



**ADDIS ABABA UNIVERSITY**

**COLLEGE OF NATURAL AND COMPUTATIONAL SCIENCE**

**SCHOOL OF INFORMATION SCIENCE**

**KNOWLEDGE SHARING AMONG ACADEMIC STAFF: THE  
CASE OF CATERING AND TOURISM TRAINING  
INSTITUTE (CTTI)**

**BY:**

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**SEPTEMBER, 2021**

**ADDIS ABABA, ETHIOPIA**



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CATERING AND TOURISM TRAINING INSTITUTE (CTTI)**

A Thesis Submitted to School of Graduate Studies of Addis Ababa University in  
Partial Fulfillment of the Requirements for the Degree of  
Master of Science in Information Science

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Advisor: Rahel Bekele (PhD)

September, 2021  
Addis Ababa, Ethiopia



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## **Declaration**

This thesis has not previously been accepted for any degree and is not being concurrently submitted in candidature for any degree in any university.

I declare that the thesis is a result of my own investigation, except where otherwise stated. I have undertaken the study independently with the guidance and support of my research advisor. Other sources are acknowledged by citations giving explicit references. A list of references is appended.

Signature: \_\_\_\_\_  
Tamerat Wolde

This thesis has been submitted for examination with my approval as university advisor.

Advisor's Signature: \_\_\_\_\_  
Rahel Bekele (PhD)

## **Acknowledgment**

First and for most, I would like to thank the Almighty GOD who makes me strong by giving me his endless help and blessings. The achievement would not have been possible without his blessings.

My great gratitude goes to my advisor, Dr. Rahel Bekele, for her feedback, support and guidance during my research. I would also like to express my gratitude to all the staff at AAU, School of Information Science, who have been so supportive and cooperative in helping me to achieve my goal at all times.

I would like to thank all CTTI staffs who willingly and enthusiastically devoted their precious time and provided genuine input to the research work by completing the questionnaire on time and providing their view for the interview questions.

Last but not least, I would like to thank my dearest parents and family as a whole for their encouragement, prayer, moral, and psychological support. Besides, I would also like to extend my deepest thanks to friends and all those who gave me advice and guidance to finalize the study. Their inputs were very important for the completion of this study.

## ***Abstract***

*Today, every hospitality business depends on employees' competence and quality. Additionally, knowledge, skills, and thoughts lead to the industry's survival and development. TVET has been established to produce a mid and lower-level competent labor force that reduces poverty and develops the country's economy. TVET instructors can prevent the loss of knowledge through knowledge sharing activities. People mostly prefer to acquire knowledge rather than contribute. Thus, institutes need to create a knowledge sharing network and encourage the staff to share knowledge. Knowledge can be shared among faculty staff and in collaboration with external enterprises, not only shared with students and society.*

*CTTI is one of the academic institutes that academicians can share their knowledge through lectures and research. Therefore, this study aimed to assess the overall current practices of knowledge sharing among academic staff in CTTI. The study employed an explanatory survey research design. Primarily, the data source were questionnaires. Secondary data were gathered from previous research works and documents of the institute. Census sampling techniques were employed to collect the questionnaire. SPSS version 20 was used to organize and analyze the quantitative data. Descriptive statistics and inferential statistics were used to explain the current KS activity of the institute. Correlation analysis was used to explain the relationship between factors of knowledge sharing. In addition, multiple regression was employed to identify the most influential predictors. The finding shows that CTTI has a poor organizational structure and infrastructural support with intermediate organizational culture and individual activities for knowledge sharing. The study concludes that CTTI's knowledge sharing practice is inefficient due to a lack of a clear strategy and inconsistent engagement in knowledge sharing activities. Thus, the study recommended that the Ministry of Culture and Tourism (MOCT) should improve and produce policy and strategy documents on knowledge sharing. The management of CTTI should also link knowledge sharing activities with employees' performance appraisals and put them on their job descriptions.*

***Key words:*** *Knowledge, Knowledge Sharing, CTTI*

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## **List of Acronyms**

CTTI	Catering and Tourism Training Institute
HRD	Human Resource Development
ICT	Information and Communications Technology
IT	Information Technology
KM	Knowledge Management
KS	Knowledge Sharing
KSP	Knowledge Sharing Practices
MOCT	Ministry Of Culture and Tourism
MOE	Ministry Of Education
SPSS	Statistical Package for Social Science
TVET	Technical Vocational Education and Training

# CHAPTER ONE

## Introduction

This thesis seeks to identify and understand practices of knowledge sharing in Catering and Tourism Training Institute (CTTI). This chapter describes background of the study, a short discussion of the hospitality and tourism industry, and activities of the sector and knowledge usage in Ethiopia. Finally, the section describes the problem statement, the research questions, the study's objective, and organization of the study.

### 1.1 Background of the Study

The hospitality and tourism industry is one of the fastest-growing sectors compared to other sectors of the global economy. It is also accounting for more than one-third of the total global services trade. Between 1995 and 2008, the international tourist arrivals have grown by 4.3 %. The industry has benefited from the process of globalization and the frequent falling relative costs of travel. However, from 1990 international arrivals have increased by 4.3 %, but the UNWTO expects them to rise by 4% annually over the next 20 years. In the past 25 years, international tourist arrivals have increased about 1% faster than global GDP. After an increase in 2008, the industry earned (US\$942 billion) and in 2009 the income decreased by 5.7 %, earning US\$852 billion (International Labour Organization, 2010).

According to (Tourism, 2016), in 2016, Ethiopia hosted 478,890 foreign tourists during the first two quarters of the 2016 budget year. As a result, the country has earned 1,792,964,160 US dollars. This income was better than the income registered the previous year simultaneously by 404,842,160 US dollars. Moreover, According to (Altes, 2018), “in 2017 The total contribution of Travel & Tourism to GDP was ETB 121,435.0 million (USD 5,074.3 million), 6.8% of GDP in

2017, and is forecast to rise by 6.3% in 2018, and to rise by 5.2% pa to ETB 213,357 million (USD 8,915.4 million), 6.1% of GDP in 2028. The total contribution of Travel & Tourism to GDP is twice as large as its direct contribution. In 2017 Travel & Tourism directly supported 604,000 jobs (2.4% of total employment). It has expected to rise by 1.9% in 2018 and rise by 1.9% pa to 742,000 jobs (2.1% of total employment) in 2028” (Altes, 2018).

Moreover, sustainable tourism development in Ethiopia has many obstacles, such as a lack of understanding of government officers and institutional structure. In addition, there is weak implementation capacity, a lack of skilled and trained workforce, etc. Moreover, communicating with the visitor’s language is mandatory to ensure proper engagement with the guides and service providers. However, few guides speak good English in Ethiopia but do not speak Italian, German, French, or Spanish (Altes, 2018).

Human resource development (HRD) is a major challenge that the tourism and hospitality industry faces internationally. Without HRD, the tourism industry cannot grow and develop into a significant economic driver. If service standards are poor and the visitor experience suffers due to insufficient staff training, this will directly impact the industry (Yaki & Murki, 2014). Additionally, today in every hospitality business, it is all about employee competence, especially the employee’s qualities. Quality of service depends on the qualities of employees; that comes from knowledge, skills and thoughts, which lead to a hotel’s survival and development. Therefore, employees’ training is essential in many ways, increasing productivity while employees have furnished professional knowledge, proficient skills, and good thoughts. Also, that motivates the workers as well as helps them to recognize how important their jobs are (Ahammad, 2013).

According to (Zaei, 2014), Nowadays, the business environment is changing rapidly, and the competition is not predictable. The business success and survival depend on the entire organization's ability to adjust itself to the dynamics of the business environment by making effective decision-making and proper utilization of skills and knowledge of employees. According to (Dhamdhere, 2015), institutions should be concerned with knowledge sharing to achieve successful knowledge management. Knowledge sharing is part of the knowledge management process, an activity through which knowledge has to be shared among people, friends, family, community, organization, or collaborative parties. The main reason for encouraging individuals to share knowledge for the entire organization is to keep the knowledge before the person disappears; for instance, if the individuals leave the organization, the knowledge might also be lost. Besides this, Universities have engaged in teaching, research and community services which means empowering knowledge as a critical factor for the business of higher education institutions. Knowledge can be shared among faculty staff and in collaboration with external enterprises, not only shared with students and society. As well as applying successful sharing of knowledge is the heart and core of universities life.

According to the Ministry of Education (MOE), Technical Vocational Education and Training (TVET) have established to produce middle and lower level competent, motivated and innovative labor force which contribute to the reduction of poverty and develop the country's economy ( as cited in Hunde & Tacconi, 2017). (Hashim et al., 2017) believes that TVET instructors can prevent the loss of knowledge through knowledge sharing activities. If the staff promotion and retirement occurred, the knowledge might be lost, and knowledge activities can fail through people's preference. People mostly prefer to acquire knowledge rather than contribute. Thus, institutes need to create a knowledge sharing network and encourage the staff to share knowledge.

According to (Dhamdhere, 2015), there is a need to create a culture of knowledge sharing among staff and students, but they are afraid to share their knowledge. Teaching professionals' development of advanced skills and ICT usage lacks contributing, communicating, capturing, recording, and sharing knowledge. Organizations should design the right policy regarding the information and knowledge capturing and sharing among the academic professionals within the branches found at different locations under the same management. Including creating an intranet or extranet, infrastructural and technical support from ICT managers, network managers are essential for all academics (Dhamdhere, 2015).

Mostly the studies of knowledge sharing (KS) focus on business organizations focusing on KS activities which are their ultimate objective. Thus, Organizational KS are motivated to accomplish an adequate profit. Nevertheless, KS is equally important for knowledge based institutions; for instance, educational institutes where knowledge creation, dissemination, and application are rooted in the institution, but there is no clear way to measure the outcome of KS in knowledge institutions; the effect of KS might be more significant than those created by the business organizations (Cheng, et al., 2009). Additionally, Celina believes that KS is not successfully implemented in educational institutions; they are likely to change their organizational culture to accept KS strategies and practices (as cited in Solomon, 2020). Besides this, as stated by (Fantaye, 2014), in higher educational institutions to apply KS more effectively, knowledge management (KM) brings three essential organizational resources, such as people, processes and technologies (Fantaye, 2014). Furthermore, Sujata & Santosh stated in their study that these three resources also need the organization to consider applying the study for the practice and barriers to KS among academics (as cited in Solomon, 2020).

## **Catering and Tourism Training Institute (CTTI)**

*Catering & Tourism Training Institute (CTTI) is the earliest institute established in 1969 with the objective of producing skilled manpower in the tourism and hospitality industry. It was founded by the Ethiopian government in collaboration with Israeli government. The first General Director of CTTI was named Mr. David Ephratse. In 2009, the institute was formally recognized as one of the Federal Government executive organs, following the act declared by the Council of Ministers under the proclamation of 174/2009/10. The newly constructed building is located in the neighborhood of Guenet Hotel. The main objective of the institute is to produce skilled manpower, conduct researches and consultancy related works in the tourism and hospitality industry. Currently, the institute is working on ten years (2016-2025) road map. It lightens the path for the industry. The strategies included in the road map show the increment of the existing 23% skilled man power to 80% within the coming ten years. The training institute has planned to conduct research works and provide consultancy services in cooperation with other universities. Capacity building and technology transfer to produce competent professionals in the industry are also among the works of the center (Www.Cttiedu.Org, 2020).*

CTTI has two departments: Hotel and Tourism, and both departments are in TVET and undergraduate programs. It has above 1500 students in extension and regular programs. Currently, the institute has 240 staff, both academic and administrative. Additionally, the institute has a good office layout with ICT infrastructure, such as a good internet connection and electronic devices. Each instructor also has a laptop and desktop, printer, etc. Therefore, for effective work performance identifying KS activities is necessary.

### **1.2 Statement of the Problem**

According to (Florijan, et al., 2020), the services of the tourism and hospitality sector depend on information and people. Thus, the industry needs to adopt KM concepts to improve people's performance and ensure a high level of competitiveness. (Nassuora, 2011), believes that companies might have benefited from KM by encouraging KS, which can improve the quality of

organizations' service. KS is a key element of KM described as one's contribution of knowledge the others acquire and transform it into their knowledge. Successful KS requires the willingness between two or more parties to share their knowledge.

According to (Hashim et al., 2017), knowledge is a strength for TVET instructors because it improves the quality of graduates in the technical fields. In order to create an effective KS activity, trust is needed among the individuals. Additionally, awareness of KS is one factor that influences individuals to hide the new knowledge from each other. Unless there is no proper awareness among instructors, that is not easy to apply knowledge sharing activities in a TVET environment (Hashim et al., 2017). Additionally, In order to improve knowledge sharing, managers should organize more training programs that improve the academic staff knowledge management awareness and skills (Solomon, 2020). Changing employee attitudes determine the promotion of knowledge sharing within an organization. Preliminary research conducted by (Solomon, 2020), was to explore the current KSP and identify the most significant factors that affect KSP among academic staff of the Institute. The research result shows that the level of KSP in the study organization was low. It is mainly attributed to the low awareness of the institute's management about the value of knowledge as a strategic resource of the organization. In CTTI, most of KS activity carried out between teachers and students in two way communication but in some cases it acquired through conference and training.

According to (Njiraine, 2019), Lecturers are being engaged in teaching, researching, and consulting. Thus, it makes the universities considerably benefited from improving education quality. Even though several universities have supported by the digital infrastructure to use free access of digital resources to the academic and research community, the acceptance and adoption

of knowledge sharing (KS) have been implemented with some resistance. To improve this resistance and bring positive change needs to be addressed from an individual, group, and institutional awareness of KS. Besides this, the other contributor for inadequate KS is the increasing of students enrollment, therefore, developing appropriate strategies and innovations needed to meet the increasing students' information needs (Njiraine, 2019). In CTTI, the construction of a new campus maximized the number of teachers and students. Also, the current organizational plan has not clearly understood the knowledge sharing activities and is not focused on formulating a proper knowledge sharing strategy. A study conducted by (Bekele & Abebe, 2011) on “prospects of knowledge sharing among Ethiopian institutions of higher learning” revealed that the status of KSP concerning personal, technical, organizational factors and availability of infrastructure. Accordingly, some hindrances of KS are the unavailability of KS platforms, lack of KS policies, strategies, and programs.

According to (Dhamdhere, 2015), one of the most contributors to knowledge creation is educational institutions. However, in these institutions, a lot of information or knowledge is often misused, so it may be helpful to have accurate recoding in the organization. The created knowledge should be organized in a central location and disseminated to the community for further development (Dhamdhere, 2015). Besides this, in CTTI recently, even though there is an established ICT directorate office but it has not established a dedicated data center and there is no other specific KS platform except social media which is used for exchanging information. For instance, the library is working manually, and at the registrar's office; a system has been developed, but teachers and students still have many complaints about the system.

According to (Haque et al., 2015), nowadays, people depend on technological tools in their works. Thus, technological factors have a significant impact on completing the process of KS both at the organizational and individual levels. Additionally, according to (Al-Kurdi et al., 2018), besides technological determinants, there are also determinants of KS such as organizational, behavioral, motivational, and cultural (Al-Kurdi et al., 2018). Furthermore, the study shows that academicians highly agree that top management support and organizational culture are important factors in knowledge sharing (Mat et al., 2019). In CTTI, there is no specific technological platform for KS, there is low management support to motivate the staff and organizational culture also not encourage the staff to share knowledge.

Academic institutes are the leading centers for knowledge creation, and their impact on the knowledge economy can be felt worldwide. In academic institutions, by collaboration with knowledge and skills owners, institutes provide the chance for teamwork between these persons whose productivity will increase by sharing their information. Individual's desire for competing and working independently results poor in the activity of KS in organizational culture (Khosravifar et al., 2021). Additionally, people mostly prefer to acquire knowledge rather than sharing. Staff's promotion and retirement might make loss of knowledge (Hashim et al., 2017). Thus, assessing the current practices of KS in the institute is essential for effective management of knowledge.

In CTTI, there is an annual research conference but presented mainly by individuals who come from outside the institute. Even though the research conference is good to share the knowledge, but a few researches only conducted by the institutes' staff. The institute does not emphasize to the institute's staff to do more research and also does not support them to participate in other conferences outside the institute. The research and consultancy office has low activities regarding

research and related activities such as the presented researches are not available for public, there are low opportunities in conducting conferences, and low research training opportunities, etc.

Based on this, the study tried to address the current activities on KS at CTTI. Although other researchers conducted studies on knowledge sharing in Ethiopia and outside Ethiopia, these researches are conducted in different organizational culture settings and technological developments. According to (Kamasak & Yucelen, 2009), every company has its own different objectives. Thus, one's company knowledge asset could be useless for others (Kamasak & Yucelen, 2009). Therefore, this study also conducted to identify KS activities of CTTI. Accordingly, to meet the study's objectives, the following research questions have been prepared:

- What does the awareness and attitude of CTTI's staff towards knowledge sharing look like?
- What does the existing knowledge sharing activities in CTTI look like?
- What does the current organizational and infrastructural support for knowledge sharing in CTTI look like?
- What types of knowledge are available to be shared among CTTI's staff?

## **1.3 Objective of the Study**

### **1.3.1 General Objective**

The main objective of this study is to explore knowledge sharing (KS) among academics of Catering and Tourism Training Institute (CTTI).

### **1.3.2 Specific Objectives**

The specific objectives of this study are to:

- Assess the existing awareness and attitude of knowledge sharing within the institute.
- Investigate the staffs' current knowledge sharing.

- Identify organizational and infrastructural support for knowledge sharing within the institute.
- Assess types of knowledge that exist within the institute.
- Show the direction for formulating a strategy for the improvement of knowledge sharing behaviour of the institute.

#### **1.4 Significance of the Study**

Nowadays, the world has become very intellectual in all fields of business and has become very competitive and educational institutions are supposed to be places where knowledge is created. The created knowledge should be shared with others. Accordingly, the result of this study will reveal the practice and challenges of knowledge sharing, which hinder the institute from giving quality service. The study may benefit the institute through the improvement of employees' knowledge sharing activities. Moreover, the study will help gain information for developing policy, decision-making, and guidelines to support knowledge sharing. This research shows the direction for formulating a strategy for the improvement of knowledge sharing culture in CTTI.

Furthermore, it will also be useful for other institutes related to tourism and hotel training institutes to develop and revise their policies and guidelines to improve their KS activities. Additionally, For Researchers, this study can be used as an input for further studies, particularly in areas of catering and tourism. Most importantly, students and other customers can also benefited from getting a quality service from the institution that improved the KS activities.

#### **1.5 Scope of the Study**

This study focused only on CTTI. The area of the research is the academic institute of tourism and hospitality. The reason for selecting this sector is that the quality of education is very important. The scope is delimited in identifying the major knowledge sharing practices of the institute. Even

though the institute is the first of its kinds in Ethiopia, it is not applying knowledge sharing effectively as a resource. Assessing the existing knowledge sharing practices such as staff attitude, awareness, and organizational support helps the institute implement knowledge sharing activities properly. The study is conducted on the institute's entire academic staff. Even though the population selected does not negatively impact the result of the study, it is geographically limited to one institute because of financial and time constraints.

## **1.6 Organization of the Study**

This research organized into five chapters. The first chapter discusses the study background, statements of the problem that relates to the research, the general and specific objectives, significance, and scope of the study. The second chapter presents the literature reviews with general overviews of knowledge, knowledge management, and knowledge sharing practice and challenges with the related works. The third chapter discusses methodologies such as the research approach, research design, data collection procedures, and data analysis procedures and other techniques for knowledge sharing practices. Chapter four is the paper's core, where the data presentation, analysis, and interpretation are presented with a detailed discussion. Finally, the fifth chapter of the study presents the conclusion, recommendations and future research directions.

# CHAPTER TWO

## Literature Review

### 2.1 Overview of Knowledge and Knowledge Management

According to (Davenport, 1998), “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 also comes from information as well as information is derived from data. Knowledge creates and is applied in the individual's mind. Besides this, at the organizational level, Knowledge might be rooted in routine work and norms, not only it becomes documented or stored in repositories (Davenport, 1998). Additionally, (Jillinda et al., 2000) believes that Knowledge starts from the data and information. Data means only consists of raw facts and numbers. Based on these raw facts and numbers, information is produced. Based on the information retrieval and information technology systems, information is documented and stored in a database available for concerned users, but the information should apply with experience and values. Knowledge could be used for decision-making by including employee’s insight and wisdom (Jillinda et al., 2000).

Moreover, as mentioned by (Asrar-ul-Haq & Anwar, 2016), in today’s competitive age, knowledge is recognized as a critical component for the survival of organizations. The researchers show that knowledge is the primary source of competitive advantage and shows that it is the crucial antecedent for continuous innovation. Thus managing Knowledge is significant for organizations (Asrar-ul-Haq & Anwar, 2016).

Polyany’s and Nonaka’s study describes two types of knowledge, namely tacit and explicit. “Tacit knowledge is that which is understood within a knower’s mind. It consists of cognitive and

technical components”. Cognitive components are unstructured knowledge and cannot be expressed by knowledge representations. To the contrary, technical components are structured knowledge that can be expressed readily. “Explicit knowledge also consists of these technical components that can be expressed directly by knowledge representations.” In an organization, knowledge can be transferred when individuals share tacit and explicit knowledge. Besides, Information technology (IT) supports the knowledge to transfer through providing knowledge repositories and helps to capture and retrieve the knowledge. IT gives a better result primarily for explicit dimensions. However, the knowledge that is primarily in the tacit dimension requires more context to be captured. That context is the information used to explain what the knowledge means and how it is used (as cited in Jennex, 2007).

## **2.2 Knowledge Management**

The purpose of knowledge management (KM) aims to manage both structured and unstructured knowledge, which can help the organizations improve their effectiveness through improved retention and reuse of knowledge (Jennex, 2007). Moreover, as stated by (Nawaz & Gomes, 2015), knowledge management mainly focused on developing organizational knowledge assets and achieving objectives through knowledge acquisition, storing, sharing, reuse, and creating. Studies indicated that business organizations, universities, and other higher education institutions are highly involved in knowledge management (Nawaz & Gomes, 2015). Additionally, the study by (Dhamdhere, 2015) also indicated that several universities are joining in knowledge management related activities such as doing research, seminars, and conferences on knowledge management. Knowledge management activities in the educational sector are becoming popular due to disclosing the intellectual power available in institutions for sharing experiences. Knowledge builds on the inside, and generating new knowledge relies on past events (Dhamdhere, 2015).

In today's challenging world, KM is the main subject of every organization and focuses on transforming tacit knowledge into explicit one. Since knowledge is constituted in individuals and depends on individual experiences, intuitions, insights, and personal judgment, it is difficult to capture. If it is extracted, it may be codified and becomes a tangible form of knowledge. Otherwise, it is called tacit knowledge. Since codified knowledge is easy to share and used, it is emphasized that tacit knowledge provides a competitive advantage. And tacit knowledge is seen as a strategic asset for the competitive advantage and sustainability of the organizations (Ozmen, 2010).

## **Knowledge Management Process**

According to (Kumaravel, 2018), an academic institution for the successful implementation of KM needs to prearrange KM enablers such as technology, organizational structure, collaboration, and trust. Moreover, (Chang & Lin, 2015) stated that in establishing a successful and competitive organizational environment, the KM process involvement, such as knowledge creation, knowledge storage, knowledge sharing, and knowledge application contributes a vital role (Chang & Lin, 2015).

## **2.3 Knowledge Sharing (KS)**

### **2.3.1 Overview**

According to (Lin, 2007b), knowledge sharing is the process of transferring knowledge to other organizational individuals for successful decision-making. KS requires a culture of social communication that incorporates employees, experiences, knowledge, and skills across offices and organizations. This kind of environment encourages employees to cooperate, create and store knowledge and expertise (Lin, 2007b).

(Abdillah, 2014) defines the term of information and knowledge sharing as disseminating information and knowledge from source(s) to destinations(s). The sources could be a person or

individual, or group in an organization. The destinations could also be similar to sources, but they might be from the same organization or from outside the particular organization. KS opens the opportunity for a member of a group, organization, institution, or company to share the knowledge, techniques, experiences, and ideas they have with other members (Abdillah, 2014).

Additionally, (Ipe, 2003) defined KS as a spontaneous act and distinguished it from reporting. This reporting involves the delivery of information based on some routines or organized formats. Moreover, sharing implies an intentional act by an individual to participate in the knowledge exchange while there is no pressure to do so (Ipe, 2003).

Knowledge sharing refers to the communication of all types of knowledge, including explicit and tacit knowledge through socialization, interaction, and training. Hence, effective KS involves transmission and absorption of the sender and receiver, respectively. Therefore, organizations are risking losing money, time, and ability when they did not have knowledge sharing effectively. Thus, knowledge sharing aims to acquire knowledge for knowledge using in daily work processes to improve the collaboration and relationships among workers and enhance the accumulation of knowledge for employees and the organization as a whole. Furthermore, the purpose of KS is to an immense pool of experience to the next generation of workers because knowledge can be lost through redundancy, retirement, resignation, and even promotion. Hence, the critical outcome of KS is the creation of new knowledge that will significantly improve organizational performance (Yu, 2011).

## **2.4 Knowledge Sharing in Educational Institutions**

Educational institutions are knowledge intensive organizations as well as; in daily academic activities, schools have to obtain, store, share, utilize, and produce knowledge; specifically, they have to adopt knowledge management (KM) to educate the students effectively. In contrast,

nowadays global economy and societal needs lay significant challenges on schools for educating knowledgeable and skillful students who will meet the expectations. However, a wide range of literature reveals that educational organizations are not ready to embrace KS and not aware of the crucial importance of tacit knowledge. In addition to this, every business organization needs attention for the success of their business. Schools have insufficient activity as knowledge sharers despite the business organizations, and their cultural and structural characteristics have hindered knowledge sharing (Ozmen, 2010).

KS is part of an essential component in KM implementation; it is also encouraged as a significant element for organizations to survive and sustain their competitiveness in the period of the knowledge economy. It is especially valid for higher learning institutions in which the environment is a collection of individual specialists who establish an acknowledged body of knowledge for many degree-granting areas. Consequently, it is essential to form effective KS in the training area to improve teaching and learning and deliver a solid knowledge base for research-based practices and strategies (Chong et al., 2014).

Technical Vocational Training and Training (TVET) aims to provide skilled human resources under the industry's requirements. To fulfill these requirements, the extent of knowledge of TVET intuition educators has to be enhanced from time to time to enhance the standard of technical graduates. KS activities among TVET educators could help improve the present knowledge level of TVET educators and arm them with updated industrial information. Nowadays, educational institutions are in great need of a comprehensive KS network that could fulfill the changing demands of the industry. Knowledge sharing among TVET instructors follows a conservative method: face-to-face interaction such as talks, seminars, and courses. Since this conservative

mechanism is quite costly, not all the updated knowledge has been fully disseminated among TVET instructors (Hashim et al., 2016).

According to (Paulin & Suneson, 2011), knowledge sharing is intended to manage processes within the organizations and colleges to transfer the proper knowledge to the targeted individual and smooth the decision-making process. The improvement of technology and communication networks enabling the exchange of knowledge and information, which prompts organizations, academies, and institutions to share knowledge and exchange experiences, where KS is a critical factor in the maintainability of organizations (Paulin & Suneson, 2011).

Knowledge sharing activities of educators are significant because individual and collective knowledge is the basis in the teaching profession. Educational institutions are knowledge centers that can outshine through KS initiatives, particularly among lecturers that proceed as conferences, discussions, and publications. Nonetheless, the KS initiative probably will not emerge if the sharing culture is not imparted. Thus, the administration of the institutions needs to design the KS initiative to enable the practice. Simultaneously, the initiative must correspond with the educational institutions' mission, such as increasing the performance, competitiveness, and improving other services to fulfill the industry needs. Successful sharing of knowledge between academics is fundamental for educational institutions. The sharing of knowledge in an educational environment ensures that academic staff is more efficient and updated with the most recent knowledge. In the context of higher educational institutions' KS among academics has been developing throughout the last decade (Cheng, et al., 2009).

## **2.5 Factors Influence Knowledge Sharing**

According to (Hashim et al., 2016), previous studies indicate that individual and organizational factors influence KS. Besides this, an organization that practices a culture of sharing knowledge between employees ensures this practice has occurred naturally. Besides that, knowledge sharing activities are positively affected by individual factors. The individual factor alludes to a person's internal encouragement acquired through trust, attitude, perception, expectation, and emotion (Hashim et al., 2016). Moreover, as stated by (Edwards, 2011) knowledge sharing is perhaps the most significant and complex activity among all knowledge management processes and expects managers to focus on the individual, organizational, and technological factors (Edwards, 2011). Besides that, with this classification, the analysis of previous works of the literature shows that the critical success factors for knowledge management and knowledge sharing found that even more than 50% of the frameworks named as individual and technological factors as well as more than 40% named "organization" as supplementary critical success factor (Lin, 2007a).

The difficulty of KS happens because these three measurements can be challenging to manage and interfere with and impact the knowledge sharing process. Individuals represent a crucial source of knowledge since they have the tacit and explicit knowledge that needs to be shared. The organizational process must support the knowledge through policies and procedures to support the activities of KS. In addition, the rising of information technology in an organization plays a vital role in the knowledge sharing process. Organizations that have suitable technological bases set up are better situated to exploit their knowledge assets. These dimensions should be seen independently and afterward be considered altogether to manage knowledge sharing to increase organizational performance execution (Abdelwhab Ali et al., 2018).

A study conducted by (Wang & Noe, 2010) revealed that individual and organizational factors were found as a success factor of KS. They examined factors such as technology platform, organizational culture, leadership, structure, expected reward, and contribution, and also they recommended further studying them in a different context.

Additionally, the study by (Fullwood & Rowley, 2013) addressed KS attitudes in UK university academics. They examined some of the factors that may be relied upon to affect Knowledge Sharing activities. It noticed that exploring these factors regarding various Higher Educational institutions is suggested and could be fundamental for KS (Fullwood & Rowley, 2013).

### **2.5.1 Organizational Factors**

According to (Fullwood & Rowley, 2013), an organization is characterized as a gathering of individuals joined in a relationship and having some interest, purpose, or activity in common. Organizational factors are one of the significant factors that have been noticed among previous scholars that significantly affect KS. Additionally, several organizational factors like leadership, information technology, organizational structure, and organizational culture are among enablers that give higher educational institutions the capability to influence their KS initiatives (Fullwood & Rowley, 2013).

#### **Leadership**

According to (Vincent, 2003) definition, leaders are the organization's manager who is responsible for distributing information with direction, inspiration, and support to workers. Furthermore, the role of leadership is significant in stressing KS in the organization. Various researchers proposed that leaders' role could positively influence KS by encouraging communication among employees. On the other hand, they may also present cultural barriers to KS among the organization members.

(Anantatmula, 2008) Also, for a culture of KS inside an organization, leadership should play a significant role in sharing knowledge. Responsibility not only lies with employees as well as more lies with the top managers who need to establish an environment that encourages KS (Anantatmula, 2008).

### **Organizational Culture**

According to (Chang & Lin, 2015), studies show that organizational culture is one of the essential factors that hinders or influences KS. Organizational culture refers to the character of an organization. Culture refers to norms, values, beliefs, principles, and legends practiced in an organization that can influence how individuals think, make decisions, and acts. Knowledge sharing characterizes the organizational culture, increasing creativity by taking KS as a routine activity, reusing best practices, and being open for collaboration within the organization. For instance, these two authors studied the influence of the different types of organizational culture such as bureaucratic, communal, innovative, and competitive on the employees' KS activities within international corporations. They found that all the four types of organizational culture influenced employees' knowledge sharing behavior and processes and believed that strong top management support is required to enable relationships between employees to share knowledge (Chang & Lin, 2015).

### **Organizational Structure**

Organizational structure is one of the critical enablers for the effective management of knowledge. It characterizes the relationship between different offices, divisions, and the hierarchy of the organization. Additionally, it encourages or facilitates knowledge infrastructure support, freedom, scope, structural flexibility, and teamwork to implement successful knowledge sharing across the organization. Besides, studies on KS emphasized that the organizational structure is a significant

factor that hinders the sharing of tacit knowledge in the organization. Due to the purpose of educational institutes, their structures differ from those of business organizations. The study argued that an educational institute's organizational structure impacts KS and could be a significant barrier to KS activities (Tippins, 2003).

The study by (Wang & Noe, 2010) assessed various kinds of organizational structures including, centralization, officialism, and complexity. A robust structure is coordinated to underline vertical information flow because the correspondence channels follow the corporate chain of command. It limits KS, as KS should happen in both vertical and horizontal ways. Complexity, formality, and centralization reduce, not increase, the amount of shared knowledge between organizations' employees. Knowledge sharing happens when associates and bosses convey. Accordingly, a less centralized structure considers more knowledge sharing (Wang & Noe, 2010).

### **2.5.2 Information Technology (IT) Platform**

According to (Leidner, 2016), information technology has been described as a significant enabler of KS initiatives. Organizations invest extensively in information technology to efficiently handle and manage both organizational and individual knowledge. According to the study, the IT platform was created to support and improve the organizational process of knowledge creation, storage, transfer, and application. Many knowledge management initiatives depend on IT as a critical enabler for growing KS activities by expanding an individual's scope beyond formal communication networks. (Young Choi et al., 2010) conducted an empirical study involving 139 ongoing teams of 743 people from two major South Korean organizations. They aimed to investigate more about the role of information technology and how it affects KS and application. Their results revealed that information technology has a positive effect on KS processes in

organizations. They concluded that by carefully investing in IT, businesses would increase their employees' ability to share their knowledge.

In recent decades, the role and development of ICT have been a central focus in encouraging higher education to play a more strategic role in economic growth and innovation. Since the role of information technology in knowledge management processes is catalyzing the process of knowledge transfer and creation, there is always a need to strengthen and promote KM systems frameworks by developing new methods, tools, and techniques. It ultimately contributes to promoting knowledge processes and technology for successful KM and enhanced higher education service delivery. Tacit and unstructured knowledge is often communicated through direct personal communication. The primary function of IT in this situation is to assist people in locating and communicating with one another to achieve complex knowledge transfer (Ryhan & Mohammed, 2013).

### **2.5.3 Individual Factors**

According to (Takeuchi, 1995), individuals act as both knowledge generators and receivers in the KS process. Individuals create knowledge by socializing through sharing experiences and ideas. Individuals who are receptors of knowledge seek and interpret the knowledge before transferring it to a repository. According to the researcher, KM and KS within an organization will not be effective without the participation of humans. Hence, it is critical to comprehend the individual factors that influence people's willingness to share their knowledge (Takeuchi, 1995).

#### **Willingness to Share Knowledge**

Researchers have found that both individual and organizational factors influence organizational members' willingness to share both explicit and tacit knowledge. Furthermore, since knowledge

sharing is a people-process rather than a technology-driven process, academicians' attitudes and willingness to share knowledge are significant elements of the process. Human beings are linked explicitly to knowledge sharing. There are a variety of KS barriers among people due to human differences. Firstly, knowledge sharing implies that a person is either a sharer or a receiver of knowledge (Adamseged & Hong, 2018).

For example, (Lucas, 2005) found that employee experiences in sharing knowledge across the organization were significantly influenced by interpersonal trust between colleagues and their leadership. Additionally, equal consideration in the allocation of intrinsic and extrinsic incentives to employees positively impacts employees' willingness to share knowledge. According to (Adamseged & Hong, 2018), Individual-level problems can be classified into two categories: knowingly and unknowingly. Knowingly individual barriers are created when a person intentionally refuses to share his knowledge for various reasons. Individual barriers are unknowingly created when a person fails to share knowledge because they are uncertain whether or not anyone needs or does not know what to do with it (Adamseged & Hong, 2018).

### **Attitude towards Knowledge Sharing**

Employees' attitudes encourage them to share their knowledge. KS is more than just information exchange; it also includes certain behaviors and attitudes to sharing knowledge. Furthermore, an individual's attitude toward a particular action is a strong indicator of one's intention to participate in that behavior. The TRA and TPB theories have been used to explore the effect of attitude on knowledge sharing. Studies have also shown that maintaining a positive attitude contributes to having a positive intention to share knowledge (Sugashwarprashanth, 2016). The theory of planned behavior (TPB) can describe why people want to share their knowledge. TPB believes that behavioral intention determines behavior and that this intention is influenced by one's attitude

toward behavior and subjective norm. An individual's attitude toward that behavior determines their behavioral intention to share knowledge (Ajzen, 1991). Employees must believe that by sharing their knowledge and skills, they can improve their interaction, motivating them to do so. KS attitudes such as mutual trust, common interests, eagerness, and willingness may increase an employee's intention to share knowledge with other organizational members to the extent that they do so (Sugashwarprashanth, 2016).

### **Trust**

One of the most challenging aspects of sharing knowledge with other members of an organization is a lack of trust. As a facilitator of KS, one of the most widely mentioned factors is trust. Individuals of the organization will communicate with each other with greater trust and share their knowledge due to social trust (Sugashwarprashanth, 2016). Moreover, trust is essential for promoting better working relationships. A person can only be confident in sharing knowledge with others in various ways if they have confidence. It makes it more likely that knowledge will be shared and will not be lost. Thus, as they aim to impact society positively, faculty members can create trust and partnerships and be transparent and free to share knowledge (Adamseged & Hong, 2018).

(Lin, 2007b) has revealed a correlation between trust and tacit KS. KS activities have been inhibited by a lack of trust among academics in educational institutions. It has been shown that when academics do not trust their colleagues with their knowledge, there will be no effective KS. For instance, (Casimir et al., 2012) investigated the impact of affective trust in colleagues and knowledge sharing. Their study found that solid trust in colleagues influences the relationship between affective commitment and KS and the relationship between the cost of KS and its activities. Furthermore, trust, cultural integration, openness, and their effects on the success of KS

from a large company to their subsidiaries. Studies have revealed that KS becomes easier when employee trust is high (Casimir et al., 2012).

### **Expected Rewards and Associations**

Besides trust, expected rewards and associations have a positive impact on an individual's KS behaviors. On the other hand, a lack of motivators and incentive programs can hinder KS in organizations (Jeon et al., 2011). (Gururajan & Fink, 2010) investigated academics' attitudes toward KS in a technology-based university environment. Their findings revealed that academics who are praised and inspired in the form of recognition, respect, and financial incentives are more likely to share their knowledge with their peers. In similar research, (Jeon et al., 2011) conducted an empirical study to find factors that affect the KS attitudes, intentions, and behaviors of the community of practice participants. Their results revealed that extrinsic and intrinsic motivational influences significantly affect attitudes toward KS behaviors (Jeon et al., 2011).

Employees are more likely to share their knowledge in return for incentives or compliments from other organizations. Employees willing to share are more focused on sending information and on their own experiences rather than developing a shared opinion. People who are willing to share their knowledge expect positive benefits in return, such as improved credibility and peer recognition. It will foster the interest of other workers in sharing their knowledge within the organization (Boer et al., 2002).

## **2.6 Knowledge Sharing Mechanisms among Staff**

According to (Boh, 2007), tacit and explicit dimensions of knowledge categorizes as codification versus personalization and individualization versus organization. In codification versus personalization, organizations can encourage sharing knowledge between people through utilizing

codification or personalization systems. In the codification mechanism, knowledge is purposely codified and stored in databases and like documents, where it can be accessed and utilized effectively by staff in the organization. In a personalization mechanism, it will be intently attached to the individual who created it and shared essentially through direct individual to individual contacts (Boh, 2007).

The presence of institutionalization versus individualization dimension characterizes the strategies utilized by organizations to socialize strangers into the organizations. The institutionalization dimension shows that socialization strategies are group and formal as far as the settings in which organizations give information to newcomers. At the same time, individualization describes socialization strategies that are individual and informal. Individualized mechanisms support the individual level of KS. There is a predetermined number of individuals who can get to the knowledge. In general, the mechanism will be founded on the random choices of people and be extraordinary to people or small groups. (Boh, 2007).

Additionally, these mechanisms also ad hoc individual-level activities that are shared in an informal and unstructured manner. Institutionalized KS instruments support KS at the collective level. They allow the transference of knowledge and learning from a personal to a large group of people by embedding capabilities of KS into the organizational structure and routine. Institutionalized KS mechanisms classify the use of mechanisms that are formal (set up and incorporated by the organization) and structured (pre-defined and implanted in various organizational routines, artifacts, or organizational structures). These components have a more extensive reach or are generally available to a large group of people in the organization (Boh, 2007).

## 2.7 Theories of knowledge sharing behavior

Several theories have been applied to study knowledge sharing behaviour, including social exchange theory (SET), theory of reasoned action (TRA), theory of planned behaviour (TPB), etc.

**Actor Network Theory:** The actor-network theory (ANT) is a social theory that investigates the interactions between human and non-human entities in an actor-network, allowing for the consideration and study of technical, organizational, and social aspects of an actor-network (Diedrich & Guzman, 2015). ANT examines the shifting relationships between the actors or members of a network. Relationships of these shifting are examined in respect of the four moments of translation. Translation is the alignment of interests of the actors in a network with that of a focal actor. The four moments of translation includes problematisation, interessement, enrolment and mobilization (Sarker et al., 2006).

**Agency Theory:** Agency theory is directed at the universal agency relationship, in which one party (the principal) delegates work to another (the agent), who performs that work. Agency theory attempts to describe this relationship using the metaphor of a contract (Jensen & Meckling, 1976).

**Attribution Theory:** This theory proposes that the attributions people can make internal or external attributions regarding events and behavior. In an internal, people assume that an event or a person's behavior is influenced by personal factors such as abilities, traits, or feelings. In an external, people infer that a person's behavior is due to situational factors (Michela, 1980).

**Knowledge-Based Theory of the firm:** The Knowledge-Based Theory of the Firm (KBTF) views knowledge as a company's most valuable resource and one of the most important predictors of long-term competitive advantage and better corporate performance (Grant, 1996).

**Organizational support theory:** Organizational Support Theory proposes that employees form a general awareness concerning the degree to which the organization values their contributions and cares about their well-being (Eisenberger et al., 1997).

**Social Cognitive Theory:** A person's behavior is partially formed and controlled by the influences of circumstantial factors and the person's cognition (Hung, 2010).

**Social Exchange Theory:** The Social Exchange Theory explains human behaviour in social exchanges in which each participant exchanges interests with one another to achieve the best results and maximize rewards while minimizing costs (Emerson, 1976).

**Theory of Reasoned Action:** Theory of Reasoned Action (TRA) is a social psychology model, which developed the idea for the evaluation and prediction of the behaviour of individuals within a social context, based upon behavioural intention, subjective norms and attitude.(Fishbein, 1980).

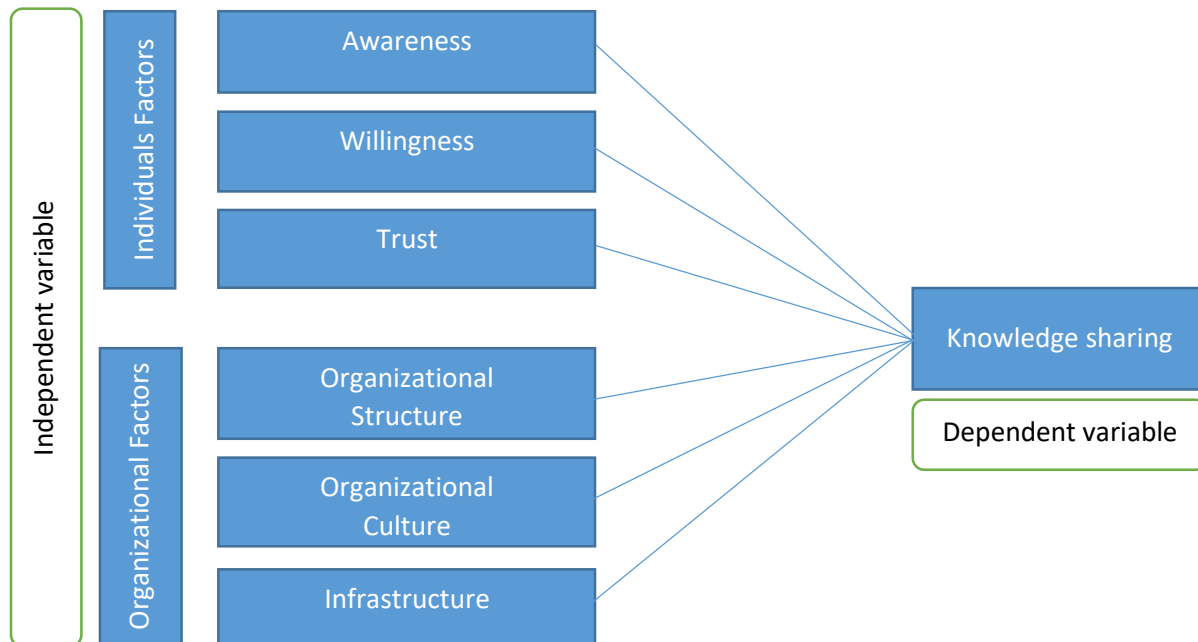
**Theory of planned Behavior:** The theory's foundation was established by Ajzen 1985, who used three types of considerations to forecast an individual's intention and willingness to engage in a particular behaviour: behavioural beliefs, normative views, and control beliefs (Ajzen, 1985). According to (Lin & Lee, 2003), TPB can be considered the extension of TRA through the combination of perceived behavioural control (PBC) and additional construct. Within TPB, it is suggested that behavioural intention and PBC are predictors of behavioural achievement. According to TPB and (Ajzen, 1991), the greater the intention of people to practice a behaviour, the greater the possibility that they will engage in that particular behaviour. Furthermore, a study by (Tohidinia, 2010) employed the TPB model, with the results indicating that there were strong relations between KS behaviour and elements of TPB; the study discovered that factors having a

positive impact upon KS behaviour included expected mutual relationship, perceived self-acknowledgement, the degree of use of communication and information technology, and professional environment. Most of the theories contribute to serve this study's research questions.

## **2.8 Model for Knowledge Sharing**

According to different works of literature, the conceptual model of the studies under various topics suggests that to fulfill the need for KS. The study recognizes various factors on academic staff's knowledge sharing practices based on the empirical literature.

There are various KS factors available in the different empirical literature, but it is not easy to access these factors in this study. As a result, this research focused on variables that have been thoroughly tested in other similar organizations. These KS factors are considered as individual, organizational and infrastructural factors. The proposed model in this study includes independent variables such as awareness (AW), willingness (WIL), trust (TR), organization structure (OS), organizational culture (OC), infrastructure with technological factors (INFr), as well as a dependent variable is knowledge sharing (KS).



*Source: (Alsaadi, 2018)*

Figure 1: Model of knowledge sharing among academic staff

## 2.9 Related Works

Various studies have been conducted by different researchers globally and locally regarding KM and KS activities. The study focused on the research works which are relevant and have a direct link with this thesis. Thus, to address the objective of this study, this section presents the most related works of the reviewed research. The study was conducted by (Fantaye, 2014) on the purpose of exploring collaboration for knowledge sharing among Addis Ababa TVET colleges which aims to explore current organizational culture, identifying the existing knowledge, identify employees' resistance for KS, and finally to formulate recommendations to improve KS culture among the colleges.

The study followed a quantitative and qualitative methodology. The target populations for this study were trainers, deans, and vice deans in Addis Ababa TVET colleges. The data were collected

from ten departments found in the six TVET colleges using stratified random sampling; 3 public and three private TVET colleges. Accordingly, a sample of 203 trainers and Academic deans were selected and questionnaires were distributed. The study adopted purposive sampling and prepared an interview for quality officers, IT department heads, deans, and vice deans. The study used SPSS software version 20 to analyze the data collected using questionnaire. Additionally, a considerable amount of qualitative data were collected from the interviews; the study employed a narrative or thematic data analysis method; the researcher interprets the gathered data and determines a valid variable in this qualitative data analysis.

The study indicated that private college academic staff are more reluctant to solve work-related problems by themselves than public colleges. Public academic staff are more likely to trust others compared to private academic staff. Private academic staff have shown less inclination to interact with the public academic staff in informal social activities. The study has shown clearly that TVET academic staff do not prefer writing communication compared to phone communication, e-mail and social network systems for KS. The study concluded that various organizational factors inhibit the effective sharing of knowledge within TVET. These include inter-institute competition, office politics, heavy workload and lack of IT support. Results have shown that positive KS occurs during break time, and it happens through informal communication. Accordingly, the study recommended that the TVET agency takes the initiative to put a system in place that facilitates KS among TVET colleges and also needs further studies to investigate more facts that facilitate KS.

(Bekele & Abebe, 2011) conducted a study on the Prospects of KS among Ethiopian Institutions of Higher Learning. The study's purpose was to identify the current level of awareness and practice of KS among higher learning institutions in Ethiopia and assess barriers that limit KS and establish

ways of supporting KS for the betterment of performance of the Ethiopian public higher learning institutions.

The study focused on nine public universities, which were purposely considered for the study because of their relatively long history (more than 10-year experience). These nine universities also focused on individual teaching staff from the IT Departments and those working in the ICT offices. The study used questionnaire surveys, interviews, observation, and informal discussions as a data collection method. The questionnaire was distributed to 125 respondents; 90 were correctly filled out and returned with a response rate of 72%. Semi-structured interviews were also conducted with the relevant individuals. All the nine universities' websites also observed a deep understanding of their KS. Another critical issue was supplementing the data collection with informal discussions conducted with colleagues at Addis Ababa University.

Qualitatively categorized data collected through different methods such as interviews, informal discussion, and observations on the website were thematically analyzed. Since the data collected through the questionnaire was quantitative, a statistical package (SPSS 16) was used to code, process, and analyze the data. Data were reported by percentages of responses for all parts of the questionnaire.

The finding shows that knowledge sharing is seen as a strength and knowledge hoarding is a weakness. Human nature indicates the feeling of insecurity when sharing knowledge; this kind of attitude may change with motivational incentives and rewarding mechanisms.

The study revealed a gap in the awareness of KS; the faculty mostly share the knowledge through informal face-to-face communication. Online communications, interactive workshops, virtual networks, peer coaching, best-practice review, etc., are uncommon. Moreover, respondents

indicated that the universities are not supportive and do not seem to update the ICT infrastructure to improve KS. On the other hand, according to the study, there are also barriers to KS, such as using their network mainly for web surfing and e-mail. Not for content or information services are run on the network, limited or no digital library access, electronic journals and databases, unavailability of KS platforms (software tools, knowledge base resources, experience sharing conversational space, structured team-based collaboration framework), and lack of KS policies, strategies, and programs.

The paper recommended formulating a strategy that incorporates motivational incentives and reward mechanisms (related to compensation, financial rewards, performance appraisal, sponsorship for conference participation, etc.) to overcome the problems. The institutes need to organize and conduct regular staff awareness programs to ensure that the staff understands the benefits of KS to advance their career and improve individual and organizational performance.

(Solomon, 2020) conducted research on KS factors among academic staff at higher education institutions (HEIS): the case of the federal TVET Institute, Ethiopia. The main aim of the research conducted was to explore the existing KS among academic staff at the Federal TVET Institute and explore the most significant factors that affect KS among academic staff by using a quantitative research methodology.

There are 149 members as a whole from 5 faculties. Due to the manageability of the total population and the need to get a better understanding of KS in each faculty, this study adopted the census method. Also, a better sampling for a small population is using census (Singh, 2011). A total of 142 questionnaires were distributed, and 130 were returned, but only 124 were appropriately filled and used for the study. The overall reliability of the data collection instrument

is .855, which is above the minimum accepted threshold value of 0.7. It implies that the data collection instruments are valid to be used for data analysis. The study used the SPSS to analyze the data. The data were analyzed using descriptive statistics such as frequency, percentage, mean and standard deviation, regression analysis, and correlation coefficient.

The result of this study revealed that academic staff in federal TVET often engaged in KS through sharing teaching materials, experience in seminars and workshops, discussing projects with peers within and outside faculty, sharing research findings, and attending university/faculty meetings. However, the research concludes that the level of KS in the study organization is low. It was mainly attributed to the low awareness of the Institute's management about the value of knowledge as a strategic resource of the organization. The study also revealed that one of the objectives was to identify the main factors affecting KS among academic staff. The survey questionnaires were used and grouped into individual, organizational, and technological factors. Accordingly, the study identified ICT infrastructure, perceived cost, attitude, self-efficacy, and organizational rewards as the most influential factors for KS.

Concerning individual factors, most of the respondents have shown a high degree of attitude about KS benefits. A high degree of trust is also considered in that academics trust colleagues and believe in their expertise. Academics are also motivated to share knowledge by both extrinsic and intrinsic motivators. Concerning the perceived cost of sharing knowledge, respondents differ in their responses. Most of the respondents think that by willingly sharing with colleges, they will get credit, but they also think that it costs them an effort. However, most of them do not think the time is wasted if they share knowledge with academic members. However, some of them fear that their knowledge might be misused by other academic members for their benefit and fear others will

mistakenly use their shared knowledge. Concerning organizational factors, respondents feel that the institution stimulates people to share knowledge and provides financial support for research activities. They also felt that travel grants to attend seminars, conferences, workshops, a system of evaluating individual performance, and providing incentives based on KS are lacking.

Finally, the study forwards some critical points based on the finding that the institute's KS is affected by individual, organizational and technical factors. Accordingly, both the management and every staff of the institute must be aware of the different factors when they undertake interventions to improve the KS practices of the institute.

To improve the academic staff KM awareness and skills; managers should prepare more training programs, monitor the performance of each individual's KS activity, and give recognition and reward, promote trust between faculties, make KS a routine activity of the institute, develop a knowledge repository or portals, encourage and organize conferences, research, seminars, journals, meetings, and public lectures, promote the acquisition of international experience and scholarship opportunities. Individuals should be aware of the value of knowledge and engage themselves in KS activities, participate in team teaching and peer reinforcement, workshops, seminars, and conferences, and group project activities among faculty members.

(Cheng et al., 2009) have conducted a study on KS in Academic Institutions: a Study of Multimedia University Malaysia to examine factors affecting the willingness to share knowledge, broadly classified as organizational, individual, and technology factors. Additionally, the study attempts to capture the spirit of sharing by examining the commitment to upload and download information to/from the ShareNet system. MMU has 20,000 students on two campuses located in two cities. It has set up its online sharing system called ShareNet to serve as a platform for the university to

share knowledge within the community. The management has made it compulsory for each university's employee to contribute to ShareNet, and the contribution was counted at the year-end performance evaluation.

Questionnaires were distributed to all academics only in the university. Only academics were invited to participate in the survey as the purpose of the study was to examine why academics share and not share their knowledge. ShareNet was replaced by Knowledge Bank in 2006. Accordingly, the study used only those who had been users of ShareNet. Thus, a total of 119 responses were collected, while only 60 responses provided complete answers. Therefore, the analysis and findings are based on a sample of 60 responses.

The overall findings revealed that incentive systems and personal expectations are the two key factors driving academics to engage in the KS activity. "Forced" participation is not an effective policy in cultivating sharing behavior among academics, which is a policy of MMU that every academic must upload their research output on ShareNet at least once a year. The impact of the "stick" strategy is not as significant as the "carrot" strategy. Promotion and other monetary rewards are fundamental factors. Besides, although it may not bring immediate monetary payoff or promotion as a return if the university recognizes the effort of KS as significant to the institution's success, academics will also be motivated to participate in the sharing activities. Technical factors, such as the user-unfriendliness of the information system, have often been cited as one of the critical factors that hinder people from participating in the open-network system, like ShareNet.

The result revealed that in knowledge based institutions to promote KS activity, the important thing is making the environment people-oriented rather than technological-oriented. Even though technology plays a crucial role in minimizing the barriers and increasing the propensity to share

knowledge, KS is still a people process. Since KS is more of a people process, more consideration should be given to understanding how individuals react to internal and external factors in making their decision as to whether to participate in the sharing activities.

The study conducted by (Mat et al., 2019) describes the Perception of KS Factors between Junior and Senior Academicians in Malaysian universities. The study aimed to identify the comparison between junior and senior academicians on three KS driver factors; organizational factor, technological factor, and individual factor.

The study adopted a descriptive standpoint and developed a questionnaire as a survey instrument for academicians in a selected Malaysian Public University. 38 academicians were selected as a sample from various faculties, using the benchmark for sample size determination table by Krejcie & Morgan. Cronbach Alpha value of more than 0.60 is regarded as reliable. Thus, the study Cronbach Alpha value for all the items in this question that Malaysian University obtained is more than 0.6. It signifies the appropriateness of the questionnaire to be used. Data analysis was applied through SPSS program version 21.

Overall, the finding shows that both junior (69.2%) and senior (83.3%) academicians strongly agreed on individual factors which play an essential role as a driver in KS. As the organizational factors, both junior (76.9%) and senior (83.3%) academicians agreed that top management support greatly influences KS between academicians. However, junior (57.7%) and senior (41.7%) academicians moderately believe that organizational rewards are not significant in KS in Malaysian universities. Both junior (57.7%) and senior (66.7%) academicians strongly agreed on the technological factors in KS. Senior (75%) academicians highly believe that the system infrastructure is an essential factor in KS, but 11.5% of junior academicians were not agreed.

However, only half of the junior (50.0%) and senior (50.0%) academicians believe that system quality is a major factor in KS. The study concludes that to run KS smoothly among academicians, Malaysian universities have to improve their system quality, organizational rewards and sustain other levels of progress.

The study conducted by (Guyo, 2015), on the effect of employee KS on organizational performance in public universities in Kenya, case of the University of Nairobi. The main objective of this study was to investigate the effect of KS on the organizational performance of Kenyan public universities, precisely to determine the effect of knowledge communication and knowledge collaboration on organizational performance. This research was guided by both the knowledge management model and the knowledge sharing model.

The study adopted a descriptive research design. The sample size was obtained from the target population using the Cooper and Schindler formula for a target population of more than 1000 and obtained a sample size of 103 respondents. The study collected primary data, a semi-structured questionnaire comprising open-ended and closed-ended questions, and collected data. Editing was done to improve data quality for coding, then fed the data and analyzed using the Statistical Package for Social Sciences (SPSS) version 21.

The respondents were asked to rate the extent to which the knowledge communication process had impacted the institution's overall performance. Mean and standard deviations were used to analyze the respondents' ratings. The study questioned to find out the knowledge communications success from the different perspectives of knowledge communications. Such as; communication style, co-constructing insights, strategic company assessment, goals in an organizational setup, interactive construction, and exchange of knowledge, professional knowledge, knowledge on building

redundancies, assisting in high-profile initiatives. As a result, it proved that employee KS relies on knowledge communication. However, the study findings show that the organization has experienced difficulties in effectively using knowledge communication. The organization needs to introduce information technology to get a positive impact on the elements of knowledge.

The respondents were also asked to state how knowledge collaboration influences organizational performance at the universities in Kenya. The study also questioned knowledge collaboration influences, such as; dynamic boundaries, professional knowledge, strategy consultation, creation of new knowledge, building redundancies. As a result, the finding revealed that most of the study respondents strongly agreed to the statements in which they were asked to state the extent to which knowledge collaboration influences organizational performance at the universities in Kenya.

Generally, the study found that organizational change helps an organization optimize processes and define a process-oriented structure; in that case, employee KS can be adopted correctly within the organization. Effective employee KS cannot be implemented without a significant behavioral and cultural change. The study recommends that universities emphasize training and information sharing to improve employee KS.

(Muqadas et al., 2017) have studied employees in public sector universities in developing countries to explore the challenges, trends, and issues for KS. Furthermore, the study aimed to explore why knowledge hoarding behavior is flourishing even when employees are encouraged to share their knowledge in organizations and are rewarded for doing so. Furthermore, the study explores identifying the elimination method for knowledge hoarding behavior.

The researchers have selected three well-known universities using purposive sampling. The population of this study included the employees of public sector universities of Pakistan. The top

management and key professors have been selected to promote the KS practices and KS culture. The selected employees have the following designations: vice-chancellor, registrar, professors, assistant professors, and lecturers. 40 respondents were selected for data collection using the interview method. These interviews were thematically analyzed using the NVivo 11-Plus software, and different themes emerged.

The results reveal that hoarding knowledge to gain power, authority, influence, promotion opportunities, and employee favoritism negatively influence KS. Furthermore, an unsupportive culture, lack of employees' socialization, communication barriers, obsolete IT infrastructure, lack of organizational support for KS, and a poor linkage between KS and rewards negatively influence KS in public sector universities. Additionally, the responses revealed that employees hoard knowledge because they regard knowledge as a personal asset and therefore believe that sharing knowledge with anyone can decrease their worth in their organizations. Also, the study shows that The KS culture, justice, effective leadership, intentions, and training can foster the KS. KS can be promoted by arranging seminars, webinars, and research conferences that promote interaction with professionals and learn new competencies and skills. To foster effective KS, apply performance appraisal systems based on sharing experiences and knowledge with colleagues.

(Jarrah & Alkhazaleh, 2020) studied knowledge Sharing Behavior in the Curricula of the United Arab Emirates Universities and Educational Organizations to identify the KS Behavior among the United Arab Emirates educational organizations and the factors affecting KS. The study used the descriptive approach to identify the behavior of KS in the curricula of 65 United Arab Emirates universities. The study sample consisted of 356 university professors in the United Arab Emirates, selected from the study community using simple random sampling. The study prepared a

questionnaire by using 8 experienced and competent experts in curricula and teaching of faculty members in United Arab Emirates universities. In the data analysis, some statistical treatments were used through the Statistical Package Program (SPSS) to answer the study questions. Frequency and percentages were applied to describe the personal characteristics of the sample members of the study. Additionally, the mean and the standard deviations of the responses of the study sample members on all areas of the study instrument were defined.

The results showed that the assessment with the calculation of mean and standard deviations on teaching staff at the nature of the KS showed a medium level. Furthermore, factors affecting KS among organizations are weak planning to enrich the curriculum and lack of confidence among participants in the knowledge exchange process. Generally, internal and external factors that influence KS (appropriate systems that support KS internally and the opportunities to support and improve the curriculum; contractual environment, legislation, and rules governing knowledge sharing among different countries) were defined. The study recommended improving the curriculum and proving it for a relatively long period to achieve the desired goals. It is essential to benefit from the results of workshops and seminars held for the process of KS to enrich and develop curricula. Doubling the material and technical resources available to the university and necessary to activate KS can be regarded to improve KS.

## Summary of Related Works

Author	Title	Objective	Methods	Findings
BirukFantaye (2014)	Collaboration For Knowledge Sharing Among A.A TVET Colleges	Exploring the current organizational culture, identifying the existing knowledge, identifying employees' resistance to KS, and formulating recommendations.	The study followed quantitative and qualitative methodology. Used stratified random sampling for the questionnaire and adopted Purposive sampling for interviews. Quantitative was analyzed using the software SPSS and the qualitative data analyzed in a narrative or thematic method.	The academic staff does not prefer writing communication compared to phone communication, e-mail, and social network systems for KS. Additionally, Inter-institute competition, office politics, heavy workload, and lack of IT support hinder the KS in the organization. Mostly, the staff shares the knowledge during break time, and it happens through informal communication. Accordingly, the study recommended that the TVET agency take the initiative to put a system in place that facilitates KS among TVET colleges.
Rahel B. & Ermias A. (2011)	Prospects of Knowledge Sharing Among Ethiopian Institutions of Higher Learning	To identify the current level of staff awareness and practice of KS, assess barriers that limit KS, and establish ways to support KS practices among higher learning	The study followed both quantitative and qualitative methodology with a Purposive selection of experienced institutions. The qualitative data were analyzed thematically	There is a KS awareness gap; The faculty mostly share the knowledge through informal face-to-face communication. Online communications, interactive workshops, virtual networks, peer coaching, best-practice review, etc., are uncommon. There is no digital library access, electronic journals, databases, KS platforms' unavailability, and lack of KS policies, strategies, and programs. The study recommended formulating a strategy that incorporates

		institutions in Ethiopia.	and also used SPSS for analysis of quantitative data.	motivational incentives and reward mechanisms and conducting regular staff awareness programs to improve KS activities.
Miskir Solomon (2020)	Knowledge Sharing Factors Among Academic Staffs at Higher Education Institutions (HEIS): A Case Study of Federal TVET Institute, Ethiopia	To explore the current KSP and identify the most significant factors that affect KSP among academic staff of the Institute.	The study followed the quantitative method, adopted the census sampling method, and as well as used SPSS to analyze the data.	The research result shows that the level of KSP in the study organization is low. It is mainly attributed to the low awareness of the Institute's management about the value of knowledge as a strategic resource of the organization. The study also identified ICT infrastructure, perceived cost, attitude, self-efficacy, and organizational rewards were the most influential factors for KSP.
Ming-Yu C., Jessica S., and Pei M. (2009)	Knowledge Sharing in Academic Institutions: a study of Multimedia University Malaysia	Examining Factors affecting the willingness to share knowledge and capture the spirit of sharing by examining the commitment to upload and download information to/from the ShareNet system.	A quantitative survey methodology has used. The study used Purposive sampling, and the questionnaire was conducted for the academics only those who have participated in ShareNet. The study used a statistical tool for data analysis.	The findings revealed that incentive systems and personal expectations are the two key factors driving academics to engage in a knowledge sharing activity. "Forced" applying of KS is not an effective policy to foster sharing behaviour among academics.
Norazila M, Jamsari A, Nur A,	Knowledge Sharing Factors: Perception	The study aimed to identify the comparison between	The study adopted a descriptive method; a questionnaire was	The result shows that top management under organizational factors and knowledge self-efficacy under individual factors are the most critical factors that motivate

Zaleha Y, and Nazri M.(2019)	between Junior and Senior Academicians in Malaysian University	junior and senior academicians on three KS driver factors; organizational factor, technological factor, and individual factor.	developed as a survey instrument. Sample size determined based on the table Krejcie & Morgan. Data analysis was applied by (SPSS) program.	KS for both junior and senior academicians. Senior academicians also agree that system infrastructure under technological factors is also essential in KS.
Guyo Sora Bagaja (2015)	Effect Of Employee Knowledge Sharing On Organizational Performance In Public Universities In Kenya, Case Of University Of Nairobi	To investigate the effect of KS on organizational performance of Kenyan public universities, specifically to determine the impact of knowledge communication and knowledge collaboration on organizational performance.	The study adopted a descriptive research design. Also, used the Cooper and Schindler formula to determine the sample size. The questionnaire was analyzed using the software SPSS.	The study shows that organizations have experienced difficulties in effectively using knowledge communication. There are no significant behavioural and cultural situations in KS. Thus, the study concluded that effective employee knowledge sharing could not be implemented without a significant behavioural and cultural change.
Farwa M, Muqqadas R, and Usman A. (2017)	Exploring the challenges, trends and issues for knowledge sharing A study on employees in	To explore why knowledge hoarding behaviour is flourishing even when employees are encouraged and rewarded to share their	The study followed the qualitative method. Using purposive sampling, they interviewed the participants and analyzed the data	The results revealed that employees hoard the knowledge to gain power, authority, influence, promotion opportunities, and employee favouritism negatively influences KS practices. The study recommends that applying performance appraisal systems based on KS experiences to foster effective KS practices.

	public sector universities.	knowledge. The study also aims to identify the elimination method for knowledge hoarding behaviour.	thematically using the NVivo 11-Plus software.	
Jarrah H. and Alkhazaleh M. (2020)	Knowledge Sharing Behavior in the Curricula of United Arab Emirates Universities and Educational Organizations.	To identify the KS behaviour among United Arab Emirates educational organizations and the factors affecting the KS.	The study used a descriptive approach. Using simple random sampling collected the questionnaire, and SPSS analyzed the collected data.	The results showed that teaching staff behaviour of the KS came to a medium level, and factors affecting the KS among organizations are weak planning to enrich the curriculum and lack of confidence among participants in the knowledge exchange process. Generally, both internal and external factors influence the KS.

## **CHAPTER THREE**

### **Research Design and Methodology**

#### **3.1 Introduction**

Research methodology contains the overall systematic procedures by which the researcher starts from identifying the problem to its conclusions. The primary role of the research methodology is to carry on the research work scientifically and validly. The research method provides the procedures and techniques for conducting a study (Singh, 2006). Accordingly, this chapter provides the research methodology of this thesis. The following methods and procedures have been included in order to achieve the study's objective. In more detail, the researcher outlines the research designs and strategy, the methods of data collection, method of sample selection, the procedure of data analysis, ethical considerations, validity, and reliability of the study.

#### **3.2 The Research Design**

Causal research or also known as explanatory research were conducted to identify the extent and nature of cause-and-effect relationships. The study used explanatory research design with self-administered questionnaire as primary data collection techniques using quantitative data type. Therefore, explanatory research design is believed to be appropriate for this study as it consists of mainly how and why questions of the study, behavioral real events which are not possible to control and contemporary and complex social phenomenon whose boundary is not clear.

#### **3.3 Research Approach**

This study was conducted to explore KS and related issues among academic staff at CTI. Accordingly, the researcher followed quantitative method, which the survey helps to clarify concepts, characteristics, descriptions, counts, and measures to demonstrate implications of the

issue under objectives. The quantitative method involved a self-administered structured questionnaire. The extent of knowledge sharing and its relationship with other individuals and organizational factors were investigated using the quantitative data.

### **3.4 Study Area**

The research was carried out at the Catering and Tourism Training Institute, one of the six sectors managed by the Ministry of Culture and Tourism in Addis Ababa, Ethiopia's capital city. Currently, the institute is training students who have passed the 12th-grade exam and have been chosen from all Ethiopian regions, including Addis Ababa. The institute offers training up to Level five in the Hotel and Tourism fields and teaching in a Bachelor degree program through affiliation with other institutes. The institute is giving these training programs in regular, short-term, and long-term extensions (weekend and night) to fulfill the needs of the industries.

### **3.5 Population of the Study**

The study employed primary and secondary data sources to compile a comprehensive list of the institute's KS activities. Primary data was gathered from teachers, while secondary data was gathered through institute documents and works of literature. The study was mainly focused on academic employees due to time constraints and the institute's academic nature.

According to (Creswel, 2003), the target population is characterized as the specified group of individuals with particular attributes of relevance and interest. It is also determined by utilizing selection criteria that reveal the most qualified potential participants (Creswel, 2003). Thus, According to CTTI's human resource information, the total population of the institute was 240, where the academic staff is 86, and the remaining 154 is working as administrative staff. These

administrative staff are working in different offices. Thus, this study was conducted with 86 instructors.

### **3.5.1 Sample Size and Sampling Procedure**

There are different approaches for sample size determinations; one of the approaches is to use the total population as a sample; accordingly, this study used census sampling. Mainly it is used for small populations, where it is recommended for a maximum number of up to 200 people. However, this is impractical for large populations (Singh, 2011). Therefore, in this study, the entire academic staff was taken as a sample to achieve the required level of precision.

### **3.6 Instruments of Data Collection**

The study's primary data source was collected through close-ended questionnaires distributed to CTTI employees. The researcher adopted a standardized questionnaire from (Bekele & Abebe, 2011) and customized it to meet the study's objective. Additionally, a secondary source of data were also obtained from the organization's document and previous research papers related to knowledge sharing.

#### **3.6.1 Questionnaires**

Questionnaires are an appropriate method for collecting brief written closed-ended questions. The questionnaires for this study were divided into four sections, with the respondents being asked to provide an honest observation of their institute's KS activities. The sections included demographic profile, personal attitude, knowledge sharing practice, and organizational support, and infrastructure. The primary data were gathered mainly by using Likert-scaled standard questionnaires. Pilot test was also conducted to make additional necessary amendment.

The Likert-type scale method has a range of responses: 'Very Low,' 'Low,' 'Medium,' 'High,' and 'Very High,' with a numeric value of 1 to 5, respectively. The usage of this particular scaling method ensured that the study illustrates the ability to assess and measure the responses quantifiably.

So that a pattern or trend may be produced to assess the research problem of the statement, it is a process of asking many people the same questions and examining their answers. Possible answers were also provided to enable the respondent to tick whichever answer suited. A sample of the questionnaire can be referred to on the back page of this thesis work.

Variable name	Operational definition	Survey Items	Research Questions
Awareness (AW)	It is an independent variable which prepared to measure the individuals' awareness of KS. Additionally, the study used this variable to predict the dependent variable (KS).	Part II: Q1,Q2, Q3,Q7	What does the <b>awareness</b> and <b>attitude</b> of CTTI's staff towards knowledge sharing look like?
Willingness (WIL)	It is an independent variable which prepared to measure the individuals' willingness towards KS. Additionally, the study used this variable to predict the dependent variable (KS).	Part II: Q5,Q6, Q8,Q13, Q14	What does the awareness and <b>attitude</b> of CTTI's staff towards knowledge sharing look like?
Trust (TR)	It is an independent variable which prepared to measure the individuals' Trust to share knowledge. Additionally, the study used this variable to predict the dependent variable (KS).	Part II: Q4,Q9, Q10,Q11, Q12,Q15	What does the awareness and <b>attitude</b> of CTTI's staff towards knowledge sharing look like?
Organization structure (OS)	It is an independent variable which prepared to measure the organization's structure towards KS. Additionally, the study used this variable to predict the dependent variable (KS)	Part IV: Q1, Q2(A to E), Q8, Q9	What does the current <b>organizational</b> and infrastructural support for knowledge sharing in CTTI look like?

Organizational culture (OC)	It is an independent variable which prepared to measure the organization's culture towards KS. Additionally, the study used this variable to predict the dependent variable (KS)	Part IV: Q5,Q6, Q7	What does the current <b>organizational</b> and infrastructural support for knowledge sharing in CTTI look like?
Infrastructural support (INFr)	It is an independent variable which prepared to measure the organization's infrastructural support towards KS. Additionally, the study used this variable to predict the dependent variable (KS).	Part IV: Q3,Q4, Q10,Q11, Q12,Q13	What does the current organizational and <b>infrastructural</b> support for knowledge sharing in CTTI look like?
Knowledge sharing (KS)	It is dependent variable which prepared to measure the overall activities of KS. Additionally, the study used this variable to identify how much predicted by independent variables.	Part III: All 13 questions	What does the existing knowledge sharing activities in CTTI look like?

### 3.7 Data Collection Procedure

The data collection process was started by obtaining a written letter of cooperation from Addis Ababa University School of Information Science that helped the researcher conduct the research smoothly and permission from the institute administrator to conduct this study and distribute the data collection instruments. The participants' willingness and cooperation was checked before distributing the data collection instruments. In this study, two basic data collection procedures were employed; first, the quantitative study using a self-administered structured questionnaire was conducted followed by the qualitative study using a semi-structured interview. Data collectors were assigned to collect the data, and the researcher also participated in the data collection. The researcher gave a brief orientation for the data collectors as well as for participants. The researcher evaluated the questionnaire for completeness and consistency after the entire data collection was completed at the end of March 2021.

## Normality:

The skewness and kurtosis of each variable were examined using SPSS to determine normality.

The normality of each variable was also checked using graphical methods such as histograms and boxplots. Table 3.2 shows the skewness and kurtosis values of variables.

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
(KS) knowledge sharing	81	-.492	.267	.625	.529
(AW) Awareness	81	-.030	.267	-.665	.529
(WIL) Willingness	81	-.079	.267	.275	.529
(TR) Trust	81	-.486	.267	.775	.529
(OS) Organization Structure	81	-.192	.267	.452	.529
(OC) Organization Culture	81	.190	.267	.300	.529
(INFr) Infrastructural support	81	-.185	.267	-.356	.529
Valid N (listwise)	81				

According to (Kim, 2013), within the sample size of 50 to 300, the Converted Z value by dividing by the standard error should not be higher than positive 3.29 or less than negative 3.29. Accordingly, the results of both the skewness and kurtosis tests for all variables were in the range between a positive 3.29 and a negative 3.29, which means that variables are normally distributed.

## 3.8 Reliability and Validity

According to (Drost, 2004), reliability refers to repeatable and consistency of specific measurements when distinctive individuals measure various occasions, in various conditions, supposedly with another instrument that measures the knowledge, skill, and attitude. Additionally, Cronbach's alpha is a measure of reliability, which ranges from 0 to 1. The higher Cronbach's alpha, the more reliable. A reliability coefficient of 0.70 or higher is considered acceptable. The

low value of alpha ( $<0.70$ ) indicates poor inter-relatedness between items (Drost, 2004). Based on this, a pilot test with 20 respondents was made in the study area only before the actual distribution of the instrument starts. As a result, the coefficients of reliability of items measuring variables are accepted as reliable. So, the questionnaire was distributed after correcting the feedback given in the pilot study. Additionally, Cronbach's value for all variables after data entry is  $\alpha = .925$ , which is considered acceptable for further analysis.

Variable	Number of items	Cronbach's Alpha
Awareness	4	0.775
Willingness to share knowledge	5	0.750
Trust	6	0.739
Organization structure	8	0.756
Organizational culture	3	0.743
Infrastructural support	6	0.733
Knowledge sharing practice	13	0.799
Overall	45	0.925

Content validity or inter judge validity was conducted to determine if the questions represented what they were intended to measure proportionally. Validity refers to the degree to which a scale or collection of measures accurately represents a construct (Hair et al., 1998). To address the problem being studied, content validity was utilized to measure the survey instrument items. To determine the research's content validity, the CTTI staff examines the questionnaire. As a result, the instrument were modified in response to staff's feedback.

### 3.9 Methods of Data Analysis

It is unquestionable that after the collection of data analysis, interpretation and presentation are forwarded in order to give recommendation to the problem. For the purpose of this study the quantitative data were analyzed accordingly.

Mainly on the analysis descriptive statistics, correlation, and regression were used to summarize data using SPSS version 20 software. Statistics, including mean, frequency, and standard deviation were also used to analyze the data among the different groups. The mean and standard deviation were used to describe the data obtained indicating mean difference of independent variables (KS factors) and the dependent variable (current KS).

The Pearson's correlation was used to show the relationship of dependent and independent variables and the strength/degree and direction of associations between variables. In addition, multiple linear regression analysis was used to show up the effect. Multiple Linear Regression Equation is an extension of simple linear regression to show the out case and effect, factor, and impact analysis. It is used to predict the value of a variable based on the value of two or more other variables.

The variables need to predict is called the dependent variable (or sometimes, the outcome, target, or criterion variable). The variables used to predict the dependent variable's value are called the independent variables (or sometimes, the predictor, explanatory, or regressor variables).

**The prediction equation is:  $Y = a + B_1X_1 + B_2X_2 + B_3X_3 + \dots + B_kX_k$**

There is still one intercept constant, a, but, each independent variable (e.g., X1, X2, X3) has their own regression coefficient. Thus, both the strength of the relationship between variables and the

outcome of independent on dependent variable predicted on statistical significance after result was portrayed.

**Model specification:**

$$KS = \beta_0 + \beta_1 AW + \beta_2 WIL + \beta_3 TR + \beta_4 OS + \beta_5 OC + \beta_6 INFr$$

I. Independent Variable

AW: Awareness

WIL: Willingness

TR: Trust

OS: Organization structure

OC: Organizational culture

INFr: Infrastructural support

II. Dependent Variable

KS: Knowledge sharing

**3.10 Ethical Consideration**

Ethical consideration in research should uphold fairness, honesty, openness, disclosure of methods, and the purpose for which the research is being carried out. In this case, primary information gathered from CTTI's stakeholders' respondents is kept until a reasonable time. Confidential files and issues regarding employees' data, policies and strategies, and other highly classified information that must be kept confidential are given value and kept confidential.

## **CHAPTER FOUR**

### **Data Presentation, Analysis and Discussion**

#### **4.1 Introduction**

In this chapter, data gathered through questionnaires were analyzed and presented. From the distributed 86 questionnaires, 81 questionnaires were filled correctly and coded for analysis. The collected raw data were transformed into meaningful information through different statistical methods of analysis, i.e., descriptive statistics such as (graphs and tables); measures of central tendency (mean, mode, and median); standard deviation for measures of central dispersion as well as correlation and regression for determining the association. SPSS version 20 was used to code and analyze the data.

#### **4.2 Respondent's Profile**

The section provides the respondents' demographic profile of the academic staff who participated in this research. The information presented in tables and figures below display the frequency and percentage of the variables such as gender, age, experience, department, and educational status.

Table 4.1: Respondent's Demographic Profile			
profile of respondents	Category	Frequency	Percentage
Age Group	20 – 30 years	17	21.0%
	31-40 years	45	55.6%
	41-50 years	12	14.8%
	Above 50	7	8.6%
Experience	Less than 3 years	5	6.2%
	3-10 years	59	72.8%
	11-15 years	9	11.1%
	Greater than 15 years	8	9.9%
Department	Tourism	24	29.6%
	Hotel	29	35.8%
	General and Supportive	28	34.6%

According to table 4.1, most of the academic staff fall in the age group 31-40, which were 45 out of 81 (55.6 %), age group 20-30 is the second highest level of the range which were 17 (21%), The third age group were 41-50 years which were 12(14.8%), The smallest number of age group is above 50 years which were 7 out of 81 responses (8.6%). Additionally, from 81 respondents, 59 (72.8%) or most of the staff's experience were grouped as 3-10 years. 9(11.1%) of the staff have 11-15 years of experience. 8(9.9%) of the academics have the highest experience in the institute, which is greater than 15 years, and the minimum experience is also less than three years of experience, which were 5(6.2%). On the other hand, there are 29(35.8%) academic staff working in the Hotel Department, in the General and Supportive Department 28(34.6%) and 24(29.6%) academic staff are available in the Tourism Department.

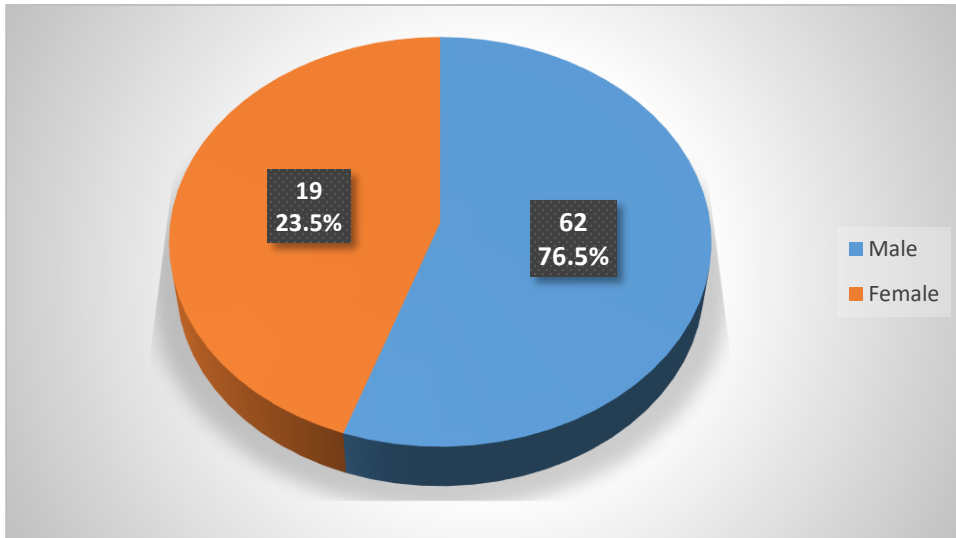


Figure 2: Gender of the Respondents

According to the above figure, both genders represent the respondents. Most of the institute's instructors are male 62 (76.5%), and females are 19(23.5%).

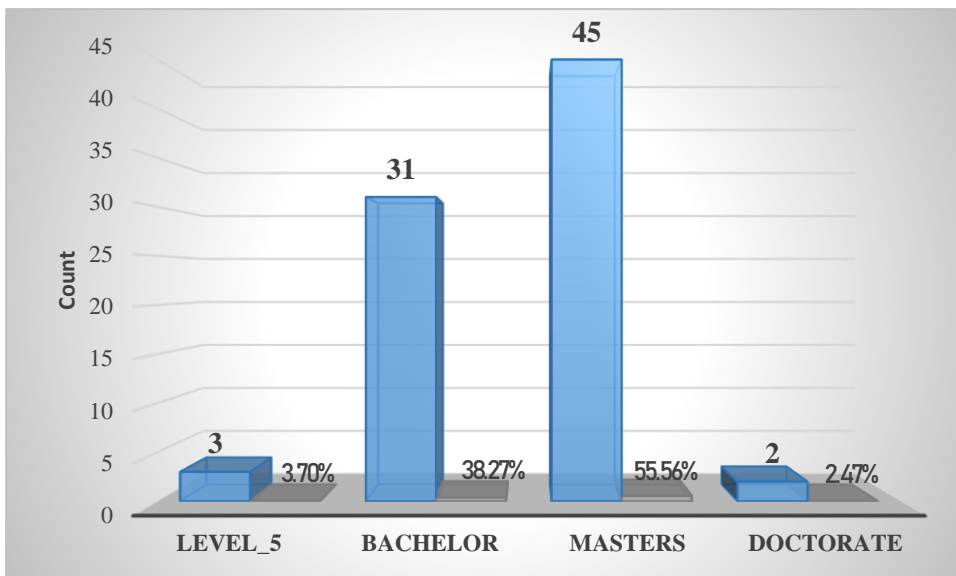


Figure 3: Educational Status of CTTI's Academic Staff

Regarding educational status figure 4.2 shows that it ranges from Level\_5 to Doctorate; most of the staff have Bachelor and Masters Degree. Level\_5 is 3(3.7%), Bachelor 31(38.27%), Masters 45(55.56%) and Doctorate 2(2.46%).

### 4.3 Descriptive Statistics Analyzing Personal and Organizational Attitude for KS

#### 4.3.1 Awareness

Item Statistics	Very Low	Low	Medium	High	Very High	Mean	Std. Deviation
	Freq. & %	Freq. & %	Freq. & %	Freq. & %	Freq. & %		
How do you rate your awareness of knowledge sharing in daily work?	1 1.2%	27 33.3%	35 43.2%	17 21.0%	1 1.2%	2.877	.797
How do you rate your KS in gaining new ideas, technologies, skills or techniques?	1 1.2%	9 11.1%	42 51.9%	29 35.8%	-	3.222	.689
How do you rate your awareness of KS in terms of not repeating the same mistake happened to other colleague?	-	11 13.6%	25 30.9%	34 42.0%	11 13.6%	3.556	.894
Rate of exclusive ownership of knowledge to be important person in the institute.	1 1.2%	41 50.6%	23 28.4%	15 18.5%	1 1.2%	2.679	.834
Total						3.083	0.804

The above table shows results regarding descriptive statistics analyzing awareness towards KS. The first question was to identify their awareness of KS in daily work activities. Accordingly, the results revealed that 28 (34.5%) low, 35 (43.2%) medium, and 18 (22.2%) high. Thus, from the total of 81 respondents, most of them rated their KS awareness practice in daily work as medium. The second question asked participants to rate their awareness in gaining new ideas, technologies, skills, or techniques due to sharing knowledge. The results revealed that there is medium effort to acquire and share knowledge; 10 (12.3%) low, 42 (51.9%) medium, and 29 (35.8%) high. The third question asked to identify if KS would help them not repeat the same mistake as other

colleagues. The result showed that the majority agreed with this idea; 46 (55.6%) high, 25 (30.9%) medium, 11 (13.6%) low. The final question was about the exclusive ownership of knowledge to be an important person in the institute. The majority of the responses show that the participants have low interest for the exclusive ownership of knowledge; 42 (51.8%) low, 23 (28.4%) medium, 16 (19.7%) high.

Generally, CTTI’s academic staff have an awareness level that is relatively beneficial for further KS activities, which indicated a mean difference of 3.0833 found likely accepted as medium level awareness. The awareness that is found to be the essentials of KS is still a concern among many organizations, particularly in knowledge intensive or educational institutions that play a vital role in KS.

#### 4.3.2 Willingness

Table 4.3: Descriptive statistics analyzing willingness to share knowledge							
Item Statistics	Very Low	Low	Medium	High	Very High	Mean	Std. Deviation
	Freq. & %	Freq. & %	Freq. & %	Freq. & %	Freq. & %		
How do you rate KS in terms of reducing your personal competitiveness?	9 11.1%	39 48.1%	23 28.4%	10 12.3%	-	2.420	.850
How do you rate KS in terms of wasting your time?	1 1.2%	41 50.6%	28 34.6%	11 13.6%	-	2.605	.736
How do you rate your willingness to explain your know-how to your colleagues?	1 1.2%	5 6.2%	31 38.3%	39 48.1%	5 6.2%	3.519	.760
How much do you enjoy helping your colleagues by sharing your knowledge?	-	10 12.3%	34 42.0%	31 38.3%	6 7.4%	3.407	.803

If you need any information, how much your colleagues are likely to tell you?	2 2.5%	10 12.3%	33 40.7%	34 42.0%	2 2.5%	3.296	.813
Total						3.049	.792

The above table reveals results regarding descriptive statistics analyzing willingness to share knowledge. The first question was to get the respondents opinion on sharing of knowledge how much would reduce their competitiveness. Accordingly, the results revealed that 48 (59.2%) low, 23 (28.4%) medium, and 10 (12.3%) high. The result shows inadequate response, which revealed they are willing and their competitiveness does not decreased because of sharing the knowledge. The second question asked the participants, how much sharing of the knowledge would waste their time. Accordingly, the results revealed that KS is not considered a waste of time. 42 (60.8%) low, 28 (34.6%) medium, and 11 (13.6%) high. The third question was identifying how they are willing to explain their know-how to their colleagues. As a result, they were highly willing to share their knowledge; 44 (54.3%) high, 31 (38.3%) medium, 6 (7.4%) low. The fourth question was about how much do they enjoying through sharing their knowledge. The result shows that they are highly enjoying sharing knowledge, which is 37 (45.7%) high, 34 (42%) medium, and 10 (12.3%) low. The final question was identifying how much their colleagues are willing to tell them any information or help. The majority of the responses show there is high interest to tell information for their colleagues; 36 (44.5%) high, 33 (40.7%) medium, 12 (14.8%) low.

According to the mean result, academics have a medium of willingness in KS; the overall mean difference indicated 3.0494 and 0.7923 depicted by standard deviations, which shows the level of perceiving and implementing KS behaviours among CTTI’s academic staff have existed to some extent. (Bartol & Srivastava, 2002), indicted the level of the willingness can be different in a function of the person’s beliefs and is significant to influence behaviour and weight by the person’s

motivation to perform the KS activities and components that influence knowledge sharing behaviours. The result has shown that a willingness to share knowledge based on personal, environmental, leader’s support, and culture will influence and motivate explaining knowledge sharing behaviours among academic staff.

### 4.3.3 Trust

<b>Table 4.4: Descriptive statistics analyzing trust on one another towards KS</b>							
Item Statistics	Very Low	Low	Medium	High	Very High	Mean	Std. Deviation
	Freq. & %	Freq. & %	Freq. & %	Freq. & %	Freq. & %		
If you share knowledge, how much your colleagues will believe that you are very concerned about their welfare?	5 6.2%	17 21.0%	34 42.0%	21 25.9%	4 4.9%	3.025	.961
How much confidence do you have in the skills of your co-workers?	5 6.2%	14 17.3%	42 51.9%	20 24.7%	-	2.951	.820
How much do you trust knowledge of your co-workers?	3 3.7%	13 16.0%	43 53.1%	19 23.5%	3 3.7%	3.074	.833
When you share your knowledge, how much do you believe that your future requests will be answered?	-	11 13.6%	36 44.4%	32 39.5%	2 2.5%	3.309	.736
Rate your confidence in your ability to provide knowledge that others in your institute consider valuable.	2 2.5%	9 11.1%	30 37.0%	28 34.6%	12 14.8%	3.482	.963
Rate how much sharing knowledge with other competitors will affect your institute negatively.	11 13.6%	28 34.6%	29 35.8%	11 13.6%	2 2.5%	2.568	.974
Total						3.068	.881

From the result of table 4.4 regarding descriptive statistics analyzing trust on one another towards KS, the first question was how much the colleagues believe each other that the shared knowledge is concerned for their welfare. The result shows a medium-level belief regarding every shared knowledge is for their welfare; 34 (42%) medium, 25 (30.8%) high, 22 (27.2%) low. On the question about identifying how much confidence the staff has in the skills of their co-workers; which shows 42 (51.9%) medium, 20 (24.7%) high, and 19 (23.5%) low. The next question was how much trust they have in the knowledge of their co-workers. The result shows 43 (53.1%) medium, 22 (27.2%) high, 16 (19.7%) low. The other question is to identify when they share their knowledge, how much do they believe that their future requests will be answered. As a result 36 (44.4%) medium, 34 (42%) high and 11 (13.6%) low. The next question was to rate the respondents' confidence in their ability to provide knowledge that their colleagues considered valuable. As a result, the staff believed that their ability is considered highly valuable, which is 40 (49.4%) high, 30 (37%) medium, 11 (13.6%) low. The last question was how much sharing knowledge with other competitors affect their institute negatively. The finding shows that 39 (48.2%) low, 29 (35.8%) medium, and 13 (16.1%) high.

Trust is also one of the enablers. That is important for KS, which indicates a mean difference of 3.0679 with the standard deviation of 0.8813. This shows that trust influences the individuals' willingness to disclose sensitive information to some extent.

Trust in academic staff is directly related to the accuracy, relevance, and completeness of shared information and knowledge and acceptance of others' expertise and influence. The individual factor alludes to a person's internal encouragement acquired through trust and other attitudes. For better knowledge sharing, high levels of trust are needed among colleagues (Hashim et al., 2017).

#### 4.3.4 Organization Structure

Item Statistics	Very Low	Low	Medium	High	Very High	Mean	Std. Deviation
	Freq. & %	Freq. & %	Freq. & %	Freq. & %	Freq. & %		
How do you rate your institute's motivational scheme to encourage employees to share their knowledge?	5 6.2%	28 34.6%	29 35.8%	19 23.5%	-	2.765	.884
How do you rate working environment for KS?	4 4.9%	24 29.6%	31 38.3%	18 22.2%	4 4.9%	2.926	.959
How do you rate salary increment for KS?	7 8.6%	33 40.7%	30 37.0%	10 12.3%	1 1.2%	2.568	.865
How do you rate carrier development for KS?	12 14.8%	33 40.7%	25 30.9%	11 13.6%	-	2.432	.907
How do you rate chance of promotion for KS?	11 13.6%	32 39.5%	28 34.6%	10 12.3%	-	2.457	.881
How do you rate the institute in giving acknowledgement for your contribution for KS?	9 11.1%	25 30.9%	38 46.9%	8 9.9%	1 1.2%	2.593	.863
Rate managers' encouragement on employee's suggestion of ideas.	10 12.3%	35 43.2%	29 35.8%	6 7.4%	1 1.2%	2.420	.849
How frequently managers consult team members to make decision and solve problem?	9 11.1%	36 44.4%	26 32.1%	7 8.6%	3 3.7%	2.494	.937
Total						2.582	.893

From the descriptive statistics analysis of the organization's structure towards KS, the first question was how much the institute motivate employees to share their knowledge. The result shows there is a motivational scheme at a low level in the institute; 33 (40.8%) low, 29 (35.8%) medium, and 19 (23.5%) is high.

The next five questions were prepared to assess the incentives that are used to improve KS attitude; accordingly, the first question was rating the institute's working environment for KS; which shows 31 (38.3%) medium, 28 (34.5%) low, and 22 (27.1%) high. The next question was rating institute's salary increment for employees who are active participants in KS; the result shows 40 (49.3%) low, 30 (37.0%) medium, and 11 (13.5%) high. The other question was to identify their carrier development scheme for participants in KS activities. The result shows 45 (55.5%) low, 25 (30.9%) medium, and 11 (13.6%) high. The next question was rating employees' chance of promotion who participates in KS. The result depicts that there is a low chance of promotion to motivate staff's KS practice; 43 (53.1%) low, 28 (34.6%) medium, and 10 (12.3%) high. Regarding incentives, the final question was rating the institute's acknowledgement for the staff who contributes for KS; the result shows 38 (46.9%) medium, 34 (42%) low 9 (11.1%) high. The other question was to identify the managers' encouragement on employee's suggestions of ideas. The result displays 45 (55.5%) low, 29 (35.8%) medium, and 7 (8.6%) high. The last question was how frequently managers consult team members to make a decision and solve a problem. Accordingly, the finding shows that 45 (55.5%) low, 26 (32.1%) medium, and 10 (12.3%) high. The overall result indicated a low-level organizational structure, which indicated a mean difference of 2.582 with a standard deviation of 0.893.

Organizational structure influences KS activity. Organizational structure is related to the communications flow among divisions and units in an organization. The organization structure procedure for KS should not be complicated and restrictive when sharing (without high confidentiality status). Additionally, the visions and goals of the institution need to be clarified so that instructors know the importance of KS in their institutions (Hashim et al., 2017).

### 4.3.5 Organization's Culture

Table 4.6: Descriptive statistics analyzing organization's culture towards KS							
Item Statistics	Very Low	Low	Medium	High	Very High	Mean	Std. Deviation
	Freq. & %	Freq. & %	Freq. & %	Freq. & %	Freq. & %		
How do you rate the institute on specific budget allocation to acquire and share the knowledge?	2 2.5%	15 18.5%	39 48.1%	25 30.9%	-	3.074	.771
Rate the periodic plan to acquire, organize and share the knowledge with in the institute.	2 2.5%	22 27.2%	37 45.7%	20 24.7%	-	2.926	.787
How frequently the institute facilitates KS platforms (workshops, seminars, etc.) on a regular basis?	1 1.2%	49 60.5%	21 25.9%	10 12.3%	-	2.494	.727
Total						2.831	.762

The above table displays results regarding descriptive statistics analyzing organization's culture towards knowledge sharing. The first question was to assess the institute's specific budget allocation towards KS activities. Accordingly, the results revealed that there is a medium level budget allocation for KS activities; 39 (48.1%) medium, 25 (30.9%) high, and 17 (21%) low. The second question asked participants to rate the institute's periodic plan to acquire, organize and share the knowledge. The results revealed that the institute has a medium plan in KS; 37 (45.7%) medium, 24 (29.7%) low, and 20 (24.7%) high. The last question was how frequently the institute regularly facilitates KS platforms (workshops, seminars, etc.). The majority of the responses show that the institute has low interest to prepare platforms of KS regularly; 50 (61.7%) low, 21 (25.9%) medium, 10 (12.3%) high.

Moreover, the finding indicated a mean difference of 2.8313 and depicted the standard deviations of 0.7616. Therefore, the result shows a medium-level organizational culture, which leads the institute to build a better platform and establish frequent knowledge sharing behaviour to improve the organizational culture of KS.

The organizational culture is represented by various behaviours, beliefs, traditions, structures, and processes in organizations and influences employee behaviour. Knowledge creation and sharing are challenging in a tightly controlled organizational culture. In contrast, loosely controlled organizations might be readily able to introduce knowledge creation and sharing strategies by employee encouragement which attempt to establish a relaxed atmosphere and easy-going work environment (Chang & Lin, 2015).

#### 4.3.6 Infrastructure

<b>Table 4.7: Descriptive statistics analyzing infrastructure towards KS</b>							
Item Statistics	Very Low	Low	Medium	High	Very High	Mean	Std. Deviation
	Freq. & %	Freq. & %	Freq. & %	Freq. & %	Freq. & %		
Rate technical support and immediate maintenance of integrated IT systems.	4 4.9%	22 27.2%	36 44.4%	15 18.5%	4 4.9%	2.914	.925
Rate trainings regarding employee familiarization with new IT systems and processes.	6 7.4%	32 39.5%	37 45.7%	6 7.4%	-	2.531	.743
Rate the development of knowledge repositories.	10 12.3%	41 50.6%	29 35.8%	1 1.2%	-	2.259	.685
Rate the availability of updated ICT infrastructure in your institute.	3 3.7%	23 28.4%	44 54.3%	8 9.9%	3 3.7%	2.815	.808

Rate availability of enough locations (Hall) where staff can easily socialize.	5 6.2%	33 40.7%	38 46.9%	5 6.2%	-	2.531	.709
Rate employees with personal home pages through which they can communicate their ideas.	9 11.1%	33 40.7%	34 42.0%	5 6.2%	-	2.432	.774
Total						2.580	.774

From the descriptive statistics analysis of infrastructure towards KS, the first question was rating technical support and immediate maintenance of integrated IT systems within the institute. The result shows there is medium level support in ICT activities; 36 (44.4%) medium, 26 (32.1%) low, and 19 (23.4%) high. The second question was how much the training made familiarize the employees with the new IT systems and processes, which shows 38 (46.9%) low, 37 (45.7%) medium, and 6 (7.4%) high. The next question was rating the development of knowledge repositories. The result shows 51 (62.9%) low, 29 (35.8%) medium, and 1 (1.2%) high. The other question was assessing how much the institute’s ICT infrastructure was updated. The result displays 44 (54.3%) medium, 26 (32.1%) low, and 11 (13.6%) high. The next question was to rate the availability of enough locations (Hall) where staff can easily socialize. The result depicts 38 (46.9%) low, 38 (46.9%) medium, and 5 (6.2%) high. The last question was assessing how many employees have personal home pages to communicate their ideas. Accordingly the finding shows that 42 (51.8%) low, 34 (42.0%) medium, 5 (6.2%) high.

The mean difference indicated 2.5803 depicted with standard deviations of 0.7738. Thus, the study result comprises the entire spectrum of CTTI’s academic information systems shows relatively low, and it is in progress.

### 4.3.7 Knowledge Sharing Practice in CTTI

<b>Table 4.8: Descriptive statistics analyzing the overall KS activities in CTTI</b>							
Item Statistics	Very Low	Low	Medium	High	Very High	Mean	Std. Deviation
	Freq. & %	Freq. & %	Freq. & %	Freq. & %	Freq. & %		
Rate your motivation to transfer knowledge for colleagues.	3 3.7%	19 23.5%	38 46.9%	15 18.5%	6 7.4%	3.025	.935
How do you rate your practice of documenting your work?	1 1.2%	13 16.0%	30 37.0%	31 38.3%	6 7.4%	3.346	.883
How do you rate your use of email, webpages, and social networks to share ideas?	7 8.6%	10 12.3%	39 48.1%	19 23.5%	6 7.4%	3.086	1.002
How do you rate your participation of workshop, seminars, panels, etc. within and outside the institute?	6 7.4%	10 12.3%	39 48.4%	22 27.2%	4 4.9%	3.099	.943
How do you rate the frequency of your knowledge sharing?	8 9.9%	16 19.8%	33 40.7%	20 24.7%	4 4.9%	2.951	1.024
Rate employees' use of knowledge networks such as (email, Web, Social media) with colleagues.	6 7.4%	19 23.5%	33 40.7%	17 21.0%	6 7.4%	2.975	1.024
Rate employees' cooperation when asked for some information or advice.	4 4.9%	18 22.2%	27 33.3%	29 35.8%	3 3.7%	3.111	.962
Rate knowledge sharing as strength and knowledge hoarding as a weakness.	16 19.8%	29 35.8%	25 30.9%	9 11.1%	2 2.5%	2.407	1.010
Rate intra-team communication and sharing of knowledge.	10 12.3%	27 33.3%	28 34.6%	12 14.8%	4 4.9%	2.667	1.037
How do you rate informal KS practice within the institute?	8 9.9%	16 19.8%	26 32.1%	23 28.4%	8 9.9%	3.086	1.131
Rate the frequency of sharing knowledge obtained from workshop and training to the institute staff.	13 16.0%	30 37.0%	28 34.6%	8 9.9%	2 2.5%	2.457	.962

Rate the frequency of knowledge sharing gained from guidelines, journals, and book to the institute staff.	18 22.2%	28 34.6%	24 29.6%	9 11.1%	2 2.5%	2.370	1.030
Rate the frequency of sharing education results, research findings with your colleagues in the institute.	17 21.0%	30 37.0%	21 25.9%	11 13.6%	2 2.5%	2.395	1.044
Total Score	117 11.1%	265 25.2%	391 37.1%	225 21.4%	55 5.2%	2.844	.999

The above table displays results regarding descriptive statistics analyzing the overall knowledge sharing practice in CTTI's academic staff which their response between low to high. However, the general practice indicated as a medium level, the majority 37.1% and 36.3% are medium and low respectively, and 26.6% shows high KS in the institute. Additionally, the mean result also indicates a medium level of KS which is 2.844 and depicted with the standard deviations of 0.999.

Therefore, CTTI's KS programs have inadequate policies and procedures to encourage and support KS activities. The study revealed that CTTI's academic staff attitude is also medium-level. On the other hand, the institute has both medium and low activities in KS factors. Therefore, there are low practices in organizational structure and infrastructural support, which might affect the staff's intentional behaviour and actual sharing of knowledge. In addition to other factors to promote KS practice, promoting organizational and infrastructural support makes an opportunity for CTTI's academic staff to promote positive attitudes toward KS behaviours.

#### **4.4 Pearson's Correlation Analysis**

As the Pearson product-moment indicates, the correlation coefficient is expressed as a number between +1 (i.e., perfect positive relationship) and -1 (i.e., perfect negative relationship). It is also defined as the dependence of one variable upon another (Brooks, 2008).

The researcher computed Pearson Correlation to determine the relationship between the dependent variable (KS) and independent variables; awareness, willingness, trust, organizational structure, organizational culture, and infrastructural support. As to the magnitude of the correlation scores is concerned, the following points can be supposed.

<b>Table 4.9: Pearson's Correlation matrix between variables</b>								
		KS	INFr	OC	OS	AW	WIL	TR
KS: Knowledge sharing	Pearson Correlation	1	.590**	.456**	.742**	.589**	.567**	.515**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	81	81	81	81	81	81	81
INFr: Infrastructural support	Pearson Correlation	.590**	1	.310**	.392**	.436**	.306**	.295**
	Sig. (2-tailed)	.000		.005	.000	.000	.006	.008
	N	81	81	81	81	81	81	81
OC: Organizational culture	Pearson Correlation	.456**	.310**	1	.430**	.511**	.391**	.397**
	Sig. (2-tailed)	.000	.005		.000	.000	.000	.000
	N	81	81	81	81	81	81	81
OS: Organizational structure	Pearson Correlation	.742**	.392**	.430**	1	.469**	.459**	.424**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	81	81	81	81	81	81	81
AW: Awareness	Pearson Correlation	.589**	.436**	.511**	.469**	1	.376**	.456**
	Sig. (2-tailed)	.000	.000	.000	.000		.001	.000

	N	81	81	81	81	81	81	81
WIL: Willingness	Pearson Correlation	.567**	.306**	.391**	.459**	.376**	1	.458**
	Sig. (2-tailed)	.000	.005	.000	.000	.001		.000
	N	81	81	81	81	81	81	81
TR: Trust	Pearson Correlation	.515**	.295**	.397**	.424**	.456**	.458**	1
	Sig. (2-tailed)	.000	.008	.000	.000	.000	.000	
	N	81	81	81	81	81	81	81
**. Correlation is significant at the 0.01 level (2-tailed).								

The Pearson Correlation Analyses were employed among variables. Table 4.9 shows the correlation analyses among all constructs for KS factor and overall KS activities in CTTI. The overall result reveals that there are significant positive correlations between all variables, the correlation between KS activities and organizational structure was the highest from the list as well as there is a strong positive relationship ( $r=0.742$ ,  $p<0.01$ ) followed by the correlation between the KS and infrastructural support ( $r=0.590$ ,  $p<0.01$ ) which indicated moderate relationship.

Similarly, there is a significant moderate positive correlation between the other variables; awareness and overall KS status ( $r=.589$ ,  $p<0.01$ ), correlations between willingness to share knowledge and overall KS status ( $r=0.567$ ,  $p<0.01$ ), and the remaining trust and organizational culture which are ( $r=.515$ ,  $p<0.01$ ) and ( $r=.456$ ,  $p<0.01$ ) respectively.

The lowest correlation is between organizational culture and KS activities, and the highest correlation between organizational structure and KS. However, the correlation coefficient's findings demonstrate a positive relationship between all variables.

As shown in the result, organizational structure is strongly correlated with overall KS that was found first highest numerous by ( $r=0.742$ ,  $p<0.01$ ). This number is close to 1, which means that there is a strong positive relationship between these variables. However, we cannot make any other conclusions about this relationship; based on this number, the positive correlation found means that as one of the variables increases, the other tends to increase, and vice versa.

In general, Pearson correlation revealed that the relationship between individual and organizational factors with general KS has a significant and positive relationship.

#### **4.5 Regression Analysis**

Multiple linear regression analysis was employed on a constructive statistical technique that can be used to analyze the association between a single dependent (KS) and several independent variables such as awareness, willingness, trust, organizational structure, organizational culture, and infrastructural support. Before this analysis was conducted, the study considered the requirements such as independent variables with dependent have relation and also have a relationship between independent variables with each other but based on the coefficient output, the VIF (Variance inflation factor) value shows there is no multicollinearity; the study also considered the sample size of the data and checked independent variables over fitting problems.

#### **Independent variables as predictors to overall knowledge sharing practice**

A regression analysis results are presented in Model Summary table 4.10 as shown in the model summary that indicates infrastructural support, trust, awareness, organizational culture, willingness, and organization structure which is explained (72.8 %) of change in showing up the current status of CTTI's academic staff knowledge sharing practice.

<b>Table 4.10: Model Summary<sup>b</sup></b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.853 <sup>a</sup>	.728	.706	.29402
a. Predictors: (Constant), Trust, Organizational Culture, Organizational structure, Awareness, Willingness, Infrastructural Support				
b. Dependent Variable: Knowledge Sharing practice				

The adjusted R<sup>2</sup> is intended to control for overestimates of the population R<sup>2</sup> = 0.706 resulting from enough samples, with no collinearity or small subject/variable ratios during study target response variable (infrastructural support, trust, awareness, organizational culture, willingness, organization structure) enough to explain lonely without other variable is need; supported by (Hutcheson, 2011).

<b>Table 4.11: ANOVA <sup>a</sup></b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.094	6	2.849	32.956	.000 <sup>b</sup>
	Residual	6.397	74	.086		
	Total	23.491	80			
a. Dependent Variable: Knowledge sharing practice						
b. Predictors: (Constant), Trust, Organizational Culture, Organizational structure, Awareness, Willingness, Infrastructural Support						

In the above table 4.11 regarding the significance of Coefficient of determination, the results indicated that the regression model was a significant predictor of KS,  $F(6, 74) = 32.956, p = .000$ . The significance value is 0.00, which is less than 0.05; thus, the model is statistically significant in predicting how the independent variable shows strappingly determining CTTI's academic staff

KS. Moreover, since the calculated F is greater than the F critical (value = 32.956), this shows that the overall model was significantly fitted.

**Table 4.12: Coefficients <sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	<b>-.241</b>	.238		-1.011	.315		
	Trust	<b>.090</b>	.069	.097	1.309	<b>.194NS</b>	.668	1.498
	Willingness	<b>.175</b>	.071	.181	2.458	<b>.016</b>	.678	1.476
	Awareness	<b>.135</b>	.069	.156	1.959	<b>.054 NS</b>	.582	1.718
	Organization culture	<b>-.005</b>	.065	-.005	-.074	<b>.942NS</b>	.660	1.514
	Organization structure	<b>.441</b>	.076	.442	5.790	<b>.000</b>	.630	1.587
	Infrastructural support	<b>.284</b>	.074	.267	3.819	<b>.000</b>	.756	1.324

a. Dependent Variable: Knowledge Sharing Practice  
b. Adjusted R<sup>2</sup> = 0.706, F ratio (6,74) = 32.956 and sig = 0.000 and NS= Not significant

One of the results in the above table shows the multicollinearity of the variables; it is one of the significant issues that must be addressed before beginning the data modelling process. There is no multicollinearity among predictors if the variance inflation factor (VIF) is equal to 1, but if the VIF is greater than 1, the predictors may be moderately correlated. A VIF between 5 and 10 indicates a high correlation among predictors that may be problematic. If the VIF is greater than

10, it can be assumed that the regression coefficients are poorly estimated due to multicollinearity, which should be handled accordingly (Akinwande et al., 2015).

Table 4.12 (coefficient) shows each variable's significant level in addition to the overall Coefficient determination (Adjusted  $R^2 = 70.6\%$ ) of KS, which is explained by all six independent variables. Multiple linear regressions output shows that out of six predictors included in the model, three of them only significantly affect the knowledge sharing practices of CTTI. In this model, KS can be explained by willingness, organization structure and infrastructural support; but not explained by trust, awareness, and organizational culture.

The contribution of willingness to share knowledge has a positive and significant effect on the KS of CTTI. The p-value and regression coefficient ( $B = 0.175$ ,  $P = 0.016 < 0.05$ ) revealed that the contribution of willingness in knowledge sharing practices of CTTI is significant. The regression coefficient values indicate that the individuals improve their willingness to share knowledge the KS will be expected to increase by 17.5% regardless of other independent variables in the model. Even if willingness to share knowledge positively affects KS, the result indicated that willingness of the academics needs to be maximized at CTTI.

The contribution of an organization structure for KS has a positive and significant effect on CTTI. The p-value and regression coefficient ( $B = 0.441$ ,  $P = 0.000 < 0.05$ ) revealed that the contribution of organization structure in increasing KS is statistically significant. The regression coefficient values indicated that KS is expected to increase by 44.1% regardless of other independent variables in the model due to the conducive arrangement of organization structure. In this study, even though the organizational structure was a better predictor or facilitated for KS of the institute, the level of KS still needs some improvements to create a good practice of knowledge sharing in CTTI.

The contribution of infrastructural support for KS has a positive and significant effect on CTTI. The p-value and regression coefficient (B= 0.284, P= 0.000< 0.05) revealed that the contribution of infrastructural support in increasing KS is statistically significant. The regression coefficient values indicated that due to a good infrastructure setup, KS would be expected to increase by 28.4% regardless of other independent variables in the model. Even though infrastructure facilitated for the KS of the institute, the level of KS still needs an amendment.

The contribution of trust has a positive and insignificant effect on the KS of CTTI. The p-value and regression coefficient (B= 0.090, P=0.194>0.05) revealed that trust's contribution to knowledge sharing practices of CTTI is insignificant. The regression coefficient values indicate that trust will be expected to increase by 9% regardless of other independent variables in the model. Even if trust has a positive relationship towards KS, the result indicated that trust in CTTI is statistically insignificant. Trust did not maximize the KS of the CTTI.

The contribution of awareness has a positive and insignificant effect on the KS of CTTI. The p-value and regression coefficient (B= 0.135, P=0.054> 0.05) revealed that the contribution of awareness in knowledge sharing practices of CTTI is insignificant. The regression coefficient values indicate that awareness will be expected to increase by 13.5% regardless of other independent variables in the model. Even if awareness has a positive relationship towards KS, the result indicated that awareness in CTTI is statistically insignificant.

The contribution of organizational culture has a negative and insignificant effect on the knowledge sharing practices of CTTI. The p-value and regression coefficient (B= -0.005, P=0.942>0.05) revealed that the contribution of organizational culture in knowledge sharing practices of CTTI is insignificant. The regression coefficient values indicated that the increase of current organizational

culture would be expected to decrease the KS by 0.5% regardless of other independent variables in the model. Thus, the result indicated that the practice of organizational culture remains to be done to maximize knowledge sharing practices of CTTI.

## **4.7 Discussions**

The study's objective was to assess the knowledge sharing practices among CTTI's academic staff; the study tried to identify the current practice of KS and identify factors or challenges affecting KS and propose better ways to improve CTTI's knowledge sharing practice. The study used a quantitative approach in which questionnaire were applied as an instrument for collecting data.

- What does the existing knowledge sharing activities in CTTI look like?

In this study, one of the objective was to investigate CTTI's academic staff's current knowledge sharing activities. Accordingly, the descriptive result shows a medium ( $X = 2.844$ ) level KS in CTTI's academic staff. Moreover, in other literature, the general practice indicated that the respondents have low to high KS. The study findings supported the findings of Abiyot's study (A. Dubale, 2020). Similarly, one study found that most 46.8% were low practice, and the remaining 26.4% and 26.9% were medium and high KS, respectively (Bekele & Abebe, 2011). Furthermore, the intermediate level of KS also showed in the finding of the United Arab Emirates Universities and Educational Organizations (Jarrah & Alkhazaleh, 2020).

- What types of knowledge are available to be shared among CTTI's staff?

The other objective was to assess what types of knowledge exist within the institute. The respondents mentioned that there is formal and informal knowledge. The question asked respondents, how they rate the informal KS within the institute and asked, how much they

participate in workshops, seminars, and panels. The result indicates there is a moderate responses in both questions ( $X = 3.099$ ) and ( $X = 3.086$ ) respectively. The result revealed that tacit and explicit knowledge in CTTI is shared in formal and informal ways. Tacit knowledge is usually shared informally among members of the institute except in classrooms where the instructor is expected to formally pass over his/her tacit knowledge. On the other hand, explicit knowledge sources cited by the participants include research papers and different manuals intended to be used for various purposes.

- What does the current organizational and infrastructural support for knowledge sharing in CTTI look like?
- What does the awareness and attitude of CTTI's staff towards knowledge sharing look like?

The other objective was to identify individual, organizational and infrastructural support for KS within the institute. Understanding the factors affecting KS in organizations is required to explore strategies to encourage KS. Many factors are affecting the KS activity of any organization. For the convenience of this discussion, the Alsaadi, 2018 model is used, which consisted of individual and organizational factors affecting KS.

### **Individual Factors**

Study result regarding willingness to share knowledge found (17.5%) gained implicitly influencing CTTI's academic staff KS activities through experience, values, contextual information, and expert insight that aid in the interpretation and incorporation of new experiences and information  $P=0.016$  at 5% significance level. To improve the individuals' willingness to share knowledge, the institute has to fill the gap and needs to amend awareness, leadership and trust, which is supported by (Alsaadi, 2018).

The other objective was to assess the extent of existing awareness of KS within CTTI. The result shows medium ( $X = 3.0833$ ) level awareness of KS among CTTI's academic staff. Additionally, awareness of CTTI's academic staff have an insignificant effect on the KS of CTTI, which the p-value and regression coefficient shows that ( $B = 0.135$  and  $P = 0.054$ ). The findings show there is a gap on awareness, but there are still rooms for improvement, which could lead to developing the many more KS framework and processes. The awareness of the essentials of KS is still a concern among many organizations, particularly the higher education institutions or in knowledge intensive organizations, which play a vital role in KS (Njiraine, 2019).

The result revealed that trust towards KS in CTTI was also at a medium level, and the regression result indicated that trust was statistically insignificant ( $P=0.194$ ) on the KS of CTTI. Since trust and tacit knowledge are related, academics should trust their colleagues with their knowledge for effective KS (Lin, 2007b). Studies also have revealed that KS becomes easier when employees' trust is high (Casimir et al., 2012).

### **Organizational Factors**

Providing an appropriate organizational structure, organizational culture, infrastructural support, and sufficient resources to facilitate KS is the basis of a successful KS program. According to the descriptive result, in CTTI, there is low practices in organizational structure and infrastructural support towards KS. Moreover, the regression coefficient shows that organizational structure and infrastructural support were statistically significant and explained KS by 44.1% and 28.4%, respectively. The results show that improving the organizational structure and infrastructural support is very important in improving the KS in CTTI. The findings supported the findings of Abiyot's study (Dubale, 2020).

The result revealed that the current organizational culture for KS in CTTI was medium-level; the mean difference is 2.831. The regression indicated that organizational culture indicated insignificantly influencing ( $P=0.942$ ) CTTI's academic staff KS. On the other hand, culture refers to norms, values, beliefs, principles, and legends practiced in an organization that can influence how individuals think, make decisions, and act. Chang and Lin studied the influence of the different types of organizational culture, and they found that all types of organizational culture influenced employees' knowledge sharing behaviour (Chang & Lin, 2015).

Finally, one of the study objectives was to show the direction and formulate a strategy to improve CTTI's knowledge sharing practice. According to the findings of this study, there is both tacit and explicit knowledge available in the institute and CTTI's academic staff have a medium degree of KS activities. Besides this, descriptive result shows that there are low practices of the overall organizational structure and infrastructural support towards KS. Accordingly, the institute needs to have a clear strategy to improve the KS. However, Like any other higher learning institute in the country, CTTI has manuals to facilitate research, consultancy, and short-term and continuous education; somehow, it is linked with KS. There is no strategy to develop a specific knowledge repository and sharing platform. Participant responded the low ( $X = 2.259$ ) response regarding the availability or development of knowledge repository. Regarding incentives, the response also shows low ( $X = 2.595$ ) result. These may discourages staff members and makes them refrain from sharing their knowledge.

In general, most respondents' findings have shown a medium level of awareness, willingness, trust, organizational culture, and KS. On the other hand, the study also found low-level results on organizational structure and infrastructural support, which indicates no clear strategy and no frequent engagement of KS activity. Moreover, the regression analysis revealed that the overall Coefficient determination (Adjusted  $R^2$ ) was 70.6% which is a good prediction and explained by all six independent variables towards KS of CTTI. Even though KS is not explained by trust,

awareness, and organizational culture, the other three factors have explained the KS significantly; willingness, organization structure, and infrastructural support. In this study, the essential significant contributors were organizational structure and infrastructural support, which are significant at  $P < 0.01$ .

## CHAPTER FIVE

### Conclusion and Recommendations

#### 5.1 Conclusion

Knowledge sharing is essential for both the academic staff as well as the institute as a whole. It provides the opportunity to improve their skills and performance by working together with colleagues. Especially, educational institutions are knowledge centers that can outshine through the presence of knowledge sharing initiatives. Additionally, KS promotes organizational performance by enhancing productivity, efficiency, innovation, quality, and better decision making.

The main objective of this study was to investigate knowledge sharing practices in CTTI. From a descriptive statistics study analyzing personal attitudes towards knowledge sharing compared with other public sector organizations, CTTI's academic staff have a medium level of awareness, willingness, and trust with the mean difference of 3.0833, 3.0494 3.0679 respectively. The finding is relatively beneficial for KS initiatives. Similarly, the study result regarding descriptive statistics analyzing the organizational and infrastructural support towards knowledge sharing, presented low to medium mean differences; 2.5818 organizational structure, 2.5803 infrastructure, and 2.8313 organization's culture.

The overall result revealed that the knowledge sharing activities of CTTI is at a medium level. Besides this, the institute's main objective is to produce skilled human power, conduct research, and consultancy; these KS activities of the institute's somehow lay at medium level of KS.

Even though the study shows a skill gap among several employees to utilize the technological devices effectively, the institute has a good initiative to fulfil essential electronic and

communication devices such as laptops, desktops, the internet, etc. On the other hand, there are several problems in the institute that hinder KS activities, such as a website developed by the institute, which has many problems, no data center, no good networking structure, no digital library; all these impede KS activities.

Moreover, the study conducted a regression analysis to show factors influencing CTTI's academic staff KS. Willingness to share knowledge was found a statistically significant result; in a good improvement of individuals' willingness, the KS of CTTI's academic staff is expected to increase by 17.5 %. Similarly, the organization structure is found 44.1% and infrastructural support 28.4 %, positively and significantly influencing CTTI's knowledge sharing practices. On the other hand, even though the study result indicated that awareness, trust and organization culture are not significantly influencing CTTI's academic staff of KS but they are part of KS enablers which shows their contribution on many studies. Moreover, all six independent variables predicted the knowledge sharing at 70.6% which is a good prediction.

Based on the study's research questions, the study analyzed seven variables, including the dependent variable. Therefore, respondents' response shows that there are low to medium knowledge sharing activities within the institute which contributes in designing knowledge sharing strategies. Additionally, the study contributes to showing CTTI's level of KS for the concerned body such as policymakers, administrative staff, academicians, researchers, and the industry, which can help to improve the current activity of KS. Theoretically, the study might contribute as literature on knowledge sharing in general, particularly for future research on academicians in catering and tourism training areas.

## 5.2 Recommendations

Besides investigating the knowledge sharing activities, one of the objectives of this study was to show the direction or formulate a strategy for improving general knowledge sharing practices among members of the institute. According to the previous conclusions and findings, the study recommends the following actions:

- Since CTTI is under the Ministry of Culture and Tourism (MOCT), policies and strategies formulated under the rule of the Civil Service Commission. The institute has no written and specific strategy to motivate the staff to share their knowledge within and outside the institute. Thus, the commission and MOCT should support on producing policy and strategy for KS, which empower the members of CTTI individually and collectively to contribute to the country's economic development. The policy should promote personal attitudes, organization structure, organization culture, and infrastructure, including making up-to-date technological support to improve the current gaps in the KS and become a center of excellence, which is the institute's vision.
- **CTTI should:**
  - In Most government institutes, a considerable amount of annual budgets are returned to the concerned government bodies, but many works should be done before returning the budget; since CTTI also one of the governmental institutes, it should use the budgets properly to improve KS. For instance: establish a knowledge repository, develop an excellent organizational culture by allocating budget and incentives, and create a platform to let all the members of CTTI participate in different capacity building programs regularly, etc.
  - Currently, CTTI has initiatives on some KS platforms, such as conducting research conferences, preparing different training and different document preparation collectively. However, the institute should prioritize building enhanced KS enablers (individual,

technological and organizational). The institute should prepare a standard KS platform by investigating current technology, such as acquiring other institutes' experience or visiting better implemented KS environment.

- Regarding infrastructure, beyond the fulfilment of electronic and communication tools, the institute should train the staff with new or updated technologies, establish a digital library, and work on the availability of effective website etc. Besides this, establish additional hall and solve any problems that show the problems on office layouts. All these hinder the KS activities.
- According to the findings, the current personal attitude (awareness, willingness and trust) of the academic staff shows a medium level towards KS. However, both the institute and individuals should prepare themselves to promote KS practice. The institute should highly encourage and motivate employees by preparing incentives and improving KS platforms. Moreover, the institute should conduct repetitive training and prepare guidelines to increase the awareness of the institute's academic staff towards KS. Additionally, establish relationships of KS activities with employees' performance appraisal and put them on their job descriptions for better willingness.

### **5.3 Future Research**

- The study would like to recommend future studies on KS related areas to focus on the impact of low to medium level knowledge sharing practice in the global economy.
- Moreover, the researcher would like to recommend future works to design and implement the knowledge sharing platform to fill the gap and improve the frequency of KS activities.

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**APPENDIX: Self-administered questionnaire to be filled by academician's**

**ADDIS ABABA UNIVERSITY  
COLLEGE OF NATURAL AND COMPUTATIONAL SCIENCES  
SCHOOL OF INFORMATION SCIENCE**

Dear Respondents:

First, I would like to thank you for your willingness to participate in the study entitled, “Knowledge sharing practices among academic staff: The case of catering and tourism training institute (CTTI)”. This research is being conducted to the partial fulfillment of the Degree of Masters of Science in the Department of Information Science at Addis Ababa University. The main purpose of this study is to assess the practices of knowledge sharing among academics, which refers to the communication of all types of knowledge, including explicit and tacit knowledge through socialization, interaction, and training. Your honest response to each question is highly important to the outcome of this study. I would like to assure you that each piece of information collected from you will be kept confidential, the questionnaire will be used only for educational purposes and no information will be linked to your identity. Therefore, I kindly request you to provide the required information as much as possible.

*If you have any questions about the study or the study questionnaire, please contact the researcher through the phone Number: +251912851874 and email: taminium@gmail.com*

**General Instruction:**

- the questionnaire has four parts.
- please circle your response (*one answer per item*).
- No need to write your name

<b>Part 1: Demographic Profile</b>					
Please Circle your response from the given alternatives.					
<b>1. Your gender?</b>					
1. Male	2. Female				
<b>2. Your age group?</b>					
1. 20-30 years	2. 31-40 years	3. 41-50 years	4. Above 50		
<b>3. Educational Status?</b>					
1. Level_5	2. Bachelors	3. Masters	4. Doctorate		
<b>4. Your experience in an academic institution (the current or prior)</b>					
1. Less than 3 Years	2. 3 -10 Years	3. 11-15 Years	4. Greater than 15 Years		
<b>5. Your department?</b>					
1. Tourism	2. Hotel	3. General and Supportive			
<b>Part 2: Personal attitude</b>					
Please Circle your response. The responses are presented in a scale ranging from 1 – 5.					
1. Very Low (VL)   2. Low (L)   3. Medium (M)   4. High (H)   5. Very High (VH)					
	VL	L	M	H	VH
1. How do you rate your awareness of knowledge sharing in daily work?	1	2	3	4	5
2. How do you rate your knowledge sharing in gaining new ideas, technologies, skills or techniques?	1	2	3	4	5
3. How do you rate your awareness of knowledge sharing in terms of not to repeating the same mistake happened to other colleague?	1	2	3	4	5
4. If you share knowledge with in the institute, how much your colleagues will believe that you are very concerned about their welfare?	1	2	3	4	5
5. How do you rate knowledge sharing in terms of reducing your personal competitiveness?	1	2	3	4	5
6. How do you rate knowledge sharing in terms of wasting your time?	1	2	3	4	5
7. Rate of exclusive ownership of knowledge to be important person in the institute?	1	2	3	4	5
8. How do you rate your willingness to explain your know-how, experience or skills to your colleagues?	1	2	3	4	5
9. How much confidence do you have in the skills of your co-workers?	1	2	3	4	5
10. How much do you trust knowledge of your co-workers?	1	2	3	4	5

11. When you share your knowledge, how much do you believe that your future requests for Knowledge will be answered?	1	2	3	4	5
12. Rate your confidence in your ability to provide knowledge that others in your institute consider valuable.	1	2	3	4	5
13. How much do you enjoy helping your colleagues by sharing your knowledge?	1	2	3	4	5
14. If you need additional advice or information, how much your colleagues are likely to tell you about the task to perform?	1	2	3	4	5
15. Rate how much sharing knowledge with public educational institutions or other competitors will affect your institute negatively.	1	2	3	4	5
<b>Part 3: Knowledge Sharing Practice</b>					
Please Circle your response. The responses are presented in a scale ranging from 1 – 5					
2. Very Low (VL)   2. Low (L)   3. Medium (M)   4. High (H)   5. Very High (VH)					
	VL	L	M	H	VH
1. How do you rate your motivation to transfer your knowledge to your colleagues within and outside the institute?	1	2	3	4	5
2. How do you rate your practice of documenting your work?	1	2	3	4	5
3. How do you rate your use of e-mail, the Webpages, and social networking to share your ideas within and outside the institute?	1	2	3	4	5
4. How do you rate your participation in workshops, seminars, panels, etc. within and outside the institute?	1	2	3	4	5
5. How do you rate the frequency of your knowledge sharing?	1	2	3	4	5
6. How do you rate employees' use of knowledge networks such as (email, Web, Social media) to communicate with colleagues?	1	2	3	4	5
7. How do you rate your institute employees' cooperation when asked for some information or advice?	1	2	3	4	5
8. In your institute, how much Knowledge sharing seen as strength and knowledge hoarding as a weakness?	1	2	3	4	5
9. Rate intra-team communication and sharing of knowledge?	1	2	3	4	5
10. How do you rate informal knowledge sharing practice within the institute?	1	2	3	4	5
11. Rate the frequency of sharing knowledge obtained from workshop and training to the institute staff.	1	2	3	4	5
12. Rate the frequency of knowledge sharing gained from guidelines, journals, and book to the institute staff.	1	2	3	4	5

13. Rate the frequency of sharing education results, research findings with your colleagues in the institute.	1	2	3	4	5
<b>Part 4: Organizational and infrastructural Support</b>					
Please Circle your response. The responses are presented in a scale ranging from 1 – 5.					
1. Very Low (VL)   2. Low (L)   3. Medium (M)   4. High (H)   5. Very High (VH)					
	VL	L	M	H	VH
1. In your institute, how do you rate a motivational scheme to encourage employees to share their knowledge within and outside the institute?	1	2	3	4	5
2. How do you rate the following incentives for you in order to improve your knowledge sharing attitude?					
a. Good working environment	1	2	3	4	5
b. Salary increment	1	2	3	4	5
c. Career development	1	2	3	4	5
d. Chance of promotion	1	2	3	4	5
e. Acknowledgment of your contribution	1	2	3	4	5
3. Rate technical support and immediate maintenance of integrated IT systems which hinders work routines and communication flows.	1	2	3	4	5
4. Rate trainings regarding employee familiarization with new IT systems and processes.	1	2	3	4	5
5. How do you rate the institute on specific budget allocation to acquire and share the knowledge?	1	2	3	4	5
6. How do you rate the periodic plan to acquire, organize and share the knowledge with in the institute?	1	2	3	4	5
7. How frequently the institute facilitates knowledge sharing platforms (workshops, seminars, etc.) on a regular basis?	1	2	3	4	5
8. Rate managers' encouragement on employee's suggestion of ideas for new opportunities.	1	2	3	4	5
9. How frequently managers consult team members to make decision and solve problem?	1	2	3	4	5
10. How do you rate your institute on development of knowledge repositories (to store research reports, articles, methods and policies, committee reports etc.)?	1	2	3	4	5
11. Rate the availability of updated ICT infrastructure in your institute.	1	2	3	4	5
12. How do you rate the availability of enough locations (Hall) where staff can easily socialize and exchange knowledge?	1	2	3	4	5
13. Rate how much employees do have personal home pages through which they can communicate their ideas.	1	2	3	4	5