reduction in the amount of uncertainties that can be faced and contingency plans are formulated.

Record management is a practice that is being practiced at the institution but the study showed that there is need to properly implement and manage it as it helps in reducing the cycle time which means that the hospital will be able to provide drugs and surgicals whenever there is need. The quality of

the services being offered will be of value as supplies are made available on time and records are kept of suppliers that offer quality products. Kingoo (2013) in her study she agrees with this finding.

Lastly internal lean practices made the hospital improve in areas that are not fully performing well through its incremental lean practices for example properly managing records will mean that there is proper inventory records kept and this will enable procurement to be postponed on items that are already available than to assume the numbers. However the findings showed that Just-in time is not an ideal practice for the hospital to use as the hospital attends to different cases each day and there is need to hold safety stock. Mwale (2014) said inspecting the procured items pushes the suppliers for shorter lead time there an improvement in the performance of the organisation

5.2 Conclusions

The study showed that supply chain management practices positively affect organizational and operational performance. This means the hospital will be able to add value to the services it offers by increasing the quality of its services. Waiting time in queues will be shortened and drugs will be readily available. The four supply chain management practices were found to be positively linked with the performance of KDH a public institution.

However, not all of the suggested strategies are very effective for example implementing just-in time on lean practices does not positively affects the hospital as it can promote shortages thereby being ineffective in case of an emergency.

The study discovered that strategic supplier partnership enables long term relationships that are very beneficial for the hospital as cost can be reduced. The results also suggests that supply chain record management has a significant effect on the performance of KDH as the institution can access crucial information from past records and these will aid in planning and decision making. In addition, sharing quality information enables an organisation to perform well as the supply chain will be effectively performing by having the right amount of quantity and quality information flowing in its midst. Internal lean practices need to be decided on carefully as the need to reduce cost should not hinder the performance and operations of the hospital. For instance reducing inventory cost does not have to comprise the amount of safety stock needed at the hospital.

5.3 Recommendations

The study showed that strategic supplier partnership positively affects the performance of the organisation. To maximize on effects to aid the organizational performance, the hospital need to participate in sharing information with its trade partners. There is need for external collaboration with trade partners. This aids the efficiency of the hospital and also reduces costs as trade discounts can be received from these partners.

In addition, information sharing is a crucial aspect. The study showed that quality information aids in planning. There is need for the hospital to share more information with key suppliers like PCD Pharmaceutical and Shreesai Medical so that they will be involved and be able to advice on possible efficiency reserves from the standpoint of the suppliers. The hospital will be able to draw up a purchasing plan with relevant information and reduces uncertainties in the future. Information to be shared needs to be carefully managed for it to be a strategic asset to the hospital and its trade partners.

The study revealed that supply chain record management positively affects organizational performance. There is need for the institution to keep simple and detailed documents of all the operation of the supply chain. Important information will be accessed when it is required and with less hustles thus enhancing operational and organizational performance. This increases accountability and reduces pilferage.

Supply chain management is an ever-changing concept. There is need for continuous employee training. This will help the organisation as the supply chain operations will have people with knowledge concerning the business for example the application and transitioning to the use of technologies such as SAP or RFID tagging will be easy to implement.

5.4 Research limitations

It is exceptionally hard to cover all elements of supply chain management in one investigation. The targeted population did not include all participants involved in SCM of the Institution. For instance, suppliers and customers (patients) because of time shortages were not included in the study but are crucial players in the entire supply chain of the institution. Then again elements of supply chain

management are not only just restricted to SCM practices looked at. Therefore the study is not speaking to all elements that could clarify the application of SCM practices.

The study findings and application are limited to Karoi District Hospital as there may not be very pertinent to other institutions or private organizations. This is so as the environment they operate in is different and each organisation has its own unique characteristics. However this study can be used for comparison purposes or benchmarking.

5.5 Suggestions for future research

The study looked at the current supply chain management practices at Karoi District Hospital and how they affect the overall performance of the hospital. However the findings are restricted to KDH only. Thus further studies are needed to broaden the range of respondents by looking at public medical institutions as a whole. More studies are desirable to look at supply chain practices and how they influence the performance of different industries in Zimbabwe. On another note, the study of supply chain management practices is a multidisciplinary topic. Looking at all of its aspects in one study is impossible. There is need to look at other practices such as customer partnership, postponement, logistics integration, e-procurement and many others involved in the study area. Because of time constraints the study failed to look at all of them. Additionally prospect studies should think about different types of firms and different sizes, these need to be looked at and also private entities to encourage a more effective economy.

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APPENDIX 1

QUESTIONNAIRE FOR EMPLOYEES

My name is Tapiwa A Zulu, a 4th year student at Midlands State University doing a Bachelor of Commerce Honors degree in Retail and Logistics Management. I am carrying out a research on supply chain management practices at Karoi District Hospital. I am asking you to kindly assist in the completion of this questionnaire. Your response will be strictly confidential and for academic use only.

I appreciate your willingness to participate. Please tick in the box applicable

PART 1: DEMOGRAPHIC INFORMATION

GENDER

Female ☐ Male ☐

EDUCATIONAL QUALIFICATIONS

'O' level ☐ 'A' level ☐ Diploma ☐ Degree ☐

LENGTH OF SERVICE

Less than a year ☐ 1-2 years ☐ 3-4 years ☐ 5+ years ☐

WHAT IS YOUR ROLE IN PURCHASING AND SUPPLY CHAIN MANAGEMENT

Procurement staff ☐ Tender committee member ☐

Procurement committee member ☐ Adjudication committee member ☐

Management ☐ Other (specify) …….

PART 2: SUPPLY CHAIN MANAGEMENT PRACTICES

Please use the ratings below and tick the appropriate answer to show the extent you agree with the statements concerning the supply chain management practices in KDH

Strongly Agree 5, Agree 4, Neutral 3, Disagree 2, Strongly Disagree 1

Strategic supplier partnership at KDH

STATEMENT	**5**	**4**	**3**	**2**	**1**
Quality is considered as number one criterion in selecting suppliers					
Problems are regularly solved jointly with suppliers					
Suppliers always meet user specifications					
We include our key supplier in our planning and goal setting					
Timely delivery is enhanced by strategic partnerships					

Level of information sharing at KDH

STATEMENT	**5**	**4**	**3**	**2**	**1**
Trading partners are informed in advance of changing needs					
Trading partners share proprietary information with the organisation					
Trading partners keeps the hospital fully informed about issues that affect its business					
We exchange information with trading partners that helps in business planning					

Quality of information sharing at KDH

STATEMENT	5	4	3	2	1
Information exchanged between us and our supply chain partners is reliable					
Information exchange between our supply chain partners and us is timely					
Information exchange between our supply chain partners and us is precise					
Information exchanged between us and our supply chain partners is adequate					

Supply chain record management at KDH

STATEMENT	5	4	3	2	1
Record management helps in planning by enhancing information accessibility					
Record management decreases the time to allocate suppliers for reduced cycle time					
Record management ensures optimum level of inventory					
Record management helps in managing costs of holding inventory					

Internal lean practices at KDH

STATEMENT	5	4	3	2	1
The hospital continually improve its performance with incremental lean procurement					
The hospital does not rely on inspecting products					

procured					
The hospital buys what is needed by patients when they are needed					
The hospital postpone the purchase of items until the last potential point in the supply chain					

PART 3: organizational performance at KDH

Organizational performance- how well an organisation achieves its market oriented and its financial goals	**5**	**4**	**3**	**2**	**1**
The hospital is capable of offering product quality and performance that creates value for customers					
The hospital is capable of providing services with the minimum waiting time possible					
Supplies are bought and made available whenever needed					
The hospital strives to maintain its overall competitive position					

If you have any comment on the above aspects

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Thank you again.