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# Factors predicting knowledge sharing behavior of academic staff

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**ABSTRACT:** The main objective of this paper is to identify the factors that influence academic staff's knowledge-sharing intentions and behaviors in Ethiopian higher education. A structural equation model was used to validate the research framework using survey data from 256 respondents. The collected data has been analyzed using Smart PLS software. The result indicates that the factors that affect knowledge-sharing intention include social interaction, reciprocity, management support, reward systems, and reputation. Systems integrated into teaching-learning practice, availability of information technology infrastructure, perceived ease of use, and perceived usefulness are among the technological factors affecting the intention to use web technology for knowledge sharing toward knowledge-sharing behavior. It has also been concluded that management support had the greatest influence, but the reward system did not affect the knowledge-sharing intention. On the other hand, the availability of IT infrastructure has the largest effect on the intention to use web technology, while perceived ease of use has the least. The contributions of this study are twofold. The framework may serve as a roadmap for future researchers and managers considering their strategy to enhance knowledge sharing in HEI. The findings will benefit academic staff, university administrations, and higher education institutions. This study gives managers a solid foundation to promote and support academic staff's usage of web technology for knowledge sharing. The study will also help academic staff enhance their current knowledge-sharing practices.

**Keywords/ phrases: Higher education institution, Knowledge sharing behavior, Social capital theory, Technology acceptance model.**

## INTRODUCTION

Higher education institutions (HEI)are knowledge-based organizations, which is a places where knowledge is created and shared. Because the HEI has more experts or professors who can share their knowledge, the overall quality of education will improve (Wu & Zhu, 2012).Accordingly, knowledge sharing (KS) in educational settings should provide policies for linking academic staff, processes, and technologies. In addition, top management must promote KS practices within HEIs. However, prior research indicates that Ethiopian HEIs are suffering from the loss of academic staff knowledge, which is poorly managed even though it is essential for their survival (Rahel & Ermias, 2011; Sisay, 2017; Yonas, 2019). The reason given is that most Ethiopian universities, particularly those located in rural areas, have high employee turnover. Because of this, all the experience and skills of the ex-staff, such as the teaching-learning scheme of the university, knowledge acquired from different training and workshops, and the like, will not be university resources. Another factor is academic staff leaving the institution for further education, which will result in the loss of previously stated knowledge. As a result, newly hired and reinstated academic staff who have returned from educational leave may use their method of teaching, which will not be documented likewise. In all of these cases, the researchers discovered that it is necessary to explicitly manage the knowledge of the academic staff on the university knowledge repository (institutional web technology) by detecting factors that hinder or enable the knowledge-sharing behavior (KSB) of academic staff within the HEI.

Web technology facilitates collaboration and interactions among academic staff and their learners. The facility of this service via the intranet makes it available and easy to use by most learners anytime and anywhere (Muda & Yusof, 2015). Besides, in developing countries such as Ethiopia, where the availability of skilled people is so scarce, the application of web-based KS in the teaching and learning process plays a significant role in

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improving the quality of education. According to the literature, in most Ethiopian HEIs, various network facilities are designed to support teaching and research activities. However, currently, they are used for simple applications like emailing and internet browsing (Rahel & Ermias, 2011; Yonas, 2019). Therefore, web technology-based KS does not exercise or actively practice in various Ethiopian HEIs.

In addition, administrators at HEIs must understand the behavior of academic staff. Top management would be able to shape the behavior of the academic staff by identifying the motivating and hindering factors that will subsequently lead to higher commitment for KS (Alemu, 2015). However, universities do not invite academic staff to deposit their teaching materials, such as lecture notes and research output, in their existing repositories. Therefore, this study is interested in looking at the interaction between the academic staff and available web technology platforms (such as institutional repositories, eLearning, and social media platforms) for KS practice within the HEI.

In addition, a few studies have also examined social capital theory (SCT) and the technology acceptance model (TAM) as predictors of KSB (Deng & Yuan, 2020; Fari, 2015; Tsai, 2014). Tsai (2014) conducted a study integrating SCT, social cognitive theory, and the TAM to develop a comprehensive behavioral model in telehealth. However, there are limitations to the study: such as, the study was conducted in the healthcare industry, which has a different culture of sharing than the HEI.

A study by Alshurafat *et al.* (2021) integrates SCT, the theory of reasoned action (TRA), and the TAM to examine accounting students' intention to use a university online learning system. The literature shows various studies have investigated TAM and SCT to explain the behavior intention toward KSB in different contexts. However, there is still a lack of a comprehensive web technology-based KSB framework. The KS framework describes how institutional knowledge, IT infrastructure, and a repository of individual and group experiences and insights are integrated into higher education (Panahi et al., 2012). A solid KS conceptual framework contributes to the achievement of KS within HEI by providing guiding principles and directions on KSB. We need to understand the factors considered when developing a KS framework that uses web technology in higher education. Many scholars and practitioners have developed various frameworks for effective KS practice. However, the existing frameworks are derived from business considerations rather than HEI (Minh et al., 2021; Pinho et al., 2018). In addition, there is a lack of a globally agreed framework and a universal set of concepts and standards in the KS community since KSB is context-dependent.

The justification for choosing HEI lies in the fact that there is still a lack of understanding of the use of web technology for KS practice. As a result, this paper aims to look into the social, organizational, and technological factors that influence academic staff's KSB when using available web technology (university-owned platforms and social media platforms). Furthermore, the paper provides a theoretical framework with empirical evidence that aids in improving academic staff's behavioral intention to use web technologies by synthesizing the SCT and TAM. In light of that, the main objective of this study is to test a theoretical framework from the perspectives of SCT Nahapiet & Ghoshal(1998) and TAM Davis(1989) that postulates SCT as determinants of knowledge-sharing intention (KSI) and TAM as determinants of intention to use web technology for knowledge sharing and evaluate the effect of KSI and intention to use web technology for knowledge sharing on KSB within HEI. In addition, structural equation modeling (SEM) was used to test and validate the proposed framework and hypotheses. Keeping this in mind, this research aims to answer the following research questions:

**RQ 1.** What is the component of social capital that influences the intention to share knowledge and the knowledge-sharing behavior of academic staff within HEIs?

**RQ 2.** What is the component of technological factors that influences the intention to use web technology for knowledge sharing toward knowledge-sharing behavior of academic staff within HEIs?

**RQ 3.** Which one of the knowledge-sharing intentions and the intention to use web technology for knowledge-sharing have a high impact on the knowledge-sharing behavior of academic staff within HEIs?

### *Related works*

KS is an activity in which knowledge is shared among individuals (Lee, 2018). Enabling web technology for KS in HEI is useful for organizational knowledge and making it available to academic staff when needed (King & Marks, 2008). Various web technology tools in HEIs, such as learning management systems (LMS), digital libraries, knowledge repositories, and social media platforms, enable KS. The LMS refers to learning in a virtual environment using various eLearning software to manage the contents of a course and course delivery, track students learning progress,

and make KS easy among academic staff in HEI (Ketema & Nirmala, 2015). However, studies have shown that the most popular way of delivering teaching and learning practices in Ethiopia is the face-to-face method. Ketema & Nirmala (2015) and Hagos et al. (2016)have listed Ethiopian universities that have adopted Moodle as their learning management system to enhance their teaching and learning practices. However, the integration of this system to support teaching-learning practice within HEI faces numerous challenges. The other web technology that most HEIs owned was the file transfer protocol (FTP) server, considered a knowledge repository by most Ethiopian HEIs. A knowledge repository is a warehouse where knowledge used by academic staff is stored (Muda & Yusof, 2015). Through KS mechanisms, the repository can store knowledge from the academic staff. The digital resource stored in the repository can be accessed and reused for learning and teaching (Asadi et al., 2019). However, most of the repositories within the university are underutilized by academic staff(Yonas, 2019).In addition, the Ethiopian Ministry of Education launched a digital repository called the "national academic digital library of Ethiopia" that was supposed to be accessed by all Ethiopian higher education institutions. Even though this is an opportunity, the researchers observed that most of the course-based design of this repository is without content. We can conclude from this that the main challenge in higher education is not only IT infrastructure but rather individual behavior in using existing web technology. Based on our previous discussion, we can observe that there is a lack of understanding of utilizing web technology for KS. This lack of understanding requires investigating the academic staff's KSB using web technologies such as LMS and digital libraries. As a result, this study considers web technologies such as digital libraries, learning management systems, FTP, research management systems, and social media platforms that can support KS through teaching and learning practices.

A growing body of research has addressed the factors that affect the willingness to share knowledge from various perspectives. Specifically, researchers in higher education and organizational fields try to theorize these factors and link them to KSB. These factors are social capital and organizational and technological factors. The interaction among individuals generates social capital factors and the organizational factors that motivate academic staff to perform or not perform KS. Technology-related factors include the acceptance of web technology by academic staff and the availability of IT infrastructure. These elements can influence a person's interest in working with KS (Rajalakshmi et al., 2010).

However, due to contextual differences and other factors, the constructs used in some previous studies are inconsistent and provide contradictory findings on the same construct. These findings vary based on the nature of the organizations and industries whose knowledge was shared. For example, a study by Kim & Lee (2006) and Hung et al. (2011) found that reward systems significantly affect employees' KS capabilities. Contrastingly, Lin (2007) and Akosile & Olatokun (2020), reported that reward systems did not significantly affect employees' willingness to share knowledge. Islam & Khan (2014) showed management support is positively related to KS. However, Akosile & Olatokun (2020)revealed no significant correlation between management support and KSB. In addition, some literature suggests that social capital is under the influence of culture, and so it should be treated and interpreted carefully in a different context. Furthermore, Supar (2012) conducted a study to determine the factors affecting KS among academic staff in HEI. Findings indicated that the availability of IT infrastructure was positively related to KS behavior. However, this study is inconsistent with the report by Akosile and Olatokun (2020); Cheng et al. (2009) in that the availability of IT infrastructure did not influence knowledge sharing.

According to Songkram, Chootongchai, and Osuwan (2023), perceived ease of use positively affects behavioral intention, whereas perceived usefulness has a negative influence. Similarly, Aldhmour and Doyle (2023) discovered that perceived ease and perceived usefulness did not affect students' KS intentions. These contradictory findings and cultural differences necessitate further research to clarify the relationships.

Most studies conducted in KS at HEI do not consider the learning organization for the quality of education via web technology. For example, a study by Elizabeth et al. (2013) examines the KS practices of academics in Ethiopian HEI, specifically the practice of conducting research. However, the study did not consider teaching and learning activities other than research publications. A study conducted by Rahel & Ermias (2011) also assessed the awareness level and practice of KS among academic staff at HEIs in Ethiopia. However, the study is limited to ICT and IT-related departments only. Therefore, it is hard to generalize such a promise since it does not consider the other academic staff's behaviors. In

addition, this study did not use any conceptual framework.

As Lee (2018), Alshurafat et al. (2021), Cai et al. (2020), and Ha (2021)have proven, SCT is used for examining social aspects in various situations. According to Diriye (2019), social capital factors are the most determinant of knowledge-sharing intentions (KSI). In addition, KSI will determine KSB (Chumg et al., 2014). KSI refers to the academic staff's positive feelings about participating in online KS in HEI (Noprisson et al., 2017). However, in the literature, there is a shortage of research investigating the determinants of key variables of the social capital theory to have a deeper understanding of the model in web technology-based knowledge sharing. From a technical perspective, the TAM is a behavioral model widely used to forecast and explain IT usage (Tsai, 2014). According to the TAM, perceived usefulness and ease of use are two pertinent factors. Perceived ease of use is the degree to which a person thinks using a system requires little effort. Perceived usefulness also refers to the degree to which a person thinks using a system improves work performance (Tesavrita et al., 2016). As mentioned in TAM, using web technology is influenced by the intention to use it and jointly determined by perceived ease of use and usefulness. According to Tsai (2014), perceived ease of use and usefulness significantly affected usage intention.

Some studies have also reported the need to integrate the effects of social capital factors and technology-related factors in KS (Razzaque, 2020). However, there is a lack of integration of social capital theory and TAM in a single study to provide a comprehensive picture of the determinants of knowledge sharing in HEI. Therefore, in response to the growing importance of web technology-based knowledge sharing in HEI and issues in this area, this study reviews the literature to ascertain the dominant determinants of knowledge sharing in HEI based on the social capital theory and TAM. The review establishes a conceptual framework that comprehensively demonstrates factors affecting knowledge sharing in HEI.

Literature has also identified and grouped these success issues into three pieces: "individual, social, organizational, and technological" factors(Dereje et al., 2016; Ismail & Yusof, 2008; Karem et al., 2022; Riege, 2005). However, the majority of KS research has focused on the business sector. Examples include the health sector (Dereje et al., 2016; Dessie, 2017), the banking sector (Assefa et al., 2013), culture, and tourism (Addisalem et al., 2017). Having said that, few studies on factors influencing KS have been conducted in Ethiopian universities, considering social, organizational, and technological factors. Besides, according to the researcher's investigation, there is a lack of studies conducted in HEI that consider synergies between social factors using social capital theory and technologically related factors using the technology acceptance model. This study examines the KSB of academic staff, taking the SCT as a determinant factor for the KSI and the TAM as a determinant factor for the intentions to use web technology for KSB. Further, the KSI and the intention to use web technology for knowledge sharing help to understand the existing condition of the KSB of academic staff in utilizing web technology within higher education. Therefore, we can hypothesize that HEIs should consider both factors. This synergy may produce better results in KSB among academic staff and in building an integrated theoretical framework of KSB, which can also explain the antecedents of KSB among academic staff within HEI.

***Research model and hypotheses development***

In their various forms, TAM and the Unified Theory of Acceptance and Use of Technology (UTAUT) have gotten attention from researchers and have been empirically tested. In the context of system use, studies were conducted utilizing both models. Similarly, we used the models to predict the usefulness, intention to use, and usage of specific systems. However, both models use different independent variables to assess the intention to use the system. As part of its effective research, UTUAT has traditionally used performance expectancy, effort expectancy, social influence, and facilitating conditions, which are beyond the scope of this study. TAM (perceived ease of use and perceived usefulness) is considered for this study because it assesses the perceived ease of use and perceived usefulness of the existing system to increase intention and usage behavior. This study proposes a research framework by synthesizing the SCT and TAM with other variables (such as KS policy, management support, and reward systems) from prior literature to examine the factors that affect academic staff's behavior to share knowledge using web technologies. Because of the scope and context of the study, the proposed framework modifies the original SCT by removing the "shared language" construct from the cognitive dimension. Because English is the medium of communication in Ethiopian HEIs, discussing a shared language for academic staff at an HEI may not be a problem. For ease of reference, these constructs are

categorized as social, organizational, and technological factors in this study.

Based on the theoretical framework and prior studies employing the SCT and TAM, the current study aims to examine the influence of KS intention from social capital factors and intention to use web technology for knowledge sharing from technological factors on KSB as determinants. Therefore, the theoretical framework depicted in Figure 1 essentially serves as the basis for the research. Based on the theoretical and empirical background of the factors influencing KSB, the following hypotheses have been proposed:

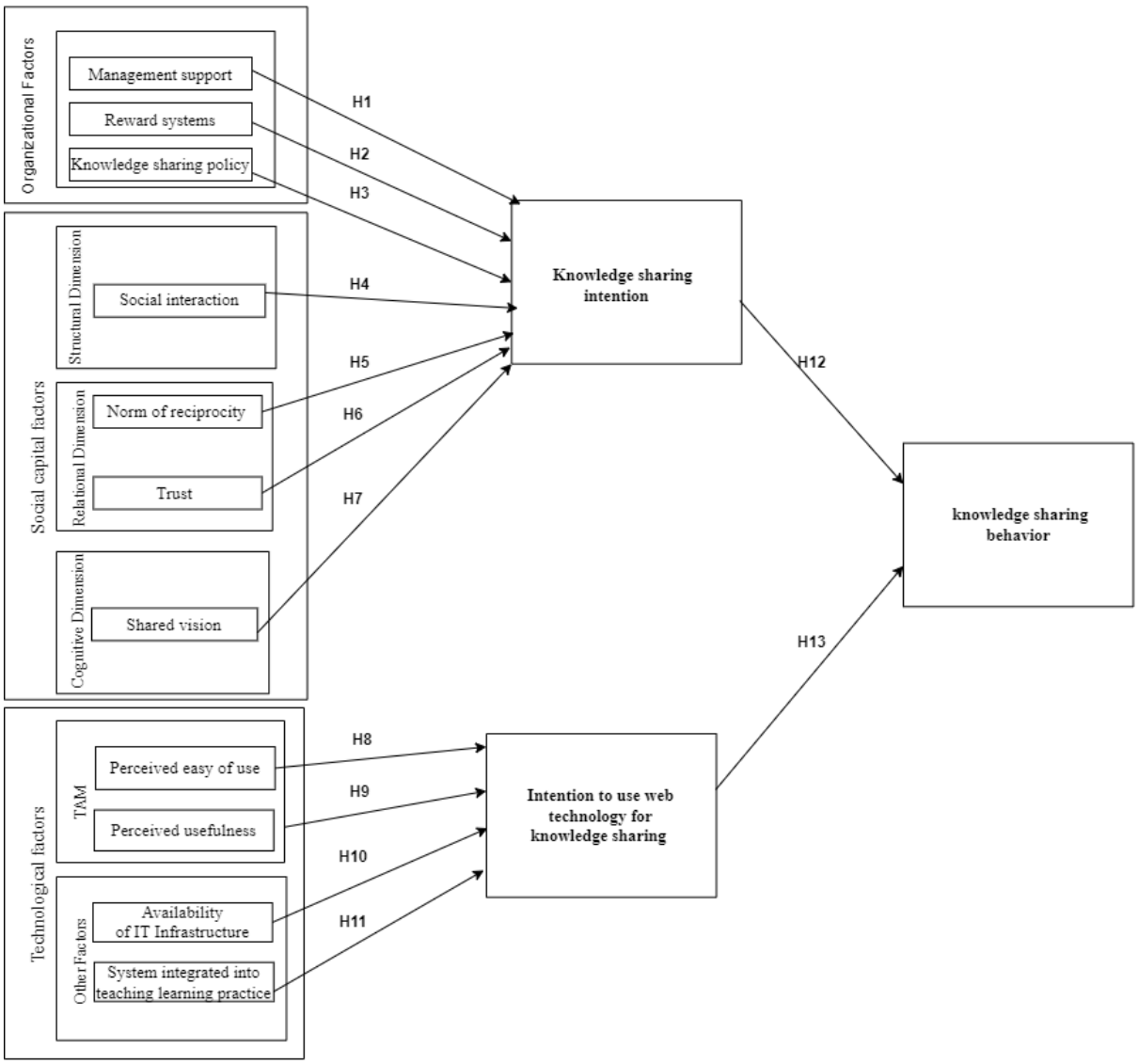


**Figure 1. A conceptual framework of the study.**

### *Organizational Factors and knowledge-sharing intention*

To deal with an organizational factor, management support, reward system, and KS policy are hypothesized in this study.

### *Top management support*

Top management support demonstrates that an organization cares about its ability to contribute to its employees (Kalra & Baral, 2020). Management support includes resource allocation, leadership, and training (Jennex et al., 2008). As a result, direct or indirect management support is critical in determining the level of encouragement among academic staff to share knowledge. Management must be willing to participate and commit the necessary resources to the knowledge system. Dessie (2017) believed that if the organization provided available resources, relevant training, meaningful incentives, and removed barriers to

KS, academic staff KS behavior would improve. Therefore, top management support is considered one of the factors affecting KSI and behavior among academic staff within HEI. Therefore, our second hypothesis is as follows:

H1: Top management support positively and significantly influences academic staff knowledge-sharing intentions.

***Reward system***

The effectiveness of reward systems is one of the major factors considered for KSBs of academic staff. Literature shows that reward systems are a significant factor influencing the willingness to share or not share knowledge (Akosile & Olatokun, 2020; Hau et al., 2013; Hung et al., 2011; Nordin et al., 2012)because people are generally motivated by rewards. According to Hung et al. (2011), those who perceive more rewards for KS are more willing to perform KS. As a result, this study asserts that when academic staff receives incentives for sharing their knowledge, they will be more motivated to share their knowledge. This argument leads to the hypothesis below.

H2: The reward system positively and significantly influences academic staff knowledge-sharing intentions.

***Knowledge sharing policy***

Establishing a KS policy is essential for an organization to succeed because KS policies are crucial to ensuring satisfactory performance for an organization (Yazdanpanah et al., 2013). A KS policy should encourage sharing knowledge and provide guidelines on externalizing knowledge from tacit to explicit (Hartner & Grünfelder, 2013). Furthermore, the KS policy may help the university identify barriers to KS and take corrective action to empower academic staff to share their knowledge. Akosile & Olatokun (2020) found that KS policy significantly influences KSB. Therefore, our fourth hypothesis is as follows:

H3: Knowledge-sharing policy positively and significantly influences academic staff knowledge-sharing intentions.

***Social Capital Factors and knowledge-sharing intention***

Social capital is the sum of the existing and potential resources inherent in, accessible through, and generated from the network of relationships owned by a person or social unit" (Nahapiet & Ghoshal, 1998). The study of social capital and KS has identified social capital's crucial influence on how academic staff members behave while sharing knowledge (Chang & Chuang, 2011; Wasko & Faraj, 2005). According to Nahapiet and Ghoshal (1998), social capital has relational, cognitive, and structural dimensions.

The structural dimension is the relationships among academic staff or those with whom they exchange knowledge. As a result, social interaction is part of the structural dimension (Gebreyohans et al., 2022; Tsai & Ghoshal, 1998). The second dimension is the relational dimension, which refers to interpersonal relationships. Trust and reciprocity are among the key attributes of this dimension (Chiu et al., 2006; Gebreyohans et al., 2022). The third dimension is the cognitive dimension, which includes "shared vision," which facilitates a shared understanding of collective group objectives and appropriate social system behavior. Several studies considered shared vision as a construct of cognitive capital (Chow & Chan, 2008; Fathi et al., 2011; Gebreyohans et al., 2022). The hypotheses developed in this study are on social interaction, reciprocal benefit, trust, and shared vision, all of which lie within the SCT constructs.

***Social Interaction***

Social interaction is communication among network members (Gebreyohans et al., 2022). They act as a medium for knowledge sharing. In addition, these interactions shape shared objectives, and norms promote goal sharing across the network (Tsai & Ghoshal, 1998). Studies proved that social interaction positively influences resource exchange (Chiu et al., 2006), which indicated that academic staff with more social interaction tended to participate more actively in KS. Tsai & Ghoshal (1998) also found a significant relationship between social interactions and resource exchange. Therefore, our first hypothesis is as follows:

H4: Social interaction positively and significantly influences academic staff knowledge-sharing intentions.

***Trust***

Academic staff is more willing to share knowledge when they trust each other or the system. In previous literature, trust was one of the frequently mentioned facilitators of KS (e.g., W. Tsai & Ghoshal (1998);Chiu et al. (2006); Hau et al. (2013);Nonaka & Takeuchi (1995). Without trust, individuals were reluctant to participate in KS practices (Jolaee et al., 2014).W. Tsai & Ghoshal (1998) and Chiu et al. (2006) also showed that trust is significantly related to KS. Therefore, we argue that academic staff builds trustworthy relationships with coworkers, helping them create a cooperative environment for KS and being able

to improve their KSI. This argument leads to the formulation of the following hypothesis:
H5: Trust positively and significantly influences academic staff knowledge-sharing intentions.

***Norm of reciprocity***

The norm of reciprocity is the sharing of knowledge for mutual benefit, which both parties perceive as fair (Chiu et al., 2006). Therefore, KS can facilitate a strong sense of reciprocity. Several studies have revealed that reciprocal knowledge exchange relationships increase employees' KS intentions (Chang & Chuang, 2011; Wasko & Faraj, 2005). Prior studies have used the norm of reciprocity in determining KS. For example, Tohidinia & Mosakhani (2010) showed that reciprocity influenced KS practices. Similarly, Hau et al. (2013) showed the norm of reciprocity is significantly associated with KSI. This argument leads to the hypothesis below.

H6: The norm of reciprocity positively and significantly influences academic staff knowledge-sharing intentions.

***Shared Vision***

Shared vision refers to shared values, mutual goals, and understanding in a cooperative relationship(Nahapiet & Ghoshal, 1998). It is a shared belief with academic staff regarding the benefits of KS and the technology used for KS. Irene & Zuva (2018)stated that if employees have a shared understanding of the advantages of sharing knowledge via technology, it is likely to encourage staff to share and contribute to the quality of education. Academic staff with a shared vision are more likely to increase their intention to join KS. Chiu et al. (2006)found that shared vision was positively related to knowledge sharing on the network. Moreover, empirical studies have also suggested that shared vision can influence KS among individuals(Chow & Chan, 2008; Fathi et al., 2011; Koranteng & Wiafe, 2019). This argument leads to the formulation of the following hypothesis:
H7: Shared vision positively and significantly influences academic staff knowledge-sharing intentions.

***Technological factors and intention to use web technology for knowledge sharing***

Technology plays a vital role in knowledge-sharing practices because knowledge is shared via various web technologies. This study examines the factors affecting the use of IT applications by academic staff in their KSI towards KSB. The TAM is a frequently used behavioral model for predicting and explaining IT usage (Tsai, 2014). In this study, perceived usefulness, perceived ease of use, availability of IT infrastructure, and systems integrated into teaching and learning practices are the determinants used to examine the intention to use web technology.

***Availability of IT infrastructure***

The IT infrastructure is the means for creating or acquiring knowledge repositories or organizational memory. A study by Jennex et al. (2008) argued that increasing organizational learning through the development of knowledge repositories was necessary to improve business performance. The availability of IT infrastructure influences the behavior of academic staff. Studies by Islam & Khan (2014), and Supar (2012)emphasize the significance of IT infrastructure for KS. Supar (2012)also examines the technological factors on the KSB, and the study reports that the presence of IT is positively related to KS. Therefore, the availability of IT infrastructure makes academic staff easy to access and more willing to share their knowledge. This argument leads to the hypothesis below:

H8: The availability of IT infrastructure positively and significantly influences the intention to use web technology.

***Perceived usefulness***

Another component of TAM that influences the intention to use web technology for knowledge sharing is perceived usefulness, which refers to the perceptions of academic staff about the relevance of web technology in their routine activities. When academic staff considers using web technology might enhance their job performance, they are more likely to be encouraged to share their knowledge via the system (Tsai, 2014). According to Hossain et al. (2013), perceived usefulness is one of the predictors of intention to use knowledge management systems. Tsai (2014) and Fan & Wu (2011) also found that perceived usefulness significantly affected usage intention. Accordingly, this leads to the following hypothesis:
H9: Perceived usefulness positively and significantly influences the intention to use web technology.

***Perceived ease of use***

When academic staff perceives that using web technology for KS requires little effort, they will be more likely to share their knowledge with others(Fan & Wu, 2011). In previous literature, Hossain et al. (2013), Tsai (2014), as well as Fan &

Wu (2011) emphasize the significance of the perceived ease of use of technology for KS. Hossain et al. (2013)showed that perceived ease of use significantly predicts an intention to use knowledge management systems. Tsai (2014) and Fan & Wu (2011) also found that perceived ease of use affected usage intention. For this reason, this study also suggests that user-friendly web technology influences the academic staff's intention to use web technology. Accordingly, this leads to the hypothesis stated below:

H10: perceived ease of use positively and significantly influences the intention to use web technology.

***Systems integrated into teaching-learning practice***

To encourage academic staff to share their knowledge through web technologies, web technology within HEI should be integrated and connected over the network. According to Dereje et al. (2016), systems integration implies integrating knowledge systems into routine business operations. Systems may support KS best when they do not create an extra burden in daily operations and should work seamlessly with other daily work processes (Caruso, 2017; Dereje et al., 2016). Integrating the existing web technology into teaching and learning practices can enhance the academic staff's intention to use web technology. Accordingly, this leads to the following hypothesis:

H11: System integration into teaching and learning practice positively and significantly influences the intention to use web technology.

***An integrated framework of the antecedents of knowledge-sharing behavior***

According toAjzen & Fishbein(1980), behavior is the degree to which a person decides to carry out or resist a particular action. According to the context of this study, KSB refers to how much an academic staff member shares their knowledge with others through readily available web technology within the HEI. To create a comprehensive theoretical framework for the causes of KSB among academic staff, this paper combines two approaches. First, examine the relationship between the knowledge-sharing intention of social capital factors and the KSB. Second, examine the relationship between the intention to use Web technologyfor knowledge sharing and the KSB of academic staff.Therefore, the dependent variable KSB is the commutative effect of the socio-technical factors. By integrating the socio-technological issues, the study explains the relationship between those contexts and how they will influence academic staff KSB at HEIs. Figure 1 above shows how those factors interact and influence each other. The following hypotheses address the two determinants of KSB for academic staff.

***The mediating role of knowledge-sharing intention toward knowledge-sharing behavior***

According to Nahapiet & Ghoshal (1998), the willingness to share knowledge is affected by social capital factors because academic staff members tend to share their knowledge when there are social interactions, a reward system, a norm of reciprocity, a KS policy, and management support. Furthermore, sharing willingness is related to the cognitive nature of knowledge-sharing behavior (Choi et al., 2008). Various studies have compared KSB to their intentions, and many have found a significant correlation (Tohidinia & Mosakhani, 2010; Wu & Zhu, 2012). The research results of Aldhmour and Doyle (2023) indicate that KS intention positively influences KS behavior. Thus, this study considers social capital factors as an antecedent to academic staff KSI. This argument leads to the hypothesis below:

H12: Knowledge-sharing intention positively and significantly influences the knowledge-sharing behavior of academic staff.

***The mediating role of Intention to use web technology for knowledge sharing toward knowledge-sharing behavior***

According to Alavi and Leidner (2001) and Kim and Lee (2006), IT applications and infrastructure are crucial for corporate knowledge integration. Alavi & Leidner (2001)noted that IT enhances knowledge sharing. Therefore, behavioral intention to accept and use a particular system is affected by the availability of IT infrastructure, perceived ease of use, perceived usefulness, and system integration into teaching and learning practice. These are indicators of the behavior of the academic staff in accepting and using the system. The term "intention to use" in this paper means whether academic staff uses web technology such as university-owned platforms (digital library, eLearning, knowledge repository, etc.) and social media platforms (Telegram, Facebook, and any online forums in virtual communities, etc.) to support knowledge sharing. Accordingly, this leads to the following hypothesis:

H13: The intention to use web technology for knowledge-sharing positively and significantly influences knowledge-sharing behavior.

## RESEARCH METHODOLOGY

A deductive approach was selected for this research because the data collected allowed the researcher to answer the research questions. The design was quantitative because the data collection took a numerical form. That is, by employing a deductive approach with a quantitative data-collection method, the research focuses on measuring and analyzing the relationship between influencing factors and academic staff's intention to share knowledge. the behavior towards sharing knowledge.

This study adopted a quantitative survey design approach to test for the hypothesized relationships and achieve the research objective of identifying the factors influencing the usage of web technologies for knowledge sharing. Two Ethiopian public universities were purposefully chosen (Addis Ababa University and Haramaya University). Both universities were chosen because they have a long history of teaching and conducting academic research. Additionally, the availability of web technology, such as the learning management system, the research management system, and digital libraries, was used to select these higher educations over others. The overarching goal of this study is to investigate the factors that influence academic staff behavior in sharing knowledge via web technologies, specifically textbooks, lecture notes, PowerPoint presentations, and research outputs.

Different authors make different recommendations for selecting an appropriate sample size. In quantitative research, 150 or more responses are required (Anderson & Gerbing, 1984).The recommended sample size in PLS is at least ten times the number of independent variables (Choi et al., 2008). This study follows the recommendation of MacCallum et al. (1996), who state that a sample size of more than 200 is appropriate for various types of statistical analysis. As a result, 280 responses were collected over two months, with 256 of them being complete and usable from both HEI. A response rate of 91% was obtained. This study's sampling technique was simple random sampling, which included samples from whoever was available at both universities at the time of the research. Table 2 below shows the detailed sampling demographics.

### *Measurement Items*

The measurement items used to operationalize the construct are adapted from previous studies that have already been validated. The independent variables are categorized into two groups: social and technological factors. Social capital factors included seven variables: social interaction, management support, a reward system, a knowledge-sharing policy, trust, reciprocity, and a shared vision; the technical dimension included four variables: IT infrastructure availability, perceived ease of use, perceived usefulness, and system integration into teaching and learning practice. The mediating variables are KSI and intention to use web technology. The surveys used to collect data on academic staff KSB were created with SCT and TAM and expanded with a variable that can express academic staff KSI and intention to use web technology for KS. The surveys were personally handed to the various departments of both universities, asking them to distribute the questionnaires to their academic staff. The questionnaire consists of two sections. The first section captures demographic information about the respondents, while the second section collects data about the participants' KSB and its predictors. All the items were scored using a 5-point Likert scale, with one being strongly disagreed and five strongly agreed. To ensure content validity, the instruments were adapted from prior studies and carefully customized to fit the context of this study (see Table 1 below).The constructs are extracted from the pre-established and validated scales of relevant literature to formulate a survey questionnaire for data collection. In this vein, a draft questionnaire was developed and pretested by academic staff from both universities with backgrounds in knowledge management and senior academic researchers. Four academic staff members from both HEI participated in a preliminary test of the questions. Their suggestions were used to improve the questionnaire's clarity and validity. There are a total of 70 items in this study. Finally, the collected data were analyzed using structural equation modeling (PLS-SEM) with a smart PLS statistical package (version 4.0).

**Table 1. The initial measurement items and their sources.**

| Items | Source | Items | Source |
|---|---|---|---|
| Social interaction | (Aslam et al., 2013; Koranteng & Wiafe, 2019) | Availability of IT infrastructure | (Lee, 2018) |
| Management support | (Akosile & Olatokun, 2020; Hossain et al., 2013) | Perceived ease of use | (Gulbahar & Guven, 2008; Kim & Lee, 2006) |
| Reward system | (Hau et al., 2013) | Perceived usefulness | (Hossain et al., 2013) |
| Knowledge sharing policy | (Akosile & Olatokun, 2020) | System integrated into teaching-learning practice | (Akosile & Olatokun, 2020) |
| Trust | (Aslam et al., 2013; Chiu et al., 2006) | Knowledge sharing intention | (Chiu et al., 2006; Hau et al., 2013) |
| Norm of reciprocity | (Aslam et al., 2013; Chiu et al., 2006) | Intention to use web technology for knowledge sharing | (Deng & Yuan, 2020; Hossain et al., 2013) |
| Shared vision | (Chow & Chan, 2008; Koranteng & Wiafe, 2019) | Knowledge sharing behavior | (Rahman et al., 2017) |

## DATA ANALYSIS AND FINDINGS

This research investigates how social capital and technological factors affect academic staff at KSB by applying SCT and TAM to understand how the relevant factors affect such behavioral intentions. The study's data analysis was carried out using structural equation modeling (PLS-SEM). The measurement and structural models, the mediating relationships, and the research hypotheses were examined using PLS-SEM. The assessment of the measurement model was evaluated using internal consistency reliability, convergent validity, and discriminant validity (Hair et al., 2017). The path coefficient and coefficient of determination were also assessed as part of the structural model evaluation (Hair et al., 2017). Smart PLS 4.0 was used for the analysis.

### *Demographics of Respondents*

Four questions make up the demographic variables: gender, age, experience, and level of education. The participant's demographic details are shown in Table 2 below. As can be seen, most respondents were men (70 %). Of most of the respondents 50% of them, their age is more than 31 years. In terms of their education level, 60 % of respondents had a master's degree, 33 % were assistant professors, and 7 % were associate professors. Additionally, the respondents were distributed among the two universities (Addis Ababa University and Haramaya University). Which are 133 from Haramaya University and 123 from Addis Ababa University responded. Finally, the length of their academic experience ranged from less than five to more than twenty-one years.52% of the respondents were 10 to 15 years, 25% were 6 to 10 years, 10% were16 to 20 years, and 5% and 8% were in the age category of above 21 and less than 5 years respectively.

**Table 2. Respondents' demographics.**

| No | Types of categories | Category | Percentage |
|---|---|---|---|
| 1 | Gender | Male | 70 |
| | | Female | 30 |
| 2 | Age category | 20-30 | 35 |
| | | 31-40 | 50 |
| | | 41-Above | 15 |
| 3 | Year of experience within the university | < 5 years | 8 |
| | | From 6 to 10 years | 25 |
| | | From 11 to 15 years | 52 |
| | | From 16 to 20 years | 10 |
| | | Above 21 years | 5 |
| 4 | Highest level of Education | Lecturer | 60 |
| | | Assistance professor | 33 |
| | | Associate professor | 7 |

### *Assessment of measurement model*

The assessment of the measurement model is to assess the validity and reliability of constructs. It was carried out using the following tests. The first one is indicator reliability by determining the factor loading of each of the observed variables, which should be above 0.708 (Hair et al., 2017); The second is internal consistency reliability by determining the composite reliability and Cronbach's alpha, which should be 0.7 and above (Hair et al., 2017). The third is convergent validity determines the average variance extracted (AVE), which should be greater than 0.5 (Fornell & Larcker, 1981). Finally, discriminant validity is by using Fornell & Larcker's (1981) where the square root of the AVE for each construct exceeds the correlations between all other constructs. The study measurement model reveals the following accuracy and validity (see Table 3). First, we looked at the loading factor of indicators. Indications with a loading factor of less than 0.7 should be removed (Hair et al., 2017). According to Table 3, all indicators were accepted because their values were above 0.7.

**Table 3. Value of Loading factor.**

| Indicator | Value | Indicator | Value | Indicator | Value | Indicator | Value | Indicator | Value |
|---|---|---|---|---|---|---|---|---|---|
| AII1 | 0.909 | ITU5 | 0.918 | KSP 4 | 0.910 | PEU 3 | 0.915 | SIT2 | 0.926 |
| AII2 | 0.947 | KSB1 | 0.928 | KSP 5 | 0.894 | PEU 4 | 0.942 | SIT3 | 0.860 |
| AII3 | 0.926 | KSB2 | 0.920 | MS1 | 0.843 | PEU 5 | 0.866 | SIT4 | 0.920 |
| AII4 | 0.827 | KSB3 | 0.914 | MS2 | 0.887 | PU1 | 0.936 | SIT5 | 0.874 |
| AII5 | 0.951 | KSB4 | 0.934 | MS3 | 0.840 | PU2 | 0.850 | SV1 | 0.915 |
| ITP1 | 0.881 | KSB5 | 0.857 | MS4 | 0.872 | PU3 | 0.898 | SV2 | 0.856 |
| ITP2 | 0.862 | KSI1 | 0.907 | MS5 | 0.853 | PU4 | 0.925 | SV3 | 0.937 |
| ITP3 | 0.897 | KSI2 | 0.921 | NR1 | 0.861 | PU5 | 0.861 | SV4 | 0.943 |
| ITP4 | 0.754 | KSI3 | 0.771 | NR2 | 0.925 | RS1 | 0.886 | SV5 | 0.898 |
| ITP5 | 0.806 | KSI4 | 0.916 | NR3 | 0.890 | RS2 | 0.911 | TR1 | 0.804 |
| ITU1 | 0.922 | KSI5 | 0.899 | NR4 | 0.872 | RS3 | 0.786 | TR2 | 0.821 |
| ITU2 | 0.817 | KSP | 0.806 | NR5 | 0.912 | RS4 | 0.771 | TR3 | 0.798 |
| ITU3 | 0.876 | KSP 2 | 0.887 | PEU 1 | 0.922 | RS5 | 0.923 | TR4 | 0.878 |
| ITU4 | 0.952 | KSP 3 | 0.827 | PEU 2 | 0.803 | SIT1 | 0.891 | TR5 | 0.857 |

After the completion of the loading factor test, the average variance extracted (AVE) was determined for testing convergent validity. The minimum acceptable level of AVE in research based on PLS analysis is 0.5 (Fornell & Larcker, 1981). In our investigation, AVE exceeded the threshold values for good convergent validity, ranging from 0.708 to 0.834 (see Table 4 below).

**Table 4. Result of construct validity and reliability.**

Construct reliability and validity - Overview  Zoom (100%)  Copy to Excel  Copy to R

| | Cronbach's alpha | rho_A | Composite reliability | Average variance extracted (AVE) |
|---|---|---|---|---|
| Availability of IT infrastructure | 0.950 | 0.956 | 0.962 | 0.834 |
| Intention to use web technology | 0.940 | 0.950 | 0.954 | 0.807 |
| Knowledge sharing behavior | 0.949 | 0.952 | 0.961 | 0.830 |
| Knowledge sharing intention | 0.930 | 0.940 | 0.947 | 0.783 |
| Knowledge sharing policy | 0.916 | 0.924 | 0.937 | 0.750 |
| Management support | 0.911 | 0.912 | 0.934 | 0.738 |
| Norm of reciprocity | 0.936 | 0.945 | 0.951 | 0.796 |
| Perceived easy to use | 0.934 | 0.941 | 0.950 | 0.794 |
| Perceived usefulness | 0.937 | 0.941 | 0.953 | 0.801 |
| Reward system | 0.908 | 0.916 | 0.933 | 0.735 |
| Shared vision | 0.948 | 0.948 | 0.960 | 0.829 |
| Social interaction | 0.938 | 0.941 | 0.953 | 0.801 |
| System integrated into teaching learning practice | 0.896 | 0.902 | 0.924 | 0.708 |
| Trust | 0.889 | 0.890 | 0.918 | 0.692 |

The discriminant validity evaluates whether the measures of the constructs were distinct and loaded on the appropriate construct. Accordingly, each construct's square root value of AVE was compared with the correlations between constructs and found to be greater than all of the inter-construct correlations (Fornell & Larcker, 1981). As seen in Table 5, the diagonal elements of every construct have a square root value of AVE that is larger than their corresponding off-diagonal elements, proving the discriminant validity of the study. Thus, all correlation values were accepted, indicating satisfactory discriminant validity.

**Table 5. The discriminant validity of the study.**

| Construct | AII | ITU | KSB | KSI | KSP | MS | NR | PEU | PU | RS | SV | SIT | ITP | TR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Availability of IT infrastructure | 0.913 | | | | | | | | | | | | | |
| Intention to use web technology | 0.700 | 0.898 | | | | | | | | | | | | |
| Knowledge sharing behavior | 0.273 | 0.161 | 0.911 | | | | | | | | | | | |
| Knowledge sharing intention | 0.266 | 0.269 | 0.803 | 0.885 | | | | | | | | | | |
| Knowledge sharing policy | 0.103 | 0.041 | 0.404 | 0.344 | 0.866 | | | | | | | | | |
| Management support | 0.120 | 0.020 | 0.739 | 0.656 | 0.313 | 0.859 | | | | | | | | |
| Norm of reciprocity | 0.172 | 0.199 | 0.291 | 0.338 | 0.151 | 0.192 | 0.892 | | | | | | | |
| Perceived easy to use | 0.461 | 0.527 | 0.280 | 0.278 | 0.065 | 0.033 | 0.201 | 0.891 | | | | | | |
| Perceived usefulness | 0.389 | 0.537 | 0.387 | 0.396 | 0.183 | 0.218 | 0.154 | 0.377 | 0.895 | | | | | |
| Reward system | 0.167 | 0.135 | 0.340 | 0.361 | 0.159 | 0.277 | 0.142 | 0.099 | 0.196 | 0.858 | | | | |
| Shared vision | 0.245 | 0.191 | 0.641 | 0.675 | 0.200 | 0.451 | 0.245 | 0.258 | 0.335 | 0.522 | 0.910 | | | |
| Social interaction | 0.311 | 0.253 | 0.583 | 0.620 | 0.238 | 0.346 | 0.297 | 0.334 | 0.312 | 0.489 | 0.620 | 0.895 | | |
| System integrated into teaching learning practice | 0.394 | 0.528 | 0.238 | 0.242 | 0.049 | 0.005 | 0.156 | 0.419 | 0.378 | 0.179 | 0.291 | 0.321 | 0.841 | |
| Trust | 0.187 | 0.259 | 0.486 | 0.587 | 0.151 | 0.325 | 0.190 | 0.230 | 0.319 | 0.480 | 0.639 | 0.658 | 0.325 | 0.832 |

After the validity test has been conducted, the next step is to test the reliability. Cronbach's alpha and composite reliability (CR) were used to complete the reliability testing. Cronbach's alpha and composite reliability indicate higher reliability; typically, a value of over 0.70 is acceptable (Hair et al., 2017). Accordingly, the result of this study shows Cronbach alpha values between 0.889 and 0.950 and CR values between 0.918 and 0.962 (see Table 4 above). It can therefore be concluded that the research instrument is reliable.

### *Assessment of structural model*

The path coefficient results were used to test the research hypotheses. The hypotheses are supported or rejected using the path estimates and the associated t-statistics with p-values. The significant t-values are 1.65, 1.96, and 2.59, respectively, with p-values of 0.1, 0.05, and 0.01 (Hair et al., 2017). The coefficient of determination (R-square) value is calculated by determining how much of each latent variable's variance can be explained.

The detailed hypothesis testing results are presented in Table 6 below. Among the 13 hypotheses, all were supported except the intention to use web technology for knowledge sharing. Analysis reveals that from organizational factors, management support (**β** = 0.386; t = 6.610), knowledge sharing policy (**β** = 0.097; t = 2.997), and social capital factors, social interaction (**β**=0.200; t=3.578), the norm of reciprocity (**β**=0.104; t=2.859), trust (**β**=0.165; t=2.893), and shared vision (**β**=0.278; t=4.655) have a significant positive effect on knowledge-sharing intentions, supporting hypothesis H1, H3, H4 to H7.

In addition, from the technological factors, perceived ease of use (**β**=0.142; t=2.416), perceived usefulness (**β**=0.227; t=3.344), availability of IT infrastructure (**β**=0.468, t=7.658), and integration into teaching-learning practice (**β**=0.199; t=4.251) have a significant positive effect on the intention to use web technology. Accordingly, hypotheses H8-H11 were supported. While knowledge-sharing intention (**β**=0.819, t=24.781) has a significant and positive effect, intention to use web technology for knowledge-sharing towards KSB (**β**=-0.059; t=1.620) has no significant effect. In addition, contrary to our expectation, the path from the reward system to knowledge-sharing intentions (**β**=-0.098; t=2.502) has a significant negative effect. Consequently, hypotheses H2 and H12 were supported, but H13 was not.

**Table 6. Hypotheses Testing.**

| Hypothesis | Paths | Path Coefficient (β) | T Statistics | P Values | Result |
|---|---|---|---|---|---|
| H1 | MS→KSI | 0.386 | 6.610 | 0.000 | Supported |
| H2 | RS→KSI | -0.098 | 2.502 | 0.013 | Supported |
| H3 | KSP →KSI | 0.097 | 2.997 | 0.003 | Supported |
| H4 | SIT→KSI | 0.200 | 3.578 | 0.000 | Supported |
| H5 | NR →KSI | 0.104 | 2.859 | 0.004 | Supported |
| H6 | TR→KSI | 0.165 | 2.893 | 0.004 | Supported |
| H7 | SV→KSI | 0.278 | 4.655 | 0.000 | Supported |
| H8 | PEU→ITU | 0.142 | 2.416 | 0.016 | Supported |
| H9 | PU →ITU | 0.227 | 3.344 | 0.001 | Supported |
| H10 | AII →ITU | 0.468 | 7.658 | 0.000 | Supported |
| H11 | ITP→ITU | 0.199 | 4.251 | 0.000 | Supported |
| H12 | KSI→KSB | 0.819 | 24.781 | 0.000 | Supported |
| H13 | ITU→KSB | -0.059 | 1.620 | 0.106 | Not Supported |

**Significant at t-value≥1.96 with p-value ≤ 0.05*

The variance explained by the paths R-squared (R2) was examined, and the results are presented in Figure 2 below. The R-square values show that the organizational factors (management support, reward system, and knowledge-sharing policy), social factors (social interaction, trust, the norm of reciprocity, and shared vision) account for 68.7% of the variance of knowledge-sharing intention, and the technological factors (perceived ease of use, perceived usefulness, availability of IT infrastructure, and systems integrated into teaching and learning practice) accounts for 62.4% of the variance of intention to use web technology for knowledge sharing as well as the knowledge sharing intention and intention to use web technology for knowledge sharing account for 64.5% of the variance of KSB.

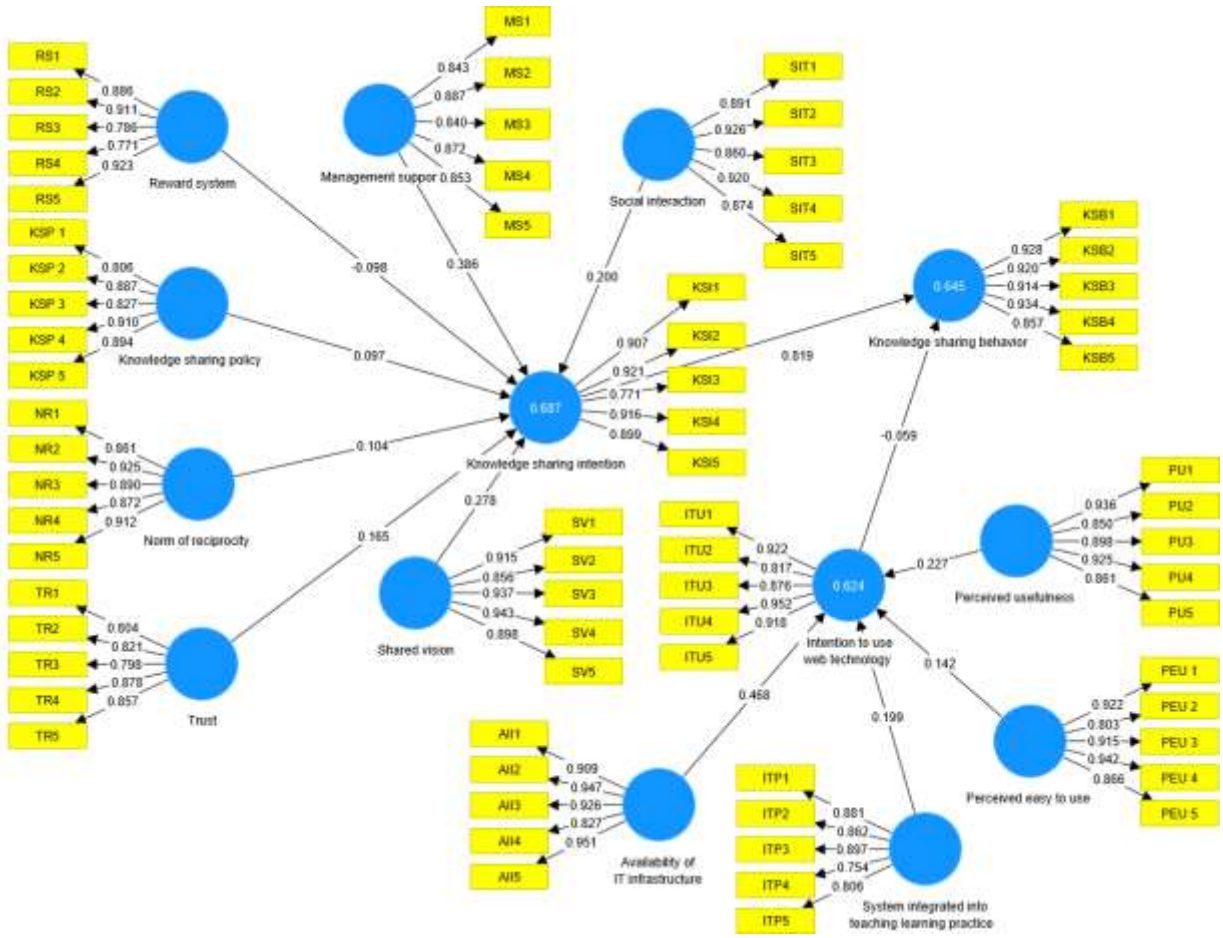


**Figure 2. Structural model of the study.**

Chin (1998) describes $R^2$ values of 67%, 33%, and 19% in PLS path models as substantial, moderate, and weak, respectively. Following this recommendation, our result reveals an adequate and valid model. The $R^2$ values for knowledge-sharing intention (68.7%), were substantial explanatory power, intention to use web technology for knowledge sharing (62.4%), and knowledge-sharing behavior (64.5%) were moderate explanatory power (see Table 7 below). This $R^2$ value indicated that the model explained a substantial amount of variance in the KSB of academics through the existing web technology within the HEIs.

**Table 7. Coefficient of determination.**

| Construct | R-Square value | explanatory power |
|---|---|---|
| Intention to use web technology for knowledge sharing | 62.4 | Moderate |
| Knowledge sharing behavior | 64.5 | Moderate |
| Knowledge sharing intention | 68.7 | Substantial |

### *Mediation analysis*

The relationship between the dependent and independent variables is tested with and without the mediating variable. If both tests reveal significant correlations, the mediating variable is a partial mediator; however, if the tests reveal that the direct link (without the mediation variable) is no longer significant when the mediating variable is included, the mediating variable is a full mediator (Nitzl et al., 2016).Following the recommended procedures for mediation tests in PLS-SEM (Nitzl et al., 2016), the mediation analysis was performed to assess the mediating role of KSI and the intention to use web technology for knowledge sharing (ITU) on the linkage between social, organizational and technical factors and KSB. The result presented in Table 8 revealed a significant correlation between the independent variables' direct effect and the mediating variables' inclusion (KSI and ITU). Except for the reward system, norm of reciprocity, and trust in the knowledge-sharing behavior. It is further noted that the indirect effect of all independent variables on KSB through both mediating variables (KSI and ITU) is found to be significant. Though both KSI and ITU partially mediate the relationship between most socio-technical factors, the impact of the reward system, the norm of reciprocity, and trust in knowledge-sharing behavior become insignificant and are fully mediated by KSI.

**Table 8. Result of Mediation Analysis.**

| Path Coefficient (Direct Effect) | | | Specific Indirect effect | | | |
|---|---|---|---|---|---|---|
| | | | | | | Mediating effect |
| Path | β and t value | P Values | Path | β and t value | P Values | |
| AII->KSB | β: 0.095<br>t: 2.188 | 0.029 | AII->ITU->KSB | β: -0.090<br>t: 3.348 | 0.014 | Partial |
| KSP->KSB | β: 0.097<br>t: 2.865 | 0.004 | KSP->KSI->KSB | β: 0.033<br>t: 2.207 | 0.034 | Partial |
| SIT->KSB | β: 0.110<br>t: 1.994 | 0.047 | SIT->KSI->KSB | β: 0.068<br>t: 2.800 | 0.016 | Partial |
| MS->KSB | β: 0.378<br>t: 5.548 | 0.000 | MS->KSI->KSB | β: 0.132<br>t: 2.980 | 0.000 | Partial |
| RS->KSB | β: -0.041<br>t: 1.214 | 0.225 | RS->KSI->KSB | β: -0.033<br>t: 1.980 | 0.007 | Full |
| NR->KSB | β: 0.013<br>t: 0.391 | 0.696 | NR->KSI->KSB | β: 0.036<br>t: 2.460 | 0.020 | Full |
| PU ->KSB | β: 0.091<br>t: 2.341 | 0.020 | PU->ITU->KSB | β: -0.043<br>t: 2.264 | 0.026 | Partial |
| SV->KSB | β: 0.126<br>t: 2.174 | 0.030 | SV->KSI->KSB | β: 0.096<br>t: 3.090 | 0.004 | Partial |
| TR->KSB | β: -0.034<br>t: 0.767 | 0.443 | TR->KSI->KSB | β: 0.056<br>t: 2.563 | 0.037 | Full |
| PEU->KSB | β: 0.094<br>t: 2.452 | 0.015 | PEU->ITU->KSI | β: -0.027<br>t: 2.196 | 0.039 | Partial |
| ITP->KSB | β: 0.083<br>t: 2.178 | 0.030 | ITP->ITU->KSB | β: -0.038<br>t: 2.714 | 0.031 | Partial |

## DISCUSSION OF RESULTS

The study investigates the effects of social, organizational, and technical factors on KSI and the intention to use web technology for knowledge sharing on KSB of academic staff. The results strongly support the proposed behavioral model and provide a comprehensive understanding of the relationships among socio-technical factors, KSI, and behavioral intentions to use web technology in an academic environment. Further, based on our results, we found that management support influenced the KSI, and the availability of IT infrastructure is the most influential factor in the intention to use web technology. However, while KSI has a positive and significant effect on KSB, the intention to use web technology for knowledge sharing does not significantly affect KSB. In addition, while all technological factors have a positive and significant impact on the intention to use web technology, most of the components of social capital factors influence KSI, and the reward system has a negative and significant influence on KSI.

The study reveals a positive and significant relationship between social interaction and KSI. They would have more opportunities to advance and deepen their understanding of what they already know if they had more networks and friends. This finding is consistent with previous research indicating that social interaction increases the desire to share knowledge (Chiu et al., 2006; Iqbal et al., 2011; Jolaee et al., 2014; Nahapiet & Ghoshal, 1998). (Yang & Chen, 2007)discovered that social interaction increases the willingness to participate in web technology-based knowledge sharing. Akhavan & Hosseini (2016) and Chiu et al.(2006) also disclose that social interaction positively correlates with KS intention. This result indicated that an academic staff member's intention to engage in such behavior is higher if they establish relationships with their coworkers and feel comfortable discussing their ideas.

Furthermore, this study discovered that management support has a positive and significant effect on KSI. In line with previous research, our findings confirmed the importance of managerial support for KS intentions. Chung and Anh (2022) and Islam & Khan (2014)reported top management support is positively related to KS. According to the findings of this study, management support is a strong predictor of academics' intentions toward KS. However, the reward system negatively affects KSI. The possible reason for the negative relationship between reward systems and KSI is that academic staff's intentions to perform or not perform such behaviors are more affected by other factors, such as social interaction and shared vision, which probably have a higher impact on KSI than reward systems.

The paper also found that the norm of reciprocity has a positive and significant correlation with KSI. The result is also confirmed by prior empirical studies on the importance of reciprocity(Chang & Chuang, 2011; Chiu et al., 2006; Wasko & Faraj, 2005). Therefore, reciprocity could underline the motivation and commitment of team members to sharing knowledge. When there is a strong norm of reciprocity, academic staff may feel obliged to share their knowledge. Academic staff is more likely to share their knowledge with other members of the HEI in such a climate. The result also shows a positive and significant effect on trust and KSI. This result is similar to those reported by Akhavan & Hosseini (2016), Alam et al. (2009),Chung and Anh (2022), and Chiu et al. (2006), who found that trust is significantly associated with KS intention. Shared vision and KSI have a positive and significant correlation. This finding indicates that if academic staff were more aware of their shared vision, they would be more willing to share their knowledge. The findings of Aslam et al. (2013), Chow & Chan (2008), Isa et al. (2010), and Nahapiet & Ghoshal (1998)are all in agreement, suggesting that there is a substantial relationship between KS and shared goals and vision. Perceived ease of use and perceived usefulness positively and significantly influenced the intention to use web technology. The result is similar to Hossain et al. (2013) and Fan & Wu (2011) showed that perceived ease of use and perceived usefulness significantly predict an intention to use knowledge management systems.

The study's findings show that the academic staff generally reported positive and significant perceptions toward ease of use, usefulness, availability of IT infrastructure, and intention to use web technology. Moreover, the availability of IT infrastructure was the most significant direct antecedent of the intention to use web technology. The result is similar to Tsai (2014), which focused on patients' intentions toward a web-based personal health record system. Davis (1989)discovered that perceived ease of use and perceived usefulness were significantly related to intended and actual system usage. As a result, the result indicates that academic staff would have utilized web technology if they perceived the system as easy to use. This study found a positive and significant correlation between systems integrated into teaching-learning practices and the intention to use web technology. This result

indicates that when the academic staff knows how to use the existing web technology available within the HEI and integrate that into teaching-learning practice, they will have more ability and control over their KS behavior. This result is similar to Alemu (2015) and Abdellatif & Asma (2014). This study also found a positive and significant correlation between the availability of IT infrastructure and the intention to use web technology. This finding is consistent with Supar(2012), which discovered that the availability of IT infrastructure is positively related to KSB.

Lastly, the results of this study show that KSI significantly influences KSB. The findings are similar to those of Tohidinia & Mosakhani (2010), who discovered that KSI significantly affects KSB. Our results revealed that social capital variables and technological factors account for 68.7% of the variance in KSI and 62.4% of ITU web technology, respectively. This result exceeds the acceptable variance of the explanatory power. Academic staff who share knowledge must plan to use web technology for KS practices to make the process much easier and smoother. However, the result of this study indicates that the intention to use web technology for knowledge sharing is not directly affecting the KSB of academic staff. The reason for not supporting the intention to use web technology might be because the respondents are more system users or academic staff from computational fields; they evaluated their behavior based on system use. However, the intention to use it does not affect their behavior. In this case, they only consider the benefits they get from the system (usefulness, availability of IT infrastructure, system integration with their daily routine work) rather than the ease or difficulty of the system. The results pointed out that the KSI has a high degree of influence on the KSB of academic staff. This finding may imply that social capital factors are more influential than technological factors in motivating academics to share their knowledge within the university.

## CONCLUSION AND RECOMMENDATION

The main goal of this study is to examine the relationships between these social, organizational, and technical factors and KSBs. The impact of these indicators on the knowledge-sharing behavior of academics via web technology is determined. The results affirmed that social capital and organizational factors such as social interaction, management support, KS policy, trust, and reciprocity are positive and significant factors for academic staff at KSI. Also, technological factors, namely perceived ease of use, perceived usefulness, availability of IT infrastructure, and systems integrated into teaching and learning practices, are proven positive and significant factors in the intention to use web technology for KS. The reward system, on the other hand, negatively impacts KSI. Finally, as expected, KSI has proven to be a positive and significant mediator of KSB. However, contrary to our expectations, the intention to use web technology for knowledge sharing negatively impacts KSB.

Based on the findings of this research, the researchers recommended the following measures to improve the KSB of academic staff and minimize the challenges they are facing right now: This indicates that the role of the university leader is to encourage academics to use web technology. University administrators should foster the desired reciprocal relationship by providing support, encouragement, reward systems, and recognition to academic staff, these will further enhance their intention to use web technology. Intention to use web technology for knowledge sharing is not affecting their KSB. This might be because of the absence of web technology training. Therefore, top management should consider offering training on web technology, which may improve the academic staff's perception that knowledge sharing helps them achieve a positive reputation. An effective KSB of academic staff could improve by emphasizing these factors.

Based on the final findings, the study has practical and theoretical contributions. Concerning implications from the theoretical perspective, to the best of the authors' knowledge, this is the first study to examine the relationship between social capital theory and the technology acceptance model and test the effects of both knowledge-sharing intentions and the intention to use web technology for knowledge sharing on knowledge-sharing behavior in higher education, particularly in the Ethiopian context. Therefore, the proposed framework model may serve as a theoretical basis for future research and offer empirical foresight to practitioners and researchers in the HEI. This study also succeeded in bridging the gap between the theories. In the literature, the SCT and TAM are suitable for exploring the factors affecting the KSB, but they have been examined separately. Furthermore, few studies have investigated SCT and TAM to understand the use of technology in KSB. Therefore, this study has two contributions from the TAM and the SCT in examining the factors affecting the web technology used in KSB at HEI. By integrating the SCT and TAM, the proposed KS framework is believed to fill the gap in the KSB literature. The integration of these

makes the framework more comprehensive and holistic in expanding the issues of knowledge itself and other factors in utilizing web technology for knowledge sharing. This result will contribute to theoretical knowledge by enriching the existing empirical knowledge on knowledge sharing, specifically in the higher education sector in Ethiopia. These factors can also implicitly change the KSB of academic staff and sharing in HEI as a whole.

Second, four main additional independent variables in this study have not been widely tested with SCT and TAM: management support, reward systems, availability of IT infrastructure, and systems integrated into teaching and learning practices, which significantly contributed to this study. For example, the involvement of top management is crucial in KSB. The practical contribution of the study is to encourage the academic staff to use web technology for KS practices. The proposed KS framework helps HEI leaders understand the key factors that affect the academic staff's willingness to share knowledge online. As KS, especially web-based KS, plays a crucial role in HEI, the lack of KS can be a bottleneck to improving HEI performance. The current study may aid in understanding the determinants of KSB. This paper could give insight into creating KS policies and implementing them in HEI, and such decisions can have an impact on the KSB of academic staff. As for web technology, management can make it compulsory for academics to use various web technology platforms, such as university-owned and social media platforms, for teaching and research. Academic staff can reach coworkers and their respective students through these web technologies, and they can download or upload documents about class activities. Furthermore, the findings of this study will help academic staff feel inspired to create and share knowledge by performing more research and scientific studies, publishing scholarly works, and exchanging knowledge and expertise. In general, universities will not suffer from loss of knowledge due to staff turnover, and newly hired staff will be able to use the knowledge stored on the university's web technology.

For future research, this paper has empirically tested the hypotheses and validated the proposed integrative framework that is capable of capturing factors influencing KSB in utilizing web technology for KS purposes in Ethiopian higher education. As a continuation of this study, the research should extend to the knowledge-sharing behavior of academic staff from the perspective of private higher education. The results from both higher education (public and private sectors) can be compared to see the difference in the effectiveness of KSB of academic staff in the two sectors. The study also found that the intention to use web technology for KS did not affect the KSB of academic staff. However, future research may consider different factors or theories. This might result in different outcomes. Finally, this research focused on the academic staff of two Ethiopian public universities. However, future research considering the administration staff of these universities may help to have a broader understanding of the academic staff's technology-based KS behavior. Thus, due to cultural differences among higher education institutions, it is recommended that you conduct further research at another university.

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## REFERENCES

1. Abdellatif, M., & Asma, K. (2014). A functional approach of knowledge management system applied to institutions of higher education. *In 2014 4th International Symposium ISKO-Maghreb: Concepts and Tools for Knowledge Management (ISKO-Maghreb)*, 1–7. https://doi.org/10.1109/ISKO-Maghreb.2014.7033453
2. Addisalem, G., Gojeh, L. A., & Amanuel, A. E. (2017). Knowledge sharing Practice among Employees of Culture and Tourism Offices in the Addis Ababa, Oromia, Amhara, and Southern Nation Nationalities and People Regions of Ethiopia. *Global Journal of Current Research*, *5*(3), 102–106.
3. Ajzen, I., & Fishbein, M. (1980). Understanding Attitudes and Predicting Social Behavior. *Englewood Cliffs*.
4. Akhavan, P., & Hosseini, M. (2016). Social capital, knowledge sharing, and innovation capability: an empirical study of R&D teams in Iran. *Technology Analysis and Strategic Management*, *28*(1), 96–113. https://doi.org/10.1080/09537325.2015.1072622
5. Akosile, A., & Olatokun, W. (2020). Factors

influencing knowledge sharing among academics in Bowen University, Nigeria. *Journal of Librarianship and Information Science*, *52*(2), 410–427.

6. Al-Alawi, A. I., Al-marzooqi, N. Y., & Mohammed, Y. F. (2007). Organizational culture and knowledge sharing: Critical success factors. In *Journal of Knowledge Management* (Vol. 11, Issue 2). https://doi.org/10.1108/13673270710738898
7. Alam, S., Abdullah, Z., Amir Ishak, N., & Mohd Zain, Z. (2009). Assessing Knowledge Sharing Behaviour among Employees in SMEs: An Empirical Study. *International Business Research*, *2*(2), 115–122.
8. Alavi, M., & Leidner, D. E. (2001). Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues. *MIS Quarterly*, *25*(1), 107–136. https://doi.org/10.2307/3250961
9. Aldhmour, F. M., & Doyle, E. (2023). Knowledge Sharing of Postgraduates Online: The Intention- Behavior Gap. *Information Sciences Letters*, *12*(2), 717–733.
10. Alemu, B. M. (2015). Integrating ICT into teaching-learning practices: Promise, challenges and future directions of higher educational institutes. *Universal Journal of Educational Research*, *3*(3), 170–189.
11. Alshurafat, H., Al Shbail, M. O., Masadeh, W. M., Dahmash, F., & Al-Msiedeen, J. M. (2021). Factors affecting online accounting education during the COVID-19 pandemic: an integrated perspective of social capital theory, the theory of reasoned action and the technology acceptance model. *Education and Information Technologies*, *26*(6), 6995–7013. https://doi.org/10.1007/s10639-021-10550-y
12. Anderson, J. C., & Gerbing, D. W. (1984). The effect of sampling error on convergence, improper solutions, and goodness-of-fit indices for maximum likelihood confirmatory factor analysis. *Psychometrika*, *49*(2), 155–173. https://doi.org/10.1007/BF02294170
13. Asadi, S., Abdullah, R., Yah, Y., & Nazir, S. (2019). Understanding Institutional Repository in Higher Learning Institutions : A Systematic Literature Review and Directions for Future Research. *IEEE Access*, *7*, 35242–35263. https://doi.org/10.1109/ACCESS.2019.2897729
14. Aslam, M., Shahzad, K., Syed, A., & Ramesh, A. (2013). Social capital and knowledge sharing as determinants of academic performance. *Journal of Behavioral and Applied Management*, *15*(1), 25–41.
15. Assefa, T., Garfield, M., & Meshesha, M. (2013). Enabling Factors for Knowledge Sharing among Employees in the Workplace. *IGI Global*, 246–271. https://doi.org/10.4018/978-1-4666-4434-2.ch011
16. Cai, Y., Song, Y., Xiao, X., & Shi, W. (2020). The Effect of Social Capital on Tacit Knowledge-Sharing Intention: The Mediating Role of Employee Vigor. *SAGE Open*, *10*(3). https://doi.org/10.1177/2158244020945722
17. Caruso, S. J. (2017). A Foundation For Understanding Knowledge Sharing: Organizational Culture, Informal Workplace Learning, Performance Support, And Knowledge Management. *Contemporary Issues in Education Research (CIER)*, *10*(1), 45–52. https://doi.org/10.19030/cier.v10i1.9879
18. Chang, H. H., & Chuang, S. S. (2011). Social capital and individual motivations on knowledge sharing: Participant involvement as a moderator. *Information and Management*, *48*(1), 9–18. https://doi.org/10.1016/j.im.2010.11.001
19. Cheng, M.-Y., Ho, J. S.-Y., & Lau, P. M. (2009). Knowledge sharing in academic institutions: A study of Multimedia University Malaysia. *Electronic Journal of Knowledge Management*, *7*(3), 313–324.
20. Chiu, C. M., Hsu, M. H., & Wang, E. T. G. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision Support Systems*, *42*(3), 1872–1888. https://doi.org/10.1016/j.dss.2006.04.001
21. Choi, S. Y., Kang, Y. S., & Lee, H. (2008). The effects of socio-technical enablers on knowledge sharing: An exploratory examination. *Journal of Information Science*, *34*(5), 742–754.
22. Chow, W. S., & Chan, L. S. (2008). Social network, social trust, and shared goals in organizational knowledge sharing. *Information & Management*, *45*(7), 458–465. https://doi.org/10.1016/j.im.2008.06.007
23. Chung, H. F., Cooke, L., Fry, J., & Hung, I. H. (2014). Factors affecting knowledge sharing in the virtual organization: Employees' sense of well-being as a mediating effect. *Computers in Human Behavior*, *44*, 70–80. https://doi.org/10.1016/j.chb.2014.11.040
24. Chung, D. T., & Anh, P. T. T. (2022). Factors affecting knowledge sharing behavior in public higher education institutions: An empirical study of Vietnam. *Cogent Business & Management*, *9*(1), 10–18. https://doi.org/10.1080/23311975.2022.2155002
25. Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13*(3), 319–340.
26. Deng, X., & Yuan, L. (2020). Integrating Technology Acceptance Model With Social Capital Theory to Promote Passive Users ' Continuance Intention Toward Virtual Brand Communities. *IEEE Access*, *8*, 73061–73070.

27. Dereje, R., Worku, J., & Chala, D. (2016). Individual, Organizational and Technological Factors Affect Knowledge Sharing Practices in Assosa Hospital, Ethiopia. *European Academic Research*, *4*(5), 4774–4799.

28. Dessie, G. (2017). Knowledge Sharing Practice and Associated Factors Among Health Care Workers at Public Hospitals in North Shoa, Amhara. *American Journal of Health Research*, *5*(5), 149–153. https://doi.org/10.11648/j.ajhr.20170505.16

29. Diriye, A. (2019). The role of social capital in knowledge sharing in higher education institutes. *Electronic Journal of Knowledge Management*, *17*(2), 158–170. https://doi.org/10.34190/EJKM.17.02.005

30. Elizabeth, A., Rahel, B., & Straub, D. (2013). Attitude Matters : Exploring the Knowledge Sharing Behavior of Academics in Ethiopian Public Higher Education Institutions. *Proceedings of the 21st European Conference on Information Systems*, 1–12.

31. Fan, Y.-W., & Wu, C.-C. (2011). The Role of Social Capital in Knowledge Sharing : A Meta-Analytic Review. *Proceedings of the 44th Hawaii International Conference on System Sciences - 2011*, 1–10.

32. Fari, S. A. (2015). Applying Social Capital Theory and the Technology Acceptance Model in information and knowledge sharing research. *Inkanyiso: Journal of Humanities and Social Sciences*, *7*(1), 19–28. https://doi.org/10.22143/HSS21.7.6.2

33. Fathi, N. M., Eze, U. C., & Goh, G. G. G. (2011). Key determinants of knowledge sharing in an electronics manufacturing firm in Malaysia. *Library Review*, *60*(1), 53–67. https://doi.org/10.1108/00242531111100577

34. Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, *18*(3), 39–50. https://doi.org/10.2307/3150980

35. Gebreyohans, G., Croasdell, D. T., & Meshesha, M. (2022). A Systematic Literature Review on Digital Knowledge Sharing in Higher Education. *Proceedings of the 55th Hawaii International Conference on System Sciences*, 5483–5492.

36. Gulbahar, Y., & Guven, I. (2008). A Survey on ICT Usage and the Perceptions of Social Studies Teachers in Turkey. *International Forum of Educational Technology & Society*, *11*(3), 37–51.

37. Ha, M. T. (2021). Social capital and firm operational performance: The mediating roles of knowledge sharing. *Cogent Business and Management*, *8*(1), 1–17. https://doi.org/10.1080/23311975.2021.1973237

38. Hagos, Y., Garfield, M., & Anteneh, S. (2016). Measurement factors model for e-learning systems success. *In 2016 IEEE Tenth International Conference on Research Challenges in Information Science (RCIS)*, 1–6. https://doi.org/10.1109/RCIS.2016.7549361

39. Hair, J., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). In *SAGE Publications, Inc.* (2nd Editio). SAGE Publications, Inc.

40. Hartner, A., & Grünfelder, M. (2013). *What influences Sharing ? The case of Alstom France*. Master's Thesis, Umeå School of Business and Economics.

41. Hau, Y. S., Kim, B., Lee, H., & Kim, Y. G. (2013). The effects of individual motivations and social capital on employees' tacit and explicit knowledge-sharing intentions. *International Journal of Information Management*, *33*(2), 356–366. https://doi.org/10.1016/j.ijinfomgt.2012.10.009

42. Hossain, M. M., Ouedraogo, N., & Rezania, D. (2013). Student Acceptance of Knowledge Management Systems: Evidence from a Canadian Business School. *International Journal of Business and Management*, *8*(12), 29–41. https://doi.org/10.5539/ijbm.v8n12p29

43. Hung, S. Y., Durcikova, A., Lai, H. M., & Lin, W. M. (2011). The influence of intrinsic and extrinsic motivation on individuals' knowledge-sharing behavior. *International Journal of Human-Computer Studies*, *69*(6), 415–427. https://doi.org/10.1016/j.ijhcs.2011.02.004

44. Iqbal, M. J., Rasli, A., Heng, L. H., Ali, M. B. B., Hassan, I., & Jolaee, A. (2011). Academic staff knowledge sharing intentions and university innovation capability. *African Journal of Business Management*, *5*(27), 11051–11059. https://doi.org/10.5897/ajbm11.576

45. Irene, K., & Zuva, T. (2018). Assessment of E-Learning Readiness in South African Schools. *International Conference on Advances in Big Data, Computing, and Data Communication Systems*, *Mcl*, 1–7. https://doi.org/10.1109/ICABCD.2018.8465444

46. Isa, R. M., Abdullah, N. L., & Senik, Z. C. (2010). Social capital dimensions for tacit knowledge sharing: Exploring the indicators. *UKM Journal of Management*, *30*, 75–91. https://doi.org/10.17576/pengurusan-2010-30-06

47. Islam, M. S., & Khan, R. H. (2014). Exploring the Factors Affecting Knowledge Sharing Practices in Dhaka University Library. *Library Philosophy and Practice (e-Journal)*, 1–11.

48. Ismail, M. B., & Yusof, Z. M. (2008). Knowledge sharing models: Do they fit public organizations? *Proceedings - International Symposium on Information Technology 2008,*

*ITSim*, 2. https://doi.org/10.1109/ITSIM.2008.4631661

49. Jennex, M. E., Smolnik, S., & Croasdell, D. (2008). Towards measuring knowledge management success. *Proceedings of the 41st Hawaii International Conference on System Sciences - 2008*, 1–8. https://doi.org/10.1109/HICSS.2008.461
50. Jolaee, A., Nor, K. M., Khani, N., & Yusoff, R. M. (2014). Factors affecting knowledge sharing intention among academic staff. *International Journal of Educational Management*, *28*(4), 413–431.
51. Kalra, A., & Baral, R. (2020). Enterprise social network (ESN) systems and knowledge sharing: what makes it work for users? *VINE Journal of Information and Knowledge Management Systems*, *50*(2), 305–327. https://doi.org/10.1108/VJIKMS-04-2019-0047
52. Karem, M., Raewf, M. B., Thabit, T. H., & Shakir, R. M. (2022). The Factors that Influence Knowledge Sharing in Educational Institutions. *Cihan University-Erbil Journal of Humanities and Social Sciences*, *6*(1), 69–74. https://doi.org/10.24086/cuejhss.v6n1y2022.pp69-74
53. Ketema, T., & Nirmala, M. (2015). The Impact of E-Learning to Enhance Quality of Education : The Case of Adama Science and Technology University. *African Journal of Computing & ICT*, *8*(1), 155–162.
54. Kim, S., & Lee, H. (2006). The Impact of Organizational Context and Information Technology on Employee Knowledge-Sharing Capabilities. *Public Administration Review*, *66*(3), 370–385.
55. King, W. R., & Marks, P. V. (2008). Motivating knowledge sharing through a knowledge management system. *Omega*, *36*(1), 131–146. https://doi.org/10.1016/j.omega.2005.10.006
56. Koranteng, F. N., & Wiafe, I. (2019). Factors that Promote Knowledge Sharing on Academic Social Networking Sites: An Empirical Study. *Education and Information Technologies*, *24*(2), 1211–1236. https://doi.org/10.1007/s10639-018-9825-0
57. Lee, J. (2018). The Effects of Knowledge Sharing on Individual Creativity in Higher Education Institutions: Socio-Technical View. *Administrative Sciences*, *8*(2), 21.
58. Lin, H.-F. (2007). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of Information Science*, *33*(2), 135–149. https://doi.org/10.1177/0165551506068174
59. MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, *1*(2), 130–149. https://doi.org/10.1037/1082-989X.1.2.130
60. Minh, P., Nguyen, B., Do, Y. T., & Wu, W. Y. (2021). Technology Acceptance Model and Factors Affecting Acceptance of Social Media : An Empirical Study in Vietnam. *Journal of Asian Finance, Economics, and Business*, *8*(6), 1091–1099. https://doi.org/10.13106/jafeb.2021.vol8.no6.1091
61. Muda, M. N., & Yusof, Z. M. (2015). Information and Communication Technology (ICT) in Knowledge Sharing Practices: Needs for the Establishment of Repository. *Mediterranean Journal of Social Sciences*, *6*(5), 69–78. https://doi.org/10.5901/mjss.2015.v6n5s1p69
62. Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and organizational advantage. *Knowledge and Social Capital*, *23*(2), 242–266. https://doi.org/10.2307/259373
63. Nitzl, C., Roldan, J. L., & Cepeda, G. (2016). Mediation analysis in partial least squares path modeling, Helping researchers discuss more sophisticated models. *Industrial Management and Data Systems*, *116*(9), 1849–1864. https://doi.org/10.1108/IMDS-07-2015-0302
64. Nonaka, I., & Takeuchi, H. (1995). The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation. *Oxford University Press*, *105*. https://doi.org/10.1016/S0048-7333(97)80234-X
65. Noprisson, H., Zulkarnaim, N., Hidayat, E., Firman, R., Putra, E. D., Cahyaningsih, E., &Sensuse, D. I. (2017). Influencing factors of knowledge sharing among students in Indonesia's higher educational institutions. *2016 International Conference on Information Technology Systems and Innovation (ICITSI)*, 1–6. https://doi.org/10.1109/ICITSI.2016.7858214
66. Nordin, N. A., Daud, N., Ummi, W., Meor, K., & Osman, M. (2012). Knowledge Sharing Behaviour among Academic Staff at a Public Higher Education Institution in Malaysia. *International Journal of Social, Behavioral, Educational, Economic and Management Engineering*, *6*(12), 3415–3420.
67. Panahi, S., Watson, J., & Partridge, H. (2012). Social Media and Tacit Knowledge Sharing : Developing a Conceptual Model. *World Academy of Science, Engineering, and Technology*, *64*, 1095–1102.
68. Pinho, C., Franco, M., & Mendes, L. (2018). Web portals as tools to support information management in higher education institutions: A systematic literature review. *International Journal of Information Management*, *41*, 80–92. https://doi.org/10.1016/j.ijinfomgt.2018.04.002
69. Rahel, B., & Ermias, A. (2011). Prospects of Knowledge Sharing Among Ethiopian Institutions of Higher Learning. *Special Issue on Knowledge Exchange*, *3*(2), 20–35.

70. Rahman, M. S., Mannan, M., Hossain, M. A., Zaman, M. H., & Hassan, H. (2017). Tacit knowledge sharing behavior among the academic staff: trust, self-efficacy, motivation, and Big Five personality traits embedded model. *International Journal of Educational Management*, *32*(5), 761–782.

71. Rajalakshmi, S., Banu, R. S. D. W., Nithiyanandam, S., & Maguteeswaran, R. (2010). Developing a Social Networking Repository Education Web Portal for Sharing and Capturing in Higher Education. *International Journal of Innovation, Management, and Technology*, *1*(1), 1–11.

72. Razzaque, A. (2020). M-Learning Improves Knowledge Sharing Over e-Learning Platforms to Build Higher Education Students' Social Capital. *SAGE Open*, *10*(2), 1–9.

73. Riege, A. (2005). Three dozen knowledge-sharing barriers managers must consider. *Journal of Knowledge Management*, *9*(3), 18–35. https://doi.org/10.1108/13673270510602746

74. Sharpe, R., Benfield, G., & Francis, R. (2006). Implementing a university e-learning strategy: levers for change within academic schools. *Research in Learning Technology,14*(2).

75. Sisay, A. W. (2017). University Students' Perception and Utilization of Technology for Learning: The Case of Haramaya University. *Journal of Teacher Education and Educators*, *6*(2), 139–146.

76. Songkram, N., Chootongchai, S., & Osuwan, H. (2023). Students ' adoption of the behavioral intention of a digital learning platform. *Education and Information Technologies*, 1–23. https://doi.org/10.1007/s10639-023-11637-4

77. Supar, N. (2012). Technological Factors Affecting Knowledge Sharing Among Academic Staff in Selected Malaysian Higher Educational Institutions and the Effect on Performance. *Journal of Education and Vocational Research*, *3*(7), 234–241.

78. Tesavrita, C., Yusuf, I. M., & Suryadi, K. (2016). Analyzing technical and social dimensions in knowledge sharing intention behavior in an E-learning system. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 2460.

79. Tohidinia, Z., & Mosakhani, M. (2010). Knowledge sharing behavior and its predictors. *Industrial Management and Data Systems*, *110*(4), 611–631. https://doi.org/10.1108/02635571011039052

80. Tsai, C. (2014). Integrating social capital theory, social cognitive theory, and the technology acceptance model to explore a behavioral model of telehealth systems. *Int. J. Environ. Res. Public Health*, *11*(5), 4905–4925. https://doi.org/10.3390/ijerph110504905

81. Tsai, W., & Ghoshal, S. (1998). Social Capital and Value Creation : The Role of Intrafirm Networks. *The Academy of Management Journal*, *41*(4), 464–476.

82. Wasko, M. M., & Faraj, S. (2005). Why Should I Share? Examining Social Capital and Knowledge Contribution in Electronic Networks of Practice. *MIS Quarterly*, *29*(1), 35–57.

83. Wu, Y., & Zhu, W. (2012). An integrated theoretical model for determinants of knowledge sharing behaviors. *Kybernetes*, *41*(10), 1462–1482. https://doi.org/10.1108/03684921211276675

84. Yang, C., & Chen, L. C. (2007). Can organizational knowledge capabilities affect knowledge-sharing behavior? *Journal of Information Science*, *33*(1), 95–109.

85. Yazdanpanah, A. A., Motazedian, R., & Ghassemmirzaei, M. (2013). Designing and defining the knowledge-sharing management system between governmental organizations. *European Online Journal of Natural and Social Sciences*, *2*(3), 763–770.

86. Yonas, H. T. (2019). E-learning Systems Success Model : The Case of Ethiopian Higher Education Institutions. In *Unpublished Ph.D. Dissertation*. Addis Ababa University, Ethiopia.

87. Zhang, X., Chen, Z., Vogel, D., Yuan, M., & Guo, C. (2010). Knowledge-Sharing Reward Dynamics in Knowledge Management Systems: Game Theory–Based Empirical Validation. *Human Factors and Ergonomics in Manufacturing*, *20*(2), 103–122.