

Do Academics Share Knowledge?: Ethiopian Public Higher Education Institutions In Perspective

Research-in- progress

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ABSTRACT

This study examines the knowledge sharing practices of academics in Higher Education Institutions(HEI) in Ethiopia. Based on the understanding that Knowledge Sharing is a key enabler of Knowledge Management, the study analyses how individual based variables determine knowledge sharing practices. The major relevant variables are drawn from the Theory of Planned Behavior. A survey instrument that has employed the conceptual framework was developed mainly from the extant literature in order to collect data from faculty of selected HEIs in Ethiopia. A quantitative approach of study will be employed to analyze the data obtained from the survey. Apart from providing a holistic perspective on the KS behaviors of faculty, based on the TPB model, the study intends to produce a validated and reliable instrument to measure KS.

Key words: Knowledge sharing, Knowledge Management, Higher Education Institution

INTRODUCTION

As an evolving discipline (Alavi and Leidner, 2001), Knowledge Management (KM) has been increasingly popular in business organizations, more so even than in academic institutions. Its literature is dominated by research on competitive business organizations that create and apply new knowledge supported through heavy investment in technology, and possibly related training, mainly for profit making (Davenport, 1997). The focus of most early studies on KM has been on organizational culture and use of technology from the executive management perspective (Brown and Duguid, 1998, Davenport, 1997).

Knowledge management is defined as “the explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, diffusion, use and exploitation. It requires turning personal knowledge into corporate knowledge that can be widely shared throughout an organization and appropriately applied” (Baskerville and Dulipovici, 2006:84). The literature, however, asserts that a key enabler of KM, one that is crucial to exploiting core competencies and to achieving sustained competitive advantage, is Knowledge Sharing (KS) (Alavi and Leidner, 2001; Nonaka and Takeuchi, 1995). KS is broadly understood as “a process that involves exchanging knowledge between individuals and groups” (Davenport and Prusak, 1998).

When considering knowledge sharing in academic institutions, few studies argue that KS is a critical element in accomplishing the integral mission of knowledge-based institutions, such as universities and research organizations (Cheng, 2009; Rowley, 2000). Knowledge created and stored in repositories of such institutions serves to further advance knowledge production and dissemination making the need for KS imperative. Thus, KS is inevitably a challenging and an important task for members of HEIs engaged in knowledge work. This is evidenced by the fact that several such institutions, particularly in the developed world, have been receiving grants to enhance KS practices as well as develop and implement effective KM systems.

Comprehensive research in the area of KS among faculty of HEIs has been rather limited. The dearth of such research is more pronounced in HEIs of developing countries, where there is a low level of research output. In

fact, the recent World Bank report (Salmi, 2009) states that the representation of HEIs from developing economies in the knowledge generation and sharing process is highly limited. This report shows that in the year 2005, only 3563 (2.7%) of the scientific publications, from around the world, are from Sub-Saharan Africa (2009:56). This situation appears to go against the pronouncements about the promise of the networked world where resource limitations are minimized by widely available IT infrastructures and widely available information. By focusing on the KS processes of one developing economy, Ethiopia, this study aims to examine the individual factors that determine the KS practices. Thus, the focus of this study is on the knowledge that exists with and among individuals in HEIs, during the process of undertaking and disseminating their individual and collaborative research, and how this knowledge is shared as it is influenced by individual factors.

The next section presents the background for the study and articulates the research questions. This will be followed by a description of the conceptual framework employed. The methodology section sketches the design for the study, and the samples selected for analysis of data. The contribution of this study is many-folds: in addition to its offering a holistic perspective on the KS behaviors of faculty, based on the TPB model, the study intends to produce a validated and reliable instrument to measure KS. Systematic research output in evaluating such practices and competencies in the African context should be valuable input to the development of theory and practice of KM.

STUDY CONTEXT AND RESEARCH QUESTIONS

While discussing research and scholarship in Ethiopia, one cannot avoid referring to the various knowledge artifacts of the Ethiopian heritage available both locally and internationally as well as the inscriptions and sacred manuscripts in the various local monasteries (the centers of excellence for the traditional HE) which provide evidence on the development of Ethiopian scholarship and publications as early as the first few centuries AD (Wagaw in Saint, 2004). These resources are distinct to the development of traditional HE in Ethiopia as well as the long tradition of knowledge creation and dissemination.

Today, with the objective of increasing access to HE, the number of public and private HEIs in Ethiopia has increased significantly: student enrollment has increased from 35,000 to 519,770 between 1996 and 2012 while that of faculty increased from 2,228 to 20,668 between 1998 and 2012 (Ministry of Education, 2011/12). As in many other countries, Ethiopian HEIs have database and knowledge repositories of various types. In most of the Ethiopian HEIs, e-mail links, though not very efficient, have facilitated communication amongst the staff and institutions. The libraries in these institutions now have web pages which not only serves a promotional purpose, but also offer links to selected sources of information, including databases and lists of experts. On the other hand, however, in most academic settings, knowledge output from research sits in archipelagos of individual knowledge clusters, unavailable for systematic sharing. For instance, at Addis Ababa University, one of the leading HEIs in Ethiopia, it was only very recently that the University library started making students' dissertations accessible through its public website. Meanwhile, it is the case that regional universities do not yet have the means or capability to download these documents. Moreover, many of the local journals published by the faculty do not have an accessible electronic version. Indeed, HEIs in Ethiopia are constrained in their access to a range of electronic journals and databases from international publishers mainly due to constrained financial and technological capacity as well as monopolized and meager provision of telecommunications and connectivity (Adem, 2003).

The increase in lack of understanding of how best to share knowledge, we would argue, has adversely affected faculty's tendency to engage in research activities; as a result of which professors are now more inclined to give service to the overwhelming student population, when possible by earning additional income from teaching extra hours (Asgedom, 2007). Duferra (2004:89) corroborated that most HEIs in Ethiopia "... do not provide a dynamic environment for the production of knowledge through research... as a result of a function of the material, human and financial organization of the system as well as the level of research culture among those who are supposed to carry out and utilize research". On the whole, the poor incentive system for research, the inadequate orientation for problem-based research collaboration, the preferred engagement of the academics for teaching rather than research and the general weak knowledge infrastructure (Teferra, 2001) that supports scientific exploration are well corroborated by the World Bank tertiary education report on Sub-Saharan countries (2009) as potential limitations of the system.

In general, in Africa today, universities and research centers have a far more important role as they are expected to "constitute the most important knowledge capital of their nations"(Teferra 2003, page128). However, the available academic and institutional settings in many African HEIs do not encourage knowledge production and diffusion practices among faculty (Adem 2003, Teferra 2004; Teferra and Altbach 2003). Generally, while there have been KS practices among faculty in many of HEIs in Africa, there are no comprehensive studies that show

the individual variables that determines KS; and the extent to which such efforts are turned into a sustained and effective sharing of research outputs. The few available studies on research in Ethiopian HEIs (Asgedom, 2007; Asegedom, 2000; Duferra, 2004, Kasa, 2006) attribute limitations mainly to institutional factors that hinder faculty engagement in research. Therefore, this study will examine the individual factors that determine the sharing of knowledge among faculty during the process of conducting and disseminating research.

The research questions for this study focus on the antecedents and determinants of individual KS and are developed based on the Theory of Planned Behavior (Ajzen, 2001; Azjen1991; Fisbein and Ajzen, 1975):

1. How do the antecedents and determinants of knowledge sharing behavior predict individual faculty's knowledge sharing practices in public HEIs in Ethiopia?
 - Does intention towards knowledge sharing predict faculty's actual Knowledge Sharing Behavior(KSB)?
 - Does attitude(A) towards knowledge sharing predict faculty's intention to share knowledge?
 - Does Subjective Norm(SN) towards knowledge sharing predict faculty's intention(I) to share knowledge?
 - Does Perceived Behavioral Control (PBC) over knowledge sharing, predict faculty's intention to share knowledge?
 - Does Perceived Behavioral Control (PBC) towards knowledge sharing predict faculty's actual Knowledge Sharing Behavior (KSB)?
2. How do personal factors affect faculty's attitude towards knowledge sharing?
 - Do Anticipated Extrinsic Rewards (AER) predict faculty's attitude towards knowledge sharing?
 - Do Anticipated Intrinsic Rewards (AIR) predict faculty's attitude towards knowledge sharing?
 - Does inter-organizational Trust (Tr) predict faculty's attitude towards knowledge sharing?
3. How do communication and IT competence predict faculty's perceived behavioral control over knowledge sharing?
 - Does Encoding Communication Competence(ECC) predict faculty's perceived behavioral control over knowledge sharing?
 - Does Decoding Communication Competence(DCC) predict faculty's perceived behavioral control over knowledge sharing?
 - Does IT Competence (ITC) predict faculty's perceived behavioral control over knowledge sharing?

Hence, as the world becomes an increasingly information-and knowledge driven society, HEIs' roles and their practices need to be revisited in light of current trends and imperatives, to foster KS in terms of collegial learning, dialogue, team building and collaboration and promoting institutional memory. This is especially important for institutions in developing countries that are not fulfilling their expected role of knowledge creation and sharing. In such contexts, understanding the individual factors that determine KS behavior is crucial because it helps to understand the challenges of implementing successful KM practices.

THE RESEARCH MODEL AND HYPOTHESES

This section provides description of the major theoretical foundation for the research and shows how the hypotheses are derived from it.

Theoretical Framing

To empirically explore the antecedents and determinants of individual academic's KS practice; this research used a conceptual framework based on the theory of Planned Behavior (TPB), an individual theory in psychology, developed by Ajzen (in Fishbein and Ajzen, 1975). TPB, which is an extension of Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), identifies molar-level and generic antecedents of human behavior. It has received a great deal of attention in social cognition models as it identifies the antecedents of attitude, subjective norms, and perceived behavioral control - corresponding beliefs reflecting the underlying cognitive structure, and it specifies the role of behavioral interventions (Ajzen, 1991).

Briefly, TPB postulates that an individual's action is influenced by behavioral intention and the intention to perform the behavior is caused by 1) an individual's *attitude* toward performing the behavior, 2) the individual's *subjective norms* about the behavior, and 3) the individual's *perceived behavioral control*. Accordingly, attitude is defined as people's overall definition of their performing behavior and it consists of expected outcomes that one associates with that behavior; normative beliefs are concerned with the likelihood that important individuals or groups approve or disapprove of performing a given behavior; and perceived behavioral control is defined as the person's perceptions of her ability to perform a given behavior and likelihood of being successful at doing so including beliefs about the presence or absence of requisite resources or opportunities (Ajzen, 1991).

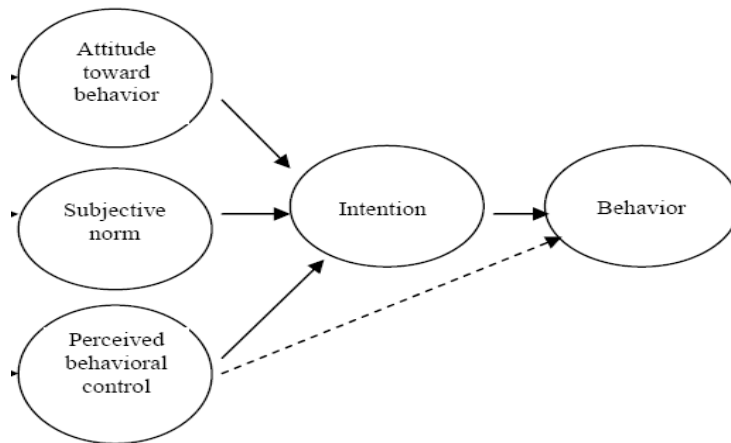


Figure 1-Theory of Planned Behavior (TPB) (Ajzen, 1975)

Hypothesis and Research Model Development

There are no well-established scales for some of the proposed constructs in this study, particularly when we wish to embed the constructs in the Ethiopian HEI environment. Thus, the study resorted to a combination of established scales and items from the extant literature to examine the model.

According to the TPB, intentions are understood to capture the motivational factors that influence behavior; they are “indications of how hard people are willing to try or how much of an effort they are planning to exert, in order to perform the behavior” (Ajzen, 1991:181). And research on KS argues that behavioral intentions could be considered as pre-requisites for the KS behavior of individuals (Bock et al., 2005; Lin and Lee, 2004). Thus, it is hypothesized as follows:

Hypothesis 1: Strong intention to engage in knowledge sharing behavior positively correlates with knowledge sharing behavior.

According to the TPB, attitude towards KS refers to the individual’s opinion that conducting KS is good or bad; that she is in favor of or against KS. According to Chen and Liu (2004), attitude is the main factor influencing behavioral intention and can be used to predict intention (Bock and Kim, 2002). Therefore, it is hypothesized as follows:

Hypothesis 2: A positive attitude towards knowledge sharing positively correlates with the individual’s intention to share knowledge.

The theory further assumes that perceived behavioral control has motivational repercussions on behavioral intentions. In other words, people who consider that they have resources and opportunities are likely to form strong behavioral intentions towards performing the desired behavior. It is also assumed that there is possibility of a direct link between perceived behavioral control and behavior. Thus, perceived behavioral control can also influence behavior indirectly via behavioral intentions (Ajzen, 1991). Based on this, the following hypotheses are made:

Hypothesis 3: There is significant and positive relationship between perceived behavioral control and intention to share knowledge.

Hypothesis 4: There is significant and positive relationship between perceived behavioral control and knowledge sharing behavior.

Besides, subjective norm reflects the person’s perception that others desire “the performance or non-performance of a specific behavior” (Fishbein and Ajzen, 1975: 57), i.e. they are in favor of or opposition to her performance of the behavior. Norms are typically understood as patterns of behavior that become accepted as ways that people ought to behave. Subjective norms, however, refer to the person’s perception of others’ thinking regarding the behavior in question. Thus, it is hypothesized as follows:

Hypothesis 5: Faculty’s strong subjective norm about knowledge sharing positively predicts the individual's intention to share knowledge.

Extending the TPB Model: Trust, Reward, Communication and IT Competence

This research tried to reinforce the TPB model by modifying the variable relationships and by adding some other factors that are considered effective predictors in previous studies (Armitage and Conner, 1999; Bock et al., 2005; Kankanhalli et al., 2005; and Kuo and Young, 2008) (See Fig. 2).

Davenport and Prusak (1998) argue that sharing is often unnatural and that individuals are not likely to share their knowledge unless they think it is valuable and important. Thus, following the TPB framework, this research theorizes that attitude to share knowledge is a function of the individuals' behavioral belief towards the act and can be explained in trust in the working environment and the anticipated reward that the sharing act provides. When trust exists, people are more willing to listen and absorb each other's knowledge and ideas (e.g., Andrews and Delahay, 2000; Davenport and Prusak, 1998 and Chen et al 2008:292). Therefore, from this review of literature, trust can be expected to positively predict KS.

Hypothesis 6: The higher the level of trust a faculty has to her colleagues, the higher the positive attitude towards knowledge sharing is.

Some studies also argued that the presence of reward is critical for the success of KS in an organization. For instance, Wasko and Faraj (2005) showed that employees are intrinsically motivated to contribute knowledge because engaging in intellectual pursuits and solving problems is challenging or pleasurable, and because they enjoy helping others. Besides, many organizations have established reward systems in order to motivate employees to share their knowledge (Bartol and Srivastava, 2002) with the belief that extrinsic rewards (like monetary rewards) are likely to affect people's behavior. However, the published findings, from empirical studies, on the use of extrinsic rewards to evoke the desired behavior seem to be mixed. Thus, the following hypotheses are presented:

Hypothesis 7: Extrinsic motivators to sharing knowledge positively predict attitude towards knowledge sharing.

Hypothesis 8: Intrinsic motivators to sharing knowledge (Anticipated reciprocity, Enjoy helping others and Feeling of self-worth) positively predict attitude towards knowledge sharing.

Moreover, this study theorizes that the perceived ease or control over behavior can be affected by two personal KS competences, namely IT competence (ITC) and communication competence (CC). This is following Hansen and Avital's (2005) argument, among others, which states that the perceived control of sharing knowledge can be influenced by the distinct communication and technological tools available for pursuing the behavior.

In KS, good ability of communication not only helps to transfer one's knowledge to others more effectively, but also reduces or eliminates social distance between the owner and receiver and helps the receiver to understand and absorb the shared knowledge (Cabrera and Cabrera 2002). Moreover, the ability to communicate can bring friendly and stable cooperation among the sharers. Hence, good communication ability, either through ICT tools (Hendricks 1999; Cabrera and Cabrera 2002; and Lin 2007) or face-to-face interaction, can affect perceived behavioral control which affects one's intention to sharing knowledge (Hansen and Avital 2005). Ko made the distinction between encoding competence, which is defined as "the source's ability to express one's ideas clearly, have a good command of the language, and be easily understood"; and decoding competence which is "the ability for a recipient to listen, respond to messages quickly, and be attentive" (Ko et al 2005:84).

Hence, the perceived ease of sharing knowledge can be influenced by the distinct tools available for pursuing the behavior. If the resources provided to the academic professionals offer sufficient flexibility to incorporate various forms of knowledge, then the detrimental effect on perceived behavioral control of KS may be mitigated. Thus, the above explanations lead to the following hypotheses:

Hypothesis 9: The higher the encoding communication competence (ECC), the better the individual's perceived behavioral control to share knowledge.

Hypothesis 10: The higher decoding communication competence (DCC), the better the individual's perceived behavioral control to share knowledge.

Hypothesis 11: The higher the IT Competence (ITC), the better that the individual's perceived behavioral control to sharing knowledge.

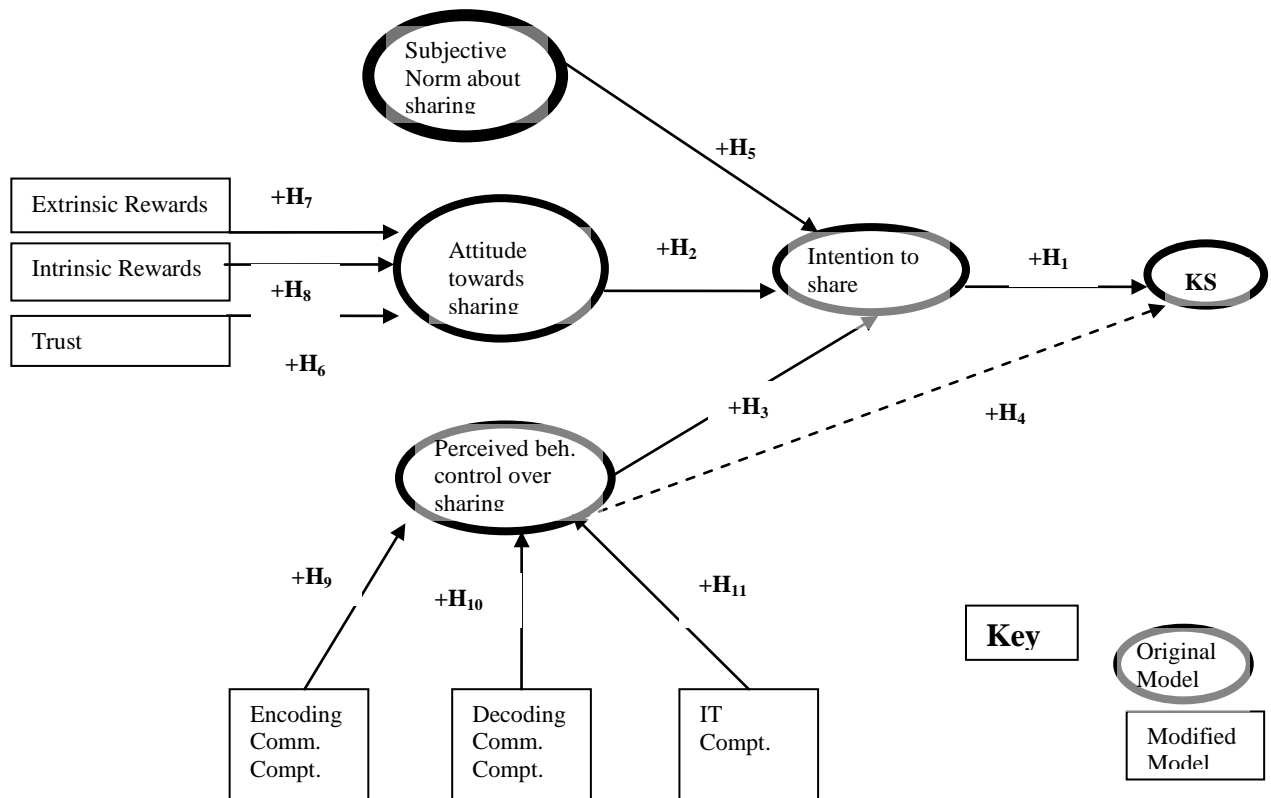


Figure 2- Proposed research model

METHODS

Understanding individual KS practices is a process entirely based on the views of individuals performing the behaviors. Thus, this research is a survey that analyzes KS practices by collecting cross-sectional data from 610 faculty in 8 Ethiopian public HEIs. A survey instrument was developed through consulting relevant studies in the extant literature, with the intent that it generates objective, numeric data on trends and actual practices of knowledge sharing (Creswell, 2008). As there are no well-established scales for some of the proposed constructs in this modified model, particularly when we wish to embed the constructs in the Ethiopian HEI environment, the study resorted to a combination of established scales and items from the extant literature to develop the research instrument. The PLS Path Modeling statistical tool (PLS-PM) (Chin 1998) will be used in this study to explore if these relationships hold up in providing a better explanation for the particular phenomenon under study. This tool allows the modeling of constructs either as formative or reflective indicators as was the case with our data, and it also handles complex modeling with a large number of latent and indicator variables (Chin and Newsted 1999).

The Sampling Frame

Out of the total population of public universities in the country, 8 (36%) of them were purposely selected due to their comparative maturity and the subsequent experience they have developed over the years. Therefore, purposive selection of samples was considered, as demonstrated through institutions having a relatively established practice of knowledge creation and dissemination. The choice of a field of study allowed the researchers to focus the thematic focal area of research that each institution has been engaged in over the years. Since purposive sampling does not produce a sample that is representative of a larger population, the choice of schools/colleges from each university was based on the amount of faculty engagement in research – availability of research projects, number of publications and other indicators of engagement in research work. Thus, samples of clusters were formed from each college/institution by taking sample size at a confidence level of 95% and confidence interval of 5% (Cohen et al, 2000). Hence, out of the total population of 1312, 1094 were considered as adequate sample size based on the requirements set for selection within the selected departments - a size expected to give a very high statistical power. At last, the number of returned questionnaires was 657 (58.6%) out of which 610 are ready for analysis after data cleaning. (See Table 1 in Appendix A).

CONCLUSION

This study is an ongoing research which presents a detailed investigation into the nature of Higher Education (HE) learning in Ethiopia - one of the countries in sub-Saharan Africa- by exploring academic's behavioral dispositions towards sharing the knowledge. While focusing and illustrating the nexus between individual behavior and knowledge sharing patterns, it utilizes a substantive theory - the Theory of Planned Behavior - that underpins the research into a broader context of empirical studies. It also tries to offer an extended model that allows explanation for the possible determinants of knowledge sharing behavior among faculty of universities in Ethiopia.

While the value of sharing knowledge might be obvious to the organization, sharing can be obstructed by various individual factors that need rigorous investigation. From a pragmatic perspective, the results of the study have many implications for HEIs which have always been trying to organize, initiate and promote KS under very difficult circumstances. Implementing successful KM initiatives in organizations requires explaining the KS behavior of individual professionals in order to accurately understand the factors that influence the same. Thus, this study is expected to indicate the extent of KS among the academic community, uncover reasons behind unwillingness to share and highlight areas that require attention and greater facilitation for KS.

Therefore, it is expected that the outcomes of the study would also provide useful insights for policy makers and leaders of HEIs to plan and implement effective research and KS practices among academics. And this effort becomes ever more important particularly now, at a time when the Ethiopian HE system is undergoing considerable transformation in its content and structural approach.

Finally, in addition to its expected valuable contribution of offering a holistic perspective on the KS behaviors of faculty, based on the TPB model, the study intends to produce a validated and reliable instrument to measure KS. It is believed that systematic research output in evaluating such practices and competencies in the African context would make a valuable input to the development of theory and practice of KM. Moreover, the study would also consider the effect of additional variables into the model, such as rewards, trust; and level of IT and communication competence. Indeed, much research remains to be done to understand individual behaviors and how the different macro-contextual factors generate different dynamics. However, by developing an instrument to be applied in a context where research on such a theme has not been conducted, we have offered an agenda for future research.

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Appendix A: Respondents' Demographic Profile

University (Code No.)	Number of respondents by					
	Field of Study	Years of work Experience in HE	Age range	Gender	Rank	Total Number of respondents
Addis Ababa University (3)	Natural Science - 37	0.5 - 10 = 54	22-34 = 44	F = 24	Emeritus Prof. = 1	102
	Research & Dev't - 26	11- 20 = 22	35-49 = 26	M = 78	Full Prof. = 12	
	Health & Medicine - 39	21 - 30 = 18 31 - 40 = 5 Missing = 3	50- 67 = 30 Missing = 3		Asso. Prof. = 16 Assit. Prof. = 43 Lect. = 29 Missing = 1	
Ambo University (4)	Natural Science - 22	0.5 - 10 = 31	22-34 = 21	F = 7	Full Prof. = 1	41
	Agriculture - 14	11- 20 = 6	35-49 = 12	M = 34	Assit. Prof. = 4	
	Research & Dev't - 5	21 - 30 = 2 31 - 40 = 2	50- 67 = 7 Missing = 1		Lect. = 36	
Arbaminch University (5)	Technology - 18	0.5 - 10 = 45	22-34 = 43	F = 5	Assit. Prof. = 5	52
	Natural Science - 34	11- 20 = 2 21 - 30 = 1 31 - 40 = 4	35-49 = 6 50- 67 = 2 Missing = 1	M = 47	Lect. = 47	
Bahir Dar University (1)	Agriculture - 11	0.5 - 10 = 57	22-34 = 36	F = 12	Full Prof. = 2	74
	Education - 21	11- 20 = 16	35-49 = 28	M = 62	Asso. Prof. = 3	
	Technology - 23	21 - 30 = 1	50- 67 = 10		Assit. Prof. = 14	
	Natural Science - 19				Lect. = 55	
Gondar University (2)	Health & Medicine - 66	0.5 - 10 = 69	22-34 = 62	F = 28	Assit. Prof. = 13	85
	Social Science - 19	11- 20 = 6 21 - 30 = 5 31 - 40 = 2 Missing = 5	35-49 = 15 50- 67 = 4 Missing = 4	M = 57	Lect. = 70 Missing = 2	
Jimma University (6)	Health & Medicine - 69	0.5 - 10 = 58	22-34 = 39	F = 17	Full Prof. = 5	133
	Agriculture - 30	11- 20 = 74	35-49 = 91	M = 116	Asso. Prof. = 3	
	Natural Science - 34	21 - 30 = 1	50- 67 = 1 Missing = 2		Assit. Prof. = 18 Lect. = 107	
Haremaya University (8)	Agriculture - 52	0.5 - 10 = 39	22-34 = 26	F = 12	Full Prof. = 6	57
	Education - 5	11- 20 = 10 21 - 30 = 3 31 - 40 = 5	35-49 = 19 50- 67 = 12	M = 45	Asso. Prof. = 1 Assit. Prof. = 15 Lect. = 35	
Hawassa University (7)	Agriculture - 43	0.5 - 10 = 55	22-34 = 42	F = 19	Asso. Prof. = 2	66
	Natural Science - 13	11- 20 = 6	35-49 = 21	M = 47	Assit. Prof. = 9	
	Business studies - 7	21 - 30 = 4 31 - 40 = 1	50- 67 = 2 Missing = 1		Lect. = 54 Missing = 1	
					TOTAL	610

Appendix B: Survey Instrument

Dear Respondent,

This questionnaire is designed to collect data for a research project that studies the ways and means of exchanging data, information and knowledge through the process of research that involves academic staff of Higher Education Institutions in Ethiopia. In other words, the study is about YOU. Therefore, your genuine response to each question is essential in accomplishing the purpose the questionnaire intends to achieve and I very much appreciate your taking time to fill it.

There are 8 groups of questions, and it takes approximately *15 minutes* of your time to answer them. Please be assured that all replies will be treated with strictest confidentiality, and your personal information will in no way be publicly revealed.

Each question in this questionnaire measures the degree of exchange of research ideas and knowledge that takes place in your institution in the process of research undertaking. Please indicate how strongly you agree or disagree with each statement, or how often you do the specific activities mentioned. Please use the letter (x) under the column that best shows your preference.

Please also make sure that you return the questionnaire to the person who gave you at your earliest convenience.

Thank you!

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A key term used in this survey is KNOWLEDGE.

It refers to important factual information, know-how (skill and methodology) and know-why (understanding cause-effect relationships) that is involved in RESEARCH ACTIVITIES.

Please note that questions do not refer to knowledge exchanged or shared during the teaching-learning process as such.

I. How frequently do you do the following to share knowledge with colleagues at work?		Never	Rarely	Sometimes	Often	Always
1	I publish scientific articles.					
2	I generally share resources (electronic and printed) with colleagues unless confidential.					
3	I review scientific publications.					
4	I participate in seminars, conferences and workshops at various levels departmental/college/national/ regional/international).					
5	I participate in activities of professional associations.					
6	I collaborate in research projects at various levels (departmental/ college/national/regional/international).					
7	I support/guide junior staff in their research effort when they express need for assistance.					
8	I collaborate to informally review draft research works from colleagues.					
9	I spend time in personal conversation regarding research work (over tea, through telephone, etc) with others.					
II. Your use of IT to share knowledge with colleagues.		Never	Rarely	Sometimes	Often	Always
1	I use e-mail to share knowledge with colleagues.					
2	I use social network sites (blogs, face book, chat room, etc) to share knowledge with colleagues.					
3	I use video technologies (conferencing/documentation) to share knowledge with colleagues.					
III. Your institution's provision to support your engagement in research		Strongly disagree	Disagree	Somewhat agree	Agree	Strongly agree
1	I am satisfied with the overall quality of IT *tools & technology for sharing knowledge in my institution.					
2	Whenever I want to share knowledge, I can easily access IT *tools & technology in my institution.					
IV. Your personal skills, disposition and the effort you make to share knowledge.		Strongly disagree	Disagree	Somewhat agree	Agree	Strongly agree
1	I have enough time available to share knowledge from research with my colleagues.					
2	I am a good listener in communicating with others.					
3	While working in teams, I am sensitive to others' needs.					
4	I have a good command of language** to share my knowledge with colleagues.					
5	My written communication is difficult to understand. (Reversed)					
6	In my oral communication with colleagues, I express my ideas clearly.					
7	Generally, I communicate with others effectively.					

- 8 I am easy to talk to.
- 9 My oral communication is difficult to understand. (Reversed)
- 10 In research undertakings, I respond to messages (memos, phone calls, reports, etc.) from colleagues promptly.

*Tools - Software used to support the development, use (searching and organizing), reuse and delivery of content and content management systems.

**language – please consider the language you use for sharing knowledge in your research undertakings

V.	Your own knowledge sharing	Strongly disagree	Disagree	Somewhat agree	Agree	Strongly agree
1	Sharing my knowledge with colleagues is pleasurable					
2	My knowledge sharing would help the institution achieve its objectives.					
3	I expand the scope of my association with colleagues when I share knowledge.					
4	I will have increased promotion opportunities in return for my knowledge sharing.					
5	It feels good to help someone by sharing my knowledge.					
6	My knowledge sharing would create new research opportunities for my institution.					
7	I believe that my future requests for knowledge will be answered if I share knowledge now.					
8	There is a better chance that I get a higher salary in return for the efforts I make to share knowledge.					
9	My knowledge sharing would help other members in my institution solve problems.					
10	I will receive honorarium in return for my knowledge sharing.					
VI.	The general understanding that prevails in your institution about sharing knowledge	Strongly disagree	Disagree	Somewhat agree	Agree	Strongly agree
1	In a long-term view, getting on well with colleagues is very important to career development.					
2	Knowledge sharing with colleagues is an enjoyable experience.					
3	My colleagues can be relied upon if I need their support.					

		Strongly disagree	Disagree	Somewhat agree	Agree	Strongly agree
4	Most conflicts among colleagues in my institution are over work issues rather than personal issues.					
5	My colleagues and I trust each other to share our knowledge.					
6	Knowledge sharing with colleagues is a wise move.					
7	It is expected of me that I share my knowledge.					
8	Generally speaking, I trust my colleagues to do as they say they will.					
VII. Your sharing of knowledge in the future						
1	I will share research reports and official documents I have with colleagues more frequently in the future.					
2	I will provide manuals, notes on research methods and models for members of my institution.					
3	I intend to share my experience or know-how (methodology) from research with colleagues more frequently in the future.					
4	I will make effort to share my know-where (possible source of knowledge) or know-whom (authorities and experts) on request.					
5	I will try to share my research expertise from my education or training with colleagues in a more effective way.					

VIII. Demographic data - Please check the category that is most appropriate or give responses briefly.

1. Gender: _____ Male _____ Female (put a tick \checkmark where appropriate)

2. Age: _____

3. Years of Teaching Experience in Higher Education: _____

4. Your Field of study _____

5. Your Area of Specialization _____

6. Academic Rank _____

Please provide any comment/suggestion that you may have about the questionnaire or on issues related to knowledge sharing at work place.
