

Exploring factors influencing knowledge sharing behaviour: The Moderating Effect of Transformational Leadership

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Abstract: The Vietnamese Government has been struggling to build a higher education system that is innovative to the requests of national knowledge-based development. It is essential to explore knowledge sharing behaviour (KSB) from environmental and personal perspectives which contribute to improve creativity and innovation in Vietnamese higher education institutions (HEIs). Social influences and individual factors are examined as critical factors on KSB. The literature suggests a complex relationship between these factors and KSB. However, the literature typically hypothesises and examines simple main-effects model. Drawing upon the role of transformational leadership, we propose a contingent research model based on social cognitive theory that comprises environmental factors (subjective norms, trust), personal factors (knowledge self-efficacy, organisational rewards, reciprocal benefits, and psychological ownership of knowledge) and KSB. Our focus will be on the moderating effect of transformational leadership on the relationship between these factors and KSB. We advance to conduct a survey to examine our proposed conceptual model. It is expected that this research will contribute to the deeper understanding of the effects of personal and environmental factors and KSB moderated by transformational leadership within Vietnamese HEIs.

Keywords: Knowledge sharing behaviour, Social cognitive theory, Transformational leadership, Vietnamese higher education

1. Introduction

The aim of this paper is to investigate how environmental and personal factors can facilitate or impede knowledge sharing behaviour (KSB) by using social cognitive theory (SCT)-based model in which transformational leadership moderates the effects of these factors on KSB. It helps this study examines how Vietnamese HEIs can promote a KS culture that will support their employees' KSB.

An organisation can successfully promote knowledge sharing (KS) culture by directly integrating knowledge in its business plan, and promoting individuals' attitudes and behaviours consistent with KS as well (Lin, 2007a). Nevertheless, KS has not met many organisations' expectation. It has been argued that individuals believe that their knowledge is power and valuable, therefore, sharing knowledge is generally unusual (Davenport & Prusak, 1998); hoarding knowledge is the real propensity (Hsu et al, 2007; Webster et al, 2008). Moreover, knowledge management (KM) has only highlighted on the technology aspect in many organisations, in particular technology infrastructures (Hsu et al, 2007, Pfeffer & Sutton, 1999). It is not surprisingly, KS is problem for organizations with the existing of information systems (Bakker et al, 2006; Argote et al, 2000; Lin et al, 2009). Finally, several studies have indicated that KM often fails in encouraging KS practices because of it ignores the importance of the willingness of KS (Lin et al, 2009). Undoubtedly, the biggest challenge in promoting KSB is the individual willingness to share knowledge with others. On this point, there have been two matters are involved: personal perceptions and social influences (Hsu et al, 2007; Wang & Noe, 2010). Personal perceptions are based on self-efficacy and outcome expectations (Hsu et al, 2007, Wang & Noe, 2010). Social influences based on trust and subjective norms (Brock et al, 2005; Hsu et al, 2007; Wang & Noe, 2010). Investigating the personal perceptions (Brock et al, 2005; Radaelli et al, 2014) and the influence of the social environment on KSB (Akhavan et al, 2015; Brock et al, 2005; Yu et al, 2013) would help both and practitioners get insights into how to encourage KS in teams, groups or the organisation in order to increased creativity and innovation in organisations. In order to achieve this goal, this paper will propose an integrated research model based on social cognitive theory (SCT).

SCT has been widely used in the literature of information systems for identifying the individual behaviour (Hsu et al, 2007; Compeau & Higgins, 1995a). SCT states that an action that has personal perception in a social

environment would be taken by a person. A personal perception to behave in a certain way has some cognitive factors. One is self-efficacy or the belief is a potential significant factor impacting the decision of sharing knowledge (Brock & Kim, 2002). Other important factor has significant influence on individual KS decisions is outcome expectations that are related to rewards systems and reciprocal benefits (Hsu et al, 2007; Lin, 2007b, Wang & Noe, 2010). Furthermore, subjective norm shows individual's feeling about the social pressure they feel about a given behaviour surrounding them. Employees having positive subjective norms towards given behaviours than the concerned behaviour intentions are more likely to be positive in KS. Finally, trust has also been identified as an important factor influencing KS (Hsu et al, 2007; Wang & Noe, 2010).

To sum up, then, it is an imperative need to take into account the influences of environmental and personal factors on KSB in order to improve KS in the context of HEIs in Vietnam. This paper will contribute to the literature of KS by investigating and answering the main research question as follows "What is the role of transformational leadership on the relationship between environmental and personal factors and knowledge sharing behaviour?".

The organisation of this paper is as follows. The next section present the literature review, followed by describing the research model development. Then, the sample and data collection methods, questionnaire design and data analysis are described in the proposed research method section. Finally, the conclusion is presented.

2. Literature Review

2.1. Vietnamese Higher Education – Challenges for Requirements Developments

Since 1986, Vietnam has transitioned to a knowledge-based economy and mitigated poverty through human resource development by providing advanced skills for the knowledge-based economy through higher education reform (Le, 2014; Pham, 1998). Therefore, the Vietnamese higher education system has been undergoing continuous change for more than twenty years. However, it has been so backward (Le, 2014). The scale of this challenge is underscored by the fact that at present none of 223 Vietnamese universities rank in the top 300 in the Asia University Rankings 2016-2017 (THE, 2017a), and none in the top 978 World University Rankings 2016-2017 (THE, 2017b). Seeing see the vital to the economic growth and development of Vietnam, the Vietnamese Government has published its vision for its higher education sector. That is, building a higher education system in Vietnam which is innovative, responsive to the demands of the market and of high quality. This has been all the more critical since Vietnam became a member of World Trade Organization, and so is looking to develop a skilled population, with a strong knowledge base, that will position the country well for expansion and integration into the global economy (Dang, 2009).

It is not automatic transformation to a knowledge-based economy to from a resource-based economy in Vietnam. It can only happen if it is assisted by wise national strategies built on the support of retrieval to information about how other similar countries participate in changing processes (Othman et al, 2014). They have mainly established a knowledge-based development underlying a far balanced and extreme foundation with regards to the development of environment, technology, human and economy than exists in Vietnam (Othman et al, 2014). The learning failures and successes from other countries that they have experienced in their transformation to a knowledge-based economy is necessary for Vietnam, yet explicit research specifically oriented to the problems of KS in Vietnamese higher education is rare.

2.2. Knowledge-Sharing Behaviour

Knowledge is a significant organisational resource. KS contributes to developing competitive advantages for organisations in complex environments, such as the improvement of intellectual capital, by encouraging the exchange and creation of knowledge within an organisation. This is because knowledge is the key factor for achieving continuous innovation at both individual and organisational levels. It is also examined a closely related factor for the progress of any individual or organisation, hence it is an essential indicator to be studied in the KS on individual behaviours in HEIs. KSB can be defined as the process involving the exchange of knowledge between individuals and groups of people (Davenport & Prusak, 1998). The authors develop the measurement of KSB by the frequency of knowledge dissemination (giving or presenting knowledge to potential receivers) that can also be beneficial for an organisation in general, a higher education institution in particular. In turn, KS is relied upon knowledge management, which is a necessary activity in all businesses. Any KS practice occurring within organisations between its employees will always be based on both

knowledge-giving and knowledge-receiving. Knowledge management is a broader term that caters to a wide range of topics, while KS is a specific focus area of knowledge management (Hendriks, 1999). KS, when performed in conjunction with other aspects of the step-by-step process of knowledge management (creation, storage, sharing, and application) can fulfil a strategic necessity for organisations that wish to improve their capabilities and performance (Lee & Hong, 2002).

3. Theoretical Background and Research Model

In this study we are examining the influence of environmental and personal factors on KSB moderated by transformational leadership, using the proposed model based on Bandura’s SCT (1986) (see Figure 1).

In SCT model, environmental influences, personal factors, and behavior act as interactive relationships (Wong, 2005). Bandura (2002) explains the main concepts of SCT by the “triadic reciprocal causation” as follows:

- (1) Environmental influences that influence the personal capacity to successfully fulfill the behavior;
- (2) Personal factors determine whether a person has low or high knowledge self-efficacy leads to his/her behaviour and;
- (3) Behaviour is the response which a person gains after his/her performing a certain behaviour. This paper focuses on the exploration of the role of environmental and personal factors on individual behaviours, and especially the contingent effects of environmental and personal factors and transformational leadership on KSB.

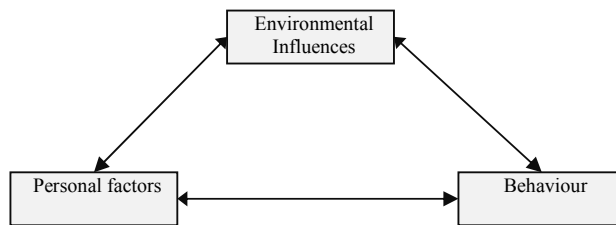


Figure 1: The interactions between environment, person and behaviour (Bandura, 1986)

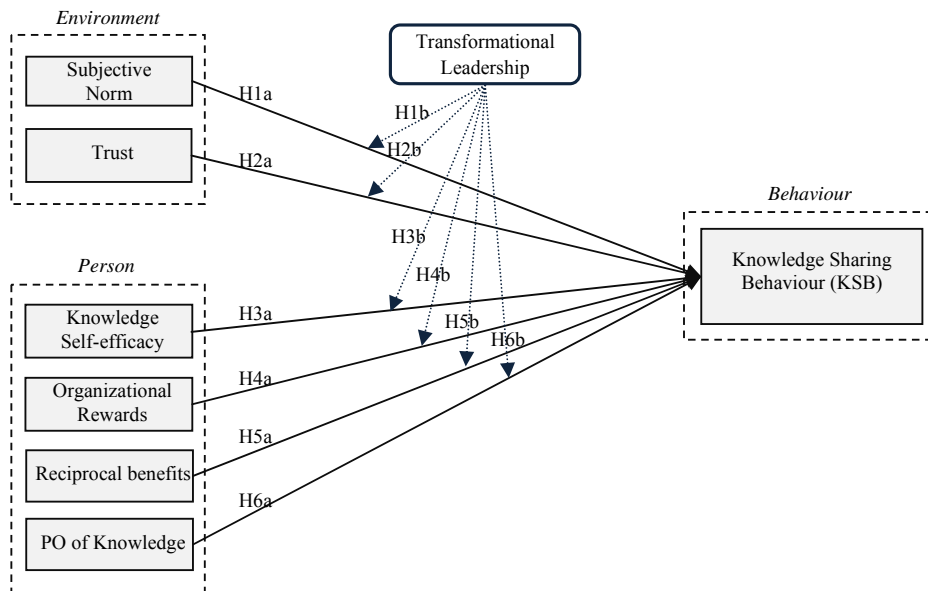


Figure 2: Moderating Effect of Transformational Leadership on the Relationship between Personal and Environmental Factors and Knowledge Sharing Behaviour. Adapted from Bandura (1986).

Table 1: The description of factors

Factor	Definition	Source
Subjective norms	The extent to which an individual perceives whether social pressure will influence the performance of KS behaviour.	Ajzen (1991)
Trust	“The extent of belief in good behaviors, competence, and reliability of members with respect to sharing knowledge in the organisation”.	Lee & Choi (2003)
Knowledge self-efficacy	The extent of confidence in employees’s ability to sharing knowledge that is important to the organization.	Lin et al (2009)
Organisational rewards	“The degree to which a reward system to share any new and creative ideas and effectiveness KS”.	Othman et al (2014)
Reciprocal benefits	“Reciprocal benefit is a form of conditional benefit; that is, individual expect future benefits from his or her present actions”.	Hung et al (2011)
Psychological ownership of knowledge	“The extent to which individuals believe on the possession and are responsible towards the knowledge they possess”.	Han et al (2010); Van Dyne, & Pierce (2004)
Knowledge sharing behaviour	The extent to which a person performs KS activities in the organization.	Davenport & Prusak (1998), Lin et al (2009)
Transformational leadership	“The extent to which leader motivates followers to work for transcendental goals (big improvements) and for higher level self-actualizing needs instead of immediate self-interest”	Bass & Avolio (1997)

3.1. Environmental Factors

- *Subjective norm*

According to Ajzen (1991), the subjective norm is a social factor which can be defined as the degree to which one perceives social pressure to carry out or not to carry out a certain behaviour. Subjective norm has acquired significant empirical support as an import antecedent to behavioural (Bock et al, 2005; Mathieson 1991). Hee (2000) emphasised the impact of others who are important to the employee such as “close friends, relatives, colleagues, or business partners.”. Subjective norm shows personal emotion regarding the social pressure they perceive about given behaviors surrounding them. Also, employees having positive subjective norms lead to given behaviors than the concerned behavior intentions are more likely to be positive in KS. Therefore, we hypothesise that.

H1a. Subjective norm has a positive effect on KSB

- *Trust*

Trust can be defined as “maintaining reciprocal faith in each other in terms of intention and behaviors” (Lee & Choi, 2003; Kreitner & Kinicki, 1992). It may encourage the exchange of knowledge to be substantive, influential, and open (Lee & Choi, 2003; Nelson & Coopriider, 1996; O’Dell & Grayson, 1999). Trust affects KS decisions and with trust, a person becomes less willing to share knowledge with others (Davenport & Prusak, 1998; Lin et al, 2009). According to Nonaka (1994) interpersonal trust is a key factor in teams, groups and organisations to establishing an environment for KS. Employees are more willing to engage into KS when they have a high level of trust in their relationships (Lee & Choi, 2003). Thus, interpersonal trust increases individuals’ tendency to participate in KS practices (Fukuyama, 1992). Therefore, we hypothesise that:

H2a. Trust has a positive effect on KSB

3.2. Personal Factors

- *Knowledge self-efficacy*

Knowledge self-efficacy is an individual’s judgment of his or her ability to organize and execute successful performance in everyday tasks (Lin et al, 2009). The individual’s sense of self-efficacy is affected by the tendency of individuals to take actions such as level of problems, expressed interest, persistence and task

effort (Hsu et al, 2007). Lin's study shows that knowledge-sharing contributions improve an organization's performance if staff increase their willingness to donate and collect knowledge (Lin, 2007a). Accordingly:

H3a: Knowledge self-efficacy has a positive effect on KSB

- *Organizational rewards*

According to Lin (2007b), from an extrinsic motivational aspect, a person's behavior is driven by its perceived benefits and the values of the behaviour. Receiving organisational rewards or beneficial reciprocity are the main purposes of motivated behaviors (Lin, 2007b; Kowal & Fortier, 1999). Providing incentives and rewards to motivate staff to contribute in knowledge sharing adoption are recommended (Webster et al, 2008). Individuals who share their knowledge may improve team performance and consecutively increase the personal rewards received (Bartol & Srivastava, 2002). Incentives and rewards encourage staff to share knowledge (Bock et al, 2005). Organizational rewards point out what the organizational values form individual behaviors (Lin, 2007a). Organisational rewards can vary according to the organization policies from monetary incentives (e.g. increased salary and bonuses) to non-monetary awards (e.g. promotion incentives and job security) (Davenport & Prusak, 1998; Lin, 2007a). Therefore, we hypothesise that:

H4a. Organisational rewards has a positive effect on KSB

- *Reciprocal benefits*

Reciprocal benefit is a form of conditional benefit; that is, the individual expects future benefits from his or her present actions. It means that an action is done in response to prior friendly behaviours (Hung et al, 2011). Many researchers have conducted detailed analyses of reciprocity and indicated that it can be valuable to knowledge contributors as they anticipate future help from others (Hung et al, 2011). Also, studies have investigated that reciprocity can yield an effective motivation to encourage KS and consequently establish long-term mutual cooperation (Lin, 2007b). Thus, people who expect reciprocity from other members through sharing their knowledge will share more useful and creative ideas and their satisfaction with the meeting will be higher KS intentions (Hung et al, 2011; Lin, 2007b). Therefore, we hypothesise that:

H5a. Reciprocal benefits has a positive effect on KSB

- *Psychological ownership of knowledge and knowledge-sharing behaviour*

Based on the theory of psychological ownership (PO) suggested by Pierce et al (2001), PO of knowledge can be defined as the extent to which individuals believe on the possession and are responsible towards the knowledge they possess. That is, PO explains the feeling of possession linking to knowledge in a psychological sense (Han et al, 2010) that makes persons regard intangible/tangible objectives as an addition of themselves Han et al (2010). The objects of PO can occur at different levels in teams or organisations, including groups and organizations created by individuals in the organisation (Pierce et al, 2001). Van Dyne & Pierce (2004) found that the PO can stimulate an altruistic spirit, supporting to extra-role behaviour such as KS behaviour and individuals who have a sense of PO may display a sense of belonging which impacts altruistic spirit (Van Dyne & Pierce, 2004) and which influences KS behaviour. Thereby, PO of knowledge is conducive to KS behaviour on the part of individuals. Therefore, we hypothesise that:

H6a. Psychological ownership of knowledge has a positive effect on KSB

3.3. Transformational Leadership

Transformational leadership is defined as "a process by which leaders inspire their followers to perform at a higher level than expected and to potentially exceed the followers' own self-interests for a high-level of shared vision" (Bass, 1999; Han et al, 2016). It motivates individuals to feel empowered, which enhances individuals' engagement (Han et al, 2016). Such leadership behaviors include four distinct aspects: inspiration, intellectual stimulation, individualized consideration and idealized influence (Bass, 1999; Han et al, 2016). Based on transformational leadership, many modern organizations have taken an active interest in knowledge management to increased creativity and innovation through more effective KS (Han et al, 2016). KS among employees has been considered as one of the vital "success factors" in knowledge management (Han et al, 2016). Furthermore, several studies have been conducted to examine the influence of transformational leadership on KSB and found that social environmental influences and personal factors can be used as an indicator for their KSB. In this study, thus, we believe that transformation leadership can have positive effect on the relationship between environmental and personal factors and KSB. Therefore, we hypothesise that.

H1b. Transformational leadership (TL) moderates the relationship between subjective norm and KSB. In teams with high TL, subjective norm will have a stronger positive impact on KSB than in teams with low TL.

H2b. TL moderates the relationship between trust and KSB. In teams with high TL, trust will have a stronger positive impact on KSB than in teams with low TL.

H3b. TL moderates the relationship between knowledge self-efficacy and KSB. In teams with high TL, knowledge self-efficacy will have a stronger positive impact on KSB than in teams with low TL.

H4b. TL moderates the relationship between organizational rewards and KSB. In teams with high TL, organizational rewards will have a stronger positive impact on KSB than in teams with low TL.

H5b. TL moderates the relationship between reciprocity and KSB. In teams with high TL, reciprocity will have a stronger positive impact on KSB than in teams with low TL.

H6b. TL moderates the relationship between psychological ownership of knowledge and KSB. In teams with high TL, psychological ownership of knowledge will have a stronger positive impact on KSB than in teams with low TL.

4. Proposed Research Method

The sequential mixed-methods, including quantitative and qualitative methods, will be used to accomplish the research goal with the sample of academic staff in Vietnamese HEIs. The questionnaires will be conducted in stage one to collect the data from the study sample about their influencing factors that will then be used in the research framework. Based on that stage two will be undertaken by interviews to validate the quantitative results.

4.1. Sample and Data Collection

After being developed from the reviewed literature, the comparability of the English and Vietnamese versions of the questionnaire will be double checked by two language experts (NAATI - the National Accreditation Authority for Translators and Interpreters). A total of 4 universities will be randomly selected from the list of 37 public universities in the north of Vietnam published by the Ministry of Education and Training. The questionnaire with a cover letter will be delivered to and collected from the participants by the administrative staff of respective departments before being returned in sealed envelopes to ensure voluntary participation and the anonymity of the participants.

4.2. Measures

In this study, the existing measures from prior studies will be used for the questionnaire. All items used to operationalise constructs will be mainly adapted for use in the KS context in Vietnam. All items will be measured using a five-point Likert-type scale (ranging from 1 = never to 5 = always or 1 = strongly disagree to 5 = strongly agree). Table 2 describes the summary of measurement scales for the constructs of the proposed model.

Table 2: Summary of measurement scales for the constructs of the proposed model

Factors	No. of Items	Sources
Subjective norm	3	Brock et al (2005); Ajzen (1991)
Trust	6	Lin et al (2009); Lee & Choi (2003)
Knowledge self-efficacy	4	Lin (2007b)
Rewards	4	Lin (2007b)
Reciprocal benefits	3	Lin (2007b)
Psychological ownership of knowledge	5	Han et al (2010); Van Dyne & Pierce (2004)
Knowledge sharing behaviour	5	Davenport & Prusak (1998); Lin et al (2009)
Transformational leadership	13	Bass & Avolio (1997)

4.3. Data Analysis

We intend to analyse our data in two phases. For phase 1 (Quantitative data analysis), a multivariate statistical approach will be implemented to quantitatively analyse data collected from the questionnaires including descriptive data analysis to find if the data is ready to continue to the multivariate data analyses step (participants' profiles and data screening by studying normality, means, standard deviations and standard error of the mean), measurement scale analysis to capture the meaning of each model construct through an assessment of reliability and validity (Cronbach's alpha) addition to this, item-total correlations will be used to assess the extent to which a particular item belonged to its scale, the validity of the measurement by using Explanatory Factor Analysis and Confirmatory Factor Analysis, and Structural Equation Modelling to examine the causal relationships of the model (Hair et al, 2006). We will use the Statistical Package for the Social Sciences (SPSS) (22.0) and Amos 22. For Phase 2 (Qualitative data analysis), data collected from interviews will be interpreted to validate the quantitative results as it provides a rich and in-depth investigation of the organisational context where KS happens (Wang & Noe, 2010).

5. Conclusion and Future Work

This work has explained the study-in-progress in exploring influence environment and personal factor on knowledge sharing practices moderated by transformational leadership in Vietnamese higher education institutions context. The significant contributions will yield to both theory and practice. The contributions to the literature of knowledge management are as follows: (1) to deeper understand the impact of environmental factors (subjective norms, trust) and personal factors (knowledge self-efficacy, rewards, reciprocity, PO of knowledge) on knowledge-sharing behaviour (KSB) and (2) explore and explain what are the contingent effects of environmental and personal factors and transformational leadership on KSB. It will contribute to practitioners as two following aspects: (1) to help leaders and managers understand how environmental and personal factors can help facilitate or impede the KSB that occurs during the exchange of knowledge between individuals within teams, groups and/or the whole organisation and (2) to guide leaders and managers in building the appropriate policies in promoting KS environment in their organisation in order to improve KS culture in Vietnamese HEIs which contributes to knowledge-based development initiatives.

Future work can test this proposed model empirically by using the questionnaire, followed by the validation of this model that described in section 4. Our model is expected to be tested in any organisations in which future researchers or practitioners wish to test this model.

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