



FACTORS AFFECTING KNOWLEDGE SHARING ON INNOVATION IN THE HIGHER EDUCATION INSTITUTIONS (HEIs)

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ABSTRACT

It is believed that Information and Communication Technology (ICT) can enhance Knowledge Sharing (KS) with the integration of individual and organizational factors. As a relatively new field of research, studies on KS based on Information Systems (IS) in developed countries is also on the increase. Unfortunately, KS research in the Higher Education Institutions (HEIs) in developing countries is mostly found to be given trivial considerations. It is even rare to find conceptual research model for KS in HEIs in developing countries that integrate individual, organizational and technological antecedent factors together. Therefore, the objectives of this paper are twofold: to explore the best conceptual KS research frameworks based on existing research models in HEIs; and also to propose a research model that can help explain better the nature of KS in HEIs. The methodology of this study is subjective/argumentative research i.e. idea generation in IS. The proposed research model has been built on the basis of IS theories and from the review of extant KS literature. The study reveals the antecedents and incorporates in the proposed research models which are: perceived self-efficacy for higher education and training, perceived leadership, social network, perceived ICT tools and technology, perceived organizational rewards, perceived organizational climate and perceived organizational trust. The finding of this study reveals that the proposed KS research model seems better compare to other existing KS research framework in HEIs in developing countries. The study also reveals that the IS theories integration with ICT technology can explain better for KS research.

KEYWORDS: academics, higher education institutions, knowledge management, knowledge sharing, innovation, developing countries.

INTRODUCTION

Academics are the intellectual leader for developing societies. New knowledge is created and transferred to the people in the Universities. Though relatively still an infancy field of research, studies in Knowledge Management (KM) and KS continue to be on the increase. KS and Innovation are believed to be inter-related and could influence organizational performance. Studies show that individual's knowledge does not renovate simply into institutional knowledge even with the use of knowledge depository. Knowledge is power and source of all actions in the organizations.

The concept of KS and institutional innovation capability are now the most emerging issues in KM research for achieving competitive advantage. Although, KM research has been very popular for the effectiveness of business organizations in developed countries for more than two decades, yet according to, the KM research is growing and is beginning to help organizations gradually understand the importance of managing knowledge. The extant literatures in KS show that, in developed countries, universities are now immensely undertaking KS research in the KM field to find links to institutional innovation capability. Recent



literatures on KM in developed countries suggest that KM phenomenon is continuously being investigated in the United States of America (USA), Canada, Netherlands, and United Kingdom (UK). Presently, knowledge workers in the USA constitute 70% of the total workforce. Over the past two decades, there has been a dramatic increase in scientific activity as well as economic advancement based on ICT. The ICT gave birth to the notion of new economic development. The past decade has also witness the rapid development of KM research in many organizations in Europe and America. Many universities in Europe focused on institutional innovation through KS practices using ICT to promote KS. For instance, Germany has launched a programme named “EXIST” while Moscow State University, Russia launched “Formula of Success” for KS practices.

Furthermore, previous studies show that individuals’ intention has potential impact on KS activities. Most of the previous KS researches have overlooked the technological dimensions of ICT for knowledge sharing. Moreover, individual, organizational and technological determinants for KS research as a whole in HEIs have not been given adequate emphasis in developing countries. Whereas, prior studies suggest that there is a need for a research model. Because, KS with individual, organizational and technological antecedents altogether can improve organizational performance. It can help explains the three dimensions, and this is still hard to find in the extant KM literature. Therefore, the aim of this paper is to recommend plausible IS theory and research constructs that can help explain the nature of KS in HEIs. It will also explore the best conceptual research framework based on existing research model in HEIs. As suggest by, the methodology of this study is

subjective/argumentative research i.e. idea generation in IS.

LITERATURE REVIEW

In the knowledge-based-view of the organizations, knowledge is considered potential to improve organizational performance and competitive advantage and to the long term sustainability and effectiveness of organizations. Knowledge has been considered very significant components and preliminary resources in the organizations. That is why, knowledge sharing is very important for an organization. KM has systematic power to resolve the problems in the organizations. Knowledge sharing is a process of social communication by individuals and groups in the organizations where knowledge is shared by people’s ideas, views among them to come out with new concept. Knowledge sharing means individual willingness to share what they have or have created in an organization. Information systems (IS) research focuses on a diverse form of antecedents that drive on individual knowledge sharing. This requires for status, organizational encouragements and technological support. Despite the fact, numerous driving issues have been discovered. Few researches have dragged them together into a single in helpful model. Instead, Identify KS behavioural climate as incentive or drive, information management ability as capability and organizational IT support as chance. Their investigation reveals that a creativeness behavioural climate has a major influence on KS behavior and perceived organizational use of IT to backup knowledge works stand strong impacts on information management ability and advocating that IT has indirect influences.

ANALYSIS OF KS RESEARCH MODELS IN HEIs

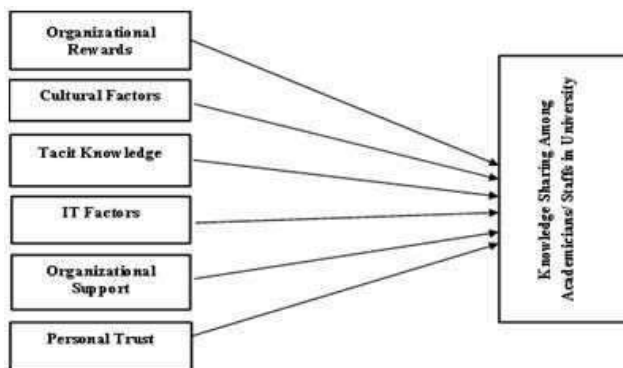


Figure-1. (Source: KS research Model of Azmi, Bakar, Shah & Hamid, 2010 for HEIs.).



In the above KS model (Figure-1), there are six dimensions that contribute knowledge sharing as demonstrated in Figure-1. The discussion of this research model and factors have been made a research framework and conduct KS research adopting individual, organizational and technological

antecedents' altogether. Limitation of this model is that they did not adopt any IS theory in their research framework. The researchers have identified that individual, organizational and technological dimensions have influenced KS behavior.

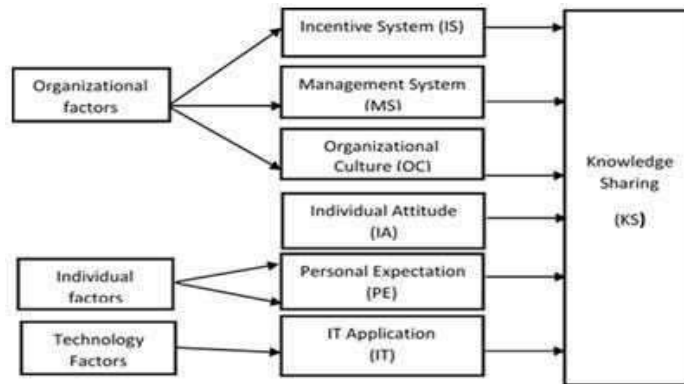


Figure-2. (Source: KS research Model of Cheng, Ho & Lau, 2009 for HEIs).

Furthermore, in the above KS model (Figure-2), have adopted individual, organizational and technological dimensions that have influenced KS behavior. These are divided into three dimensions as demonstrated in figure-2. They have made research framework and conducted KS research adopting individual, organizational and technological antecedents' altogether. They did not adopt any IS theory in their research framework.

Moreover, according to, the precursors that effect knowledge sharing actions, these are divided into three types of factors, as has demonstrated below in Figure-3. They delineate that the personal factors, organizational factors and technology factors have influenced KS. They have also identified that these can improve knowledge sharing and it can also make innovation activities in the universities.

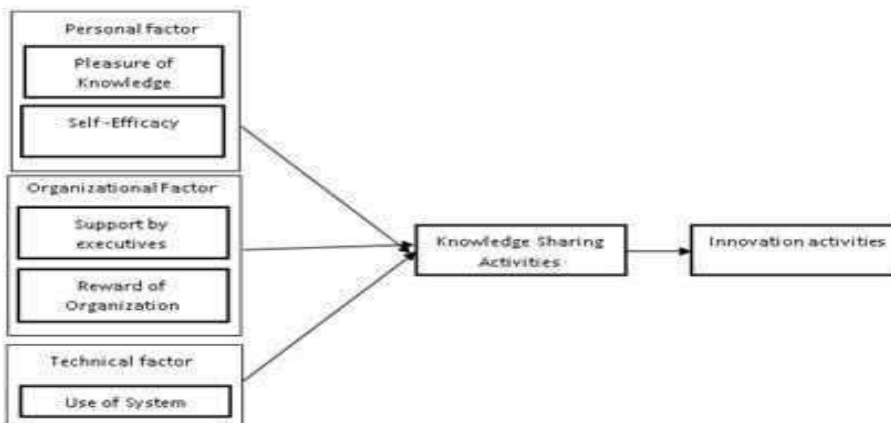


Figure-3. (Source: KS research Model of Lee, Kim & Han, 2010 for HEIs).

Shortcoming of the above model is that do not adopt any IS theory in their research model.

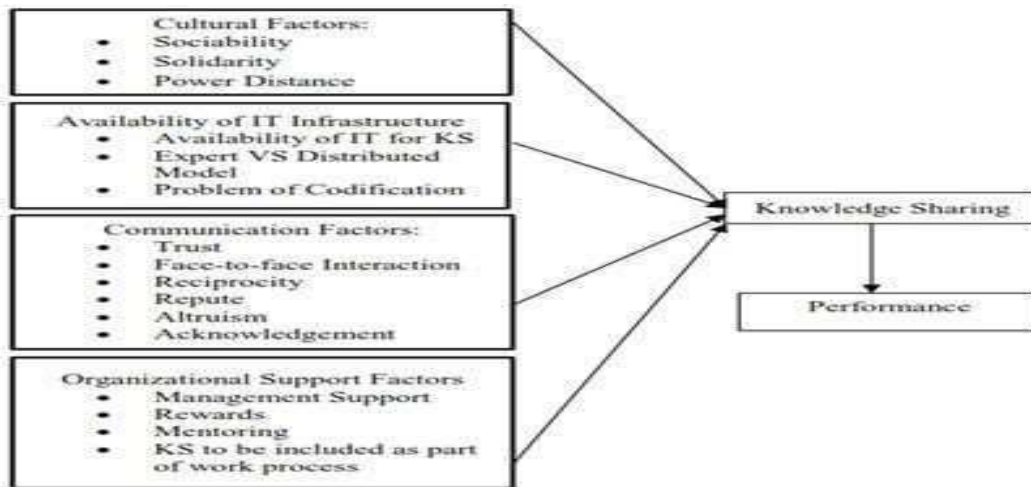


Figure-4. (Source: KS research Model of Supar, Ibrahim, Mohamed, Yahya & Abdul, 2005 for HEIs.).

Additionally, in the above KS model (Figure-4), demonstrate that the antecedents that influence KS among academics and their effects on performance in HEIs comprise of four antecedents as has exposed in the Figure- 4. This is also a conceptual model. The limitation of the KS research model shows that they have overlooked IS theory.

Moreover, in the following KS model (Figure-5), have also made research framework for HEIs. These are divided into three types of dimensions: individual, organizational and technological antecedents' altogether as has demonstrated in Figure-5, and the factors adopt in the model, have been shown in Table-2. This research put emphasis on KS research for HEIs. Deficiency of this study is that they do not use IS theory. They explain that the dimensions influence KS and it makes innovation performance to the HEIs.

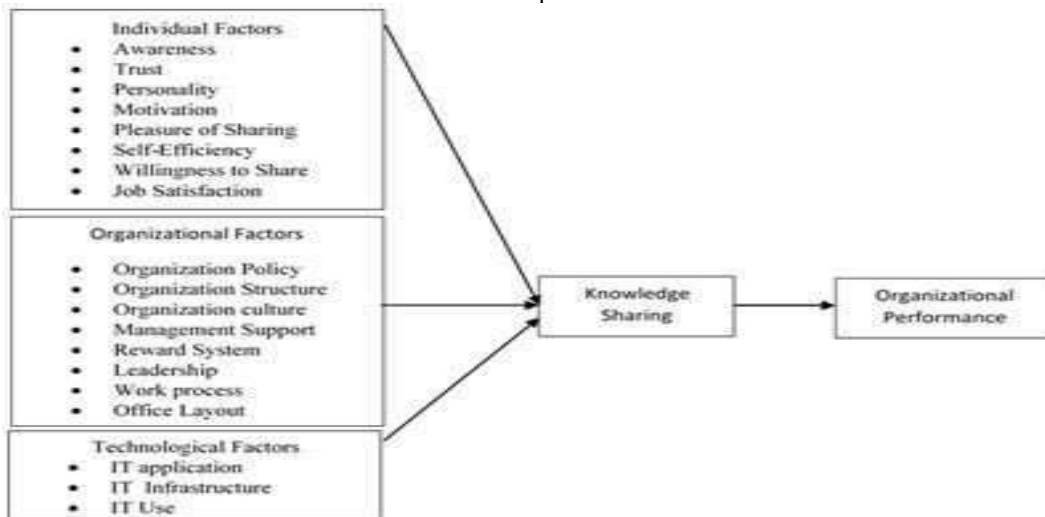
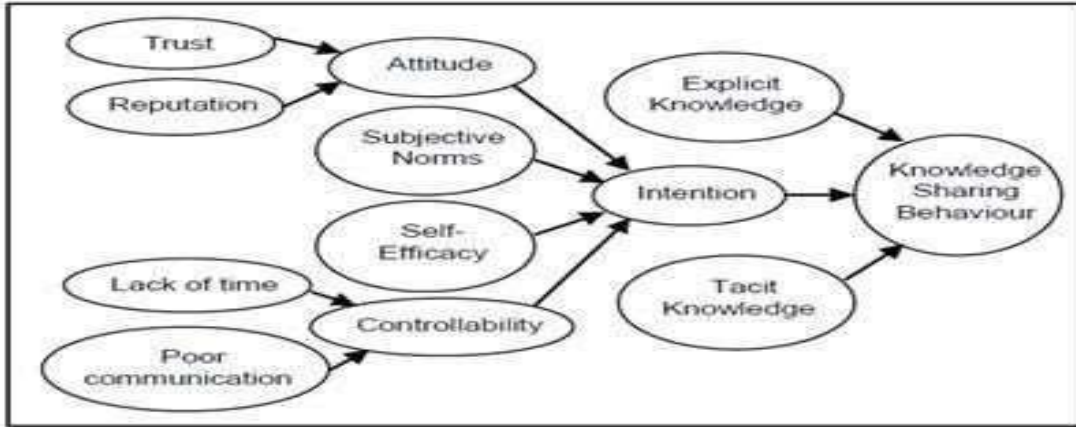


Figure-5. (Source: KS Research Model of Bulan & Sensuse, 2012 for HEIs.).



Figure-6. (Source: KS Research Model of Skaik & Othman, 2014 for HEIs (extracted)).

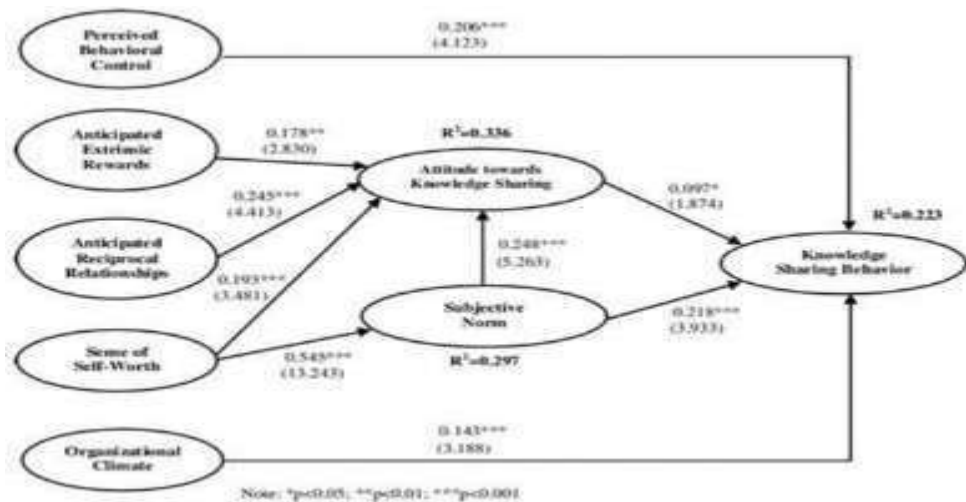


In the above KS model (Figure-6), have made a KS research framework and conduct a research for academics' knowledge sharing behaviour. They have adopted IS theory namely Theory of Planned Behaviour (TPB). It has been exposed in the Figure-6. But they did not adopt individual, organizational and technological antecedents together in their research model. They have overlooked technological factors in their study.

At the end of the discussion of the research model of this paper, we expose in the following KS model (Figure-7), KS research framework and

conduct a research for academics' KS behaviour. They have adopted IS theory namely Theory of Planned Behaviour (TPB). But they have also overlooked technological antecedent in their research model. Likewise, they do not adopt KS intention in their research model. Whereas, intention to KS is a key mediator construct in TRA. Even though, they do not explain why they have ignored this important construct from their study. Therefore, it is explored in their research model that there is a limitation of construct for explaining its generalizing of theoretical underpinning. It has been uncovered in Figure-7.

Figure-7. KS Research Model of Ramayah, Jasmine, Yeap & Ignatius (2013) for HEIs (extracted).





RESEARCH PURPOSE AND METHODOLOGY

The purposes of this study are: (i) to explore relevant theories that can help explain the nature of KS in HEIs; and (ii) also to propose the best conceptual research framework based on comparing other existing research model in HEIs in developing countries. It has been emphasized by that “the IS research community has moved away from concentration upon the technical issues associated with IS and now tends to focus on more behavioural issues”. This study is subjective/argumentative research i.e. idea generation in IS. There has been dispute in the IS research community on the selection of study methodologies and their appropriateness of diverse features of IS research. The study has adopted IS research methodology, personifies its’ leanings to sufficiently backing technology fit in and the transmission of innovation. It is vital to operative practical IS research. Innovative study mainly establishes on belief and theory, it is worthwhile in constructing a theory that can successively be verified. The statistical tool SPSS, SEM-AMOS will be used for analyzing the data for empirical study. The unit of analysis of this further study is knowledge workers i.e. academics, working in the public universities. Five point Likert scale will be used for research instruments. Factor analysis and hypothesis will be tested based on the propose research framework and its constructs. The propose research framework is made up based on the amended model of the Theory of Planned Behaviour (TPB), Theory of Reasoned Action (TRA) and Social Capital Theory (SCT). Research instruments adapt from previous

different KS studies to become accustomed with this research objectives.

RESEARCH HYPOTHESIS

H1: Academics’ intention have positive influence on knowledge sharing and universities’ innovation capability.

H2: Academics’ attitude have positive influence on knowledge sharing intentions.

H2.1: The higher the Self-Efficacy for Higher Education and Training, the higher will be the influence to academics’ attitude towards knowledge sharing.

H2.2: The higher the Leadership style, the higher will be the influence to academics’ attitude towards knowledge sharing.

H2.3: Social Network has positive influence on academics’ attitude towards knowledge sharing.

H2.4: The higher the usage of ICT Tools and Technologies, the higher will be the influence on academics’ attitude towards knowledge sharing.

H2.5: Perceived organizational Rewards have positive influence on academics’ attitude towards knowledge sharing.

H3: Subjective Norm has positive influence on academics’ intention towards knowledge sharing.

H3.1: Organizational Climate has positive influence on subjective norm towards academics’ intention to share knowledge.

H4: Perceived organizational Trust has positive influence on academics’ intention towards knowledge sharing.

THE PROPOSED RESEARCH MODEL AND PROPOSITION

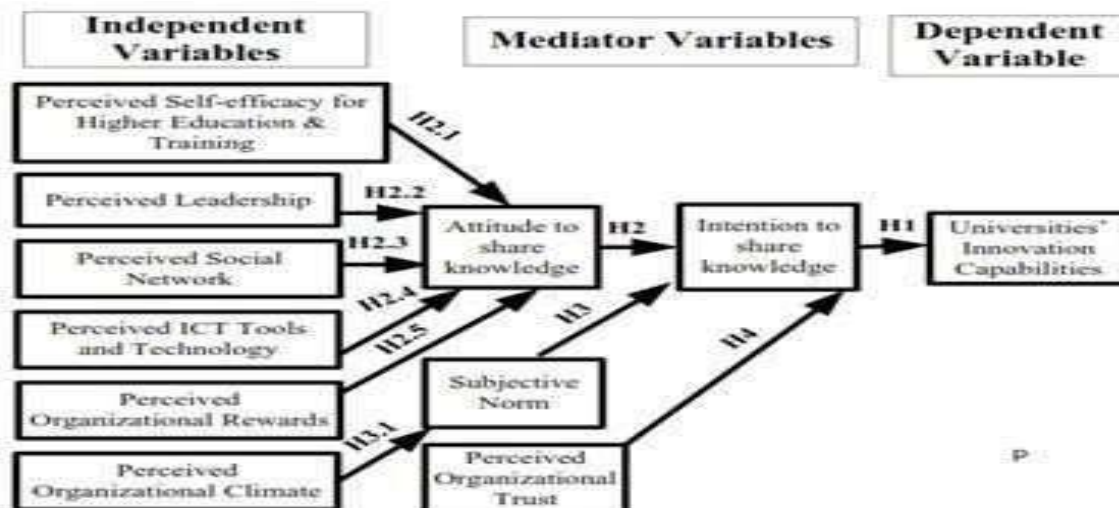


Figure-8. The Proposed Research Model.



The model, proposed in this study, is an extension of TRA and TBP, with additional individual, organizational and technological constructs that are integrated with trust from Social Capital Theory. In fact, numerous theories have been useful for analyzing the prior studies of KS behavior. Among others, popular IS theories of KS are TPB and TRA and it has been broadly accepted. Both TPB and TRA have variables that can determine individual behavioral attitude, intention and subjective norm i.e. social pressure for KS motivation.

Moreover, we add the construct trust from Social Capital Theory (SCT) to elaborate the idea of KS. It is triggered from most important traditional theory of KS, i.e. SCT. SCT establishes the correlation and significance of discrete in information and KS. Even though, study has also establishes that social capital is capable to influence persons to share know-how within societies and groups [46]. Thus, SCT is now intensively used in Europe for KS research and considers as IS theory. SCT indicates to the level of trust that groups or individual as may have relations base on reciprocal systems, sets of norms and networks between social communications. SCT is based on social relations and profits for the people. If organizational people have trust to the organization, the organizational member will be more pro-active and the organization might be innovative.

Nevertheless, we have reviewed seven KS research models for HEIs. We find that the extant variables do not sufficiently explain the acceptance of KS in academic institutions and its innovative behavior. Therefore, based on the review of previous KM literature, we find it necessary to identify additional variables that can explain better and can impact on KS for HEIs in developing countries. We have added some new variables in our proposed model and assume that it can impact on knowledge workers' attitude and intention towards KS with individual, organizational and technological factors together. By reviewing the extant KM literature, it also reveals that without technological determinants now-a-days, KS in organizations and also in personal level is almost incomplete. Because, people depends on ICT technological tools in their works both on organizational and individual level. This is why; it has a huge influence towards using technological antecedent factors along with psycho-socio determinants for KS. The constructs of this study are Perceived Self-efficacy for Higher Education and Training, Perceived Leadership, Social Network, Perceived ICT Tools and Technology, Perceived Organizational Rewards, Perceived Organizational Climate and Perceived

Organizational Trust are the additional variables of IS theory TBP, that are intended to measure the perceptions of the knowledge workers' intention regarding innovation capability of HEIs towards KS. We have omitted the construct controllability of TPB amended model in our proposed research model. Because, prior researchers did not find its influence significant in their study. Our aim is to examine the factors that can influence knowledge sharing of academics for universities performance and innovation capability. As the following factors have been adopted in this research model and assume to have the highest effect on KS intention which is preferred for this study.

DISCUSSION OF THE FINDINGS

This paper discusses elaborately with special reference to other previous KS research frameworks for HEIs in the developing countries perspective. The findings based on the aims of this study, have revealed adequate idea generation in IS research with comparison of the other prior seven KS research frameworks. The argumentative idea has been established through this study. The study has explored that the proposed individual, organizational and technological KS research framework with IS theories for HEIs can be helpful to explain the nature of KS theoretical development for developing countries. The strength of this paper is to propose a conceptual research model comparison with previous other conducted research for KS among academics in the HEIs in developing countries. It might be able to boost institutional innovation capabilities.

CONCLUSIONS

Human behavioural intentions have significant role in organizational as well as individual level knowledge sharing activities. This knowledge sharing action is generally increased when individual, organizational and technological factors act together. Universities KS functions might be improved with a systematic way involving ICT technology. Consequently, the universities could be benefitted. Access to more KS practices in the universities is a fundamental requirement especially in the developing countries where people are still expected to be motivated by KM practices. The limitation of this study is the comparison of KS research models that find lack of technological antecedents and IS theory. The factors that influence KS are individual, organizational and technological. It is being believed that effective KS among academics (knowledge workers) might improve the innovation capability of the universities. In the future, an empirical study (cross-sectional survey-



based approach) would be conducted to assess and validate the proposed research framework. It is hoped that the continuous study will enhance the understanding of knowledge sharing in the HEIs and its impact on universities' performance in developing countries.

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