

**DETERMINANTS OF KNOWLEDGE SHARING BEHAVIOR IN HIGHER  
EDUCATION INSTITUTION: CASE STUDY OF ASSOSA UNIVERSITY  
ACADEMIC STAFF, ETHIOPIA**

**M.Sc. THESIS**

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**HARAMAYA UNIVERSITY, HARAMAYA**

**DETERMINANTS OF KNOWLEDGE SHARING BEHAVIOR IN HIGHER  
EDUCATION INSTITUTION: CASE STUDY OF ASSOSA UNIVERSITY ACADEMIC  
STAFF, ETHIOPIA**

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**Haramaya University, Haramaya**

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I hereby certify that I have read and evaluated this thesis entitled “Determinants of Knowledge Sharing Behavior in Higher Education Institution: Case Study of Assosa University Academic Staff, Ethiopia” prepared under my guidance by Yohannes Mulu. I recommend that it be submitted as fulfilling the Thesis requirement.

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Final approval and acceptance of the Thesis is contingent upon the submission of its final copy to the council of Graduate Students (CGS) through the candidate’s department or school graduate committee (DGC or SGC).

## **DEDICATION**

I dedicate this thesis manuscript to my mother Atalay Getaneh and my father Mulu Wondie for nursing me with affection and love and for their dedicated partnership in the success of my life.

## **STATEMENT OF THE AUTHOR**

First, I declare that this thesis is my bona fide work and that all sources of materials used for this thesis have been duly acknowledged. This thesis has been submitted in partial fulfillment of the requirements for an advanced MSc degree at the Haramaya University and is deposited at the University Library to be made available to borrowers under rules of the Library. I solemnly declare that this thesis is not submitted to any other institution anywhere for the award of any academic degree, diploma, or certificate.

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## **BIOGRAPHICAL SKETCH**

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## **LIST OF ABBREVIATIONS**

ASU	Assosa University
ASUAS	Assosa University Academic Staff
HEI	Higher Education Institution
HLI	Higher Learning Institutions
KM	Knowledge Management
KS	Knowledge Sharing
KSB	Knowledge Sharing Behavior

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**ABSTRACT**

*Knowledge is the most important strategic resource in organizations, and its management is critical to organizational success. Knowledge sharing behavior is a social interaction culture, involving the exchange of employee knowledge, experiences and skills through organization. However there is no previous studies that asses the knowledge sharing behavior in Assosa University. Therefore the purpose of this study is to examine the knowledge sharing behavior and identify factors that affect knowledge sharing behavior among Assosa university academic staff. A cross-sectional study with both quantitative and qualitative approach was conducted among 6 Faculties of Assosa University. A total of 250 on duty respondents were taken as a whole population. The data were collected using close-ended questionnaire and to supplement the quantitative study semi-structured interviews were also conducted. The data were entered and analyzed using SPSS version 20. Frequencies and percentages were used to describe the study population and multiple linear regression analysis was used to assess the presence and degree of association between dependent and independent variables. The study revealed that the association between commitment and knowledge sharing behavior is significant. The multiple regression analysis result shows that commitment has  $\beta=.408$ ;  $p\text{-value}=.000$ . The results prove that, there is a strong association between commitment and knowledge sharing behavior. Trust is the other significant variable which has ( $p\text{-value} .003$  and the  $\beta = .197$ ). The results of this study show that there is a significant association between reward system and knowledge sharing behavior which reward system has  $\beta=107$ ,  $p=0.090$ . Technology (ICT) is associated with knowledge sharing behavior among the academic staff of Assosa University. Multiple regression analysis shows technology had  $\beta= .156$ ,  $p\text{-value}= .016$ , implying that there is a positive and significant association between technology and knowledge sharing behavior. From this study most of the respondents were aware of the importance of knowledge sharing but not most respondents were engaged on active knowledge sharing behavior, and the factors that were independent predictors of knowledge sharing behavior were commitment, trust, reward system and technology.*

# **1. INTRODUCTION**

## **1.1. Background of the Study**

This study was conducted in Assosa University academic staff. Assosa University is one of the Ethiopian Higher Education Institutions which is established in 2011. Higher Learning Institutions (HLIs) are bestowed with an important responsibility of managing knowledge production, distribution and apply the knowledge acquired to efficiently respond to the constantly changing environment.

Recently in Ethiopia, there looks to be an increased understanding and recognition at national level on the importance of an educated workforce to economic growth and national development, and that greater access to higher education is a pre-requisite in this regard. To this end, major and rapid initiatives are being taken to expand higher learning institutions in the country (Rahel Bekele and Ermias Abebe, 2011). As they stated that the challenge for these new institutions basically lies in establishing systems because of lack of organization experience. Creating curriculum, setting up research themes and groups, and even delivering courses are the main challenges in these new academic institutions not only because they lack experience but also they are short of the requisite resources. Therefore, sharing knowledge with other academic institutions is a must for many of them.

Ireson and Burel (2010) in their study defined that Knowledge sharing is the activity where agents (individuals, communities or organizations) exchange their knowledge (information, skills or expertise). It is essentially linked to the knowledge management process, which can be broadly characterized by four activities; creation, storage and retrieval, transfer and application of knowledge. Whilst knowledge sharing is fundamentally concerned with the transfer activity, it cannot be isolated from the other activities.

Bock and Kim (2002) in their study stated that Knowledge sharing is one of the key processes in knowledge management as it transforms knowledge into a valuable organization asset. Knowledge sharing is believed to be one of the most important processes for knowledge management. Internationally numerous studies have addressed issues related to knowledge

Sharing at various levels within organizations and between types of organizations (Siddike and Islam, 2011). According to Siddike and Islam in developing countries the concept of 'Knowledge Management (KM)' is not very familiar despite growing recognition of the importance of knowledge sharing.

As more information and knowledge is created and exchanged, knowledge is increasingly becoming the resource for wealth generation (Cheng and Lau, 2009). In the resource based view, knowledge is considered to be the most strategically important resource. According to Van den Hooff and De Ridder (2004) the effective management of this resource is consequently one of the most important challenges facing today's organizations. Therefore, organizations can start to effectively manage this resource when they understand the concept of knowledge. As Willem (2003) and Jain et al., (2006) stated due to the lack of theories on this subject and the intangible nature of knowledge more research needs to be done on this important resource. The best sustainable source of competitive advantage and knowledge management in organization is knowledge – a key part of the strategy to create a sustainable competitive advantage.

According to Hareya (2011) Knowledge is the key reason for both business and academic world, But having knowledge by itself is not worthy unless it is shared with friends, staff and the community at large. However, the implementation of knowledge management in every organization in Ethiopia is very poor. For this reason, every organization should give value for the proper implementation of knowledge management, so as to meet organizations objectives and goals. Knowledge sharing among individuals raises organizational efficiency and innovation abilities (Assefa *et al.*, 2012). Through knowledge sharing individual knowledge is converted into organizational knowledge and applied to create business values.

As academic staffs play an important role in higher education (doing research, publishing, teaching, providing consultation and conducting other professional activities) identifying factors influencing their knowledge sharing behavior is considered in this study. The main aim of this study was to investigate knowledge sharing behavior of Assosa University academic staff; to assess the extent of academic staffs for knowledge sharing and identifying barriers that affect knowledge sharing behavior.

## 1.2. Statement of the problem

In the area of education, sharing knowledge activities are able to improve universities' performance as the main academic activities of universities which are teaching-learning process, conducting research and serving community by promoting sharing of knowledge (Bock *et al.*, 2005).

In today's knowledge-based economy where an organization's most valuable asset has shifted from physical capital to knowledge capital, organizations develop systematic processes to create and leverage knowledge but employees do not share their knowledge under all circumstances. They may think that knowledge becomes less valuable when they share it and they lose their intellectual property which gives them a personal advantage (Cho *et al.*, 2007)

Now a-days everybody believes that knowledge sharing plays a great role in every organization, but there are challenges that prevent knowledge sharing behavior. According to Ardichvili *et al.* (2006), competitiveness, job-security and power are some of the fears that arise in individual's mind if they share their knowledge to others. Individuals have the culture that: if someone solves problems that others cannot solve, he/she will be valued and get self-respect. Sometimes individuals know that sharing is good but they do not share because they think they get less than what they need contribute. This is a comparison of personal benefit and cost.

According to Hareya (2011) today, organizations are dealing with the concept of sharing and some believe that sharing what you have is important, but most individuals especially in developing countries like Ethiopia do not agree with this idea, because there is fear of losing their power position, incentive and respect if they allow their knowledge to be used by others. The problem of knowledge sharing may also arise from the culture, infrastructure and management problems of organizations.

There are many employees who are unwilling to share their knowledge they have (Chow *et al.*, 2000). They added that this phenomenon happens is because the employees scared of the loss of valuable knowledge. Although many organizations apply technology to support knowledge sharing behavior, the problem still exists and is far from being successful. It is a problem to encourage the employees to share their knowledge because the knowledge is with them and is a sign of power to them (Grumbley, 1998). Due to the situation, Mason and Pauleen (2003) noted

that this represents a formidable challenge for most managers. Therefore, this study focuses on examining the knowledge sharing behavior of academic staffs of Assosa University.

### **1.3. Objective of the Study**

#### **1.3.1. General objective**

The main purpose of this study is to examine the knowledge sharing behavior among academic staff of Assosa University, Ethiopia.

#### **1.3.2. Specific objectives**

1. To identify the factors affecting Knowledge Sharing Behavior of Academic Staff of Assosa University
2. Assess the extent of existing knowledge sharing behavior among academic staffs of Assosa University.
3. To identify the channels of communication used to share knowledge by the academic staffs of Assosa University.

### **1.4. Research Questions**

The study will attempt to answer the following questions:

1. What are the factors affecting Knowledge Sharing Behavior of Academic Staff of Assosa University?
2. To what extent of existing knowledge sharing behavior among academic staffs of Assosa University?
3. What are the channels of communication used to share knowledge?

### **1.5. Significance of the Study**

Studying the possible factors which influence knowledge sharing behavior in ASUAS would help to identify the pressing problem in sharing knowledge. Thus, the findings of the study are significant for the following reasons. First Assosa University can use the findings of this research for developing more effective knowledge sharing mechanism. Second Assosa University community can have more knowledge about KS concepts and behaviors from the study. The

staff also stays competitive or stays on continuous development, since the staff easily knows how activities are performed without wasting time.

## **1.6. Scope and Limitation of the Study**

### **1.6.1. Scope**

This study was conducted in Benshangul-Gumuz Regional State of Ethiopia and limited on Assosa University. This study aimed at investigating the factors that affect knowledge sharing behavior of Assosa University academic staff. In addition, the study was attempted to identify the extent of knowledge sharing behavior among Assosa University academic staff. Knowledge management is a wide area to study. It encompasses knowledge creation, capturing, representation and finally sharing for an organizational success. This study investigated the knowledge sharing behavior of ASUAS.

### **1.6.2. Limitation**

This study has certain limitation. First the result of the research will be more useful if it would be conducted widely by including others Ethiopian higher education institutions and other private institutions. However, due to time, labor and money constraints the study had been limited to treat the problems and factors of knowledge sharing behavior among the academic staffs of ASU. Second the study was focused on only academic staffs which might possibly influence the result.

## **2. LITERATURE REVIEW**

### **2.1. Introduction**

Knowledge management is about applying the collective knowledge of the entire workforce to achieve specific organizational goals. The aim of knowledge management is not necessarily to manage all knowledge, just the knowledge that is most important to the organization (Servin, 2005). The central aims of KM in the organization is to leverage the knowledge of individuals and teams so that this knowledge becomes available as a resource for the entire organization and supports the organization in becoming more competitive .

In general, KM is important in managing organizational knowledge so as to create new knowledge from the existing knowledge. Creation of new knowledge also becomes easy when there is KS among individuals, groups and communities of organizations. Therefore, the main lesson for KM is to facilitate and to stimulate a broad portfolio of knowledge-sharing mechanisms among employees, communities and departments in any organization (Berends *et al.*, 2006).

### **2.2. Data, Information and Knowledge**

Kahn B. and Adams (2000) provide a distinction among these terms: data, information and knowledge. Data viewed as a set of facts. Information is represented as categorized, reviewed and scrutinized data. Knowledge is the result of merging information with practice, perspective and expression, resulting in insinuation and presents approaches and plans on which decision is based on.

According to Gevorgyan and Ivanovski (2009), data, information and knowledge are often used interchangeably despite that they are different concepts. Fahey and Prusak (1998) assume that knowledge management would be meaningless if there is no difference between knowledge, data and information.

Holmes (2004) defines data as “a representation of facts or ideas in a formalized manner, capable of being communicated or manipulated by some process”. Davenport and Prusak (1998) described data as “a collection of objective facts that is specific to some events” and the property of data is that it does not have any purpose when it is separated from the context. Information is

defined as the “meaning that a human assigns to data by means of the known conventions used in its representation” (Homes, 2004). The relationship between data and information is that data can be converted to information when the data is utilized for a specific purpose (Davenport and Prusak, 1998). Knowledge is personalized information possessed in the mind of individuals, which is related to cognition, analysing and judgments (Alavi and Leidner, 2001). Information exists at a lower order than knowledge (Ahmed *et al.*, 1999). Ahmed, Lim and Zairi (1999) explain the difference between information and knowledge by using dance as an example. The information of a dance is related to the step-movements during the dance. The dancing knowledge is held within a person perfecting the dancing skills (movements, balance and emotion) simultaneously. Gevorgyan and Ivanovski (2009) interpret the inter-relationship by a “knowledge circle” which is shown in Figure 1 and which shows the supporting relationships between the three entities.

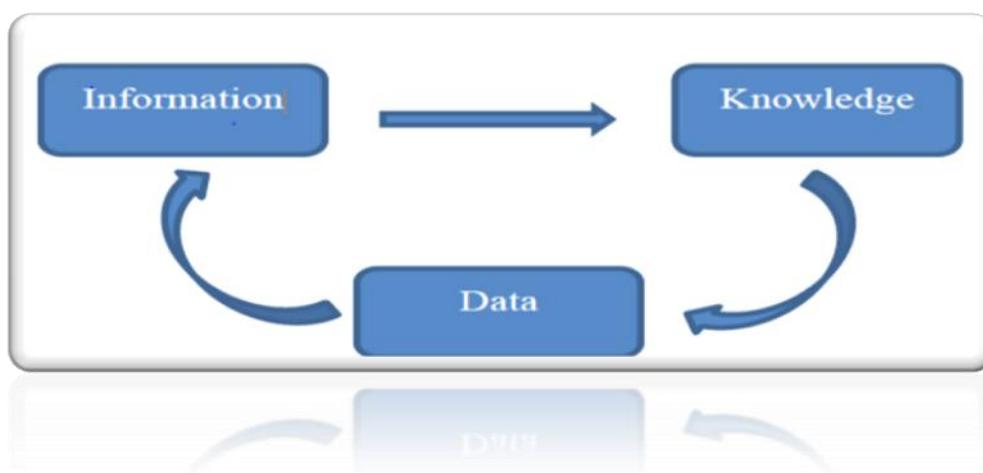


Figure : Knowledge circle

Source: Gevorgyan and Ivanovski, 2009

### 2.3. Knowledge

In current era, knowledge is the driving force behind the social and economic development so that in the past decade, it has been increasingly highlighted as one of the important competitive elements in the organizations. Knowledge plays a significant role in technological and scientific development. Knowledge exists in people’s minds and is exhibited through their actions and behaviors (Alawi *et al.*, 2007). According to Davenport and Prusak (2000) Knowledge is 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 knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms.

In the modern economy, the knowledge that it is able to harness is the organization's competitive advantage. This competitive advantage is realized through the full utilization of information and data coupled with the harnessing of people's skills and ideas as well as their commitments and motivations. In the corporate context, knowledge is the product of organization and systematic Reasoning applied to data and information. It is the outcome of learning that provides the organization's only sustainable competitive advantage. As such knowledge is an essential asset that has become more important than land, labor or capital in today's economy (Filemon and Uriarte, 2008).

### **2.3.1. Classification of knowledge: Tacit knowledge and explicit knowledge**

Knowledge in organizations is often classified into two types: explicit knowledge and tacit knowledge.

**i. Tacit knowledge:** tacit is the knowledge that people carry in their heads. It is much less concrete than explicit knowledge. It is more of an unspoken understanding about something, knowledge that is more difficult to write down in a document or a database. An example might be, knowing how to ride a bicycle – you know how to do it, you can do it again and again, but could you write down instructions for someone to learn to ride a bicycle? Tacit knowledge can be difficult to access, as it is often not known to others. In fact, most people are not aware of the knowledge they themselves possess or of its value to others. Tacit knowledge is considered more valuable because it provides context for people, places, ideas and experiences. It generally requires extensive personal contact and trust to share effectively (Servin, 2005).

Tacit knowledge is personal. It is stored in the heads of people. It is accumulated through study and experience. It is developed through the process of interaction with other people. Tacit knowledge grows through the practice of trial and error and the experience of success and failure. Tacit knowledge, therefore, is context-specific. It is difficult to formalize, record, or articulate (Filemon and Uriarte, 2008).

**ii. Explicit knowledge:** according to Servin (2005) explicit knowledge can be captured and written down in documents or databases. Examples of explicit knowledge include instruction manuals, written procedures, best practices, lessons learned and research findings. Explicit knowledge can be categorized as either structured or unstructured. Documents, databases, and spreadsheets are examples of structured knowledge, because the data or information in them is organized in a particular way for future retrieval. In contrast, e-mails, images, training courses, and audio and video selections are examples of unstructured knowledge because the information they contain is not referenced for retrieval.

### **2.3.2. Knowledge conversions**

Personal knowledge can become organizational knowledge through the dynamic interaction between tacit knowledge and explicit knowledge. This dynamic process is the essence of knowledge creation in an organization. This interaction between the two types of knowledge brings about what is called the four modes of knowledge conversion (Nonaka, 1996). The interaction between explicit and tacit knowledge lead to the creation of new knowledge that is knowledge Conversion. Through the conversion process, tacit and explicit knowledge expands in both quality and quantity.

**Socialization** is the process that transfers tacit knowledge in one person to tacit knowledge in another person. It is experiential, active and a living thing, involving capturing knowledge by walking around and through direct interaction with customers and suppliers outside the organization and people inside the organization. This depends on having shared experience, and results in acquired skills and common mental models. Socialization is primarily a process between individuals or a focus group (Stevens *et al.*, 2010).

**Externalization** is a process of articulating tacit knowledge into such explicit knowledge as concepts and/or diagrams. The process often uses metaphors, analogies, and/or sketches. This mode is triggered by a dialogue intended to create concepts from tacit knowledge. A good example of externalization is the process of creating a new product concept or developing a new production process. Here the tacit knowledge in the brains of experts are articulated and expressed as concepts or drawings, thus becoming explicit knowledge that can be further studied and refined (Filemon and Uriarte, 2008).

**Combination:** Explicit to explicit (combination) is the process of corporation of various bodies of existing explicit knowledge that leads to the creation of new explicit knowledge (Alkhaldi, 2003). In addition as Shih et al., (2010) stated combination involves the conversion of explicit knowledge into more complex sets of explicit knowledge through storage, combination and classification to make the explicit knowledge systematic.

**Internalization** is a process of embodying explicit knowledge into tacit knowledge or an individual's know-how or operational knowledge. An excellent example of this is "learning by doing or using." Explicit knowledge that is available as text, sound, or video facilitates the internalization process. The use of operating manuals for various machines or equipment is a quintessential example of explicit knowledge that is used for internalization. The instructions are learned and become part of the person's tacit knowledge (Filemon and Uriarte, 2008). Internalization mode is exemplified by the creation of tacit knowledge from explicit knowledge and similar to traditional learning (e.g., the learning as a result of reading). Internalization mode could be considered as the knowledge transformation process from collective knowledge to individual knowledge (Chen and Ghaedian, 2012).

#### **2.4. Knowledge Management Definition**

There are several definitions for knowledge management. Knowledge management can be defined from two viewpoints; a process viewpoint and an outcome viewpoint. The process viewpoint focuses on how to work with knowledge; the outcome viewpoint pressures the benefits of knowledge management for an organization (Carrillo, 2006). A combination of both viewpoints is also possible. Newman and Kazi see knowledge management as a process of controlling the creation, dissemination, and utilization of knowledge. Snowden understands knowledge management as the identification, optimization, and active management of intellectual assets, either in the form of explicit knowledge held in artifacts or as tacit knowledge possessed by individuals or communities to hold, share, and grow the tacit knowledge (Mládková, 2012).

Knowledge management is seen to be concerned with the way an organization gains a competitive advantage and builds an innovative and successful organization. For Tiwana (2000) knowledge management enables the creation, communication, and application of knowledge of all kinds to achieve business goals. All definitions focus on the fact that knowledge is a valuable

asset that must be managed, and that knowledge management is important to provide strategies to retain knowledge and to improve performance (Al- Ghassani, *et al.*, 2006). In recent years, knowledge management (KM) has been recognized as a key instrument for the improvement of organizational effectiveness and performance (Zack *et al.*, 2009).

Knowledge management has been the subject of research in organizational, educational, social and business science as well as information management. Throughout the years various approaches towards knowledge management have been developed which offer different definitions of knowledge and therefore of knowledge management itself. Alavi and Leidner (2001) identify a number of different perspectives of knowledge and implications for the role of knowledge management(KM) such as: KM as giving users access to personalized information; KM as building and maintaining stocks of knowledge; KM as creating processes that enhances knowledge creation and sharing.

#### **2.4.1. Components of knowledge management**

Liebowtz (2012) explained that knowledge management is combined by three components: people, process and technology. The people side is about how to create and nurture a knowledge sharing environment and culture in the company and the process side is about managing the knowledge management processes and aligning knowledge sharing with the daily work of the employees. Technology is about creating a unified platform for the employees to communicate and share knowledge.

#### **2.4.2. Organizational knowledge management process**

Knowledge management and its organizational applications are important to take into consideration the process of knowledge management in organizations.

Serrat (2008) notes that there are five basic activities of knowledge management processes: identify, create, store, share and use knowledge. Further, Leila et al. (2008) said that KM process is about creation, transport, storage, distribution and knowledge sharing. In practice, KM process has major common tasks namely knowledge creation, acquisition, codification, sharing and application.

#### **2.4.2.1. Knowledge creation**

Knowledge creation is the initial task performed in implementing KM in any organization. Thus, organizational participants create knowledge through their intuition, ability, skills, behaviors, work experiments and problems faced. When a company creates knowledge, it has to concern about interactive team working process. This process involves different backgrounds, cutting across organizational boundaries, combining skills, artifacts, knowledge and experiences in new ways. It involves the collection and organization of raw information, which is stored in tacit and explicit format and will be achieved primarily by creating a repository of relevant information and creating a repository of learning which can be converted into knowledge (Paween, 2006)

#### **2.4.2.2. Knowledge acquisition**

Knowledge acquisition refers to the knowledge that a firm can try to obtain from external and internal sources (Alan, 2011). The external sources include suppliers, competitors, partners, alliances, customers and external experts. Whereas internal sources include experts and other employees of the organization.

#### **2.4.2.3. Knowledge codification**

After acquiring the knowledge from different sources and experts, it should be codified or recorded for making easily accessible for whoever wants to use. This process will transform knowledge into a coded form to make knowledge structured, explicit, transferable and easy to understand as possible (Paween, 2006). Knowledge codification involves conversion of tacit knowledge into explicit knowledge in usable form. Knowledge codification is stored and retrieved via information retrieval systems such as Decision tree, Decision table, Boolean logic, fuzzy logic, Vector query and Extended Boolean logic. The aim of information retrieval is to access retrospective knowledge of the organization and to share for all users who need the knowledge (Sagsan, 2006).

#### **2.4.2.4. Knowledge sharing/transfer**

To ensure that the created knowledge is available for applying in the organization, individual and teams must have to share what they know with other co-workers. Tacit or explicit knowledge is communicated to other organizational participants'/employees/' in this step; three important

clarifications are in order (Sagsan, 2006). First, knowledge sharing means effective transfer, so that the recipient can understand it well enough to act on it. Second, what shared is knowledge instead of recommendations based on the knowledge. Third, knowledge sharing may take place across individuals as well as across groups, departments or organizations.

#### **2.4.2.5. Knowledge application**

Knowledge application starts from the recipients using the learned and received knowledge (Gevorgyan and Ivanovski, 2009). During the knowledge application process of the recipients, the knowledge will be re-identified and applied and gradually converted to personalized and routinized knowledge.

### **2.5. Knowledge Harvesting**

Knowledge harvesting is an approach that allows the tacit knowledge or know-how of experts and top performers in an organization to be captured and documented. This know-how can then be made available to others in various ways such as through training programs, manuals, best practices and knowledge management databases. Knowledge in organizations exists in two forms: explicit knowledge, which is easily captured and shared; and tacit knowledge, which is more experiential and intuitive, and so is less easy to articulate. Knowledge harvesting is about trying to make some of the tacit knowledge more explicit. Its aim is to help organizations make better and wider use of their existing knowledge by extracting it from the heads of a few key people and making it available to a much wider range of people (Servin, 2005).

### **2.6. Knowledge Sharing**

Knowledge exists in the minds of employees, which cannot be clearly observed, then how to manage this knowledge has become a particularly difficult problem in knowledge management. Knowledge in the mind of individuals or tacit knowledge is essentially an unconscious cognitive ability, and it is highly personalized knowledge that is acquired by individual experience. Therefore, it is through sharing that enterprises manage this knowledge well, and promote its sharing among staff to enhance competitive advantages (Hareya, 2011).

According to van den Hoff and de Ridder's (2004) explanation, knowledge sharing can be divided into two separate behaviors: donating and collecting knowledge. Knowledge donating

involves “communicating one’s personal intellectual capital to others”, while knowledge collecting is “consulting others to get them to share their intellectual capital. These are two distinct processes, either communicating to other what one knows, or actively consulting others in order to gain their knowledge.

Knowledge sharing is a process through which a people’s knowledge is transferred to another person in an understandable, absorbable and applicable form (Lin, 2007). The goal of knowledge sharing is to create new knowledge by combining existing knowledge in new knowledge or to exploit the existing knowledge in a better way (Antonova *et al.*, 2011). Bock and Kim (2002) believe that knowledge sharing occurs when employees, besides being interested in sharing their knowledge, seek learning from each other’s’ knowledge and experience. Knowledge sharing is the social interaction culture which includes the exchange of knowledge, employees’ experience and skills all over the organization (Lin, 2008). Generally, Knowledge sharing is a cooperative process which includes the distribution of information, ideas and skills.

According to Gao (2004), there are two benefits organization gained if the members in organization shared their knowledge. Firstly, valuable knowledge can be disseminating effectively and efficiently within the organization through the process of knowledge sharing. Secondly, the ability of individual knowledge to recognize the value of knowledge, assimilate it, and apply it in the commercial end, can be increase by knowledge sharing among individuals of an organization. Theoretically, knowledge sharing is unnatural. People think that their knowledge is valuable and important and unwilling to share their knowledge unless there are enough incentives.

Riege (2005) warned that knowledge sharing is the keystone of many organizations. Some might not be capable to function as knowledge based organizations since they suffer from knowledge sharing disabilities. The transfer of knowledge is a core issue in organization Alavi and Leidner (2001), tacit knowledge especially is difficult to be shared especially whenever an individual refused to do so.

Even though knowledge sharing among individuals has been acknowledged as a positive force for the survival of an organization but the factors that encourage or discourage knowledge

sharing behaviors in the organizational context are poorly understood (Bock *et al.*, 2005). Therefore, it is not surprising that individuals are unwilling to share their knowledge with others. It is important to understand when people are willing to share their knowledge and how an organization can facilitate this type of behavior from both research and practical standpoint.

Knowledge can be viewed from five perspectives (1) state of mind, (2) object, (3) process, (4) condition of access to information, (5) capability (Alavi, M. and Leidner, D. E, 2001). Alavi, M. and Leidner, D. E. (2001) also state that if we talking about knowledge sharing, then we view knowledge as a process. Perhaps this can be supported by Tiwana, Amrit (2000) which explained in the view of basic element of knowledge utilization. Knowledge sharing is one of the processes in knowledge management framework apart from knowledge creation, knowledge organization/storage, and knowledge application. On the other hand, it can also be view as one of the elements in knowledge utilization cycle when combined with knowledge acquisition and knowledge utilization (Tiwana, A, 2000).

Knowledge sharing is a kind of knowledge development cycle, in knowledge sharing cycle there are eight processes: identify, collect, classify, organize/store, share/disseminate, access, user/exploit, and generate (Skymie, D. J, 1999) which explain the process on how we absorb, filter and regenerate the knowledge. However, Tiwan. A (2000) says knowledge sharing is make use of organization's resources to collect and digest all existing knowledge, is much focus on collaborative view.

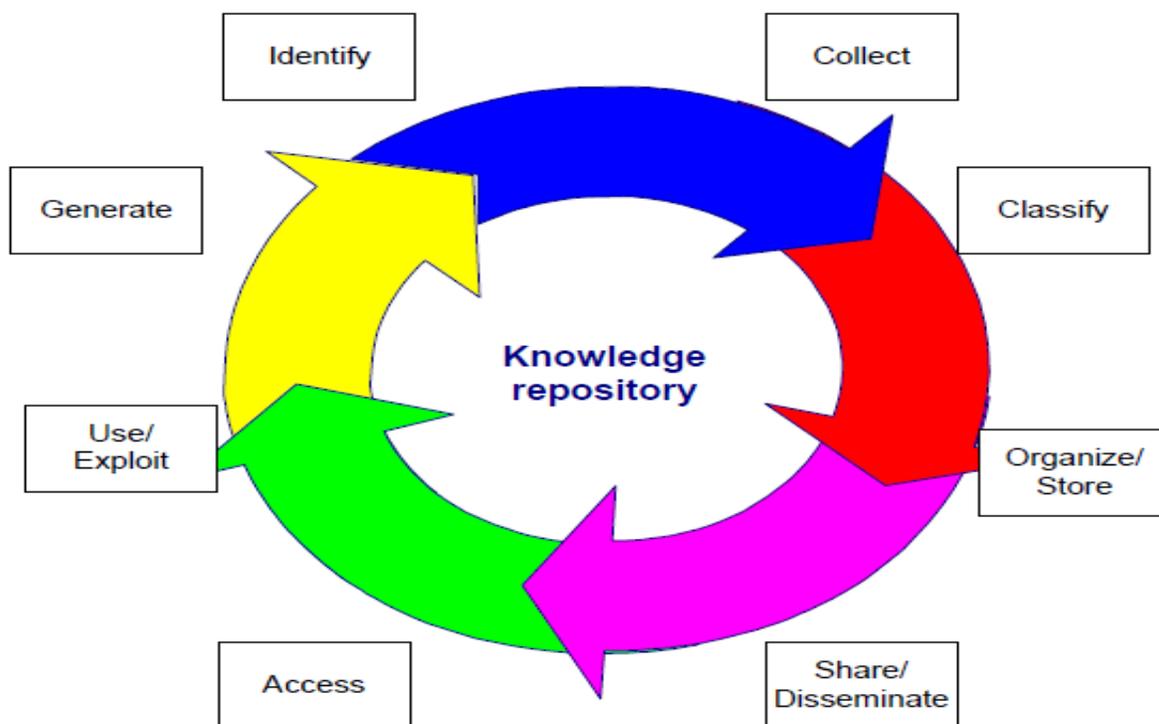


Figure : Knowledge Sharing Cycle.

Source: Skyrmie, 1999

### 2.6.1. Knowledge sharing in higher learning institutions

Higher Education Institutions are bestowed with an important responsibility of managing knowledge production and distribution and while efficiently responding to the constantly changing environment. Thus, KS is inevitably a challenging and an important task for members of HIEs engaged in knowledge work (Ayalew *et.al*, 2013).

Higher Learning Institutions are granted with an important responsibility of managing knowledge production, distribution and apply the knowledge acquired to efficiently respond to the constantly changing environment. Therefore, HLIs are not only required to create knowledge quickly but also acquire and apply it quickly in order to gain the competitive edge Syed-Ikhsan and Rowland (2004) and Yang (2007) hence making knowledge sharing an inevitably important task for members of Higher Learning Institutions in knowledge management.

According to Kamal *et al.* (2007), sharing of knowledge is very essential in knowledge-based organizations like Higher Learning Institutions due to the fact that most of the employees are

knowledge workers. The knowledge sharing in an educational system ensures that academic staff is updated from time to time with the latest knowledge. Institutions of Higher Learning indeed play a fundamental role on knowledge creation. The implicit knowledge created by academics is embedded in their minds and constitutes the storehouse of an educational institution's intellectual capital.

Ismail and Chua (2006) mentioned that the higher learning institutions are no longer just providing knowledge to the students, but also manage and blend together the existing knowledge as references for the next generation. Instead of creating new patterns of knowledge management, it is better to acknowledge the existing KM in Institutions of Higher Learning for further progress. HLIs and their staff also are required to recognize and respond to their changing role in a knowledge-based society (Yang and Ismail, 2008).

### **2.6.2. Knowledge sharing mechanisms**

A lot of mechanisms are present for moving knowledge from one person to another one. Meenakshi and Sundari as cited in Jian (2007) their research on knowledge sharing (KS) in schools in Singapore originate that knowledge sharing (KS) by teachers happens through unplanned meetings, online communications, peer training and interactive workshops. Other research in Singapore by Chang (2003) found that knowledge sharing (KS) takes place on an informal basis through face to face communication and cooperative workgroups.

In a case, there are two non-exclusive ways of knowledge sharing, i.e. closed-network sharing (person-to-person sharing) and open-network sharing (sharing through a central open repository) (Cheng, Ho and Lau, 2010). In the closed sharing model, individual has the freedom to decide the mode of sharing and choose partners to share his or her knowledge. This type of interaction allows more personal touch and more directed sharing is expected.

Many factors would explain the success of the sharing activity in this model, including personal relationship and trust. On the other hand, the open-network sharing refers to the sharing of knowledge among members of a group through a knowledge management system, typically a central database system. It involves multiple individuals sharing multiple knowledge assets in the system. Knowledge asset in this form of sharing carries the characteristics of a public good

(Müller, Spiliopoulou and Lenz, 2005), thus insufficient voluntary sharing is anticipated. Open-network sharing is widely accepted in organizations to share organizational- knowledge.

Knowledge expands with the extension of social and community interactions (Pan and Leidner, 2003). Knowledge contributors and seekers who share common interest areas will often look for a common community to share their ideas and experiences which can be done via either informal or formal network. These knowledge contributors and seekers are habitually glued together through their personal connections (Ardichvili, et al., 2003), and formed what is generally called “communities of practices”. Since the critical success factor of virtual communities of practice is very much depending on perpetual knowledge generation and sharing, cultivating communities of practices could be an effective mechanism to promote the sharing culture.

### **2.6.3. ICT solution’s Potential on knowledge sharing in Education**

In the twenty-first century, information and communication technologies (ICTs) have become vital tools for developing innovative solutions to development challenges. The use of ICTs provides equitable access to information, knowledge and education for the poor and the rich in developing and developed countries and it gives us opportunities to enrich our lives by positive developments in print, broadcast (radio and TV), digital (computer and Internet), mobile technologies. In such circumstances, education plays an important role in the ICT development as the main source of valuable human capital (Nessipbayeva. O, 2013).

### **2.7. Knowledge Sharing Behavior**

Sharing knowledge leads to increase the performance and efficiency among academician. Several studies have been conducted to find out the motivation factors that affecting an individual's knowledge sharing behavior. For example (Cheng *et al.*, 2009) conduct a study in an academic institution to examine the behavior of knowledge sharing among academic staff. The findings of their study show that personal expectation and incentive systems are two significant motivation factors to knowledge sharing. (Jain *et al.*, 2007) and (Seonghee and Boryung ,2008) found that reward is an important motivation factor for knowledge sharing.

According to Connelly and Kelloway (2003) knowledge sharing behavior is defined as behavior’s set which involve exchanging of information or assistance with others. On the other hand Chatzoglou and Vraimaiki (2009) defined Knowledge sharing as a behavior in which one

offers his knowledge and experiences voluntarily to others. Since the principles of knowledge management has been proposed, researchers tried to review the variants related to knowledge sharing behavior. According to the researches, several factors including attitudes, intentions, and subjective norms effect on knowledge sharing.

Considering the fact that behavior is a response to a certain stimulus Karimi (2010), in the context of knowledge sharing, knowledge sharing behavior could be defined as people's response to others' request or others' need for knowledge. Beliefs, views, goals and behavior of knowledge source and knowledge receiver will have significant impact on the effectiveness of knowledge sharing strategies (Lichtenstein and Hunter, 2008).

According to Yi (2009) knowledge sharing behavior is the set of individual behaviors involving sharing one's work-related knowledge and expertise with other members within one's organization, which can contribute to the ultimate effectiveness of the organization. In order to measure knowledge sharing behavior Yi (2009) developed a valid and reliable scale which is called Knowledge Sharing Behavior Scale. In her study, she determined four dimensions of knowledge sharing behavior: written contributions, organizational communications, personal interactions and communities of practice.

1. Written contributions include behaviors of employees' contributing their ideas, information, and expertise through written documentation rather than dialogs, such as by posting ideas to organizational database and submitting reports which can benefit other employees and the organization. In this dimension, knowledge is shared through a person-to document channel.
2. Organizational communications include behaviors of sharing knowledge in formal interactions within or across teams or work units. For example, working teams or project groups may have regular meetings for brainstorming or problem solving by seeking ideas from employees. Knowledge is shared through formal social interactions of a person-to group channel.
3. Personal interactions include behaviors of sharing knowledge in informal interactions among individuals, such as chatting over lunch and helping other employees who approach them. Knowledge is shared through the informal social interactions of a person-to-person channel.

4. Communities of practice include behaviors of sharing knowledge within communities of practice, which are voluntary groups of employees communicating around a topic with common interests in a non-routine and personal way. Knowledge is shared through informal social interactions of a person-to-group channel.

### **2.8. Challenges in Encouraging Knowledge Sharing Behavior**

It is not easy to absorb the knowledge sharing behavior culture as a norm in the organization. In the literature, there are widely discussions on the challenges faced by the organization in encouraging their employees to share their knowledge and ideas. For example, organization's scholars who are analyzing factors that inhibit knowledge sharing among subunits found that the lack of extensive communication and direct relationship between employees at different subunits has been the main contribution. The weak-tie theory which is originally advanced by Granovetter (1985) mentioned that distant and infrequent relationships which presents as weak-ties are efficient for knowledge sharing behavior as these people bring the accessibility to novel information by connecting other disconnected individuals and groups in the organization. In contrast, strong ties are likely to lead in redundant information as they tend to exist among a small group of people where everybody knows what the others know (Hansen, 2010).

### **2.9. Factors Affecting Knowledge Sharing Behavior**

Generally, sharing knowledge is about communicating knowledge within a group of people. The group may consist of members engaged in a formal institution, for instance, among colleagues in a workplace, or informal, for example, among friends, and the interaction may occur between a minimum of two individuals to a multiple of individuals. According to Ipe (2003) Knowledge sharing between individuals is the process by which knowledge possessed by one individual is converted into a form that can be understood and used by others.

Sharing knowledge leads to increase the performance and productivity among academician. Several studies have been conducted to find out the motivation factors that affecting an individual's knowledge sharing behavior. For example Cheng *et al.* (2009) conduct a study in an academic institution to examine the behavior of knowledge sharing among academic staff. The findings of their study show that personal expectation and incentive systems are two significant

motivation factors to knowledge sharing. Seonghee and Boryung (2008) found that reward is an important motivation factor for knowledge sharing.

Jain *et al.* (2007) examine the factors that affected on knowledge sharing activities among academic staff. The results indicated that the formal and informal lack activities to cultivate sharing of knowledge, lack of time, lack of incentive rewards and lack of Information Communication Technology. The effectiveness of knowledge-sharing in organizations can be a significant factor to successful organizational management. Knowledge-sharing is the flow of knowledge from someone who has it to someone who wants it.

### 2.9.1. Commitment

The commitment of the employees in the organization is one of the key issues in making the employees to share their knowledge. In order to make knowledge management successful, the level of commitment and capability to encourage knowledge sharing are strongly related (Scarborough and Carter, 2000). According to Hislop (2002) the level of commitment will, in turn, influence employee's attitudes and behaviors to sharing their knowledge for the benefit of the organization. When employees levels of commitment is high then they are more willing and work effectively for the organization. Thompson and Heron (2006) conclude that affective organizational commitment is positively related to knowledge sharing. Employees, who feel committed to the organization, wishing for good outcomes for the organization, are more likely to share knowledge in favor of realizing the organization's goal. Similarly, Storey and Quintas (2001) argue that commitment of knowledge workers is one of the critical factors in knowledge management, as it creates a higher level of willingness to share knowledge among employees.

### 2.9.2. Reward system

Reward is also one of the effective factors which will encourage people to share knowledge with others. Kugel and Schostek (2004) study found that knowledge is shared only because monetary rewards are obtained, and when the rewards system is withdrawn, the knowledge sharing behavior will decrease. Syed-Ikhsan and Rowland (2004) study reveals that organizations which provide reward systems will definitely encourage employees to share the knowledge. It is also found that one of the strategies that could foster knowledge sharing is by introducing incentive schemes for knowledge sharing. The companies have to reward the employees who are willing to share their knowledge with others. Hariharan and Cellular (2005) emphasize that the

management should announce reward and recognition schemes to measure and reward knowledge sharing and replication with demonstrated knowledge results.

### 2.9.3. Culture

Researches have investigated the importance of organization culture. It is one of the main factors that make the knowledge management and knowledge sharing a success in an organization (Tuggle and Shaw, 2000). Strong culture and the attitudes of the employers and employees could help the company become successful. So, it is important to have a culture of sharing knowledge. Culture is shared values, beliefs and practices of the people in the organization. Culture exists in a deeper level as well for example how people act, what they expect of each other and how they make sense of the opposite party's action (McDermott and O'Dell, 2001). McDermott and O'Dell (2001) added that people are often acting in ways consistent with its underlying or core values. From the definition it could be concluded that in an organization with knowledge sharing culture, people would share their ideas and exchange knowledge with others because they treat this culture as natural, rather than they are force to share their knowledge with others.

### 2.9.4. Social interaction

Knowledge sharing can occur without our realization. Knowledge sharing is actually has been occur at that time of communicating or talking with people. Even the employees having a cup of coffee at a coffee shop or talking about their work; some knowledge has been exchanged among them. This behavior not only applies to the employees, this could be possible to the upper management as well. The employees and the employers should interact more in order to gain knowledge. When both employees and employers communicate, it indirectly reduces the status differentials. This reducing nature of status differential may encourage social interaction among them which may increase the knowledge sharing (Connelly and Kelloway, 2003). Thus, many organizations encourage motivating their employees to interact more by providing rest rooms or provide food or drinks for them.

### 2.9.5. Trust

According to Sharratt and Usoro (2003) Trust is the most effective and least costly method that can encourage people to share their knowledge. Many people are willing to share their knowledge with others if they feel that the person is honest and can be trusted. This has become a tool to motivate people to share knowledge. when one views a community as upholding

trustworthy values such as mutual reciprocity, honesty, reliability and commitment, there is likely to be greater degree of motivation to participate and share one's knowledge. Kalantzis and Cope (2003) concludes that high level of interpersonal trust correlate with high levels or willingness to knowledge sharing

#### 2.9.6. Technology

Many organizations increase knowledge sharing behavior among the employees by introducing and using technology (Yaacob and Hassan, 2005). The organizations create or acquire database or knowledge repository where the employees can contribute their expertise in a way that can be accessed by other employees as well (Ruggles, 1998). Connelly and Kelloway( 2003) stated that Through technology, employees not only can share their knowledge internally but they can share even across a wide geographical separation Knowledge sharing technology may provide a visible symbol of management's support for the knowledge sharing. Technology makes people easily to access and more willing to share their knowledge because it suits for those who are shy or very busy and prefer to avoid face to face interaction.

#### 2.10. Related empirical study

The results of a research conducted by Tohidinia (2009) on Knowledge sharing behavior and its predictors shows that extrinsic rewards did not show a significant relationship with KSB variable. Organizational climate had a positive impact on knowledge sharing. In addition, the level of information and communication technology usage reflected a positive effect on knowledge sharing behavior. Similarly, Hoegl *et al.* (2003) conducted research on Team-level antecedents of individuals' knowledge networks; Decision Sciences shows that organization's climate has a positive effect on knowledge sharing activities.

Kim and Ju (2008) identified and analyzed major factors (perception, trust, openness in communication, collaboration, reward systems and communication channel) for knowledge-sharing among faculty members in a higher educational institution in order to examine how those factors influence campus wide knowledge-sharing. The study also investigated the way in which those factors are interrelated. Results showed that perception is the most influential factor and reward systems are the second most influential factor for faculty knowledge-sharing.

Respondents did not consider other factors such as trust, openness in communication, collaboration, and communication channels based on IT infrastructure to be main factors.

Lou *et al.* (2007) studied the behavior of instructors from information management departments with regard to knowledge sharing at technological universities. The influence of self-motivation and incentive mechanism on instructors' individual knowledge sharing and the obstacles encountered while knowledge sharing were investigated in this study. The results showed that information management instructors may encounter some barriers when sharing knowledge with others; they showed negative consensus on issues such as individual job security, academic promotion and intellectual property rights, making colleagues unwilling to share knowledge; the relationship among colleagues is very distant; and department heads do not take knowledge sharing seriously. Among the positive consensus items are: instructors agreed that the research workload is too heavy to share knowledge with others; and the university's information software that facilitates knowledge sharing is too old to use.

Alam (2009) conducted research to present and tests the key factors of knowledge sharing behavior of employees in the SMEs in Malaysia. The results of the study show that reward system, culture, trust and technology are the four key factors which influencing the knowledge sharing behavior in the firms.

According to Connelly and Kelloway (2003), the technology of knowledge sharing may serve a tangible or visible symbol of support from management for the knowledge sharing behavior. They also believed that technology would makes employees to access easily and increases the willingness to share their knowledge as it suits most of the people especially for those who are very shy or busy and people who prefer to avoid face to face conversation.

Hsieh *et al.* (2009) indicated that organizational culture is believed to be as the most significant input towards the effectiveness of KM that associated with values, beliefs and work system which can encourage knowledge sharing. However, a study from Rad *et al.* (2011) showed findings where organizational culture did not impose any influence on knowledge sharing. The results was contradicts to most of the research results (Hoof and Huysman, 2009) and discussion

theoretically from the existing knowledge sharing behavior literature where organizational culture are often being as important determinants of knowledge sharing behavior.

Hareya (2011) conducted research on Knowledge Sharing among Employees of Mesfin Industrial Engineering and the result shows that IT infrastructures, personal benefits, management problems, attitude and willingness of individuals, skills and knowledge storage mechanisms are the critical factors that affect knowledge sharing in the organization.

Topchyan (2013) studied on Factors Affecting Knowledge Sharing in Virtual Learning. His findings suggest that there is a direct predictive relationship between knowledge sharing and learning environment, social presence, task type, and mediating relationships for learning community, social presence, and task type in the knowledge sharing model.

### 2.11. Conceptual frame work of the study

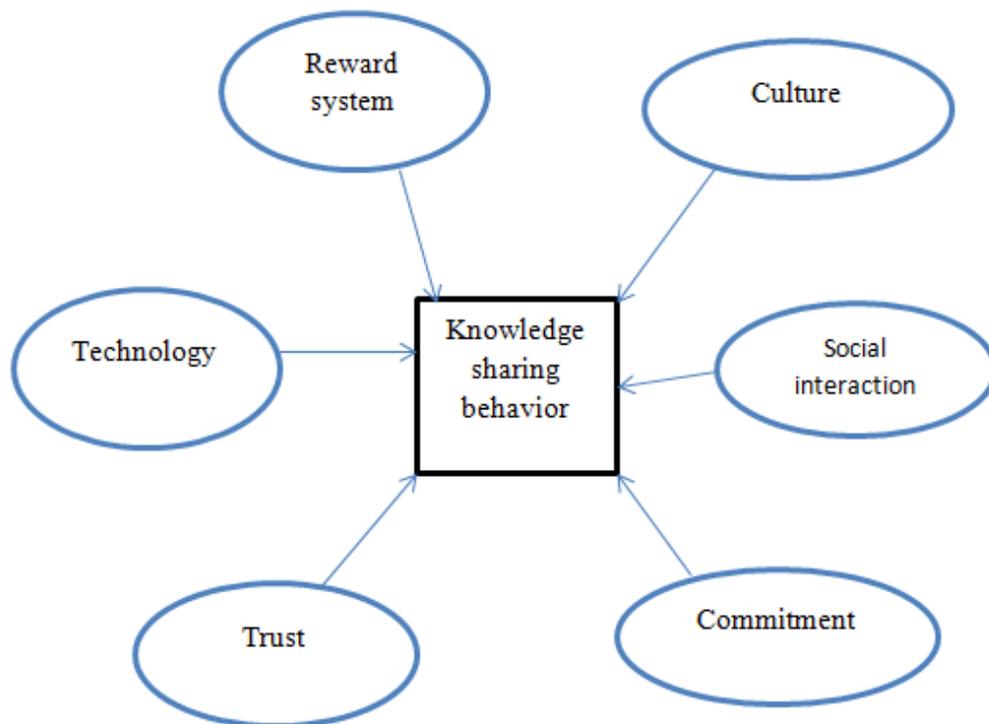


Figure : Conceptual framework of the study

Source : Alam 2009

Knowledge sharing behavior is the dependent variable in this research. The dependent variable is analyzed in this research in order to find out the answers or solution to the problem i.e., what are the factors that influence knowledge sharing behavior of ASUAS in Ethiopia? In this situation, the study has been tested six independent variables i.e. commitment, reward system, culture, social interaction, trust and technology as possible variables that are believed to have influence towards the dependent variable (knowledge sharing behavior).

### **3. RESEARCH METHODOLOGY**

#### **3.1. Description of the Study Area**

The study area is located in the Benishangul-Gumuz regional state which is found 675 km away in the west from Addis Ababa. It is located at 9° 30'- 11° 30' latitude in the North and 34° 20'- 36° 30' longitudes in the east. The Region is bordered with the Sudan in the west, Amhara regional state in the east and north, Oromiya regional state in the east and south east and Gambella regional state in the south. It covers a total area of about 49,289.46 square kilometers. Plain undulating slopes and mountains characterize the topography of the Region. The altitude of the region ranges from 580-2731 meter above sea level. The agro-climatic zone of the Region can be categorized as 75% lowland, 21% midland, and 4% highland (BBoARD, 2012).

The governmental higher educational institutions of Ethiopia were very limited some years ago. However nowadays, the Government has given due attention for the expansion of Public higher Learning institutions. As a result, the numbers of Universities are increased to 31 including Assosa University. Assosa University was established in 2011 committed to advance teaching learning activities, need based research and community service.

Assosa University currently comprises six faculties (Agriculture and Plant science, Business and Economics, Engineering and Technology, Health science, Natural and computational science and Social science and Humanities) and 32 departments

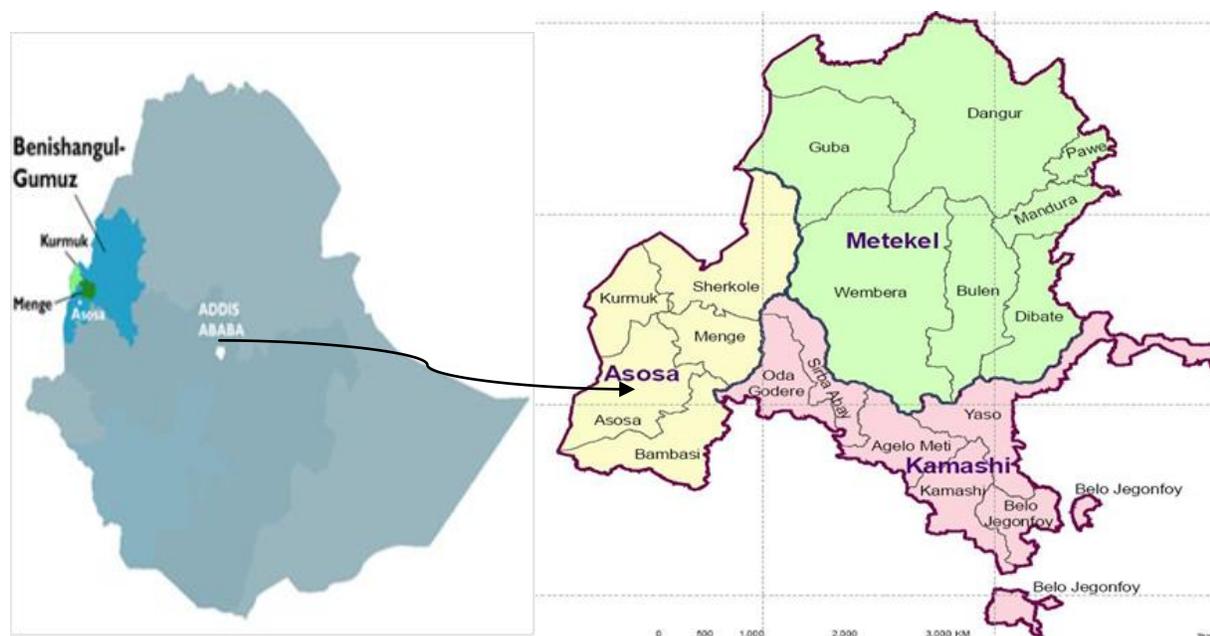


Figure : location of the study area

### 3.2. Study Design

Once the research objective for the study has been adequately specified in terms of target population, exposure and outcome, the next step is to consider design of the study. Study design is one of the main parts of a research. Therefore, it is important to choose the appropriate research design in order to achieve the study objectives.

Research designs are the plans and procedure that cover the decision from broad assumption to detailed methods of data collection (Creswell, 2009). According to Creswell (2009), there are different types of research designs: qualitative, quantitative and mixed research.

The study used a mixed research approach where both quantitative and qualitative research designs are applied. In this study mixed research method was selected to gather all the relevant perceptions that might support each other which are important in maximizing the reliability and accuracy of findings.

For the quantitative method questionnaire was adapted from Johanna. K (2010) and Patricia.G *et al.* (2009) and used for the present research study. The questionnaire contains close-ended questions because of large size of population in this study.

For qualitative method, this research used semi-structured personal interviews with academic staff directorate and two (2) faculty heads (Engineering and Technology faculty and Natural and computational science faculty) was undertaken to support those quantitative data collection methods. The reason for the selection of interview is that it makes express ideas freely, to understand the respondent's point of view. According Guerra *et al.* (2009) the aim of personal interviews is evaluating directly interviewers' ideas and reactions according to the respondent's problems, in order to avoid losing some information that questioner(quantitative data) is not possible catch.

One of the most common and well-known study designs is the cross-sectional study design. In this type of research study, either the entire population or a subset thereof is selected, and from these individuals, data are collected to help answer research questions of interest. It is called cross-sectional because the information about X and Y that is gathered represents what is going on at only one point in time (Chris, 2004). Cross sectional descriptive with some analytical study is used. One-shot or cross-sectional studies are those in which data is gathered once, during a period of days, weeks or months. Many cross-sectional studies are exploratory or descriptive in purpose. They are designed to look at how things are now, without any sense of whether there is a history or trend at work.

A cross-sectional study is selected because it is relatively easy to conduct than longitudinal studies because the researcher can collect all the needed data at a single time. Accordingly, in this study both quantitative and qualitative research design is used. For the quantitative method close-ended questionnaires survey method is used and for qualitative method semi-structured interview is used. The reason for the selection of interview is that it makes express ideas freely, to understand the respondent's point of view rather than make generalizations about behavior, It uses open-ended questions, some suggested by the researcher and it supports the fulfillment of the main objective of the study.

### **3.3. Study Population**

The population of the study was all the academic staffs of Assosa University in order to get detail and relevant information about the existing knowledge sharing behavior. The Air University Sampling and Surveying Handbook (2002) explains about the importance of sampling in that if money, time, or other resources were not a concern, the most accurate data you could

get would come from surveying the entire population of interest. Since limited resources are a reality that the researchers have to deal with, however, the researchers are often forced to survey the views of only a few members of the population.

Table : educational status of respondents

<b>FACULTY</b>	<b>BSc</b>	<b>MSc</b>	<b>PhD</b>	<b>TOTAL</b>
Agriculture and Plant science	5	12	0	17
Business and Economics	3	17	1	21
Engineering and Technology	61	12	0	72
Health science	0	4	0	4
Natural and computational science	4	33	0	37
Social science and Humanities	5	21	0	34
Total	78	99	1	185

Source: ASU

Assosa university academic staff comprises six (6) faculties. There are 377 staff members who are the target population of the study, out which 250 staff members are on duties and the rest 127 are off duties. As indicated on the above table 250 questionnaires distributed across six faculties (Agriculture and Plant science, Business and Economics, Engineering and Technology, Health science, Natural and computational science and Social science and Humanities) with a response rate of (185) 74 % were found valid and included in the analysis for quantitative study. Three respondents responded both quantitative data and interview. To identify the factors that affect KSB among academic staff of ASU, the researcher had taken all population who were on duties.

### **3.4. Data Type and Data Collection Methods**

The source of primary data in this study was the whole population of Assosa University academic staff from which data collected. Primary data are collected by the investigator directly from study participants to address a specific question. Data can be collected by in-person semi-structured interviews and surveys questionnaires. While primary data collection has the advantage of being able to address a specific study question, it is often time consuming and expensive (Wai, 2001). The data was collected from primary source by using structured questioner and semi-structure interview to fulfill the objectives of the study which is identifying knowledge sharing behavior among academic staff of Assosa University.

Based on the basic research questions, the questionnaire prepared in English language, since the medium language of instruction at the Higher Institution level is English and it is believed to be well responded as per the educational level of the respondents is concerned. The items in the questionnaires contain close-ended items. The close-ended items have been used for the reason that they are easier to categorize the responses gathered.

Primary data are first-hand information collected by the researcher from their original sources through various methods such as observation, interviewing, mailing, questionnaires, focus group etc (Alemayehu, 2009). Therefore, the primary data for this study is collected from ASUAS, using questionnaire and semi-structured interview.

### **3.5. Method of Data Analysis**

After the distributed questionnaires were collected, the survey data have been encoded to MS-Excel for data classification and organization and set to validate the data for further analysis. After data classification and organization, the data transferred to the SPSS version 20 and statistical analysis was performed in order to accomplish the purpose of the study. SPSS package which offers extensive data handling capabilities and numerous statistical analysis routines that can analyze small to very large data statistics (Krishna and Ranganatham, 2007).

Multiple linear regression analysis were used to indicate the major determinants of knowledge sharing behavior. According to Pohlman, (2003) multiple linear regression model indicate the relationship between a dependent variable and a collection of independent variables. The value of a dependent variable is defined as a linear combination of the independent variables plus an error term.

### **3.6. Multiple Linear Regression Analysis**

A regression model that involves more than one repressor variable is called a multiple regression model. It is statistical tool that allows examining how multiple independent variables are related to a dependent variable. The multiple linear regression models are an extension of a simple linear regression model to incorporate two or more variables in a prediction equation for a response variable. Multiple regression modeling is now a support of statistical analysis in most fields because of its power and flexibility.

In a regression analysis the relationship, called the regression function, between one variable  $y$ , called the dependent variable, and several others  $x_i$ , called the independent variables. Regression function also involves a set of unknown parameters. If a regression function is linear in the parameters (but not necessarily in the independent variables) it is a linear regression model. Otherwise, the model is called non-linear. Linear regression models with more than one independent variable are referred to as multiple linear models, as opposed to simple linear models with one independent variable.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_K X_K + E,$$

Where:-

$Y$ - Is dependent variable

$\beta$ s -are the regression coefficients,

$X$ s- are column vectors for the independent variables and

$E$ - is a vector of errors prediction

The regression coefficients are interpreted as the change in the expected value of  $Y$  associated with a one-unit increase in an independent variable, with the other independent variables held constant. The errors are assumed to be normally distributed with an expected value of zero and a common variance.

### **3.7. Data quality assurance**

All steps in data collection method were followed carefully. Adapted questionnaire was used to collect data from study participants. Data collecting material was checked for free of spelling errors and its completeness and coded before actual data collecting date.

Awareness creation among respondents about the purpose of study, their rights, and confidentiality, nothing to harm them was done by an investigator and data collectors before and during data collection date. Continuous /daily supervision was done up to the end of data collection date to be ready and take measures if problem arises. Data were cleaned, edited and

checked for its consistency, Completeness, free of out- layers and missing values during data collection, before and during analysis by investigator.

### **3.8. Ethical Consideration**

This study has been intended for academic purpose and only for the purpose of a professional contribution to the improvement of higher institution education research acceptance. Hence, it would not attempt to harm anybody in any way. In addition, before data collection from the selected institution, the researcher has distributed an official letter with detail description of the research objectives of the funding organization, Assosa University based on which consent would be collected. Moreover, to having the respondent's involvement in the study, a letter of permission has been issued by all involves in the study.

On the other hand confidentiality of information provided by the respondents would be communicated. During data collection, each respondent has been informed about the purpose, scope and expected outcome of the research, and appropriate informed written consents had taken from the respondents.

## 4. RESULTS AND DISCUSSION

This chapter presents the results from the descriptive and regression analyses. The descriptive analysis made use of tools such as frequency distribution and percentage. Regression analysis was carried out to identify the most important factors that affect knowledge sharing behavior of Assosa University academic staff.

### 4.1 Socio- Demographic Characteristics of Respondents

The demographic and background variables used in this study are gender, age, working experience and faculty. Table 2 below gives respondents' demographic profile:

Table : respondents' demographic profile

Respondent's profile	classification	Frequency	Percentage
Gender	Male	164	88.6
	female	21	11.4
	Total	185	100.0
Age	21-25	85	45.9
	26-30	72	38.9
	31-35	20	10.8
	36-40	4	2.2
	41-45	4	2.2
	Total	185	100.0
Experience	< 2 years	54	29.2
	2-4 years	94	50.8
	5-7 years	30	16.2
	8-10years	3	1.6
	> 10years	4	2.2
	Total	185	100.0
Faculty	Agriculture and Plant science	17	9.2
	Business and Economics	21	11.4
	Engineering and Technology	72	38.9
	Health science	4	2.2
	Natural and computational science	37	20.0
	Social science and Humanities	34	18.4
	Total	185	100.0

Source: own survey, 2015

A total of 250 questionnaires were distributed across six faculties (Agriculture and Plant science, Business and Economics, Engineering and Technology, Health science, Natural and computational science and Social science and Humanities) with a response rate of 74 % were found valid and included in the analysis for quantitative study. The rest 65(26%) were non responses for the mentioned reasons of lack of time on the respondents side, unavailability after receiving the questionnaire for long time and lack of interest after taking the questionnaire.

Among those respondents 164 (88.6%) were males and 21(11.4%) were females. This indicated that there was disproportion of gender ratio in Assosa University. Regarding age of the respondents, 85(45.9%) was between the age group of 21-25, 72(38.9%) between 26-30 years, 20(10.8%) between 31-35 years, 4(2.2%) between 36-40, years 4(.2%) between 41-45 years. Since Assosa university is new established institution most of respondents were found in 21up to 25 age groups.

Besides, 54 out of 185 respondents (29.2%) had experienced the working life less than 2 years, 94 persons (50.8%) had worked between 2 to 4 years, 30 persons (16.2%) had working experience between 5 to 7years, 3 persons (1.6%) had working experience between 8 to 10 years ,4 persons (2.2% )with ten and more than ten years of working experiences . This shows that majority of the respondents had experienced the working life between 2 to 4 years, because Assosa University was established before four years, but there were also other respondents had working experience more than the age of the institution that employed from experienced institutions.

The faculty distribution of respondents was as follows: 17(9.2%) were Agriculture and plant science 21(11.4%) were Business and economics, 72(38.9%) were Engineering and technology, 4(2.2%) were Health science, 37(20%) were Natural and computational science and 34(18.4%) were Social science and humanities. This indicates that most of the respondents were found in Engineering and technology because new Ethiopian higher education institution strategies tend to improve human power in Engineering and technology.

## 4.2. Existing Knowledge Sharing Behavior

One of the methods of examining the extent of existing knowledge sharing behavior trend in ASUAS is examining the contribution of different knowledge sharing mechanisms that employees used to share knowledge and experience in the institution.

Table: Existing knowledge sharing behavior of ASUAS.

<b>Submitted Documents and Reports</b>	<b>Frequency</b>	<b>Percentage</b>
very low	4	2.2
low	26	14.1
medium	57	30.8
high	80	43.2
very high	18	9.7
<b>Total</b>	<b>185</b>	<b>100.0</b>
<b>Contribution of expressing ideas and thoughts in organizational meeting for KSB</b>		
very low	3	1.6
low	25	13.5
medium	56	30.3
high	75	40.5
very high	26	14.1
<b>Total</b>	<b>185</b>	<b>100.0</b>
<b>personal conversation with others to help them with their work related problems</b>		
very low	3	1.6
low	24	13.0
medium	59	31.9
high	70	37.8
very high	29	15.7
<b>Total</b>	<b>185</b>	<b>100.0</b>

Source: own survey, 2015

Results in the above table showed the existing knowledge sharing behavior of Assosa University. The study revealed that 52.9% of the respondents were reported Submitting documents and reports had high contribution for knowledge sharing behavior of Assosa University. 30.8 % of respondents agreed that Submitting documents and reports had medium contribution for knowledge sharing behavior and only 16.3% of respondents reported low contribution of Submitting documents and reports for knowledge sharing behavior in case of Assosa University.

More than half (54.6%) of the respondents were informed the high role of expressing ideas and thoughts in organizational meetings for knowledge sharing behavior where as 30.3% of respondents accepted medium role of expressing ideas and thoughts in organizational meetings for knowledge sharing behavior and the rest 15.1% of respondents took expressing ideas and thoughts in organizational meetings as low contributor of knowledge sharing behavior among Assosa University academic staffs.

Based on the descriptive analysis result 53.5%, 31.9% and 14.6% of respondents reported the high, medium and low contribution of spending time in personal conversation (e.g., discussions during lunch time, through telephone) for knowledge sharing behavior of Assosa University respectively. The result showed that submitted documents and reports and spending time in personal conversation (e.g., discussions during lunch time, through telephone) had relatively low contribution to knowledge sharing behavior of Assosa University academic staff respectively.

Qualitative study (semi – structured interview) interviewee revealed *that*: “Knowledge sharing is our main focus at this time and we have knowledge about knowledge sharing as our institution is a knowledge-based company, but its implementation is at the starting phase”. “Training is not given for us; cross department training is very important to improve our knowledge sharing behavior. Most of the time we used faces to face communication and printed documents to share knowledge in our institution”. The other employee commented in the questionnaire “training plays significant roles in organizing and conducting different training programs in relation to upgrading the knowledge of the staffs, familiarizing with new systems and knowledge sharing programs with exposure and experience with other countries” but we used meetings, documents, face to face communication and internet to share our knowledge each other in our institution”.

### 4.3. Knowledge Sharing Channels Used by Assosa University Academic Staffs.

Table : knowledge sharing channels

<b>How often do you share knowledge by face to face communication channel</b>	<b>Frequency</b>	<b>Percentage</b>
Never	4	2.2
Rarely	21	11.4
Sometimes	64	34.6
Often	66	35.7
Always	30	16.2
Total	185	100.0
<b>How often do you share knowledge by telephone</b>		
Never	10	5.4
Rarely	69	37.3
Sometimes	39	21.1
Often	39	21.1
Always	28	15.1
Total	185	100.0
<b>How often do you share knowledge by group meetings</b>		
Never	10	5.4
Rarely	117	63.2
Sometimes	25	13.5
Often	23	12.4
Always	10	5.4
Total	185	100.0
<b>How often do you share knowledge by email</b>		
Never	8	4.3
Rarely	113	61.1
Sometimes	31	16.8
Often	19	10.3
Always	14	7.6
Total	185	100.0
<b>How often do you share knowledge by IT solutions</b>		
Never	134	72.4
Rarely	26	14.1
Sometimes	15	8.1
Often	8	4.3
Always	2	1.1
Total	185	100.0
<b>How often do you share knowledge by fax</b>		
Never	145	78.4
Rarely	36	19.5
Sometimes	2	1.1
Often	2	1.1
Total	185	100.0

Source: own survey, 2015

As the analysis result shows 30(16.2%) respondents use face to face channel frequently, 66(35.7%) the respondents use face to face knowledge sharing Channel often, 64(34.6%) the respondents use sometimes; 21 (11.4%) the respondents use rarely and 4(2.2%) the respondents never use this channel. The result shows face to face communication is the first knowledge sharing channel in Assosa university academic staff.

The second frequently used knowledge sharing channel in Assosa university academic staff is telephone which is used by 28(15.1) respondents, 39(21.1%) of the respondents use often, 39(21.1%) of the respondents use this channel sometimes, 39(21.1%) respondents use some times, 69(37.3%) of respondents use rarely while 10(5.4%) never use this channel.

The third frequently used knowledge sharing channel is group meeting which is used by 10(5.4%) of the respondents, 23(12.4%) use often, 25(13.5%) use some times, 117(63.2) use rarely and 10(5.4%) respondents never Use this channel. This implied that Assosa University had not well enough group meeting to Share knowledge and experience because ASU is in infant stage

The fourth frequently used channel is email which is used by 14(7.6%) respondents, 19(10.3%) of respondents use often, 31(16.8%) respondents use sometimes, 113(61.6%) respondents use rarely and 8(4.3%) the respondents never use email to share knowledge.

The fifth frequently used channel is IT solution which is used by 2(1.1%) respondents, 8(4.3%) of respondents use often, 15(8.1%) respondents use some times, 26(14.1%) respondents use rarely and 134(72.2%) never use It solutions. This implied that Assosa University didn't have database to store and share knowledge.

The least frequently used knowledge sharing channel is fax which is by 2(1.1%) respondents, 2(1.1%) respondents use some times, 36(19.5%) respondents use rarely and 145(78.4%) respondents never use fax to share knowledge.

#### **4.4. Multicollinearity Test**

Multiple linear regressions model was selected for analyzing the factors influencing knowledge sharing behavior of Assosa University academic staff. Prior to running the multiple linear regression analysis continuous variables were checked for the existence of multicollinearity using variance inflation factor (VIF). The VIF values for continuous variables were found to be

very small (much less than 10) indicating that absence of multicollinearity between them (Table 5). Multicollinearity occurs when there are high inter-correlations among some set of the predictor variables. In other words, multicollinearity happens when two or more predictors contain much of the same information. Multicollinearity may occur because several predictors, taken together, are related to some other predictors or set of predictors. For this reason, it is important to test for multicollinearity when doing multiple regressions (Nancy *et al.*, 2005). Six continuous variables were used to estimate the linear regressions model. As regression analysis of VIF result in this study indicates that there is no Multicollinearity problem with in variables. For this reason, all of the variables were included in the final analysis.

Table : Multicollinearity statistics test

Variables	Tolerance=1/VIF	VIF
Technology	.949	1.054
Commitment	.933	1.072
Reward	.984	1.016
Social interaction	.974	1.027
Organizational culture	.956	1.046
Trust	.940	1.064

Source: own survey, 2015

Tolerance and VIF give the same information. (Tolerance =  $1 / \text{VIF}$ ) They tell us if there is multicollinearity. If the Tolerance value is low ( $< 1 - R^2$ ), then there is probably a problem with multicollinearity. In this case, since  $R^2$  is .309, and  $1 - R^2$  is about .691, then tolerances are good, this implies that no multicollinearity problem in this variables.

#### 4.5. Reliability Test

Table : Reliability test

Variables	Cronbach alpha value (reliability)	N
KSB	0.906	185
Trust	0.816	185
Technology	0.876	185
Commitment	0.918	185
Reward	0.812	185
Social interaction	0.810	185
Organizational culture	0.715	185

Source: own survey, 2015

Table 6 shows reliability test. Based on the table, all the variables' Cronbach's alpha is good with more than 0.715. The variable which has highest reliability is commitment with an alpha value of 0.918 and variable which has lowest reliability is organizational culture with an alpha value of 0.715. There is no variable with poor reliability and no variable deleted or removed from this research. This table also shows the descriptive analysis of the variables. Trust, technology, commitment, reward system, social interaction and organizational culture are the independent Variables of this research while knowledge sharing behavior is the dependent variable of this research.

#### 4.6. Determinants of knowledge sharing behavior

Multiple regression analysis main goals are to explain the nature of the relationship between the independent and the dependent variables. In addition, the analysis allowed us to assess the accuracy and the relative importance of the various predictors and their contribution to the variation in the dependent variables. The multiple regression analysis was done to search for the predictive relationships between commitment, technology, trust, reward system, social interaction, organizational culture and knowledge sharing behavior.

Table : regression analysis result

Variables	B	Std. Error	t	Sig.
(Constant)	.573	.835	.687	.493
Technology	.215	.088	2.441	.016
Commitment	.471	.075	6.320	.000
Reward	.172	.101	1.705	.090
Social interaction	.017	.083	-.206	.837
Organizational culture	.029	.086	.338	.736
Trust	.285	.093	-3.065	.003

Source: own survey, 2015

Table : Model Summary

R Square	Adjusted R Square	Sig.
.309	.286	.000

The model summary shows that the regression model can explain 30.9 % of the variance in the dependent variable. When adjusting the number of estimated parameters and study population, the model can explain 28.6 % of the dependent variable's variance. It is expected of getting small  $R^2$  such type of research because of difficulty of determining human behavior. In this study the population has p-value of  $p < 0.001$  (see table 8).

The results of this study in table 11 show that the association between commitment and knowledge sharing behavior is significant. The multiple regression result shows commitment has  $\beta = .408$ ;  $p\text{-value} = .000$ . The results prove that, there is a strong association between commitment and knowledge sharing behavior. In this situation, the academic staffs those are working in Assosa University perceived commitment as a more important factor for knowledge sharing behavior.

The study of Scarbrough and Carter (2000) revealed that, In order to make knowledge management successful, the level of commitment and capability to encourage knowledge sharing are strongly related. Other study by Hislop (2002) stated that the level of commitment will, in turn, influence employee's attitudes and behaviors to sharing their knowledge for the benefit of the organization. Van den Hoff and de Ridder (2004) show a positive relationship between organizational commitment and knowledge sharing. An individual who is more committed to the organization, and has more trust in both management and coworkers, is more likely to be willing to share their knowledge.

The results of this study show that there is a significant association between reward system and knowledge sharing behavior which reward system has  $\beta = .107$ ,  $p = 0.090$ . It indicates that there is an association between knowledge sharing behavior and reward system in this finding.

Interview questions that are related to the encouragement of knowledge sharing were asked and respondents provide the following answers: "Knowledge sharing will be encouraged if there is

motivating factor like rewards or incentives because reward system is the main factor for motivating academicians to share their knowledge .Knowledge sharing will be fostered if orientations about knowledge sharing are provide for the employees of the organization, if there is emphasis on internal training rather than expected only from peoples outside of the organization and if there is reward mechanisms for theses who contribute knowledge to the organization.”

This study is supported by Kugel and Schostek (2004), Reward system is one of the effective factors that will encourage employees to share knowledge with each other in the organization. The study of Kugel and Schostek (2004) found that knowledge is shared only because monetary rewards are obtained, and when the rewards system is withdrawn, the knowledge sharing behavior will decrease. Syed-Ikhsan and Rowland (2004) study reveals that organizations which provide reward systems will definitely encourage employees to share the knowledge. Bock et al. (2005) studied the influence of extrinsic rewards in knowledge sharing. They stressed that when the management of an organization is motivated to embrace knowledge sharing and its employees are not, using incentives to influence knowledge exchange would only result in the employees placing emphasis on incentives and this could result in sharing of low-quality knowledge and undermine the whole knowledge sharing effort. Jain et al. (2007) studied levels of knowledge sharing among academics in some higher institutions in Malaysia. The finding revealed that the key factors that motivate academics to engage in knowledge exchange include personal expectations and incentives.

The regression analysis results show that the association between organizational culture and knowledge sharing behavior is not significant. The multiple regression result shows organizational culture has  $\beta=.022$ ;  $p\text{-value}= .736$ . The results prove that, there is no relationship between organizational culture and knowledge sharing behavior in this study.

The results of this study show that the association between social interaction and knowledge sharing behavior is not significant. The multiple regression result shows social interaction have  $\beta= -.013$ ,  $p\text{-value}= .837$ . The results prove that, that there is no relationship between social interaction and knowledge sharing behavior could not be rejected.

Table 7 shows the association between trust and knowledge sharing behavior, it is significant which has (p-value .003 and the beta = .197). Trust has greater impact on the knowledge sharing behavior.

Technology (Information communication technology) is associated with knowledge sharing behavior among the academic staff of Assosa University. In this study technology consider the application and use of Internet technologies and services as email, search engines, Facebook, wikis, blogs LinkedIn and websites. Multiple regression analysis shows results of (beta= .156, p-value= .016), implying that there is a positive and significant association between technology and knowledge sharing behavior. IT plays an important mediating factor in knowledge sharing. Bock *et al.* (2005) in his study examined the factors that influence knowledge workers to share their knowledge and how ICT relates to these factors. The study concluded that the role of ICT for knowledge sharing can only be fully understood if it is related to the motivation for knowledge sharing, and not just to maintenance factors.

## **5. SUMMARY, CONCLUSION AND RECOMMENDATION**

This chapter briefly summarized the study, draws conclusions on the basis of the findings and suggests possible recommendations.

### **5.1. Summary**

The study was carried out to examine knowledge sharing behavior of academic staff of Assosa University, Ethiopia.

The specific objectives of the study were to identify the factors affecting Knowledge Sharing Behavior of Academic Staff of Assosa University, to assess the extent of existing knowledge sharing behavior among academic staffs of Assosa University and to identify the most preferred channels of communication used to share knowledge by the academic staffs of Assosa University.

In order to achieve these objectives, relevant review of related literature concerning the topic under study were thoroughly reviewed and included in the review. This research was done under theoretical framework developed from previous study. Cross-sectional study design was selected and the entire population had taken, from these populations relevant data were collected to help answer research questions of interest. The study used close ended questioner and semi-structured interview to know the factors that affect Assosa University academic staff knowledge sharing behavior. The study applied multiple linear regression models. The model explains 30.9 per cent of the variance in Institutions' academic staff knowledge sharing behavior. The response rate of this study (74 %) was found valid and included in the analysis for quantitative study. Most of the respondents (88.6%) were males and only (11.4%) were females. Since Assosa University is found in infant stage most (45.9 % and 38.9 %) of the respondents ages were 21-25 and 26-30 respectively. 50.8 % of respondents had experienced with 2-4 years.

In the first phase, quantitative survey was conducted that contained fact finding using close ended questions. Previous studies questionnaires were adapted and sent to the whole population 185 responses were received with 74% response rate. The data was analyzed by using SPSS version 20. In the second phase, the study determined qualitative research design and detailed semi-structured interviews of academic dean and 2 selected faculty heads from the institution.

Interviewees felt that Knowledge sharing is the main focus at this time and they have knowledge about knowledge sharing because Assosa University is a knowledge-based company, but its implementation is at the starting phase. Cross department training is very important to improve knowledge sharing behavior. According to the interviewees most of the time they used face to face communication and printed documents to share knowledge in the institution but training plays significant roles in organizing and conducting different training programs in relation to upgrading the knowledge of the staffs, familiarizing with new systems and knowledge sharing programs with exposure and experience with other countries.

Based on descriptive analysis most of the respondents used Face to Face communication or oral communication for knowledge sharing with colleagues.

As regression analysis of VIF result in this study indicates that there is no Multicollinearity problem with in variables. For this reason, all of the variables were included in the final analysis. Knowledge sharing behavior is the dependent variable in this research. The study tested six independent variables i.e. commitment, reward system, culture, social interaction, trust and technology as possible variables that are believed to have influence towards the dependent variable (knowledge sharing behavior).

In a multiple regression analysis, the mediating variables are treated as independent variables to measure their effect on the dependent variable, knowledge-sharing behavior. Together, these variables have a high explanatory value on knowledge-sharing behavior. There exists a relationship between the independent variables and knowledge-sharing behavior. Looking at each individual variable's explanatory value, four variables are significant: commitment (P-value= 0.00.), trust (P-value=0.003), reward system (P-value=0.090) and technology (p-value=0.016). Each independent variable has their own effect on knowledge sharing behavior.

## **5.2. Conclusion**

Based on the entire study findings and the summary made above the following conclusions were drawn.

Based on the study results and summary, it could be concluded that the IT infrastructures, commitment, reward system or incentive and trust are the significant variables that affect academic staff's knowledge sharing behavior in Assosa University

Personal conversations, Submitted documents and reports and group meetings had important role for the knowledge sharing behavior of Assosa University academic staffs.

Face to Face communication was found to be the most frequently used means of communication channel for knowledge sharing and the least one was fax.

Individuals are the knowledge creators in higher institution and produced knowledge should be translated into organizational knowledge. This requires effective knowledge sharing behavior;

Although Assosa University is a knowledge-based company, its knowledge sharing implementation is at the starting phase.

In the institution most of the time their knowledge sharing was informal and there was a great lack of formal knowledge sharing opportunities like periodic meeting, training and workshops.

## **5.3. Recommendation**

Based on the findings and summary this study revealed that there is a need for further research on some other aspects of knowledge sharing behavior in Ethiopian higher institutions. To improve knowledge sharing behavior of Assosa University academic staffs the following recommendations are forwarded.

The institution should promote knowledge sharing by providing access to information technology infrastructures that are used for knowledge sharing.

There should be mechanism for knowledge sharing like preparing knowledge sharing opportunity as periodic meeting, training, and workshops at cross-department level.

There should be motivational scheme to motivate employees to improve their knowledge sharing behavior such as good working environment, acknowledgement of their contributions, and reward within the university.

For effective knowledge sharing there is a need to design knowledge management system such as portal that encompasses knowledge creation, knowledge representation, knowledge storing and knowledge sharing.

#### **5.4. Recommendation for future research**

Future research may focus on identification of other intrinsic factors that foster the willingness of individuals to donate knowledge. Intrinsic factors are mainly included in psychological and personal context such as belief, attitude, enjoy helping others, humanism. Extrinsic factors reside out of individuals. Subjects like IT, reward, ease in knowledge sharing, level of knowledge, leadership, and organizational structure could be categorized among extrinsic factors. It is recommended that a willingness to donate knowledge be considered in future research as a component of the knowledge sharing behavior to measure the impacts of other factors on it.

Further research should be conducted to determine the influence factors that affect knowledge sharing behavior of Assosa University. Since this research only included 6 faculties (academic staff of Assosa University) findings should be confirmed through a larger sample in order to increase generalizability.

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## **7. APPENDICES**

## Appendix I: Survey questionnaire on knowledge sharing behavior

### HARAMAYA UNIVERSITY

#### SCHOOL OF GRADUATE STUDIES

#### INFORMATION SCIENCE PROGRAM

#### Survey Questionnaire on Knowledge sharing Behavior

**Dear respondent!** This survey questionnaire is meant only for research purposes. The objective of the survey is to conduct research on determinants of knowledge sharing behavior in Assosa University academic staff. Please read each question or statement carefully and try to answer all questions honestly and to your best knowledge. Your answers will be treated confidentially and only for this research. I greatly appreciate your help!

No.	Questions	Responses	
<b>1. Socio- Demographic Characteristics of the Study Subject.</b>			
1	Sex	1. Male      2. Female	
2	Age	1. ≤ 20      2. 21-25      3. 26-30      4. 31-35 5. 36-40      6. 41-45      7. >46+	
3.	1. Agriculture and Plant science 3 .Engineering and Technology 5 .Natural and computational science	2. Business and Economics 4 .Health science 6 .Social science and Humanities	
4	Work experience	1. < 2 years      2. 2-4 years      3. 5-7years 4. 8-10 years      5.>10 years	

#### 2. about the extent of existing knowledge sharing behavior

No	What do you think the <i>contribution</i> of the following practices for your knowledge sharing behavior	1=Very low    2=low 3= Medium    4= high 5= very high				
		1	2	3	4	5
1	Submitting documents and reports.					
2	Expressing ideas and thoughts in organizational meetings.					
3	Spending time in personal conversation (e.g., discussions during lunch time, through telephone) with others to help them with their work-related problems.					

### 3. TRUST

Trust Issues	1= strongly disagree      2=Disagree 3=Neutral                      4=Agree 5=strongly agree				
	1	2	3	4	5
Mostly I distrust contents shared by others					
I'm concerned of providing wrong or false information					
It troubles me that if I share information it can be misused by others					
<b>4. Experience and skills with technology</b>					
I use social medias (e.g. wikis, blogs, Facebook, LinkedIn) in my personal life					
I use Internet (search engines, dictionaries) for working purposes					

### 5. Commitment

What is the degree of commitment on knowledge sharing of:	1=very low      2=low      3=Medium 4= High        5=very high				
	1	2	3	4	5
Managers inside your organization					
Academic staffs inside your organization					

6. Reward System	1=Very low importance    2= low importance 3=medium importance    4= High importance 5=very high importance				
	1	2	3	4	5
How are monetary incentives important to improve your knowledge sharing attitude?					
How are non-monetary incentives (like career development) important to improve your sharing knowledge attitudes?					

## 7. SOCIAL INTERACTION

How is it hard to develop a relationship between:	<b>1: Very Low      2: Low</b> <b>3: Medium      4. High</b> <b>5: very high</b>				
	1	2	3	4	5
Managers inside your organization					
Managers and staffs inside your organization					
staffs inside your organization					

## 8. CULTURAL DIFFERENCES

	<b>1=Strongly disagree</b> <b>3=neutral      4=agree</b>		<b>2=Disagree</b> <b>5=strongly agree</b>		
	1	2	3	4	5
<b><i>Organizational culture</i></b>					
Your institution gives positive feedback for contributing					
My colleagues contribute to the institution value contributions					
I don't have any social interaction because I'm able to make independent decisions					
My manager(s) control how I distribute my working hours for different tasks					
The institution supports departments to cooperate with each other in sharing knowledge.					

## 9. CHANNEL OF COMMUNICATION

17. How often do you share knowledge by:-	<b>1= never      2= rarely      3= sometimes</b> <b>4=often      5=always</b>				
	1	2	3	4	5
Telephone					
Fax					
Emails					
Face-to-face meetings					
Group meetings					
IT solutions					

Appendix II: Interview Questionnaire on knowledge sharing behavior

1. Do you have any knowledge about knowledge sharing?
2. What is the role of training, group discussion (meetings) and face to face communication for the improvement of your knowledge sharing?
3. Is there any knowledge sharing mechanism that the academicians use to share their knowledge among each other?
4. Is there any reward or incentive system for the academic staffs that share knowledge with their colleagues?