

**St.MERY'S UNIVERSITY**

**SCHOOL OF GRADUATE STUDIES**

**EFFECT OF KNOWLEDGE MANAGEMENT PRACTICE ON  
ORGANIZATIONAL PERFORMANCE.THE CASE OF  
ETHIOPIAN SHIPPING AND LOGISTICS ENTERPRISE**

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**EFFECT OF KNOWLEDGE MANAGEMENT PRACTICE ON  
ORGANIZATIONAL PERFORMANCE.THE CASE OF ETHIOPIAN  
SHIPPING AND LOGISTICS SERVICES ENTERPRISE**

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## **DECLARATION**

I hereby declare that this thesis, "**The effect of knowledge management practice on organizational performance: the case of Ethiopian Shipping and Logistics Services Enterprise**", undertaken by me for the partial fulfillment of Masters of Business Administration [MBA] at St. Mary's university school of graduate studies, is my original work and not submitted earlier for any degree either at this University or any other University.

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**ENDORSEMENT**

This thesis has been submitted to St.mary's University College, school of Graduate studies for examination with my approval as university advisor.

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Advisor

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## **List of Acronyms and Abbreviations**

**ANOVA**- Analysis of Variance

**BSC**- Balanced score card

**ESLSE** - Ethiopian Shipping and Logistics Services Enterprise

**ICT** - Information and communication technology

**KM**- Knowledge management

**KMO**- Kaiser Meyer olkin

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## **Abstract**

*The main purpose of the study was to identify the effect of knowledge management practice on the organizational performance in Ethiopian shipping and logistics service enterprise. For the purpose of the study primary data were collected using five point likert scale based questionnaire that was constructed taking into account all the dimensions of knowledge management. A sample of 103 employees responded to the questionnaire distributed. The data was analyzed using descriptive such as frequency, mean and standard deviation and inferential statistics such as correlation and Regression analysis by using SPSS version 20 as a tool. The result of this study shows that as compared to female employees the male employees are much in number with more work experience and high educational level. Further the regressed figure shows that from all listed knowledge management factors only technology has positive effect on the organizational performance and both organizational structure and culture have insignificant effect on the organizational performance. The insignificant effect doesn't mean that there is no cause and effect relationship with the dependent variable but shows that there is no good knowledge management practice in ESLSE due to poor organizational culture and structure. The other components of KM are knowledge creation, storage, transfer and application and on this study shows that the four elements have positive and significant effect on the company performance. Therefore, it is concluded that the company has a limitation in addressing their objective on a better way. Based on the finding the researcher recommend that ESLSE has to work on the problems stated, and also the government and stakeholders should have to work as strong team to enhance the organizational performance.*

*Key words: Knowledge application, knowledge creation, knowledge management, knowledge sharing, organizational performance*

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the study

There are varying definitions of knowledge and Knowledge management within existing literature. Knowledge is sometimes explained as a more complex form of information (Hoe, 2006), in the sense that knowledge is interpreted in the context of an organization's culture & values. (Martensson, 2001) other scholars, however, explain that knowledge is what a person knows, and is gained through lived experiences.

Knowledge Management, (KM) is a concept that arose approximately two decades ago, roughly in 1990. Quite simply one might say that it means organizing an organization's information and knowledge holistically, but that sounds a bit woolly, and surprisingly enough, even though it sounds overbroad, it is not the whole picture. Very early on in the KM movement, (Davenport, 1994) offered the still widely quoted definition:

"Knowledge management is the process of capturing, distributing, and effectively using knowledge". A few years later, the Gartner Group created another second definition of KM, which is perhaps the most frequently cited one (Duhon,B.) MarchApril, 72 (2)September,12 (8)

"Knowledge management is a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving, and sharing all of an enterprise's information assets. These assets may include databases, documents, policies, procedures, and previously un-captured expertise and experience in individual workers. (Koenig, 2012). Knowledge is information combined with experience, context, interpretation and reflection. It is a high-value form of information that is ready to be used for decisions and actions (Davenport, 1994). Companies need to understand precisely which knowledge will give them a competitive advantage.

Complementary to this view is Leonard's (1992) description of how core rigidities are deeply embedded knowledge sets that hinder innovation. Arthur's (1989) law of increasing returns also supports the equivocal link between knowledge and performance. While having a good base of knowledge means that a company can leverage it and increase its advantage over

competitors, having a bad base of knowledge means that the company that is losing advantage can only lose further advantage.

For knowledge to become a source of competitive advantage, firms need to match their knowledge strategy with their business strategy. When a firm's knowledge strategy matches its business strategy, the impact of knowledge is positive. The implementation of knowledge strategies comprises all person-oriented, organizational and technological instruments suitable to dynamically optimize the organization-wide level of competencies, education and ability to learn of the members of the organization as well as to develop collective intelligence" is match is not achieved; knowledge may have no impact or even have a negative impact on performance.

Hence most business organization give more attention for knowledge management to utilize their resources (human capita) and optimize their organizational performance (Halimah, 2012). More comprehensive definition given by Maier ( 2007) as "Knowledge management is defined as the management function responsible for the regular selection, implementation and evaluation of goal-oriented knowledge strategies that aim at improving an organization's way of handling knowledge internal and external to the organization in order to improve organizational performance.

The Ethiopian Shipping and Logistics Services Enterprise establish To maintain the commendable economic growth that has been registered in the country over the last several years, one of the strategic measures taken by the Federal Government of Ethiopia is merging the former three public enterprises that have until recently been operating separately in a rather similar and interdependent maritime sub-sector; namely, Ethiopian Shipping Lines S.C, Maritime and Transit Services Enterprise and Dry Port Enterprise and is vested with the huge responsibility of rendering sea-transport & logistics services to the country's importers, exporters, and investors in a more effective and efficient way, by reducing transit time, cost and handoffs. Besides, a truck operating company named Comet Transport SC has recently been transferred to ESLSE.

ESLSE has a multitude of vessels, heavy duty trucks, sea and dry port facilities, chicaneries, etc that enable it render efficient sea and land transport services as well as sea and dry port services.

ESLSE has its headquarters located in the heart of Addis Ababa, Ethiopia, with main branches at Djibouti, Modjo, and Kality (the former Comet) and other branches in Mekelle, DireDawa, Kombolcha, Semera and Gelan towns. It also has a Maritime Training Institute at a place called Babogaya in Bishoftu (former Debrezeit) Town.

The Enterprise is re-starting the building work of its Head Office, the process of which has been interrupted for some years due to construction related problems. The giant building in Laghar area is a 20 storey sky scraper that may accommodate all the enterprise's functions at head office level, upon finishing, as well as partially serving as an apartment.

According to the Regulation issued by the Council of Ministers in 2011, the enterprise is supervised by the Ministry of Transport and has a Board of Management comprised of eight higher officials from various ministries. After its establishment in Nov.2011, ESLSE embarked on designing an organizational structure that could bring together the functions of the former three enterprises in to an integrated operation. Accordingly, the enterprise put in place its own new organizational structure in Dec 2012 on the basis of which, it has one chief executive officer and four deputy chief executive officers appointed by the government to lead and direct the enterprise at top management level.

The enterprise has four sectors led by the four deputy CEO's, namely:

1. Shipping sector.
2. Freight Forwarding Sector
3. Port & Terminal sector
4. Corporate Services Sector

There are also some 18 departments and 8 branches that report to the deputy CEO's depending on line of function.

Previous researches have provided many reasons for failure to implement knowledge management but didn't try to clearly show the effect of knowledge management on the organizational performance. This study clearly identifies the effect of knowledge management on organizational performance and focus on KM factor and process to achieve better in its organizational performance.

## 1.2 Statement of the Problem

Although, the knowledge concept has been discussed between scholars over the last few decades, it is still not fully understood in regard to the effect of managing knowledge with in organization. As early discussed by wenger and freeman knowledge is a valuable resource and a key to success which give the organization a competitive edge, So managing this asset is important task for organizations. (Gubta, Sharma.Hsu & Rubenstein-Montano , 2008)

As council of logistics management defines Logistics is the process of planning, implementing and controlling the efficient, effective flow and storage of goods, services and related information from point of origin to point of consumption for the purpose of conforming to customer requirements. (Fekadu M. Debela, 2013) and ESLSE is the one and the biggest logistic company that operate with a vision of "providing competitive shipping and logistics services to become preferred and renewed African logistics company by 2025" With this vision to achieve the company should work on the resources specially the human capital knowledge and its management. But currently regarding to employee turnover both shore based and sea the lack in knowledge transfer is the main problem that the company is facing today.

The practice of KM is a recent phenomenon in Ethiopia. At this stage the researcher has observed that there is no defined and clear guide of knowledge management practice handling from acquiring or securing documentation process; The researcher believe that The study is a reliable evidence in addressing gaps on how knowledge created, shared, documented, communicated and secured and seeks to improve the understanding of Knowledge Management. So far, only limited local researches were conducted such as the role of knowledge management in enhancing the humanitarian emergency organizations and also Factors affecting KM practice in banking industry , but there is no research conducted on sea-transport & logistics services rendering organization. If this gap persists, this study initiated to investigate on the effect of knowledge management practice on organizational performance with in Ethiopian Shipping and Logistics Services Enterprise.

## 1.3 Basic research questions

Based on the above research problem this research tries to answer the core points in Knowledge management by the following basic questions;

1. What are the KM (knowledge creation, storing, sharing and transferring) practices at The ESLSE?
2. What are the factors that facilitate or impede KM at ESLSE?
3. To what extent KM contributes to the organizational performance?

#### 1.4 Objectives of the research

##### 1.4.1 General objective

The general objective of the study is to examine the effect of knowledge management on the organizational performance in case of Ethiopian Shipping and Logistics Services Enterprise.

##### 1.4.2 Specific objective

The specific objectives of the study are:-

- To identify the KM practice in ESLSE.
- To examine factors facilitating or impeding KM in ESLSE.
- To investigate the contribution of KM to organizational performance.

#### 1.5 Definition of Key Terms

- **Knowledge:** -the insights, understandings, and practical know-how that we all possess the fundamental resource that allows us to function intelligently (Wiig, 1993)
- **Knowledge Management:**-isthe combination of activities involved in Gathering, organizing, sharing, analyzing & disseminating knowledge to improve an organizations performance (MIS Thomson ,2002 Third Edition).
- **Knowledge Utilization:-** Concerned with using and applying knowledge to organizational functions or business processes (Tesfaye, 2015).
- **Knowledge Sharing:** - Knowledge sharing can be enhanced through the implementation of appropriate technologies, operations and systems that stimulate collaboration(Uriarte,2008).
- **Knowledge Management Practice:** -The deliberate and systematic coordination of an Organization's people, technology, processes, and organizational structure in order to add Value through reuse and achieved through applying knowledge and best practices into corporate memory in order to foster continued organizational Learning(Daltir, 2005).
- **Explicit knowledge:-** is documented and public; structured, fixed content, externalized, and conscious (Duffy, 2000).



- **Tacit knowledge**:-is experimental, intuitive, and experience based knowledge that cannot be expressed in words, sentences, and formalized or articulated and therefore difficult to share. ( Alhawary (2011),

#### **1.6 Scope the study**

Knowledge in an organization is important source of value and should be managed well. The main focus of this paper is to investigate the effect of Knowledge Management on Organizational Performance. The researcher tries to use different materials to examine all processes of knowledge management (creation, storing/retrieval, transferring and Application) and KM factors(organizational structure, culture and technologies) . On this study the new organizational performance measurement model BSC is used which contain the three perspectives (customer's perspective, internal process perspective, and learning and growth perspective).

The study is conducted in the company head office located in Addis Ababa leghar and includes only office based staffs.

#### **1.7 Significance of the study**

As the study focus on the main problem of the company it has a lot of importance and helps in contributing something to the country as it is the biggest and the only shipping company in Ethiopia. Accordingly, the study is essential for Ethiopian Shipping and Logistics Services Enterprise in that, it helps to efficiently push specific knowledge to employees based on their pre specified needs and have many potential benefits in the decision-making process since problem is identified and possible solution is suggested. In addition to this, the research benefits the customers and stakeholders by filling the gap and improves the service and helps other researchers to do more investigation on it.

#### **1.8 Organization of the study**

The research report is expected to comprise five chapters, which include :chapter one contains Introduction, background of the study, background of the company, statement of the problem, basic research questions, objective of the study, significance of the study and scope of the study. Chapter two include review of related literatures both theoretical and empirical literatures.

Chapter Three: Methods of the Study Under this chapter; conceptual framework /adapted from previous studies, the subjects/participant of the study; the sources of a given data; the data collection tools/instruments employed; the procedures of data collection; and the methods of data is analysed.

Chapter Four: Results and Discussion this chapter should be summarize the results/findings of the study, and interpret and/or discuss the findings. Chapter five: Summary, Conclusions and Recommendations this chapter comprises four sections, which include summary of findings, conclusions, limitations of the study and recommendations. Summary of findings should be drawn from the results discussed under chapter four, conclusions should be drawn from the summary of findings, and specify any limitations that could have effect on conclusions.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1. Theoretical literature

##### 2.1.1 Definition of knowledge

Knowledge is the insights; understanding and practical know how that people possess. It's the fundamental resource that allows people function intelligently. It can be stated that knowledge is an invisible or intangible asset, in which its acquisition involves complex cognitive process of perception, learning, communication, association and reasoning (Epetimehin, 2011). Davenport, De long and Beers (1998) define knowledge as information combined with experience, context, interpretation, reflection, and perceptiveness that adds a new level of insight. Allee (1997) says that knowledge becomes meaningful when it is seen in the larger context of culture, which evolves out of beliefs and philosophy. Sveiby(1997) describes knowledge as the capacity to act on information and thereby make it valuable, therefore knowledge can be said to be ineffectual if not used in organizations, knowledge become embedded not only in documents or repositories, but also in organizational routines, processes, practices norms and cultures.

(Blackler, 1995) defines knowledge as taking five distinct forms :*embodied, embedded, embrained, encultured and encoded*. He defines **embodied** knowledge as knowledge that's gained through training of body to perform task, and (Hislop, 2010)Hislop(2013);Strati (2007);Yakhlef (2010) point out that it is impossible to totally disembody this knowledge from people. **Embedded** knowledge is a knowledge that's found in routines and systems. Organisational common tasks routines or common ways people go about their jobs, can hold embedded knowledge as the routines facilitate learning amongst the employees that go beyond their job tasks.

**Embrained** is defined as the knowledge that a person can possess, but has difficulty expressing in words or sharing with other. It's further described as a knowledge that one cannot easily write down, talk about with others, or represent with pictures or other tools. It's gained through experience over time and may reflect one perceptions, opinion, value and morals.

**Encultured** knowledge is described as a set of knowledge that's shared among groups of people who share a similar environment or culture, such as what is accepted, what actions opinions are considered normal, and what behaviours are expected of people. **Encoded** knowledge is a form of knowledge that can be easily written down, expressed in words or diagrams and transferable through multiple channels and means. Procedures manuals, guidelines, process diagram, flowcharts, recipes and instructions are all examples of encoded knowledge, because they are encoded in physical forms that are understandable by a lot of people. (Omotayo, 2015)

Therefore in organization it can be said that organizational knowledge is embodied and embained in staff, embedded in routines/common tasks, encultured among the staff, and encoded in manuals, guidelines and procedures. Davenport and prusak (2000) say that in organization knowledge becomes embedded not only in documents or repositories, but also in organizational routines, processes, practice, norms and cultures organizational knowledge is therefore the sum of the critical intellectual capital residing within an organization. It is an embedded knowledge which is found primarily in specialize relationship among individuals and groups and in particular norms, attitudes, information flows and ways of making decisions that shape their dealing with each other. (Badaracco, 1991).

#### **2.1.2 Types of Knowledge: Tacit and Explicit**

Tacit knowledge is difficult to articulate and difficult to put into words, text, or drawings. Explicit knowledge represents content that has been captured in some Tangible form such as words, audio recordings, or images.

**Table 2.1**

**Comparison of properties of tacit versus explicit knowledge**

Properties of tacit knowledge	Properties of explicit knowledge
<ul style="list-style-type: none"> <li>• Ability to adapt, to deal with new and exceptional situations</li> <li>• Expertise, know-how, know-why, and care-why</li> <li>• Ability to collaborate, to share a vision, to transmit a culture</li> <li>• Coaching and mentoring to transfer experiential knowledge on a one-to-one, face-to-face basis</li> </ul>	<ul style="list-style-type: none"> <li>• Ability to disseminate, to reproduce, to access and re-apply throughout the organization</li> <li>• Ability to teach, to train</li> <li>• Ability to organize, to systematize, to translate a vision into a mission statement, into operational guidelines</li> <li>• Transfer knowledge via products, services, and documented processes</li> </ul>

Source:(Daltir, 2005)

Tacit knowledge tends to reside within the heads of knower's, whereas explicit knowledge is usually contained within tangible or concrete media. However, it should be noted that this is a rather simplistic dichotomy. In fact, the property of tacitness is a property of the knower: that which is easily articulated by one person may be very difficult to externalize by another. The same content may be explicit for one person and tacit for another. There is also somewhat of a paradox at play here: highly skilled, experienced, and expert individuals may find it harder to articulate their know-how. Novices, on the other hand, are more apt to easily verbalize what they are attempting to do because they are typically following a manual or how-to process. Table 2.1 summarizes some of the major properties of tacit and explicit knowledge. Typically, the more tacit knowledge is, the more valuable it tends to be. The paradox lies in the fact that the more difficult it is to articulate a concept such as story, the more valuable that knowledge may be. This is often witnessed when people make reference to knowledge versus know-how, or knowing something versus knowing how to do something. Valuable tacit knowledge often results in some observable action when individuals understand and subsequently make use of knowledge. Another perspective is that explicit knowledge tends to represent the final end product whereas tacit knowledge is the know-how or all of the processes that were required in order to produce that final product.

A popular misconception is that KM focuses on rendering that which is tacit into more explicit or tangible forms, then storing or archiving these forms somewhere, usually some form of intranet or knowledge portal. The "build it and they will come" expectation typifies this approach: Organizations take an exhaustive inventory of tangible knowledge (i.e., documents, digital records) and make them accessible to all employees. Senior management is then mystified as to why employees are not using this wonderful new resource. In fact, knowledge management is broader and includes leveraging the value of the organizational knowledge and know-how that accumulates over time. This approach is a much more holistic and user-centered approach that begins not with an audit of existing documents but with a needs analysis to better understand how improved knowledge sharing may benefit specific individuals, groups, and the organization as a whole. Successful knowledge-sharing examples are gathered and documented in the form of lessons learned and best practices and these then form the kernel of organizational stories. There are a number of other attributes that together make up a set of what KM should be all about. One good technique for identifying these attributes is the concept analysis technique.

### **2.1.3 What is knowledge management?**

Knowledge management is a way of organization to take care of all the existing knowledge within the organization. Knowledge, have been serving as a key strategic resource or even the foundation of organization competitiveness in the contemporary economy. (wang& Aspinwall,2005;Chen,Huang & cheng,2009),knowledge management is recognized of high importance. From very early, KM can be defined as "an emerging set of organizational design and operational principles, process, organizational structures, applications and technologies that helps knowledge workers dramatically leverage their creativity and ability to deliver business value"(Gurteen,1998,p.6). KM can also be defined as the practice of selectively applying knowledge from previous experience of decision making to current and future decision making activities with the express purpose of improving the organization's effectiveness

### **2.1.4 Knowledge management processes**

According to (Alavi, 2001) define the four knowledge management presses:

#### **1. Knowledge creation**

Knowledge creation can be described as developing new or replacing existing content. Using (Nonaka, 1994) knowledge creation viewed as continual interplay between tacit and explicit dimensions of knowledge and growing spiral flow as knowledge moves trough individual

group and organizational levels .by that four modes of knowledge creation have been identified: **socialization, externalization, combination and internalization**

**Socialization** is the process of creating common tacit knowledge through interactions including observation, imitation, or apprenticeships. **Externalization** is the process of articulating tacit knowledge into explicit knowledge by means of metaphors, analogies, or sketches. Externalization converts tacit knowledge into explicit knowledge.

**Combination** is the process of assembling new and existing explicit knowledge into systemic knowledge such as a set of specifications for the prototype of a new product. Combination involves combining explicit knowledge through meetings and conversations or using information systems.

**Internalization** converts explicit knowledge into tacit knowledge. There are five conditions to encouraging the process of knowledge creation: intention, autonomy, creative chaos, redundancy, and requisite variety. Managers must be committed to accumulating, exploiting, and renewing the knowledge base within the organization and be able to create management systems that will facilitate the process. New ideas usually develop at the individual level, rather than at the group or organization levels, and the individuals generating it must be given scope to follow their initiatives. This process of exploration can be encouraged by creative chaos, where flux and crisis cause people to reconsider precepts at a fundamental level. Incentives can then be given to exchange knowledge rather than ration or hoard it. The organization should be made to be conducive to this.

## **2. Knowledge storage/ retrieval**

Organizational knowledge storage includes knowledge residing in various component forms, including written documentation, structured information stored in electronic databases, codified human knowledge stored in expert systems, documented organizational procedures and processes and tacit knowledge acquired by individuals and networks of individuals.

## **3. Knowledge sharing/transfer**

An important process of knowledge management in organizational settings is the transfer of knowledge to locations where it is needed and can be used.

The knowledge in the organization is not shared properly because there is not enough awareness about knowledge management. (waheed akbar Bhatt, 2010). How effective you are at sharing knowledge within your business is not solely about the tools and platforms available to you, but also be influenced by the wider culture at play. Is there a high degree of openness amongst your managers and employees, or do some people have a tendency to

hoard knowledge? Don't overlook this issue in terms of effect on the knowledge management drive. Here are some of the ways in which knowledge can be shared:

**A. Access to the resource centre**

Of course, all managers require access to the electronic and hard copy components of the resource centre and as such the information should be appropriately catalogued for ease of access. It should also be possible for managers to add to the resources over time when they have something of value worth sharing so the resource is constantly growing. Ensuring the security of your information is naturally always a concern, but that is an issue for the business as a whole and not just in relation to knowledge management so you should already have strong protections in place for important business information.

**B. Training and development**

Naturally training and development has a vital role to play in the transfer of knowledge and it is important that any training courses offered in your business, particularly at management level, help to bridge identified knowledge gaps. This requires greater collaboration with external training providers in terms of programme content and design.

On-the-job training/coaching/mentoring

These activities help to encourage the sharing of tacit knowledge and as such they should be encouraged and widely applied.

**C. Meetings**

Meetings are of course an ideal opportunity to share knowledge and this happens to some degree as a matter of course as part of normal discussions. However, it is also worth considering introducing a learning component to every management meeting whereby a short presentation is included on an important topic which you have identified as a knowledge gap.

**D. Manuals/notice (Boards/newsletters)**

In addition to their informational value, these various tools can be helpful in sharing a short, concise burst of knowledge and often this can be presented in a visual way (Irela, 2013).

**4. Knowledge application**

Bhatt (in mills & smith, 2011) stated that: "knowledge application means making knowledge more active and relevant for the firm in creating value. For organizations to create value they need to apply knowledge to their products and services by various means such as repackaging



available knowledge, training and motivating its people to think creatively and utilizing people's understanding of the company processes, products and services(Mill & smit,2011).

## 2.2. Knowledge management factors

In order to manage knowledge effectively, attention must be paid on to three key Factors: organizational culture, structure and technology (Mill & smit, 2011).

### 2.2.1 Organizational culture

The convergent theories about organizational culture claim that, there is a unified consolidate culture in an organization which is distinguished as something which provides constancy between cultural factors (fundamental suppositions, values, artifacts (cultural manifestations))among people and different units. (Schein ,2004). Suppositions or fundamental beliefs are indicative of explanations and interpretation which people would use them to understand truths around themselves and make these truths more tang able and understandable for themselves. As people in an organization decide to expose problems and use opportunities, these suppositions would be formulated, afterwards they would be transmitted to other members of the organization. When we can say that a specific culture has emerged when, all members of an organization believe these suppositions and beliefs. Values are more observable indications of fundamental beliefs, as they show some norms of the society and such norms would consequently define rules based on which people would interact. (DeLong and Fahey ,2000). Values would formulate a basis for social control in an organization due to their identification of accepted behaviors. Artifacts (cultural manifestation) are considered as the most obvious aspects of a culture. One of the cultural products related to the knowledge management is open knowledge base in an organization which stands as the symbol of values and fundamental cultural suppositions of that organization. Researchers believe that there exists a unified cultural unit which is considered as a unit or a powerful norm which makes the structure of an organization coherent; it is able to join and coordinate potentially differing parts of an organization. (Meyerson and Martin ,1987).

Four Different Cultures Based on Comeron and Quinn's (1999) theoretical framework about competitive values, four distinctive kinds of culture can be identified:

- a. Group (tribal) culture
- b. Developmental culture (adhocracy)

- c. Hierarchical culture
- d. Market (logical) culture

**a) Group (tribal) culture:**

In family culture emphasis is put on the internal concentration as well as flexibility. Valuable aspects of this culture are team work, freedom, participation and extension of the personal. Organization is emphasizing on developing a human work environment in which personnel participation, commitment and loyalty are distinguished.

**b) Developmental culture:** The emphasis of this culture is on the external concentration and flexibility. Compatibility, flexibility and creativity are among the main values of this culture. This kind of culture exist within expert organizations which has temporal group works and are formed to accomplish tasks which need high levels of technology and also the task in uncertain and ambiguous.

Risk taking personality and also ability to predict are of great importance in this kind of culture.

**c) Hierarchical culture:** It emphasizes on internal concentration and constancy. Its main values consist of constancy, efficiency and predictability. This kind of culture is found in organizations which have hierarchical formal places for work or are managed by official formal rules and processes.

**d) Market (logical or reasonable) culture:** In market culture, external concentration and constancy are emphasized competitive nature, accomplishing goods and productivity are among its central values. An organization which in formed based on this culture is after competition with other rival organizations, also with concentration on customers in trying to return its money.

#### 2.2.2. The Relationship between Culture and Knowledge Management

Culture can affect knowledge management in different ways. As knowledge and it's related findings can penetrate into culture, organizational culture is also affected by knowledge management. The logic behind cultural knowledge management is that presupposed specific values of an organization can result in favorable as well as unfavorable behaviour and also resulting knowledge management processing. For example positive aspiration and motivation for exchanging knowledge, dominance of a good content is an organization and reciprocal trust between, personal would affect knowledge management in a positive way. On the other

hand negative competition and unwillingness for sharing knowledge are among factors which affect knowledge management adversely. The result of the one of the most recent studies indicated that this is not true in all organization. (King and Marks, 2008).

### 2.2.3 The Effect of Organizational Culture on Knowledge Management

Two researchers believe that organizational culture (organizational subcultures) could affect KM in four different ways (DeLong and Fahey, 2000).

1. Supposed culture which indicates the most important kind of knowledge.
2. Culture in interpersonal and organizational relations act as a mediator variable.
3. Culture set the scene, for social interaction (reciprocal relationship between members of an organization).
4. Culture formulates needed processes for modern knowledge production and selection. Suppositions exist in the essence of culture as the central element in evidently one of the most important of such suppositions is related to organizational knowledge. The second way in which culture can affect knowledge management is related to regulation and permanent use.

There is a question here that who dose possess the knowledge, an individual or an organization. Sometimes knowledge is formal but most of the time it has formal and implicational nature with consequential behaviors in organization. The issue of possession depends on the people's viewpoint about the possession of their personal knowledge. The crucial role of trust and confidence is evident here. So that accepted norms also play an important role in relations between different responsible units in organizations for strengthening or weakening culture of knowledge. For example Gold Et.al.concluded that organizations which show more supportive and open value tendencies has more potentials to show behaviors which would result in knowledge creation. Two other researchers also studies university personnel. They found that shared organizational values would affect personnel's perception of knowledge possession. (Jarvenpaa and Staples ,2001). The third way by which organizational culture affects KM is related to the role of culture in creating a basis for social interaction. Reflection of such a role can be observed in issues such as standard methods about goal, abundance and time duration of meetings, appropriateness of using electronic mail for contacting managers, bosses and supervisors. Culture also formulates some processes for knowledge production and selection. Personnel's perception of organization's view about defeats and mistake are among important factors of this role. In some

organizations mistake which could be explained and justified logically are accepted or even welcomed, but in other organizations only one mistake or defeat (even unintended and low cost) can terminate in dismissal of an employee. It is clear that risk taking and new knowledge creation depend on organizational view. In spite of strong beliefs about chief effects of organizational culture on KM studies about organizational factors about behaviors related to knowledge have show paradoxical results about norms which reinforce knowledge transference in organizations ( Huber, 2001). In fact appropriate culture can provide the situation for appropriate knowledge management in an organization ( Luin and Mullin ,1996). Therefore each research about the effect of culture on knowledge management should concentrate on the most eminent affecting factors on knowledge management. Although four above mentioned problems are emphasizing the effect of organizational culture on knowledge management but knowledge management would also affect organizational culture, because suppositions, values and cultural artifacts are all among major affecting factors on new knowledge. Production (King ,2007). Organizational culture would be structured when the beneficences of a new method is proved.

#### 2.2.4 Organizational structure

Stoner and Wankel define organizational structure as the arrangement and interrelationship of the component parts and positions of a company. The authors focus mostly on the configuration of organizational components and relationships between them. In wider definitions the term is explained as “the established pattern of relationships between the components parts of an organization, outlining both communications, control and authority patterns. Structure distinguishes the parts of an organization and delineates the relationships between them” [Wilson et. al. 1990, p. 215]. Emphasis is thus put on communication and control.

The nature and basic functions of organizational structure have changed for decades. Traditional structure is close in its nature to Weber’s ideal bureaucracy and Burns and Stalker’s mechanistic model. The major characteristics of this form are: strict and rigid definition of tasks, a high number of organizational levels, vertical communication, centralized authority, formal influence, standardized activities, and a high level of formalization. Numerous findings prove that this model is effective in simple and stable conditions - see research works conducted by Lawrence and Lorsch or Burns and Stalker.

The organic model is a logical opposite – flexible division of tasks, low standardization, flat structure, hierarchy, and low formality of rules. According to numerous experts this type of organizational design is developed for knowledge-based organizations that operate in dynamic milieu. There are faster flows of information and knowledge in the organic structure, which additionally facilitate the exchange of experience and individual’s unlimited creativity. The following four sections are devoted to the examination and presentation of the advantages and disadvantages of the knowledge

management process in the most common organizational designs – functional, divisional, matrix, and project.

#### a. Functional Structure and Knowledge Management

The functional design is the most basic one. The idea is to group employees who perform similar tasks and activities in one department of an organization. The functional structure tends to centralize coordinating and decision making at the top organizational level. What is the knowledge management process like in the functional design? First we should point out that there is a good flow of knowledge and information within a department thanks to the similarity of tasks and activities. Such circumstances also foster knowledge creation, because specialists in the same discipline are grouped together in one department. Their common field of interests and similar education facilitates organization of training courses within the department. Another advantage is that such conditions are favorable for organizing databases. The collected information can be kept in one central library, administrated by specialized staff, and catalogued in a logical way, e.g. each department has access to the most important information related to its field of activity. The major disadvantage is a poor flow of information and knowledge between departments. Members are often isolated or even hostile to one another as a result of strict functional division. Moreover, the lack of coordination across the functions results in low innovativeness – ideas for new products and the implementation of new methods and technologies often get lost because of the need to communicate or to generate support across departments [Aldag, Stearns 1987, p. 297]

#### b. Divisional Structure and Knowledge Management

According to Chandler's theory, a result of organizational growth and product diversification (or market, or customer), the divisional structure appears. The divisional design means that all activities needed to produce a good or services are grouped together into an autonomous unit. It tends to decentralize decision making by pushing authority and responsibility down to the lower level. Knowledge management in the divisional structure differs significantly from the type discussed above. Generally the flow of knowledge and experience is efficient within the divisions were set apart. Flows between particular divisions however are limited and poor. Low functional specialization does not facilitate learning and specializing processes. Employees are obliged to handle all activities related to the business units they are hired in: from supply, logistics and production, to sales, marketing and finance. So individuals have good conditions for creating and developing more general rather than specialized knowledge. Horizontal flows of information and knowledge do not exist in the divisional structure. In fact, their usefulness can be questioned. When divisions operate in different fields, e.g. totally different products or markets, the one holistic knowledge management in an organization system is not needed. Because of the large size of organizations and their diversified

activity, numerous problems with the location of database or knowledgebase appear within an organization. How to manage it? Who should be responsible for data storage and sharing? Should it be centralized or decentralized? These and many other questions arise when we organize knowledge identification, collection and distribution in a large company. One universally correct does not exist. For this reason each case should be studied individually so that the most effective model could be found.

#### c. Matrix Structure and Knowledge Management

Due to an increase in the complexity and changeability of the organizational environment, the matrix design appeared. It is a stable and permanent form of organization based on horizontal and vertical relationships (both functional and divisional structures concentrated on vertical ones). It combines functions with products, projects, or markets, as the result of which each unit reports simultaneously to two directors. The information and knowledge flows are multidirectional in this case and most experts regard the sharing of information as the major strength of the matrix form. Also knowledge creation can be more effective if various specialists cooperate with each other and are all engaged in problem solving and knowledge creation and update processes. To conclude, in spite of its weaknesses that are exemplified in practice, the matrix organization is a good form in terms of knowledge management.

#### d. Project Structure and Knowledge Management

Organic organizational forms like project structures or task forces, which are based on temporary teams, seem to be the most flexible and suitable for the knowledge management process. Many authors present this kind of structures primarily in terms of its advantages. Is it really the best solution for the knowledge management process? Specialists and experts engaged in projects are members of particular teams and they focus mainly on goals, dates, and budgets, rather than on creating knowledge or sharing experience. There is no place, tools, and motivation for such an exchange. Individuals meet to perform particular tasks or solve problems, and after completing the tasks, each of them goes their own way taking his knowledge and experience with them. In a traditional organization all specialists in the same discipline, even if they complete different tasks and work on different projects, share rooms, report to the same supervisor, attend the same courses and meetings, etc. In the pure project structure they do not have an opportunity to generate new organizational knowledge and share their experience, which can be seen as the major disadvantage of the organic form. Is there any possibility to make use of the flexibility of the organic structure and avoid the above mentioned obstacle? Nonaka developed the "hypertext organization", which blends the strengths of bureaucratic efficiency and standardization with those of task force flexibility and dynamism. The hypertext organization combines the "business system layer", the "project team layer", with a value-added feature of the hypertext organization called the "knowledge base layer". In the business system layer routine, day-to-day operations are carried out. It operates along the lines of

the bureaucratic model. It is here that products and services are delivered and it is here where the vast majority of tacit knowledge is found within the organization. The business system layer is that part of the organization that deals directly with the customers and whole environment. The project team layer is where multiple project teams engage in knowledge-creating activities, such as new strategies or product development. This layer operates along the lines of the task force model whereby individuals are drawn from their normal responsibilities to participate in a project team with a specific objective and time frame for completion. This is where knowledge conversion takes place, pulling tacit knowledge from individuals from the business system layer and engaging this knowledge towards developing new concepts, ideas and products. Once the project is completed, individuals return to their normal roles and responsibilities within the business system layer. The knowledge base layer is where knowledge generated in the above two layers is codified and stored to ensure accessibility to everyone in the organization. The most effective organizational knowledge base is structured around organizational intent – vision, long-term objectives, performance expectations. What very important is that staff must be capable of moving between these three layers with relative ease and ability to separate their mindset and business practice.

#### **2.2.5 Technology/ICT and Knowledge Management**

The last factor of KM is *Technology/ICT*. Technology is a critical enabler and foundational element of KM plan. With the advances in ICTs, KM can be attained through technological solutions. ICTs also facilitate KM activities through the codification of knowledge as well as rich and interactive forms of communication through internet. While technology is important and can significantly enable KM it is pertinent to state that is not a solution in and of itself. Technology does not make organization share knowledge but, if people want to share it. Technology can increase the reach and scope of such exchanges. Putting an ICT-based KM system in place is not in and of itself going to make people utilize it, but the success of KM initiatives involves taking account of socio-cultural factors which inhibit people's willingness to share knowledge, such as conflict, trust, time, or concerns about loss of power/status (Sun qne Scott, 2005).

Technology/ICT provides a number of functionalities that may enable knowledge management. As discussed above on knowledge creation let us First consider the role of IT in supporting the knowledge creation spiral proposed by Nonaka and Takeuchi. Socialization requires interaction between two or more persons with similar and/or overlapping interests. Communication, coordination, and group process support functions offered by IT are useful in facilitating the socialization process. Many organizations set up yellow pages that list experts and their field of expertise. Such yellow pages facilitate socialization by pointing to the source of tacit knowledge. The yellow pages use the

storage and retrieval function. The search process associated with these pages may be enhanced through information location function.

Externalization converts tacit knowledge into explicit knowledge. Knowledge acquisition techniques and tools can facilitate this process to some extent. Combination process creates explicit knowledge through transformation, analysis, and integration of available explicit knowledge. All IT functions with the exceptions of communication, coordination, and group process support are useful in facilitating combination. Internalization converts explicit knowledge into tacit knowledge. Knowledge location, browsing, filtering and retrieval functions are useful in finding appropriate knowledge, while analysis and presentation functions are useful in assimilating knowledge from its explicit form into tacit form.

Managing explicit knowledge requires significant investment in IT (Hansen et al., 1999). Knowledge extracted from experts, organizational policies and procedures, problem solving episodes, etc. are captured in the organizational knowledge base. Browsing, presentation, location, and filtering functions are deployed to provide knowledge workers access to this knowledge. An expert system may also be used as a vehicle for knowledge reuse (Liebowitz and Beckman, 1998). IT, thus, plays a key role in facilitating knowledge creation and management

### **2.3. Organizational performance and its measurements**

Increasing organizational performance is a goal of every organization. Organizational performance can be most simply defined as company performance compared to goals and objective.

performance measurement is like a speedometer, compass or mirror of a vehicle portraying information about past, current and expected positions of the organizational .Performance measurement is virtually always important in management, especially in highly competitive, dynamic, complex, and global environments where managers are expected to have a strong grasp on dozens of issues (Fleisher, 2003). This is particularly true in ensuring that organizations determine, implement and adapt organizational strategies successfully. An organisation's strategy is the rudder that steers the ship (Ross & Kami, in David, 2003:1).

Measuring organizational performance was in the past limited more or less on financial measures in the form of revenue, profit net operating income, Return on Asset (ROA), Return on equity (ROE), Return on sales (ROS) and other mostly revenue and profit related measures. Although very practical and useful, traditional financial measures cannot create advantages for the organization in intense competitive environment (Wu & Liu, 2010) .New organizational concept demanded additional measurement information in order for managers



to make proper decision and for shareholder to properly evaluate company performance. New financial and especially non-financial information in measuring performance became more or equally important and provided added value to stakeholders. By incorporate non-financial information in performance criteria as well; this information can reflect intellectual capital and social responsibility as well as promotion of organizational knowledge level.

New measurement concept and models of organizational performance emerged into business world like Economic value added (EVA), market value added (MVA), integral measurement concepts like BSC that contain *customer's perspective, internal process perspective, learning and growth perspective*, customer's perspectives like human resource, output, stakeholders satisfaction, strategy and process alignment, operational performance, value creation, corporate vision, organizational growth, competitive advantage etc.

#### **2.4 Relationship of Knowledge Management to Organizational Performance**

Organizational performance is described as an organization's ability to acquire and utilize its scarce resources and valuables as expeditiously as possible in the pursuit of its operations goals (Griffins, 2006). There has not been many researches done to link organizational performance and KM, but researchers have implicated that the more knowledge organizations can capture the higher is their performance. Managing knowledge does not necessarily improve performance, but the knowledge managed should be linked to utilization and development of an organization to gain better performance (Kalling, 2003). Although the concept of KM is well-known, only a small number of organizations are capable to link KM to enhance organizational performance (Zack, 2009). (Ikhsan, S. and Rowland, F. , 2004) , report that organizations should transfer knowledge from one unit to another to gain an overall performance. The ability to apply knowledge to perform important activities is viewed as a source of competitive advantage. When knowledge is managed to improve development and subsequently utilized by individuals, only then KM can be used to improve performance. (Farshath, 2004) concluded his study stating that Maldivian organizations are aware of the concept of KM to some extent and is moving towards better implementation of KM but the effect on the organizational performance has never been a subject of research in the country in case of ESLSE.

## 2.5 Empirical review

The importance of knowledge has been stressed by many management researchers and authors. Peter Drucker has declared that knowledge is just not another resource like labor, capital, but is the only important resource today. Toffler subscribes to the views of Drucker, by proclaiming that knowledge is the source of the highest-quality power and is the key to the power shift that lies ahead. Quinn shares a similar view while stating that the economic and the producing power of modern organisations lies more in its' intellectual assets and capabilities more than the other tangible assets. Nonaka and Takeuchi have focused on how Japanese companies have leveraged their knowledge assets to gain competitive advantage and industry leadership Davenport has defined knowledge as a 'fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of the owners of knowledge. In organizations, it often becomes embedded not only in documents or repositories, but also in organizational routines, processes, practices and norms' with The level of knowledge available in a workforce is not enough to influence organization's processes, but its integration into production is the key to competitive advantage. It shows that boundaries and governance structures are determined by the value to be derived from using employees' knowledge. The competitive advantage therefore is dependent on the firm's ability to continuously configure and integrate knowledge into value creating strategies. To put it short, possession of knowledge is not enough but its integration, transfer and re-use are essential to derive a competitive advantage for the organization. Knowledge is not created and held by organizations but by individuals. The knowledge is then applied by firms in the production of goods and services. Therefore, management is burdened with the responsibility through the organization's practice to help tap into employees' knowledge and successfully transfer it to the organization for optimal productivity and profitability. The organizational practice focuses on factors that are included in this process (Morrison, 1992) In the age of e-economy, business organizations need to reconsider the process of doing business as well as incorporating KM practices into it to be more competitive. Awad and Ghaziri (2004) support this statement by saying that KM is the ultimate competitive advantage for today's organizations. KM is embedded in many key areas such as economics, information management, business environment and in the human psychology. In addition, Hwang (2003) in his article quotes Leonard (1995) "Managing knowledge is a skill, like financial acumen, and managers who understand and develop it, will dominate competitively". To create a KM environment and to be competitive

organization, it is necessary to choose the appropriate desirable environment in which the organization can adopt the changing concepts (Nonaka, 1998). Assimilation of KM and adopting a culture that supports knowledge sharing can bring change in organizational performance (Hwang, 2003).

Technology is an important aspect to successfully organize and share knowledge. With the help of technology, organizations can build the infrastructure and tools to support the expansion of KM (Mathi, 2004). IT facilitates organizations to use knowledge for organizational efficiency and effectiveness (Lang, 2001). Furthermore, IT provides suitable environment for learning and interaction among the employees of an organization. Systems like expert systems are used in organizations to capture and manage knowledge (Gumbley, 1998). However, Gumbley (1998) states that although the technologies exist to manage knowledge, technology is not the key success factor in creating a successful KM environment in organizations. Davenport and Prusak (1998) supports them by arguing that the emphasis on the role of IT in KM is somewhat exaggerated (Hwang 2003; Davenport and Prusak, 1998). However, the above studies reveal that KM could partially accelerate obtaining competitive advantage for an organization by assimilating the skill and application of IT knowledge. IT knowledge is a key tool to facilitate KM practice in organization for better performance.

Knowledge Management (KM) has been the subject of much discussion over the past decade. Organisations are told that they will not survive in the modern Knowledge Era unless they have a strategy for managing and leveraging value from their intellectual assets, and many KM lifecycles and strategies have been proposed. However, it has become clear that the term "Knowledge Management" has been applied to a very broad spectrum of activities designed to manage, exchange and create or enhance intellectual assets within an organisation, and that there is no widespread agreement on what KM actually is. IT applications that are termed "knowledge management applications" range from the development of highly codified help desk systems to the provision of video conferencing to facilitate the exchange of ideas between people

Knowledge Management can be thought of as the deliberate design of processes, tools, structures, etc. with the intent to increase, renew, share, or improve the use of knowledge represented in any of the three elements [Structural, Human and Social] of intellectual capital. Adoption of KM in an organization is not a complicated process because employees are one way or another, already got into the habit of using undefined KM in their daily

official undertakings. Thus, organizational culture is at a close position to assimilate KM. During KM adoption within an organization, cultural setting must be a concern in the context of the ability and acceptance by the employees (Gumbley, 1998). Furthermore, the approach of adopting KM is somewhat extent related to the internal culture of organization. Therefore, when organizational cultures are rigidly bureaucratic, interactions are formal and hierarchical with limited participation that leads to the exchange of knowledge within a paradigm that is forced from the top management (Lang, 2001). According to Drucker (1998), knowledge is more concentrated in service staff; knowledge tends to be floating between the top management and the operational staff. The culture must be changed to infuse knowledge at all levels of the organization to obtain efficient human resource. Hence, to make KM effective, organizations need to adopt such a culture which provides an environment of sharing knowledge to accelerate success (Robbins, 2003).

There is no many researches done to link KM and organizational performance, but researchers have implicated that the more knowledge organizations can capture the higher the performance. Managing knowledge does not necessarily improve performance, but the knowledge managed should be linked to utilization and development of an organization to gain better performance (Kalling, 2003). Although the concept of KM is well-known, only a small number of organizations are capable to link KM to enhance organizational performance (Zack, 1999). (Ikhsan, S. and Rowland, F. , 2004) report that organizations should can transfer knowledge from one unit to another in order to gain an overall performance. The ability to apply knowledge to perform important activities is viewed as a source of competitive advantage. When knowledge is managed to improve development and subsequently utilized by individuals, only then KM can be used to improve performance. Farshath (2004) concluded his study stating that Maldivian organizations are aware of the concept of KM to some extent and is moving towards better implementation of KM but the extent to which KM is practiced has never been a subject of research in the country.

In Ethiopia, a research which focuses on knowledge management in Agricultural Sector by Ermias Sehai in 2006 from International Livestock Research Institute has been conducted. The study shows knowledge management system will have a positive impact on the development of Ethiopian agriculture sector. The other study is about Knowledge Sharing Practice in CBE which was conducted by Habtamu Mohammed in 2011. The result of the study revealed that the bank has relatively in a good position in synthesizing explicit knowledge from the existing explicit knowledge to come up with organizational knowledge.

However, the culture of tacit-to-explicit and explicit to tacit knowledge sharing is minimal. The major barrier to share knowledge among employees of the Bank was lack of time for externalizing existing knowledge and internalizing new knowledge. As a result, the researcher recommends for the Bank to arrange appropriate time for enabling knowledge sharing practice among employees but limited researches are done in showing the effect of KM and organizational performance. The Impact of Knowledge Management on Organizational Performance: The Case of Ethiopian Insurance Corporation by Ibrahim Abdela, is one of them showing the impact but this study did not investigate an exhaustive list of determinants of knowledge management processes (like knowledge storage, knowledge transfer, knowledge application) that could impact organizational performance.

In this study, the researcher investigated whether there is a sustainable link between KM and the performance in organization using KM processes and KM factors. Knowledge management process refers to the creation, storage, transfer and application of knowledge within the organization and KM factors are organization structure, culture and technology. They are deliberately taken together to show their combination and individual contribution to affect organizational performance. The researcher thinks it's important to show the link of knowledge management with the organizational performance.

#### **2.6 conceptual frame work of the study**

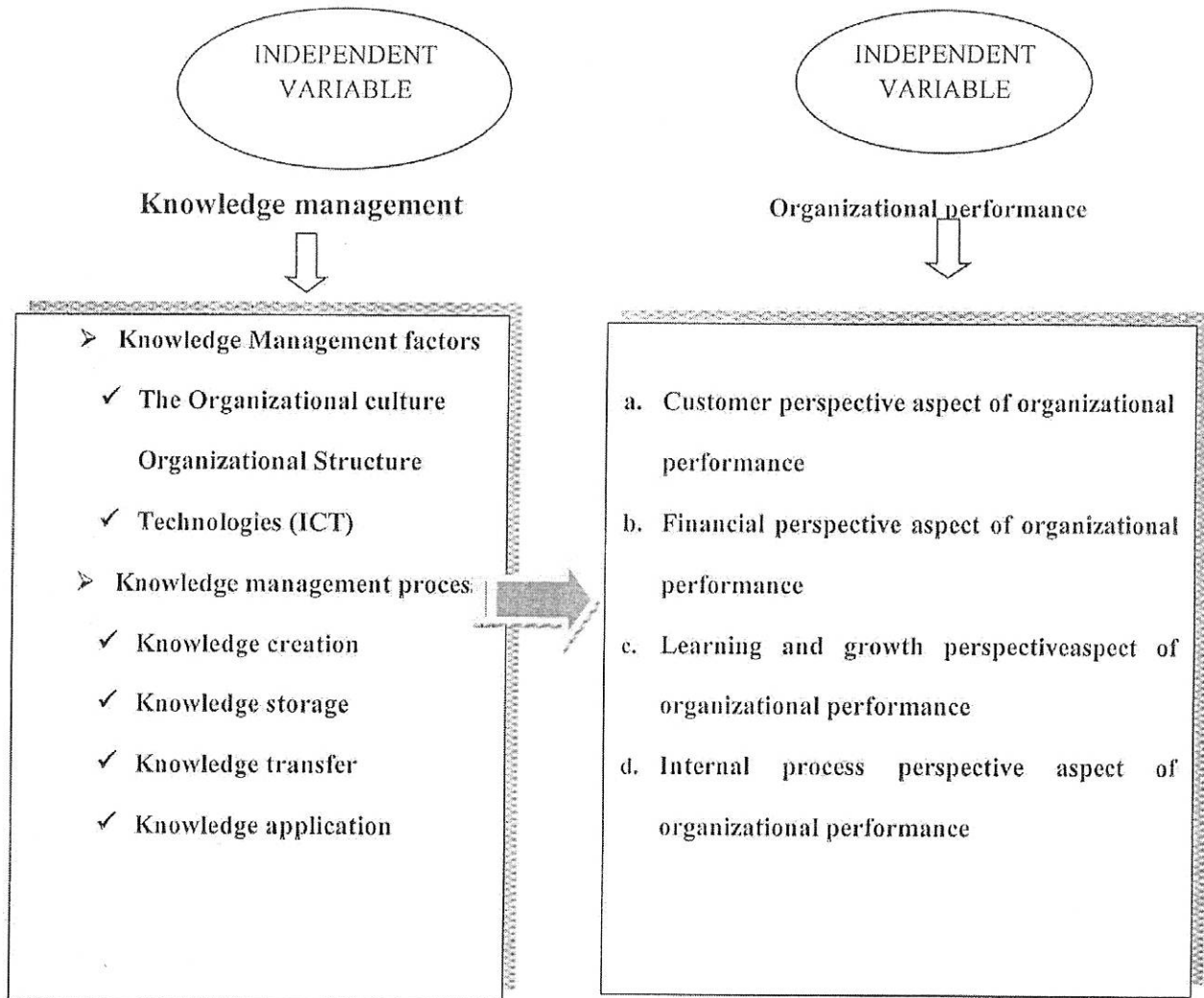
Based on the previous empirical research and theoretical argument for the relationship between knowledge management and organization performance, this study develops the following conceptual frame work.

A conceptual framework is a theoretical structure of assumptions, principles, and rules that holds together the ideas comprising a broad concept. It is a system of concepts, assumptions, expectations, beliefs, and theories that supports and informs to design a research method. It is used to make conceptual distinctions and organize ideas. Strong conceptual frameworks capture something real and do this in a way that is easy to remember and apply.

Figure 2.1 shows the conceptual frame work of the study. On this study the dependent variable is organizational performance (measured in three perspectives as customer, learning & growth and internal process) and the independent variables are knowledge management factors that are organizational culture, structure, Technologies (ICT) used in the organization

and the knowledge management processes that are Knowledge creation, storage, transfer and application.

Figure 2.1 Conceptual frame work of the study



Source; previous study and own develop, 2018

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1. Research design

According to Dooley the nature of problem and objective of any study usually determine the type of research design adopted by researcher. The major objective of this study is to obtain the evidence regarding the effect of knowledge management practice on organizational performance in the case of Ethiopian Shipping and Logistics Services Enterprise. Whether there is a cause and effect relationship between variables, explanatory research must be undertaken (Shields, 2013). Since, this research objective is to identify the extent and nature of cause-and-effect relationships between knowledge management and organization performance the research adopts *Explanatory* research method analysis.

#### 3.2. Data type and source

##### 3.2.1. Data type

Quantitative research approach is based on the development of testable hypothesis and theory. Quantitative investigations tend to measure “*how often*” or “*how much*” (kenova and jonnason,2006).by utilizing this method the researcher ry to measure effect of knowledge management practice on organizational performance in the case of Ethiopian Shipping and Logistics Services Enterprise.

##### 3.2.2. Data sources

###### *a. Primary source of data*

By using questionnaire this study collect primary data from the sample respondents. The questionnaires have four parts and some of the questions are taken from the research done on 2016 by Ibrahim Abdela on "The Impact of Knowledge Management on Organizational Performance: The Case of Ethiopian Insurance Corporation" and modifications are made relating to the objective of this study.Using a five-point Likert-style responses ranging from “strongly disagree” to “strongly agree” (1 = strongly disagree, 2 = Disagree,3 = Neutral /Not sure, 4 = Agree, 5 = Strongly agree).

#### b. Secondary source of data

Secondary information has been gathered from various journals, articles, previous researches, books, and reports of Ethiopian Shipping and Logistics Services Enterprise (ESLSE).

### 3.3. Total Population

Ethiopian Shipping and Logistics Services Enterprise have a total of 3,798 employees and of that 798 (male 463 and female 335) works as employees at Head Quarter. (Monthly report October, 2017). To this study the researcher has taken 139 office based workers as total populations who are permanent at head office and have at least six years' experience in the enterprise.

### 3.4. Sampling techniques

This study use Purposive sampling technique, which is a non-probabilistic sampling technique. There are two reasons to use Purposive sampling technique in this study. The First reason is limitation of time and resource, since academic schedule is limited time and it may needs huge amount of resources to conduct study on the total population of ESLSE Because, the enterprise have eight inland ports in the country and one foreign branch in Djibouti. Secondly in order to collect quantitative data from the sample element judgmental sampling is appropriate because some characteristics required to select the sample like a respondent should be an employees at head office who have at least six years' experience in ESLSE, as the researcher believe individuals who have more years' experience with in one company are able to give more information about the company.

### 3.5. Sample size determination

Since there is an academic schedule so very limited time and resources to conduct the study on the total population this study use sample size formula for proportion.

According to (Cochran, 1977) stated the following sample size determination formula for Finite population:

$$n = \frac{N}{1 + Ne^2}$$

Where:

n= Sample Size for finite population

N = Total population of the study

e= Margin of Error (allowable error)



Based on the above formula and by using 5% margin of error (the amount of error that the researcher can tolerate), 95 % confidence level (tells how sure the researcher can be) from 139 populations (permanent office based employees at Head Quarter who have at least six year experience in ESLSE) the sample size of this study is 103.

$$n = \frac{139}{1 + 139(0.05)^2}$$

$$n = \underline{103.15 \text{ approximately } 103}$$

### 3.6. Data analysis techniques

The quantitative type of data is obtained through questioner and analyzes using the Statistical software's, to present a profile of the respondents, to identify the mean and standard deviation of the variables. Then, simple Regression analysis is used to analyze the data and find out the effect of knowledge management practice of Ethiopian Shipping and Logistics Services Enterprise on organizational performance.

(Brooks, 2008) by his book indicates that to analyse the relationship between dependent and independent variables and he develop the following model specification:

$$Y_{it} = \beta_0 + \sum \beta_K X_{it} + \epsilon_{it}$$

Where:

- $Y_{it}$  represents the dependent variables for time period  $t$ .
- $\beta_0$  is the intercept.
- $\beta_K$  represents the coefficients of the  $X_{it}$  variables.
- $X_{it}$ , represents the explanatory variables for time period  $t$ .
- $\epsilon_{it}$  is the error term.

Based on the above general empirical research and other similar researches this study adopted the following peculiar equation to find out the effect of knowledge management practice on organizational performance in Ethiopian Shipping and Logistics Services Enterprise. The equation is stated as follows:

$$Y = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + \epsilon$$

Where,  $y$  is the measure value of organizational performance or the value of dependent variable.

$\alpha$  = Constant term (coefficient of intercept)

$b_1, b_2, b_3, b_4, b_5, b_6, b_7$  are coefficient of the independent variables (regression coefficient).

- x<sub>1</sub> = Knowledge creation
- x<sub>2</sub>= knowledge storage
- x<sub>3</sub> = knowledge transfer
- x<sub>4</sub>= knowledge application
- x<sub>5</sub>=organizational culture
- x<sub>6</sub>= organizational structure
- x<sub>7</sub>=technology
- ε= Error term

### 3.7. Reliability and Validity

The term reliability is defined as consistency of measurement or stability of measurement over a variety of conditions in which basically the same results should be obtained (Bollen, 1989), There are various reliability coefficients. The most popular and commonly used technique to estimate reliability or internal consistency in the behavioral sciences is coefficient alpha often referred to as Cronbach's alpha which was developed by Lee Cronbach in 1951 to provide a measure of the internal consistency of a test or scale; it is expressed as a number between 0 and 1. Value of 0.7 or less generally indicates unsatisfactory internal consistency reliability (Cronbach, 1971). Internal consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is connected to the interrelatedness of the items within the test. Coefficients of internal consistency increase as the number of items goes up, to a certain point.

In this study the scale reliability was checked by Cronbach's alpha Reliability test for all items of knowledge management factors and process. A summary of the reliability statistics of the data from the SPSS version 20 is presented in Table 3.1.

**Table 3.1 test of reliability for all items**

Variables	N items	Cronbach's Alpha
Knowledge creation	7	0.992
knowledge storage	5	0.721
knowledge transfer	8	0.924
knowledge application	6	0.89
organizational culture	5	0.975
organizational structure	3	0.732
Technology/ICT	4	0.82

Source: own computed from data, 2018

A Chronbach alpha is an important concept in the evaluation of assessments and questionnaires. It is mandatory that assessors and researchers should estimate this quantity to add validity and accuracy to the interpretation of their data.

The value of chronbach alphas for this study is above 0.7 for all scale variables so the data collected from respondents is reliable and consistent with the scale chronbach L.J (1971). In simple term the result is confirmed the reliability and consistency of the questionnaire.

### 3.7.1 Factor Analysis: validity/construct validity

This analysis is useful for assessing factor validity/construct validity. The main measures used to test the validity of an instrument in factor analysis include Extraction communalities, The Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's test of sphericity.

### 3.7.2 Extraction communalities

Extraction communalities are estimates of the variance in each variable accounted for by the components. The communalities values indicate that the extracted components represent the variables well. Thus, small values indicate variables that do not fit well with the factor solution, and should possibly be dropped from the analysis.

From Table 3.2 below, all the ratio of knowledge management dimension questions item communalities are larger than the minimum level of 0.5, so communalities values indicate that the extracted components represent the variables well. The same is true for organizational performance items.

**Table 3.2 Communalities of knowledge management dimension items**

#### Communalities

	Initial	Extraction
The_Organizational_culture_in_ESLSE	1.000	.647
Organizational_Structure_in_ESLSE	1.000	.707
Technologies_ICT_used_in_ESLSE	1.000	.841
Knowledge_creation_practice_in_ESLSE	1.000	.654
Knowledge_storage_in_ESLSE	1.000	.737
Ways_in_which_knowledge_can_be_shared_in_ESLSE	1.000	.889

Knowledge_application_in_ESLSE	1.000	.676
Measuring_customer_perspective_aspect_of_performance	1.000	.821
learning_and_growth_perspective_organizational_performance	1.000	.550
internal_process_perspective_organizational_performance	1.000	.878
organizational_performance	1.000	.952
knowledge_management_factor	1.000	.996
knowledge_management_process	1.000	.954

Analysis source: own computed from survey 2018

### 3.7.3 KMO (Measure of Sample Adequacy)

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is a statistic that indicates the proportion of variance in the variables that might be caused by underlying factors. High values (close to 1.0) generally indicate that a factor analysis may be useful with your data. If the value is less than 0.50, the results of the factor analysis probably won't be very useful. (source: www.statisticshowto.com)

**Table 3.3 KMO and Bartlett's Test for knowledge management process**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.808
Bartlett's Test of Sphericity	Approx. Chi-Square	231.109
	Df	120
	Sig.	.000

source :own computed from survey,2018

**Table 3.4 KMO and Bartlett's Test for knowledge management factors**

#### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.642
Bartlett's Test of Sphericity	Approx. Chi-Square	112.163
	Df	6
	Sig.	.000

Source: own computed from survey, 2018

Table 3.5 KMO and Bartlett's Test for organizational performance  
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.565
Approx. Chi-Square		170.551
Bartlett's Test of Sphericity	Df	3
	Sig.	.000

Source:own computed from survey, 2018

On the above table 3.3,3.4&3.5 The calculated Kaiser-Meyer-Olkin (KMO) measure of sample adequacy is 0.808, 0.642 and 0.565 for the independent variables (knowledge management process and knowledge management factor) and the dependent variable organizational performance respectively. Based on the KMO test it is inferred that the adequacy of the sample enable to run factor analysis and further it indicates the suitability of the research data for structure detection.

#### 3.7.4 Bartlett's test of sphericity

Bartlett's test of sphericity tests the hypothesis that the correlation matrix is an identity matrix, which would indicate that the variables are unrelated and therefore unsuitable for structure detection. Small values (less than 0.05) of the significance level indicate that a factor analysis may be useful with the data.(source:www.itl.nist.gov)

From the above table (3.3, 3.4& 3.5) the Approximate Chi-Square value is 231.109, 116.163 &170.551 for variables under knowledge management process, factor & organizational performance. The significance values for all factors are (000) which are less than the level of significance 0.05, so this tests reveal the correlations among the variables considered for the study is efficient and justifiable.

### 3.8 Diagnostic Tests

According to (Thomas &Wonnacott, 1990) in the classical linear regression model it need to be test the classical linear regression model assumptions in order to maintain the data validity and robustness of the regressed result of the research. As result, this study tested the following classical linear regression model assumptions.

### 3.8.1 Normality assumptions test

Residuals are normally distributed about the predicted scores on the dependent variable. In multiple linear regressions, the response variable is numerical while the predictor variables may be either numerical or categorical in nature and therefore, the normality assumption is only tested on the response variable. The most commonly applied tests for normality is tested graphically using histogram and kdensity normal test (Thomas and Wonnacott, 1990)

### 3.8.2 The Multicollinearity Test

Multicollinearity refers to the situation in which independent variables are highly correlated; resulting in a paradoxical effect, whereby the regression model fits the data well, but none of the independent variables has a significant impact in predicting the dependent variable. The existence of multicollinearity is tested by calculating the Variance Inflation Factor (VIF) where a VIF coefficient greater than 10 indicates the presence of multicollienarity (Thomas and Wonnacott, 1990).

### 3.9. Ethical clearance

When human beings are the focus of investigation, it is necessary to look at the ethical implications of what we are proposing to do. Most ethical issues fall in to one of four categories: protection from harm, informed consent, right to privacy, and honesty with professional colleagues (Paul D. Leedy & Jeanne Ellis Ormrod, 2005.)

Therefore, taking the nature of this study under consideration, participants be aware about nature of the study to be conducted and given the choice of either participating or not participating because any participation should be strictly voluntary. More specifically, for ethical clearance the study confirmed containing the following information:

- ✓ A brief description of the nature of the study.
- ✓ A description of what participation involve, in terms of activities and duration.
- ✓ The guarantee that all response remains confidential and anonymous.
- ✓ An offer to provide detailed information about the study (e.g., summary of findings upon its completion).
- ✓ The researcher reports the findings in a complete and honest fashion and gives appropriate credit where credit is due and acknowledges any indebtedness to others.

## CHAPTER FOUR

### Data Analysis and Discussion of Results

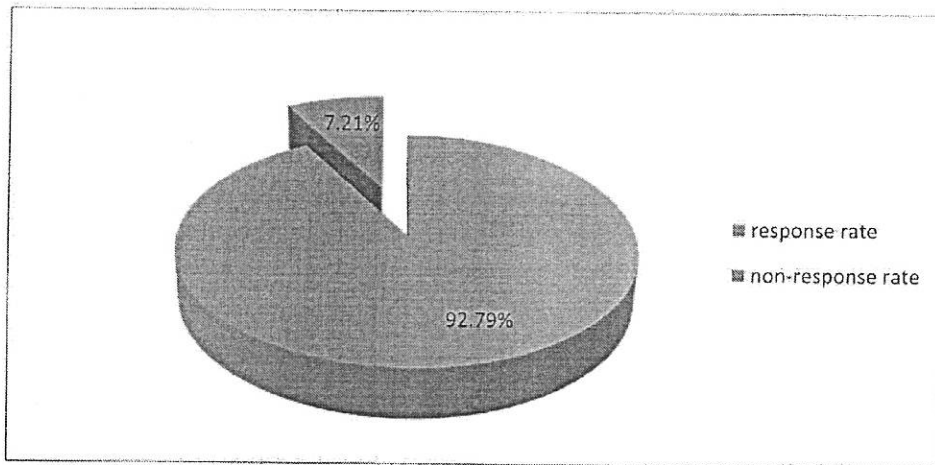
#### 4.1 Introduction

In this chapter the results obtained in the thesis are presented and discussed. First background information on the respondent statistics is presented. Such information includes demographic profile. Then the statistical methods of analysis were discussed, which included a descriptive analysis, a correlation and Regression analysis are presented through SPSS version 20.

#### 4.2 Response Rate

One hundred eleven questionnaires were distributed to the respondent and out of that one hundred three of them are returned for analysis with response rate of 92.79%.

Figure 4.1 Response Rate of Distributed Questionnaire.



#### 4.3 Profile of the Respondents

Data collected on the respondents was focused in the areas of gender, age, Marital Status, education qualification and work experience. This profile was useful to gain an overall insight of ESLSE employees responding to the questionnaire.

The table below shows the detail of background information or respondents.

**Table 4.1 Background information of Respondents**

Characteristics /variables		Frequency	Percent (%)	Valid percent	Cumulative percent
Gender	Male	55	53.4	53.4	53.4
	Female	48	46.6	46.6	100
	<b>Total</b>	103	100	100	
Age	26-30	27	26.2	26.2	26.2
	31-35	43	41.7	41.7	68.0
	36-45	27	26.2	26.2	94.2
	Above 46	6	5.8	5.8	100.0
	<b>Total</b>	103	100	100	
Marital status	Single	51	49.5	49.5	49.5
	Married	52	50.5	50.5	100
	<b>Total</b>	103	100	100	
Education qualification	Certificate/diploma	44	42.7	42.7	42.7
	BA/BSC	50	48.5	48.5	91.3
	MA/MSC & above	9	8.7	8.7	100
	<b>Total</b>	103	100	100	
Work experience	6-10	49	47.6	47.6	47.6
	11-15	40	38.8	38.8	86.4
	16 & above	14	13.6	13.6	100.0
	<b>Total</b>	103	100	100	

Source: Own survey, 2018

As the above table 4.1 indicated that there were more males as compared to females. Male respondents represent 53.4 %, and female respondents represent 46.6 %. In taking age as variable of measure The Respondents in between 31 to 35 years of age category represented 41.7%, followed by the 26 to 30 and 36 to 45 age groups of respondents at 26.2% both & above 46 age groups are only 5.8 %.

The marital status of respondents also shows that 50.5% are married and 49.5% are single. These shows that almost half of the respondents are matured enough to take responsibility.



Concerning educational level the largest groups of the respondents have a fine educated Background from which 48.5% are Degree holders a certificate/diploma and masters holders accounts 42.7% and 8.7% respectively.

In terms of work experience this study focus on employees that work more than six years of experience so that most of them fall in experience level 6-10 which is 47,6% .the second group fall between 11-15years of experience and 38.8 in percent, the last group of respondent are above 16 years of experience and these are 13.6%.

#### 4.4. Descriptive statistics

Table 4.2 perception on Km practice

Descriptive statistics	N	Mean	Std. Dev.
The Organizational culture in ESLSE	103	3.2039	0.47767
The Organizational Structure in ESLSE	103	4.0583	0.1360
Technologies (ICT) used in ESLSE	103	3.8544	0.3091
Knowledge creation practice in ESLSE	103	2.83	0.504
Knowledge storage in ESLSE	103	2.89	0.407
Ways in which knowledge can be shared /transferred in ESLSE	103	2.4563	0.2968
Knowledge application in ESLSE	103	2.9515	0.416

Source: Own, computed from survey data, 2018

Table 4.2 depicts the descriptive statistics of variables involved in the research. Based on the above Analysis, the mean score of The Organizational culture in ESLSE is 3.2039. The mean score of Organizational culture is an average of variables under knowledge management factors and indicate that employees are neutral about organizational culture in ESLSE. The standard deviation of Organizational culture is very small representing the low variance of the respondent.

The mean score of The Organizational structure in ESLSE is 4.0583 meaning employees agree on the organizational structure within their company. The mean score of Technologies (ICT) used in ESLSE is 3.8544 this figure shows that the respondent are neutral about technology used in ESLSE. This shows that the employees are not sure on the technology

used in creating, codifying and transferring knowledge and help others by storing and using online/web based service.

The mean score of Knowledge creation practice in ESLSE is 2.83 showing that the employees of ESLSE disagree on the knowledge creation practice in the company.

The mean score of knowledge storage in the organization is 2.89 this also shows that the employees disagree on that's proper and systematic documentation in the company.

The mean score of Ways in which knowledge can be shared /transferred in ESLSE is 2.4563 and the last independent variable of the study is Knowledge application that is the last knowledge process with mean score of 2.951 shows that the employees disagree on the knowledge practice implemented in the company.

#### 4.5. Relationship between KM and organizational performance

Based on the result obtained from the factor analysis, the extracted factors are considered to find

out the association between knowledge management factors(organizational culture, structure and technology) and knowledge management process(knowledge creation, storage, transfer and application).For this analysis Pearson correlation was computed.

**Table 4.3 Inter-correlation analysis between knowledge management dimensions and Organizational performance**

		The_Organizational_culture_in_ESLSE	Organizational_Structure_in_ESLSE	Technologies_ICT_used_in_ESLSE	Knowledge_creation_practice_in_ESLSE	Knowledge_storage_in_ESLSE	Ways_in_which_knowledge_can_be_shared_in_ESLSE	Knowledge_application_in_ESLSE	Measuring_customerperspective_aspect_of_performance	learning_and_growthperspective_organizationalperformance	internal_process_perspectiveorganizationalperformance
The_Organizational_culture_in_ESLSE	Pearson Correlation	1	.125*	.144**	.249**	.126**	.121**	.124	.113	.270	.584
	Sig. (2-tailed)		.003	.000	.000	.000	.000	.000	.003	.001	.000
	N	103	103	103	103	103	103	103	103	103	103
Organizational_Structure_in_ESLSE	Pearson Correlation	.125*	1	.118	.121	.315	.150	.106	.230	.273	.138
	Sig. (2-tailed)	.022		.000	.000	.003	.001	.000	.000	.001	.000
	N	103	103	103	103	103	103	103	103	103	103

Technologies_1 CT_used_in_ESLSE	Pearson Correlation	.104**	.118	1	.304**	.284**	.545**	.113	.109	.119	.191
	Sig. (2-tailed)	.000	.001		.000	.000	.000	.003	.000	.000	.002
	N	103	103	103	103	103	103	103	103	103	103
Knowledge_ere ation_practice_i n_ESLSE	Pearson Correlation	.149**	.105	.104**	1	.184**	.437**	.105	.67	.51	.57
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.001	.000	.000	.001
	N	103	103	103	103	103	103	103	103	103	103
Knowledge_stor age_in_ESLSE	Pearson Correlation	.126**	.149	.684**	.684**	1	.601**	.129	.226	.123	.286
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.001	.000	.000	.002
	N	103	103	103	103	103	103	103	103	103	103
Ways_in_which _knowledge_en n_be_shared_in ESLSE	Pearson Correlation	.301**	.199**	.545**	.437**	.601**	1	.150	.143	.173**	.152**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.001	.000	.003	.000
	N	103	103	103	103	103	103	103	103	103	103
Knowledge_app lication_in_ESL SE	Pearson Correlation	.124	.224	.113**	.251**	.129	.150	1	.505**	.689**	.556**
	Sig. (2-tailed)	.000	.002	.000	.000	.001	.000		.000	.000	.000
	N	103	103	103	103	103	103	103	103	103	103
Measuring_cust omer_perspecti ve_aspect_of_pe rformance	Pearson Correlation	.113	.117**	.519	.167	.228	.143	.505**	1	.616**	.833**
	Sig. (2-tailed)	.000	.002	.002	.000	.001	.000	.000		.000	.000
	N	103	103	103	103	103	103	103	103	103	103
learning_and_g rowth_perspecti ve_organization al_performance	Pearson Correlation	.270	.173	.119	.351	.123	.173	.589**	.616*	1	.422**
	Sig. (2-tailed)	.000	.000	.003	.000	.000	.000	.000	.000		.000
	N	103	103	103	103	103	103	103	103	103	103
internal_proces s_perspective_o rganizational_p erformance	Pearson Correlation	.984	.837	.319	.573	.186	.152	.526*	.833*	.422*	1
	Sig. (2-tailed)	.000	.000	.000	.001	.000	.000	.000	.000	.000	
	N	103	103	103	103	103	103	103	103	103	103

\*\*correlation is significant at the 0.01 level (2-tailed)

Source: Own, computed from survey data, 2018

The above table presents the results of Pearson correlation on the association between all the independent variables with organizational performance that is generated from SPSS version 20.

The correlation coefficient ( $r$ ) ranging from 0.10 to 0.29 may be regarded as indicating a low degree of correlation,  $r$  ranging from 0.30 to 0.49 may be considered as a moderate degree of correlation, and  $r$  ranging from 0.50 to 1.00 may be regarded as a high degree of correlation. (Warokka et al. 2012),

As a result of this the correlation between organizational culture have low degree of correlation with internal process perspective of organizational performance except knowledge creation with correlation coefficient of 0.249 and but less correlated with the knowledge management factor variables in ESLSE. The other organizational factor is organizational structure with low correlation factor of 0.106 with internal process knowledge application and highly correlated with knowledge storage. The 3<sup>rd</sup> knowledge factor is technology and highly correlated with ways in which knowledge can be transfer and low correlation with organizational structure.

The other independent variables are knowledge creation, storage, transfer and applications which are strongly coorelated with both the independent and dependant variables and the three performance measurement components are also show the same correlation which can be said high.

In general the results point out that knowledge management factors like organizational culture, structure and technology have a significant and positive relationship with knowledge management process and performance measurement dependant variables in ESLSE.

#### 4,6 Diagnostic Tests

##### 4.6.1 Normality assumptions test

According (Thomas & Wonnacott, 1990) one of the most commonly applied tests for normality is tested graphically using histogram and the residuals are normally distributed with a mean of zero, the histogram is bell-shaped this implies that the residuals are normally distributed. Hence, the normality assumption is fulfilled and the data were consistent with a normal distribution assumption.

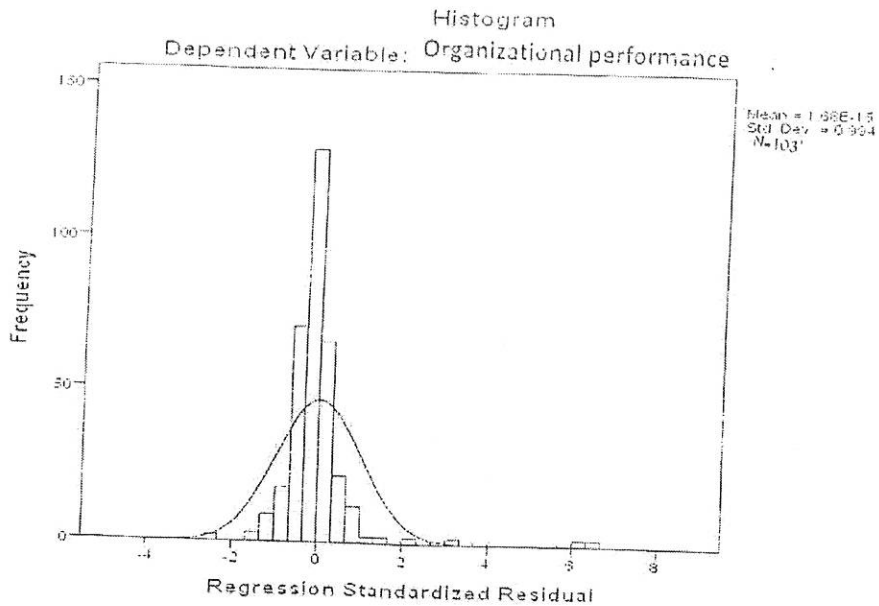


Figure 4.2 - Normality test for residuals

#### 4.6.2 The Multicollinearity Test

Multicollinearity refers to the situation in which independent variables are highly correlated; resulting in a paradoxical effect, whereby the regression model fits the data well, but none of the independent variables has a significant impact in predicting the dependent variable. The existence of multicollinearity is tested by calculating the Variance Inflation Factor (VIF) where a VIF coefficient greater than 10 indicates the presence of multicollinearity (Thomas and Wonnacott, 1990).

Table 4.4 Variance Inflation Factor (VIF) of the explanatory variables

Variable	Collinearity Statistics
	VIF
The Organizational culture in ESLSE	5.530
The Organizational Structure in ESLSE	5.459
Technologies (ICT) used in ESLSE	7.313
Knowledge creation practice in ESLSE	6.756
Knowledge storage in ESLSE	7.452
Ways in which knowledge can be shared /transferred in ESLSE	8.234
The Organizational culture in ESLSE	9.819

Source: Own, computed from survey data, 2018

The results in above Table 4.4 indicate the VIF value of the explanatory variables and all independent variable are lower than the upper limit of VIF that is 10. Hence, the multicollienarity assumption is fulfilled.

#### 4.7 Effect of knowledge management on the organizational performance

Multiple linear regression (MLR) analysis was applied to investigate the effect of knowledge management on the organization performance. Further the analysis also considered organizational performance measurements .Coefficient of determination-R2 is the measure of proportion of the variance of dependent variable about its mean that is explained by the independent or predictor variables (Hair et.al, 1998). Higher value of R2 represents greater explanatory power of the regression equation

**Table 4.5 Model Summary (Independent variables as predictors to organizational performance).**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.822 <sup>a</sup>	.675	.651	.04157

Table 4.5 presents the model summary of the model which states organizational performance as a function of knowledge creation, storage transfer and application and factors (organizational culture, structure and technology). Based on the above model summary R square value indicated that the independent variables explained the dependent variable by .675. This result implies that knowledge management accounted for 67.5percent of the variance in organizational performance. So, knowledge management variables explained the organizational performance by 67.5 percent.

Table 4.6 Coefficients of the independent variables

Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-.024	.019		-1.286	.202
The_Organizational_culture_in_ESLSE	.029	.024	.118	1.223	.224
Organizational_Structure_in_ESLSE	.016	.023	.066	.706	.208
Technologies_used_in_ESLSE	.063	.038	.195	1.648	.013
Knowledge_creation_practice_in_ESLSE	.121	.051	.235	2.360	.020
Knowledge_storage_in_ESLSE	.072	.057	.180	1.268	.003
knowledge_can_be_shared_in_ESLSE	.118	.106	.200	1.109	.000
Knowledge_application_in_ESLSE	.006	.008	.083	.782	.000

Source: Own, computed from survey data, 2015

Table 4.6 shows the coefficients of the independent variables (technology, knowledgecreation,storage,transfer and application) which have a positive sign ( $P < 0.05$ ) but organizational culture, structure, have  $p > 0.05$  this two independent variables shows insignificant relationship with the organizational performance.

Table 4.7 ANOVA (Independent variables as predictors to organizational performance)

ANOVA <sup>a</sup>					
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	.309	7	.044	46.142	.000 <sup>b</sup>
Residual	.091	95	.001		
Total	.400	102			

a. Dependent Variable: Organizational performance

b. Predictors: (Constant), Knowledge storage in ESLSE, Knowledge application in ESLSE, Ways in which knowledge can be shared /transferred in ESLSE , The Organizational Structure in ESLSE, Knowledge creation practice in ESLSE, Technologies (ICT) used in ESLSE. The Organizational culture in ESLSE

ANOVA tells overall goodness of fit of the model. F-statistic of the model is 46.142 with Significant at the 0.000 level which is quite good and entails that model is a good fit at 1% level of significance.



## Chapter Five

### Summary, Conclusion and Recommendation

This chapter deals with the summary of findings, conclusions and recommendations.

#### 5.1 Summary of Major Findings

- 111 questionnaires were distributed to the respondent and out of this 103 of them are returned.
- Most of the respondents were male & married and also they are with a fine educational background.
- The mean score showed that Organizational culture and Technology were not the facilitating factors while Organizational structure was found out to facilitate KM in ESLSE.
- It also shows that the knowledge management process practice in the company is poor.
- Based on the result obtained from the Pearson correlation analysis the independent variables shows that:
  - Technology is highly correlated with knowledge transfer,
  - Knowledge application is highly correlated with organizational structure and knowledge creation and
  - Organizational culture is highly correlated with internal process perspective organizational performance.
- Furthermore, the multiple regression analysis shows that the some of the explanatory variable (Technologies, Knowledge creation, Knowledge storage, Knowledge transfer and Knowledge application in ESLSE) indicate statistically significant and positive relationship with the dependent variables.
- From the analysis, it is noted that knowledge management accounted for 67.5 percent of the variance in organizational performance.

- The Beta coefficients results show that the independent variables (i.e. technology, knowledge creation, storage, transfer and application) have a significant & positive effect and P value less than 0.05 whereas two of the independent variables (organizational culture and structure) have insignificant relationship with the organizational performance in ESLSE.
- From the analysis, it is noted the ANOVA result shows that the regression relationship was highly significant at 0.000 significance level.

## 5.2 conclusions

Based on the major findings of the results the following conclusions were drawn:

- There is a poor knowledge management practice in ESLSE.
- From the three factors mentioned only organizational structure facilitate KM in ESLSE.
- From the KM dimensions mentioned all process of KM and one of KM factor that is organizational structure affect the organizational performance.

## 5.3. Recommendations

The following recommendations are forwarded to the management and stakeholders.

- The organization should work on the human capital and create knowledge management department that brings better KM practice to enhance performance.
- The organizational structure established in 2012 should be reformed and revised by top level managers to make the knowledge management easy.
- In order to achieve the visions to become preferred and renewed African logistics company, the organization should employ advisors from other countries that are well experienced on the logistics sector.
- The government and stakeholders should give more attention on this sector and help other competitive companies to enter to the market.
- To be more efficient and effective The organization should give more attention and work on knowledge management that assist better and faster decision making, increase innovation, reduce cost of production, increase employee satisfaction, increase investment, produce better customer services, improve market share and gain competitive advantage.

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Annex I: SPSS Outputs: **Profile of the Respondents**

**Frequency Table**

**Gender**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	55	53.4	53.4	53.4
Female	48	46.6	46.6	100.0
Total	103	100.0	100.0	

**Age**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 26-30	27	26.2	26.2	26.2
31-35	43	41.7	41.7	68.0
36-45	27	26.2	26.2	94.2
46 and above	6	5.8	5.8	100.0
Total	103	100.0	100.0	

**Marital\_status**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Single	51	49.5	49.5	49.5
Married	52	50.5	50.5	100.0
Total	103	100.0	100.0	

**Education\_qualification**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Certificate/ Diploma	44	42.7	42.7	42.7
BA/BSC	50	48.5	48.5	91.3
MA/MSC & above	9	8.7	8.7	100.0
Total	103	100.0	100.0	

**Work\_experience**

	Frequency	Percent	Valid Percent	Cumulative Percent
6-10	49	47.6	47.6	47.6
Valid 11 -15	40	38.8	38.8	86.4
16and above	14	13.6	13.6	100.0
Total	103	100.0	100.0	

**Annex II: SPSS Outputs: Regression Analysis**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.979 <sup>a</sup>	.958	.958	.20538516

a. Predictors: (Constant), Knowledge\_application\_in\_ESLSE, Organizational\_Structure\_in\_ESLSE, The\_Organizational\_culture\_in\_ESLSE, Knowledge\_creation\_practice\_in\_ESLSE, Knowledge\_storage\_in\_ESLSE, Technologies\_used\_in\_ESLSE, knowledge\_can\_be\_shared\_in\_ESLSE

**ANOVA<sup>a</sup>**

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	675.43	4	168.85	4002.96	.000 <sup>b</sup>
1 Residual	29.570	701	.042		
Total	705.000	705			

a. Dependent Variable: organizational\_performance  
 b. Predictors: (Constant), Knowledge\_application\_in\_ESLSE, Organizational\_Structure\_in\_ESLSE, The\_Organizational\_culture\_in\_ESLSE, Knowledge\_creation\_practice\_in\_ESLSE, Knowledge\_storage\_in\_ESLSE, Technologies\_used\_in\_ESLSE, knowledge\_can\_be\_shared\_in\_ESLSE

Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-.024	.019		-1.286	.202
The_Organizational_culture_in_ESLSE	.029	.024	.118	1.223	.204
Organizational_Structure_in_ESLSE	.016	.023	.066	.706	.436
Technologies_used_in_ESLSE	.063	.038	.195	1.648	.011
Knowledge_creation_practice_in_ESLSE	.121	.051	.235	2.360	.020
Knowledge_storage_in_ESLSE	.072	.057	.180	1.268	.034
knowledge_can_be_shared_in_ESLSE	.118	.106	.200	1.109	.000
Knowledge_application_in_ESLSE	.006	.008	.083	.782	.021

a. Dependent Variable: organizational\_performance



## Annex III: Questionnaire

ST MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

MASTERS OF BUSINESS ADMINISTRATION PROGRAM

### Questionnaire

Dear respondent,

I am post graduate student at st.mery's university (SMU) school of graduate studies. Currently am carrying out research for my master's thesis with a research title of "**Effect of knowledge management practice on organizational performance: the case of Ethiopian Shipping and Logistics Services Enterprise**".

The purpose of the study is to investigate effect of knowledge management with respect to knowledge process your genuine responses on this questionnaire are valuable for the quality and validity of the data to be used in the course of this study. Therefore, I kindly request you to voluntarily participate in filling out this questionnaire which has a solid contribution for my study and your organization. Thank you in advance for your cooperation.

If you have any questions or concerns about completing the questionnaire please contact me via the address provided below. Please note that your responses are confidential and your name and department will not be shared.

Hawi ketema

Mobile: +251-0912023461

Email:hawiketema2@gmail.com/ hawikj@yahoo.com

### Instruction

- No need to mention name on the questioner.
- The questioner includes both open and close ended questions. Please Use the mark [√] for the close ended and a brief answer for the open one.

**Part I: General information**

1. Gender: A. Male [ ] B. Female [ ]
2. Age: A. 20-25 [ ] B. 26-30 [ ] C. 31-35 [ ] D. 36-45 [ ] E. 46 and above
3. Marital Status: A. Single [ ] B. Married [ ]
4. Education qualification: A. Certificate/ Diploma [ ] B. BA/BSC [ ] C. MA/MSc & above [ ]
5. Work experience: A. 6-10 [ ] B. 11-15 [ ] C. 16 and above [ ]

Please tick [✓] the appropriate box for your answers and rank each statement as follows:

5 = strongly agree    4 = agree    3 = neutral/ not sure    2 = disagree    1 = strongly disagree

**Part II: knowledge management factors**

1	The Organizational culture in ESLSE	Response Options				
		SA	A	N	D	SD
		5	4	3	2	1
1.1	Allow organizational members to participate in the development of department manuals, rules, and goals					
1.2	Have frameworks or policies that guide individuals working in the organization					
1.3	Communication between the members of virtual organizations is so limited sense of belonging or a climate in the organization is almost nonexistent					
1.4	Consists of the set of norms, routines, and unspoken rules of how things are done in that organization.					
1.5	Is dynamic and is always in the process of changing					
2	Organizational Structure in ESLSE	5	4	3	2	1
2.1	Is Departments and divisions that encourage interaction and sharing of knowledge					

2.2	Facilitate innovation and help individuals to share their experiences with their colleagues on the basis of mutual trust and respect					
2.3	With Strong departments and divisions that encourage knowledge Acquisition from external sources					
3	<b>Technologies (ICT) used in ESLSE</b>	5	4	3	2	1
3.1	Help employees in Generating/creating knowledge					
3.2	Enhance knowledge codification and transfer.					
3.3	Store knowledge to make available for others					
3.4	Manage knowledge and information via online data bases, collaborative technologies, and web-based services					

### Part III: KNOWLEDGE MANAGMENT PROCESS

1	Knowledge creation practice in ESLSE	Response Options				
		SA	A	N	D	SD
		5	4	3	2	1
1.1	Is socializing the knowledge management through observation, imitation, or apprenticeships					
1.2	Is a culture of converting explicit knowledge into tacit knowledge					
1.3	Has processes for acquiring knowledge about new services within the industry					
1.4	Has processes for acquiring knowledge about competitors within the industry					
1.5	Recruiting experienced Employees that bring new knowledge into the organization					
1.6	provides IT support that facilitate new Knowledge Creation					
1.7	Practice of assembling new and existing explicit knowledge into systemic knowledge					
2	<b>Knowledge storage in ESLSE</b>	5	4	3	2	1
2.1	Is held by Proper & systematic documentation.					
2.2	Is held by IT department in securing the existing knowledge					
2.3	There are simple protocol in storing information and data withdrawal					
2.4	Employee has the access & awareness to use stored information effectively					
2.5	Are codified and can be retrieved and used other time as reference to solve					

	similar problem or deal with changing service dynamicity					
<b>3</b>	<b>Ways in which knowledge can be shared /transferred in ESLSE</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
3.1	There are a good intra-team communication and sharing of knowledge in ESLSE					
3.2	There are Recording and sharing knowledge cultures with in employees in the organization					
3.3	ESLSE Develops a common language for transfer of knowledge					
3.4	There is an appropriate Knowledge Management channel to transfer knowledge between Employees					
3.5	Employees of ESLSE have the access to resource center					
3.6	Training and development practice is one of the ways					
3.7	ESLSE will Arrange meetings seasonally					
3.8	Using Manuals, notice board or newsletter					
<b>4</b>	<b>Knowledge application in ESLSE</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
4.1	Is process learned from experience					
4.2	Avoid repetition of errors and unnecessary duplication of work					
4.3	Improve the quality and speed of making important decisions					
4.4	There is Transform organizational new levels of effectiveness, efficiency and scope of operation In ESLSE					
4.5	There is enough training for employees to apply a new acquired knowledge					
4.6	Is a challenging process due to many factors like technology, management and organizational culture					

**Part IV: Organizational performance**

1	Measuring customer perspective aspect of organizational performance	Response Options				
		SA	A	N	D	SD
		5	5	5	5	5
1.1	The quality of services that we provide has improved as per the customer need					
1.2	Customers of ESLSE are leaving due to poor services					
1.3	In my organization The quality of services that we provide has improved					
1.4	The number of people who are using our services has increased					
<b>2</b>	<b>Statement for Measures of learning and growth perspective aspect of organizational performance</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>

2.1	I got enough training on the job am doing no					
2.2	I am satisfied with my job					
2.3	My organization gives me the chance to upgrade my education and became more professional					
2.4	My organization checks employees' performance continuously and update the job titles					
2.5	ESLSE has best way that helps to protect the firm from loss of knowledge due to employee turnover					
<b>3</b>	<b>Statement for Measures of internal process perspective aspect of organizational performance</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
3.1	My organization has better quality in service					
3.2	ESLSE gives a priority for the employees' health and safety					
3.3	My organization provides Necessary equipment/tools for employees					
3.4	The organization has a time saving Decision making process					

4. If you have any additional comments please state.

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Thank you very much!!!