

Tacit knowledge sharing: The role of individual factors**Hassabelrasul Yusuuf ALtom Shihabeldeen^{a*}, Nahid Osman Ali Babiker^b, and Nazar Omer Abdallah Ahmed^c**^a*Department of Business Administration, College of Science & Humanities Studies in Al-Aflaj, Prince Sattam bin Abdul-Aziz University, Saudi Arabia*^b*Department of Business Administration, Majmaah University College of Science & Human Studies in Hotat Sudair, Saudi Arabia*^c*Birkbeck University of London, London, United Kingdom***CHRONICLE****ABSTRACT***Article history:*

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Knowledge has become one of the key strategic assets for the organizations to gain and maintain competitive advantage. There are two main types of the knowledge, which can be found in organizations and individuals: tacit and explicit. Tacit knowledge is Omni present in individual's head while explicit knowledge is a written and documented. The most valuable and remarkable human knowledge exists more implicitly. Sharing and managing this implicit knowledge is considered very difficult, so investigating the factors that may affect knowledge sharing has become a colorful area of research. The focus of this study is to examine the relationship between individual (individual attitude, organizational commitment, and knowledge self-efficacy) and tacit knowledge sharing. The study distributed 650 questionnaires among teaching staff in public higher educational institutes. Out of 650, only 320 questionnaires were returned. Hypotheses for direct relationships were tested using SEM. Results indicated that individual attitude and knowledge self-efficacy were substantially associated with tacit knowledge sharing, however, no relationship was found between organizational commitment and tacit knowledge sharing.

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1. Introduction

For success and competitive advantages of an organization, knowledge and knowledge sharing activities are the vital and strategic assets (Bollinger & Smith, 2001; Burton-Jones, 2003; Constantinescu, 2008; Murray & Peyrefitte, 2007; Rabbi, GholamReza, & Farrukh, 2015). There are normally two kinds of knowledge; namely explicit and tacit. An official knowledge can be described explicitly while tacit knowledge can be explained informal which exists in an individual's mind in terms of mental modes, personal experiences, know-how, insight, and paradigms (McAdam, Mason, & McCrory, 2007; Nonaka, 1994). To manage explicit knowledge, knowledge management (KM) covers a broad range from records of an open access journal to sophisticated artificial intelligence (AI) units. In fact, a significant portion of knowledge is only available in form of tacit (Abidi et al., 2005). However, tacit knowledge tends to be difficult to share among people (Lai, 2006) and several studies have attempted to address this issue (Bollinger & Smith, 2001; Kebede, 2010; Mirza, 2009; Yang, 2007; Yang & Wang, 2014). According to McDermott (2000) the "real gold" in KM activities is not associated with explicit knowledge, but it is related to tacit knowledge sharing such as ideas, insights, experiences, personal opinions, and beliefs. The loss of tacit knowledge in an organization as acknowledged by Penciu et al. (2010), may often lead to lose all of its collective memory which can be regarded as one of its main assets. Quality of work, decision making, organizational learning, as well as productivity can be improved by tacit knowledge sharing. In addition to competitiveness, customer services and production of goods

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can significantly be increased by tacit knowledge sharing. To obtain high level of accuracy of task performance, tacit knowledge sharing may save time for organizations (Haldin-Herrgard et al., 2000; Selamat & Choudrie, 2007; Wahab et al., 2010). Disseminating tacit knowledge among employees has to be the top priority of the firms (Quintas, 2002). In the educational organizations it has become more important as teaching and training need more tacit knowledge in addition to use of explicit knowledge (Steininger et al., 2010). Through previous studies it has become clear that there are many variables that could affect knowledge sharing in an organization (Chiu, Hsu, & Wang, 2006; Collins & Smith, 2006; King & Marks, 2008; Lin, 2007; Willem & Scarbrough, 2006). Most of these researches, however, studied only knowledge sharing in general and not concentrating on tacit knowledge sharing. In fact, we have to study the individual factors that affect tacit knowledge sharing as emphasized by Wang and Noe (2010). Several researchers have emphasized on many insufficient studies that employed quantitative approaches in investigating the success factors of knowledge sharing (Wang & Noe, 2010), especially tacit knowledge sharing. Therefore, it can safely be said that discussion on the importance of tacit knowledge sharing for organizational success is not that much. There are many factors in the literature that could affect knowledge sharing in general and a tacit knowledge sharing in particular. Nonetheless, many researches in the area of knowledge sharing has repeatedly emphasized the importance of individual factors (Bock et al., 2005; Constant et al., 1994; Jarvenpaa & Staples, 2000; Nonaka, 1994) as a factor that could influence knowledge sharing. Wang and Noe, (2010) and McAdam et al. (2007) have argued that as individual factors are important predictors of tacit knowledge sharing, therefore they are needed to be empirically investigated in regard to tacit knowledge sharing. An important individual factor influences knowledge sharing is called “individual attitude” (Bock et al., 2005; Huang et al., 2006).

These previous findings, however, only focused on the association between individual attitude and knowledge sharing in general. But the question that how individual attitude affects tacit knowledge sharing is still have to be answered and there is a need to know whether individual attitude is also important for tacit knowledge sharing and if yes then to which extent.

Knowledge self-efficacy is another individual factor that was found to affect employees tendency to share their knowledge (Wasko & Faraj, 2005). In essence, knowledge self-efficacy plays an essential role for tacit knowledge sharing because it gives the confidence for employees to share their knowledge. In knowledge sharing field, *organizational commitment*, on the other hand, has been proven as an individual factor that has a significant impact on knowledge sharing in general (McKenzie et al., 2001) and tacit knowledge sharing in specific (Pangil & Nasurdin, 2009). The effect of organizational commitment is indeed quite consistent and therefore this variable is included in this study to further confirm the effect of organizational commitment on tacit knowledge sharing. The aim of this study, therefore is to investigate the impact of individual factors on KS. The study thus aimed at answer the following question: Do the individual, factors relate to tacit knowledge sharing? The term tacit knowledge was first coined by Michael Polanyi in 1966 (Friedman & Bernell, 2006) by stating “We can know more than we can tell” (Polanyi, 1966, p. 4) and introduced the idea of *tacit knowledge*. He argued that knowledge is a consequence of interaction between focal and subsidiary awareness, dynamically. Focal awareness includes an individuals’ clear knowledge, which is, what they concentrate on in executing a useful skill, whereas subsidiary awareness covers an individual’s tacit knowledge generated subsidiary using past experiences in the individual’s mind and donates to the understanding and interpreting of present awareness. Playing a guitar, bicycle, or football are some examples, where knowing the explicit rules does not necessarily mean someone has the ability to do them. Nonaka and Takeuchi (1995) expanded the concept of tacit Knowledge by following Polanyi’s work (1966),, and describing it as a:

“Highly personal”, “hard to formalize” making it difficult to communicate to others or share with others. In this category also fall subjective insights, intuitions, and hunches. Moreover, tacit knowledge is deeply rooted in an individual’s action and experience, as well as in the ideas, values, or emotions that he or she embraces. (p. 215) Nonaka and Takeuchi (1995) also specified two dimensions for tacit knowledge: Cognitive and Technical.

As for as cognitive dimension is concerned, it refers to an individual’s mental capabilities, while the technical dimension refers to other capabilities (Haldin-Herrgard et al., 2000; Leonard & Insch, 2005). How to cook rice without using any recipe, how to learn and speak a language, or how to play chess can be the examples of cognitive tacit knowledge. Examples of technical tacit knowledge can be found in routines, reports and discussions (Haldin-Herrgard et al., 2000). Wagner (1987) explored the extent and dimension of implicit or tacit knowledge under the supervision of Sternberg et al. (2000). He defined implicit or tacit knowledge as practical formation of abilities, open expressions or statements of which is not possible and acquisition of which must be out-with that of direct mentoring. Wagner (1987) also proposed multiple content and contexts of implementing tacit knowledge and described that tacit knowledge was about directing not only oneself but also other individuals, teams and tasks that those individuals and teams undertake. Managing or directing oneself refers to self-intrinsic values of motivation and development as well as the belief in the growth and management of self-organizational and administrative skills. Task Management or task-based activities refers to better ways of behaving or doing specific actions. Team management or people management refers to the knowledge associated with managing subordinates and interacting with peers. The context to which tacit knowledge is applicable on either locally or globally is defined by Wagner (1987). Local context is referred to the situation when the task is performed without considering one’s aspirations, values, career goals, or in other words, the —big picture. On the other hand, when the task accomplishment considers long term goals and achievements and how actions in the present connect to future aspirations and behavior, is referred to as the global context. Wagner (1987) supported for a multi-platform-based model of intrinsic tacit knowledge. A characteristic of his multi-platform model refers to the expression of the ability to acquire knowledge in a tacit form. Furthermore, career success and job experience are

found to increase the tacit knowledge. Tacit knowledge is an invisible part of an iceberg which surrounds the biggest part of human knowledge compared with the explicit knowledge (Haldin-Herrgard, 2000). Polanyi (1966) is believed to be the first who introduced the term “tacit knowledge”. He explains that all explicit human knowledge is built based on tacit knowledge which is essential for problem solving and building new knowledge (as cited in Henry, 2006). Hicks et al. (2007) also implemented a metaphor of “explicit islands in a tacit sea” to describe the necessity of tacit knowledge.

The primary objective of knowledge management is to help tacit knowledge acquisition and sharing among others (Bollinger & Smith, 2001; Kebede, 2010; Saeed Mirza, 2009; Yang, 2006). McDermott (2000) looked at the “real gold” in knowledge management activities which is not in delivering ready-made explicit knowledge, but in sharing tacit knowledge. Penciu et al. (2010) also confirmed that loss of tacit knowledge within an organization could have severe consequences in organizations. In general, exchanging tacit knowledge is considered as an essential factor for enhancing the quality of work, efficiency of decision making (Selamat & Choudrie, 2007). Moreover, capturing and facilitating tacit knowledge sharing among employees along with exploiting existing explicit knowledge has been discussed to be priorities for the most organizations (Quintas, 2002).

2. Hypothesis development

2.1 Tacit Knowledge Sharing Success Factors

The upcoming section focuses on the individual factors which might affect tacit knowledge sharing in organizations.

Individual Factors

Many individual factors have been detected that affect knowledge sharing including individual attitude (Bock et al., 2005; Huang et al., 2006). Other factors include self-efficacy (Tohidinia & Mosakhani, 2010) and organizational commitment (Gellatly et al., 2006). However, the focus of the current study is tacit knowledge sharing. Studies focusing tacit knowledge sharing are not many; most of previous studies investigated knowledge sharing in general (Cabrera et al., 2006; Judge & Bono, 2001). However, it is argued here that individual attitudes, knowledge self-efficacy, and organizational commitment could have a substantial effect on employee tendency to share tacit knowledge sharing. With regard to knowledge sharing, *individual attitudes* are defined as the degree of one’s favorable or positive feeling about sharing one’s knowledge (Hutchings & Michailova, 2004). Fishbein and Ajzen (1975) and Davis (1989) suggested that researches on a person’s attitude are totally dependent on the logical and rational action theories, followed by acceptance model of the adapted technology. These theories illustrate the way individual behaviors are influenced by beliefs, norms, values and attitudes. Positive knowledge sharing attitude leading to intentions and behaviors that can influence individuals are acquired knowledge (Bock et al., 2005). A number of earlier studies have successfully considered attitude toward knowledge sharing (Bock et al., 2005; Lin & Lee, 2004). An attitude affects an individual's perception towards a specific behavior (Blue et al., 2001). Moreover, attitudes are considered as a key part of the cognitive system. They enjoy the potential to influence the intention in order to divide knowledge (Sun & Scott, 2005). Thus, this study suggests the following hypothesis:

H₁: There is a significant and positive relationship between individual attitude and tacit knowledge sharing.

2.2 Organizational Commitment

Organizational commitment as defined by Porter et al. (1974), is the organizational strength of an individual’s identification and involvement in a particular organization. It consolidates the quality of a worker recognizable identity and contribution in a specific organization (Mowday et al., 1983). Organizational commitment is also regarded as a positive response of the employees who form the organization and its structure (Becker, 1992). Various views of organizational commitment emphasize effective and efficient response to the organization as an entity rather than to any specific function or context (Farmer et al., 2003). Many researches related to the organization theory report that organizational commitment plays a significant role in carrying out sharing of knowledge (Farrukh et al. 2016; Jarvenpaa & Staples, 2000). Individual willingness of committing extra effort is considered as organizational commitment (Meyer & Allen, 1991; Syed et al., 2015). Van Weenen (2004) observed that there are some expectations that organizational commitment is inter connected with and willingness to exchange knowledge. Individual commitment supports to immediate organizational influences in relation to the extent and pattern of their knowledge sharing characteristics as revealed by many studies (O’Reilly III & Chatman, 1986; van den Hooff & de Leeuw van Weenen, 2004)

In the view of researchers such as Hall (2001) as well as Van et al. (2004), individuals who have emotional attachment to their organization are more likely to share their knowledge. They realize that their sharing is recognized, followed by being utilized. This sharing of knowledge and commitment eventually benefit the organization. Employees who are strongly committed individuals, generally provide concentration to their organizational membership and as well as to the relationship among colleagues (O’Reilly & Chatman, 1986). Therefore this attachment may drive individual organizational commitment to facilitate their tacit knowledge sharing intension, which may provide long run benefit to their organization. Mackenzie et al. (1998) also pointed out that organizational commitment has strong link with sales force contexts. Supportive spirits like tacit

knowledge sharing is in-turn directed towards co-workers. It shows that significant liaison is present between the commitment within organization and the sharing of tacit knowledge. This phenomenon is further supported by Jarvenpaa and Staples (2001). According to them strong organizational loyalty and commitment creates the beliefs on the right of the organization to the knowledge created or acquired by the organizational members. On the basis of O'Reilly and Chatman's (1986) findings with regards to the extra role of pro-social behavior along with Kalman's (1999) opinion concerning knowledge sharing, it may be stated that contribution of knowledge sharing may be sensitive to the level of the internalization attachment of the employee. From previous literature, the relationship between the responsibility of an organization and appropriate behavior and conduct of an organization (e.g. revenue, term, job fulfillment) resulted in the following conclusion:

H₂: There is a significant and positive relationship between organizational commitment and tacit knowledge sharing.

2.3 Knowledge Self-Efficacy

One can define knowledge self-efficacy as the judgments of individuals regarding their capabilities to organize and execute courses of actions which are required to achieve specific levels of performance in an organization (Lin, 2007; Bandura et al., 1999). This construct has been analyzed and clarified in order to predict attitude as well as actions in several types (Dulebohn, 2002). Therefore, it can be interpreted that knowledge self-efficacy is enabling the possibility of sharing the complicated tacit knowledge. It could actually become a knowledge sharing platform. The procedures of self-efficacy, as documented by Bandura et al. (1999), can be helpful to get information about as how people might make a decision to share tacit and complex knowledge. It can be described in other words as the perception of knowledge self-efficacy which is constructed through a process of judgment that people participate in deciding whether or not they can carry out an action based on the effect of personal and contextual factors (Bandura, 1999). Tacit knowledge sharing context and self-efficacy in distributing the complexity was studied in the past. Under certain conditions, there will be an increment in tacit knowledge. These conditions include understanding others like ourselves, which ultimately results in providing encouraging knowledge sharing platform (vicarious experience); creating ways to exchange knowledge in a successful way (enactive mastery); and/or receiving support or praise from others to share knowledge (persuasion). There is another important way to increase knowledge self-efficacy to distribute the complexity through the past experiences. Self-efficacy is regarded as the person's ideas and beliefs about his/her capabilities to produce the looked-for effects (Bandura et al., 1999). Perceived self-efficacy results in the obtaining the skills that may lead to related behavior samples (Bandura et al., 1999). Depending on the target decided by individuals, self-competence will be recognized as one of the most significantly encouraging forecasters of people's performance (Heslin & Klehe, 2006). According to a knowledge sharing context and based on previous studies, self-competence and tacit knowledge sharing exhibits positive relation. So, this study proposes the H₃ as follows:

H₃: There is a significant and positive relationship between knowledge self-efficacy and tacit knowledge sharing.

The study adopted quantitative research design as it enables the researcher to test the relationship between the research variables and it also enables the researcher to answer questions about relationships among measured variables with the purpose of explaining, predicting, and controlling phenomena. This corresponds with the primary objective of this study, which is to examine the relationship between individual attitude, organizational commitment, knowledge self-efficacy and tacit knowledge sharing. For this study, the unit of analysis is at the individual level (teaching staff). Respondents' perceptions about the individual attitude, organizational commitment, knowledge self-efficacy, becomes the basis for understanding their influence on tacit knowledge sharing. Therefore, it is suitable to use individual as a unit of analysis to test all the variables shown in the research framework. The primary data for this study was collected through distribution of questionnaire and was collected at one point of time. A cross-sectional design is simple, inexpensive and allows for the collection of data in a relatively short period.

3. Measures

Tacit knowledge sharing is the dependent variable. In this study, tacit knowledge sharing is operationalized as a social interaction culture, involving the exchange of employee knowledge, experiences, and skills through the whole department or organization (Bock et al., 2005). Tacit knowledge sharing was measured by 5 items developed by Bock et al. (2005). This 5-item tacit knowledge sharing instrument has been shown to be both reliable and valid for measuring tacit knowledge sharing. Individual factors are the first independent variable. In this study, individual factors are measured by three components, namely individual attitudes, organizational commitment and knowledge self-efficacy. Individual attitude is operationalized as the degree of one's favorable or positive feeling about sharing one's knowledge (Bock et al., 2005). Individual attitude was measured using 5 items adapted from Bock et al. (2005). The second component of individual factor, organizational commitment is operationalized as the strength of an individual's identification with and involvement in a particular organization (Mowday et al., 1974). In this study, a 7-item of organizational commitment developed by Liden et al. (1997) was adapted. The last component of individual factor, knowledge self-efficacy is operationalized as the judgments of individuals regarding their capabilities to organize and execute courses of action required to achieve specific levels of performance. The 4-item of knowledge self-efficacy was adapted from Lin (2007). First, the data were inserted into SPSS and they were analyzed through SEM-PLS and using structural equation model (SEM) we perform the analysis. According to Hair et al. (2010), SEM can be used to forecast a series of interrelated dependence relationships, simultaneously. Besides, the study employed SEM for data

analysis to investigate the relationship among the study variables. SEM is a statistical tool which proceeds confirmatory like as hypothesis testing approach for the analysis of a model consisting of some phenomenon. Generally, SEM expresses two important aspects of procedure. The first is to consider the causal processes, which are represented by a series of structural equations such as regression; the second one refers to the structural relations which enable a clearer conceptualization of the theory under study. The study is based on quantitative methodology. SEM-PLS was used for the purpose of data analysis. The results of the measurement and structural model are presented separately in the following sections. The initial step of analysis using Smart PLS was to test the measurement model to determine the internal consistency reliability, convergent validity and discriminant validity. The measurement model for this study is presented in Fig. 1.

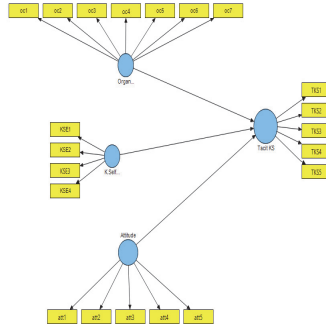


Fig. 1. The structure of the proposed model

First, Cronbach’s alpha was monitored and the reliability coefficient must be a value of 0.7 and above and in our survey, they were above 0.8 while the composite reliability was applied to detect any internal consistency reliability and as indicated in Table 1, the composite reliability of all measures in this study was above the value of 0.8. To determine the convergent validity, average variance extracted (AVE) was implemented to demonstrate the average communality for each latent variable and the results are summarized in Table 1 as follows.

Table 1

The results of composite reliability

	AVE	Composite Reliability	Cronbach’s Alpha
Organizational Commitment	0.61	0.90	0.87
Individual Attitude	0.55	0.88	0.84
K-Self Efficacy	0.56	0.88	0.84
Tacit KS	0.51	0.90	0.88

Subsequently, the discriminant validity was performed to learn whether the latent variable describes the variance of its own indicators better than the variance of other latent ones (Fornell & Larcker, 1981). Moreover, the survey compared the square root values of AVE with the correlations among the latent constructs and the analysis discloses higher values of square root values of AVE for each construct of the study compared with its correlation estimates with other constructs; thus, all constructs in the measurement model were found to be distinguishable.

Table 2

Discriminant validity

	OC	Individual attitude	K- Self Efficacy	Tacit-KS
OC	0.742			
Individual attitude	0.125	0.78		
K- Self Efficacy	0.350	0.13	0.76	
Tacit-KS	0.324	0.07	0.19	0.72

Note: diagonals represent the square root of the AVE while the other entries represent the squared correlation

The path coefficient, the level of significance and the R² value needed to be examined to determine the strength of the relationships among the variables. The hypotheses were tested through the structural model of SMART PLS by evaluating the path coefficients produced by bootstrapping procedures. The results supported the first hypothesis, which is, H₁: individual attitude is related to tacit knowledge sharing ($\beta = 0.353$, t-value = 2.90). The statistics did not accept the second hypothesis; H₂: organizational commitment is related to tacit knowledge sharing ($\beta = 0.031$, t-value = 1.23). The third hypothesis mentioned was, H₃: knowledge self-efficacy is related to tacit knowledge sharing. This was also supported by statistical results. ($\beta = 0.20$, t-value = 2.29. The results are presented in Table 3.

Table 3

The summary of the hypothesis testing

	Beta	Standard Error (STERR)	T Statistics (O/STERR)	Decision
Individual atti → Tacit Ks	0.2102	0.353	2.9011	Supported
OC → Tacit KS	0.031	0.0462	1.2305	NS
K-Self efficacy → Tacit Ks	0.20	0.0364	2.297	Supported

4. Discussion

The aim of this research paper was to investigate the association between individual factors (individual attitude, organizational commitment and knowledge self-efficacy) with tacit knowledge sharing. Statistical analysis has shown that individual attitude and knowledge self-efficacy were positively associated to Tacit knowledge sharing while there was no association between OC and Tacit knowledge sharing. The positive association between individual attitude and knowledge sharing has indicated that Individual attitude was a vital element in knowledge sharing process. These findings are in line with Seba et al. (2012). The role of attitude in the effectiveness of knowledge sharing practices has been emphasized by many researchers (e.g. Gottschalk, 2007; Yang, 2009). In this context, individual attitude is described as the individual's positive feeling regarding sharing his knowledge (Hutchings & Michailova, 2004). In order to share knowledge, no doubt, one must have positive feelings towards sharing. In other words, it can be said that one has to like sharing their knowledge. The previous decade has witnessed the development of a practice-based perspective in knowledge sharing literature. This phenomenon could possibly be explained by the fact that employees nowadays have more positive perception related to knowledge sharing. Consequently, knowledge sharing is voluntarily performed stemming from an innate motivation for sharing, which is positive attitude towards knowledge sharing. In the second hypothesis we postulated a positive association between organizational commitment and tacit KS, the findings showed no relationship between the both constructs. These findings are in fact in contrast to other findings that relate to knowledge sharing in general (Cabrera et al., 2006; Chang et al., 2015; Demirel & Goc, 2013; van den Hooff & de Leeuw van Weenen, 2004; Zampetakis & Moustakis, 2007). This inconsistency of the results could be because of the focus of the study, since most of the previous studies investigated the relationship between organizational commitment and knowledge sharing in general, but this study investigated tacit knowledge specially. From this finding we can postulate that, to share tacit knowledge organizational commitment it is not a necessary element especially in case of higher educational institutes. In regard to third hypothesis we tested association between individual attitude and tacit knowledge sharing. The findings of this study revealed the existence of strong association between knowledge self-efficacy and tacit knowledge sharing. The results are consistent with studies, such as those by Lin (2007) and Cabrera et al. (2006) who report a strong relationship between knowledge self-efficacy and tacit knowledge sharing. Therefore, it can be deduced that the understandings of individual self-efficacy and certainty can be a prerequisite for an individual to take part in the tacit knowledge sharing. This means that employees, who possess knowledge self-efficacy to provide valuable knowledge, and with most of them holding, are more likely to share their tacit knowledge with others. The significance of the study is twofold, theoretical and practical. The study contributed to the domain of knowledge sharing by empirically testing individual characteristics and tacit knowledge sharing. This micro level model of tacit KS a unique contribution in the field. A set of guidelines for improving tacit knowledge sharing are the outcome of this study too. These guidelines take into consideration the most important and most influencing factors on the tacit knowledge sharing within the organization. It provides insights for the decision makers toward better decision making. Moreover, these guidelines could be in the form of recommendations, requirements, best practices, and opportunities or challenges for increasing the effectiveness and efficiency of tacit knowledge sharing.

5. Conclusions

This study developed a micro level model of tacit knowledge sharing in which we tested the association between organizational commitment, knowledge self-efficacy and individual attitude with tacit knowledge sharing, the study contributed to the body of knowledge by developing micro level model of KS. The results revealed that for sharing tacit knowledge, commitment of the employee with the organization is not necessary but individual attitude and self-efficacy matters; therefore, practitioners must pay focus on these two elements before hiring or training the employees.

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References

- Abidi, S. S. R., Cheah, Y. N., & Curran, J. (2005). A knowledge creation info-structure to acquire and crystallize the tacit knowledge of health-care experts. *IEEE Transactions on Information Technology in Biomedicine*, 9(2), 193–204.
- Bandura, A., Freeman, W. H., & Lightsey, R. (1999). Self-efficacy: The exercise of control.
- Bock, G. W., Zmud, R. W., Kim, Y. G., & Lee, J. N. (2005). Behavioral intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. *MIS quarterly*, 29(1), 87-111.
- Bollinger, A. S., & Smith, R. D. (2001). Managing organizational knowledge as a strategic asset. *Journal of Knowledge Management*, 5(1), 8–18.
- Burton-Jones, A. (2003). Knowledge Capitalism: the new learning economy. *Policy Futures in Education*, 1(1), 143.
- Cabrera, A., Collins, W. C., & Salgado, J. F. (2006). Determinants of individual engagement in knowledge sharing. *The International Journal of Human Resource Management*, 17(2), 245–264.
- Chang, W., Liao, S.-H., Lee, Y., & Lo, W.-P. (2015). Organizational commitment, knowledge sharing and organizational citizenship behaviour: the case of the Taiwanese semiconductor industry. *Knowledge Management Research & Practice*, 13(3), 299–310.
- Chiu, C.-M., Hsu, M.-H., & Wang, E. T. (2006). Understanding knowledge sharing in virtual communities: An integration of

- social capital and social cognitive theories. *Decision Support Systems*, 42(3), 1872–1888.
- Collins, C. J., & Smith, K. E. N. G. (2006). Knowledge exchange and combination : The role of human resource practices in the performance of high-technology firms. *Academy of Management Journal*, 49(3), 544–560.
- Constant, D., Kiesler, S., & Sproull, L. (1994). What's mine is ours or is it? *Information System Research*, 5(4), 400–421.
- Constantinescu, M. (2008). Knowledge Management Through the Lens of Innovation and Labour Productivity in a Knowledge Based Economy. *Journal of Applied Economic Sciences*, 2(4), 65–80.
- Demirel, Y., & Goc, K. (2013). The Impact of Organizational Commitment on Knowledge Sharing. In *1st Annual International Interdisciplinary Conference, AIIC 2013* (pp. 24–26).
- Dulebohn, J. H. (2002). An investigation of the determinants of investment risk behavior in defined contribution pension plan. *Journal of Management*, 28(1), 3–26.
- Farmer, S. J., Beehr, T. A., & Love, K. G. (2003). Becoming an undercover police officer: A note on fairness perceptions, behavior, and attitudes. *Journal of Organizational Behavior*, 24(4), 373–387.
- Farrukh, M., Wei Ying, C., & Abdallah Ahmed, N. O. (2016). Organizational commitment: Does religiosity matter? *Cogent Business & Management*, 3(1), 1–10.
- Friedman, L. H., & Bernell, S. L. (2006). The importance of team level tacit knowledge and related characteristics of high-performing health care teams. *Health Care Management Review*, 31(3), 223–30.
- Gellatly, I. R., Meyer, J. P., & Luchak, A. A. (2006). Combined effects of the three commitment components on focal and discretionary behaviors: A test of Meyer and Herscovitch's propositions. *Journal of Vocational Behavior* (Vol. 69).
- Haldin-Herrgard, T., Tua Haldin-Herrgard, & Haldin-Herrgard, T. (2000). Difficulties in diffusion of tacit knowledge in organizations. *Journal of Intellectual Capital*, 1(4), 357–365.
- Höck, M., & Ringle, C. M. (2006). Strategic networks in the software industry: An empirical analysis of the value continuum. IFSAM 8th World Congress, Berlin.
- Huang, Q., Davison, R. M., Liu, H., & Gu, J. (2006). The Impact of Management Style on the Intention to Share knowledge in China. In *Pacific Asia Conference on Information Systems (PACIS)* (pp. 83–98).
- Hutchings, K., & Michailova, S. (2004). Facilitating knowledge sharing in Russian and Chinese subsidiaries: the role of personal networks and group membership. *Journal of Knowledge Management*, 8(2), 84–94.
- Jarvenpaa, S., & Staples, D. (2000). The use of collaborative electronic media for information sharing: an exploratory study of determinants. *The Journal of Strategic Information Systems*, 9(2–3), 129–154.
- Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluations traits--self-esteem, generalized self-efficacy, locus of control, and emotional stability--with job satisfaction and job performance: a meta-analysis. *The Journal of Applied Psychology*, 86(1), 80–92.
- Kebede, G. (2010). Knowledge management: An information science perspective. *International Journal of Information Management*, 30(5), 416–424.
- King, W. R., & Marks, P. V. (2008). Motivating knowledge sharing through a knowledge management system. *Omega*, 36(1), 131–146.
- Lai, I. (2006). Information Management & Computer Security Article information : *Information Management & Computer Security*, 13(3), 224–255.
- Leonard, N., & Insch, G. S. (2005). Tacit knowledge in academia: A proposed model and measurement scale. *The Journal of psychology*, 139(6), 495–512.
- Liden, R. C., Sparrowe, R. T., & Wayne, S. J. (1997). Leader-member exchange theory: The past and potential for the future. *Research in personnel and human resources management*, 15, 47–120.
- Lin, H.-F. (2007). Knowledge sharing and firm innovation capability: an empirical study. *International Journal of Manpower*, 28(3/4), 315–332.
- McAdam, R., Mason, B., & McCrory, J. (2007). Exploring the dichotomies within the tacit knowledge literature: towards a process of tacit knowing in organizations. *Journal of Knowledge Management*, 11(2), 43–59.
- McKenzie, J., Truc, A., & van Winkeln, C. (2001). Winning Commitment for knowledge management initiatives. *Journal of Change Management*, 2(2), 115–127.
- Meyer, J. P., & Allen, N. J. (1991). A Three-Component Model Conceptualization of Organizational Commitment. *Human Resource Management Review-March 1991*, 1(1), 61–89.
- Mirza, R. S. (2009). *Knowledge Management and Clinical Framework for Cross Country Healthcare Organizations*. Blekinge Institute of Technology.
- Mowday, R. T., Porter, L. W., & Steers, R. M. (2013). *Employee—organization linkages: The psychology of commitment, absenteeism, and turnover*. Academic press.
- Murray, S. R., & Peyrefitte, J. (2007). Knowledge Type and Communication Media Choice in the Knowledge Transfer Process. *Journal of Managerial Issues*, 19(1), 111–133.
- Nonaka, I. (1994). A Dynamic Theory of Organizational Knowledge Creation. *Organization Science*.
- O'Reilly III, C., & Chatman, J. (1986). Organizational commitment and psychological attachment: the effects of compliance, identification, and internalization on prosocial behavior. *Journal of Applied Psychology*, 71(3), 492–499.
- Pangil, F., & Nasurdin, A. M. (2009). Assessing the Relationship between Organisational Commitment and Knowledge Sharing Behaviour. *Malaysian Management Journal*, 13, 35–50.
- Rabbi, F., GholamReza, Z., & Farrukh, M. (2015). The impact of Knowledge Management Infrastructure on Performance Effectiveness in Jordanian Organizations. *SEGi Review*, 9(1), 107–119.

- Seba, I., Rowley, J., & Delbridge, R. (2012). Knowledge sharing in the Dubai Police Force. *Journal of Knowledge Management, 16*(1), 114–128. <http://doi.org/10.1108/13673271211198972>
- Selamat, M. H., & Choudrie, J. (2007). Using meta-abilities and tacit knowledge for developing learning based systems: A case study approach. *The Learning Organization, 14*(4), 321–344.
- Steininger, K., Ruckel, D., Dannerer, E., & Roithmayr, F. (2010). Healthcare knowledge transfer through a web 2.0 portal: an Austrian approach. *International Journal of Healthcare Technology and Management, 11*(1/2), 13–30.
- Syed, N., Saeed, A., & Farrukh, M. (2015). Organization commitment and five factor model of personality: Theory recapitulation. *Journal of Asian Business Strategy, 5*(8), 183–190.
- Tohidinia, Z., & Mosakhani, M. (2010). Knowledge sharing behaviour and its predictors. *Industrial Management & Data Systems, 110*(4), 611–631.
- van den Hooff, B., & de Leeuw van Weenen, F. (2004). Committed to share: commitment and CMC use as antecedents of knowledge sharing. *Knowledge and Process Management, 11*(1), 13–24.
- Wahab, S. A., Adbullah, H., Uli, J., & Rose, R. C. (2010). Inter-Firm Technology Transfer and Performance in International Joint Venture Firms. *International Journal of Business and Management, 5*(4), 93–103.
- Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review, 20*(2), 115–131.
- 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.
- Willem, a., & Scarbrough, H. (2006). Social capital and political bias in knowledge sharing: An exploratory study. *Human Relations, 59*(10), 1343–1370. h
- Yang, J. (2007). The impact of knowledge sharing on organizational learning and effectiveness. *Journal of Knowledge Management, 11*(2), 83–90.
- Yang, L., & Wang, D. (2014). The impacts of top management team characteristics on entrepreneurial strategic orientation: The moderating effects of industrial environment and corporate ownership. *Management Decision, 52*, 378–409.
- Zampetakis, L. a., & Moustakis, V. (2007). Fostering corporate entrepreneurship through internal marketing: Implications for change in the public sector. *European Journal of Innovation Management, 10*, 413–433.



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