The Mediating Effect of Knowledge Sharing on Emotional Intelligence and Team Performance: An Empirical Study in Vietnam

Thi-Trang-Nhung Nguyen
Department of Business Administration, Hanoi University of Industry, Ha Noi, Viet Nam
Tel: 84-983-1985-32 E-mail: ntrangnhung32@gmail.com / nguyenthitrangnhung@haui.edu.vn

Abstract
This article presents the findings of a study which tested the relationship between emotional intelligence, knowledge sharing, and team performance. Further, the study determined the influence of emotional intelligence and knowledge sharing on team performance. Although these interrelations are very important for enhancing team performance, few empirical studies analyze these relationships together. This paper examined those relationships using SEM with data from 357 employees of SMEs located in Vietnam. The results indicated that emotional intelligence indirectly enhances team performance through knowledge sharing. Besides, knowledge sharing effects directly on team performance. On the other hand, there is a positive association exists between emotional intelligence and knowledge sharing. Findings, implications and recommendation for future research from this study are discussed.

1. Introduction
In during last recent years, Emotional intelligence has been significantly considered by industry experts and intellectuals equally. This personality related factor has received the attention of behavioral and management scholars (Pradhan and Nath, 2012). Emotional intelligence is an individual characteristic that has affect from both business and academic research perspectives (Schlaerth et al., 2013). Emotional intelligence is defined as the expression of emotional state of self and others while trying to distinguish among these two, on the other hand, based on these to adjust their own behaviours and cognitions (Salovey and Mayer, 1990). Emotions and feelings are two insident side of organization. However, there was a few reseach that conducted on the emotions at workplace (Bande et al., 2015).

According to de Geofroy and Evans (2017), Emotional intelligence has a positive influence on trust, organizational commitment and teamwork. Many scholars stated that there are a negatively relationship between emotional intelligence and the behavior of hiding knowledge, besides, there are the positive relationship between emotional intelligence and the trust atmosphere in the organization, organizational commitment of individuals and teamwork behavior (Rezvani et al., 2018, Majeed et al., 2019). Reducing the behavior of hiding knowledge also means improving the behavior of sharing knowledge. When considered within this framework, it is possible to say that emotional intelligence will support knowledge sharing behavior.

Most research has only tested the direct relationship between emotional intelligence and team performance. On the other hand, various studies also analyze this relationship through intermediate constructs such as job satisfaction and organizational commitment (Naz et al., 2019), team conflict (Hendriani, 2020). However, understanding for the processes that through which the leader put into practice this influence is still limited and largely speculative. Besides, a few empirical research has been studying about association among three variables (emotional intelligence, knowledge sharing, and team performance). This study seeks to analyze empirically potent mediating variable whether emotional intelligence effect on team performance through the intermediate influence of knowledge sharing.

To summarize, this study analyzes the influence of emotional intelligence on knowledge sharing and team performance emphasizes the importance of empirical research to affirm these relationships. The model also proves a positive and significant link between knowledge sharing and team performance. To achieve these objectives, the paper develops as follows. The section on hypotheses, based on prior researches, the paper showed the influence of emotional intelligence on knowldege sharing and team performance, the influence of knowledge sharing on team performance. The method section presents data and method used to analyze the hypotheses. The paper is researched in Vietnamese context. The result section presents the findings. The last, the conclusion and future research section presents results and some limitations of this study.
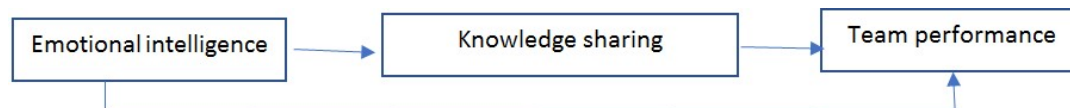
Figure 1. Research model

2. Literature and Hypotheses

2.1. The influence of emotional intelligence on knowledge sharing

It is possible for one`s emotional state at a given moment to affect his or her attitude towards knowledge sharing and his or her intention to actually share that knowledge (Van Den Hooff et al., 2012). Employees control their emotions together voluntarily to help inspreading knowledge throughout their organization. But, they need to eliminate the negative perceptions within the organizational environment and employ a participatory management in order to help this to happen (Tamta and Rao, 2017).

The higher emotional intelligence people have, the higher ability to accurately read other people`s emotions. This helps people to understand how to react and behave in various social situations (Miao et al., 2017). Inndividuals that have high emotional intelligence can manage their emotions, therefore, they don`t think of giving up and quitting in case of unpredicted situations that may have a negative influence of them. So, such individuals are less prone to quit than others. Consequently, as emotionally intelligent people are also socially intelligent (Priyadarshi and Premchandran, 2019), employees with high emotional intelligence are expected to positively affect knowledge sharing behavior.

H1: There will be a direct positive relation between emotional intelligence and knowledge sharing

2.2. The influence of emotional intelligence on team performance

Teams and their performance are one of the facts developing and spreading management prospects nowadays. Team performance has obtained special position in the 21st paradigm. In the literature, we can find many defination about teamwork; Team is a group of individuals namely independent performance of the duties, sharingresponsibility, in one or more social systems that can be seen by themselves or others andcarrying out their relations within the framework of organizational boundaries.

Past research has shown the importance of emotional intelligence to the achievement of successful outcomes (Rezvani et al., 2018), the management literature is replete with unsubstantiated generalizations, with much of the existing evidence bearing on the role of emotional intelligence for leader at the individual level. As such, this literature appears to have overlooked the assessment of EI for team members at the team level.

H2: There will be a direct positive relation between emotional intelligence and team performance

2.3 The influence of knowledge sharing on team performance

In knowledge intensive era, knowledge sharing behavior is a key factor to enhance organizational success. Knowledge management is very useful for companies or organizations, by reducing cycle times of processing, improving the quality of decision-making with better information, improving human resource innovation and productivity, reducing recurrences of the same errors, improving customer responses, increasing flexibility and the capability to adapt, and mproving the ability of companies or organizations to share and learn. Therefore, if knowledge management is applied, then the company or organization will become a learning organization, which is one of the competencies that is needed in the uncertainty of today's market environment for anticipating change by giving priority to flexibility, responsiveness, quality, dependability, service, and cost.

The phenomena of knowledge sharing is imperative in teams and organizations. The foundation of knowledge management is the sharing of knowledge that encourages ability to provide effective outcomes (Huang et al., 2013). In this article knowledge sharing is being examined as an important factor that has propensity to produceteam performance. As a social behavior knowledge sharing of an individual working in team is inevitably susceptible to various social influences arising from other team members. Specifically, knowledge sharing in work teams refers to team members sharing task relevant information, experiences, and perspectives with each ot

H3. There will be a direct positive relation between knowledge sharing on team performance

2.4. Emotional intelligence to team performance as mediated by knowledge sharing

The research of Baruch and Lin (2012) established a model based on competition theory to explain the formation of team performance in virtual teams. The article found that, there is an indirectly relationship between team performance and social capital via the mediation of cooperation, emotional intelligence and team competence. Several past studies have pointed out the relationship between emotional intelligence and team performance because emotional intelligence itself represents the capability to use emotions to facilitate performance. Emotional intelligence can predict team performance at both initial and later stages which could help in problem

solving and contributes to team performance. Additionally, high emotional intelligence tends to help cultivate positive social exchanges, social support or advice among the team members. Hence, employees that have high emotional intelligence will have the tendency to regulate their own emotions as well as manage other's emotions to raise more positive relationships and consequently, contributes to better team performance (Baruch and Lin, 2012). The finding of this study stated that emotional intelligence and team competence only affects team performance rather than knowledge sharing. Furthermore, emotional intelligence and team competence both reflect the types of team capability that can improve performance.

H4. The relationship between emotional intelligence and team performance will be sequentially mediated by knowledge sharing

3. Method

3.1. Sample and procedures

This article adopted an empirical data based on a survey of 45 SME firms located in Vietnam. We first communicated with representatives of these firms by phone. In some case, we made personal visits to interpret the goals of the research and inquired for assistance in collecting data. Employees who are working at the important departments of these companies such as operation, accounting, R&D, marketing, and sale… were selected to answer survey questionnaires.

We distributed total 900 questionnaires and then received 512 questionnaires which were properly filled and useable. Response rate was 56.89%

3.2. Measures

We chosen the measures that used in this paper because of two reasons. Firstly, there are consistently strong reliabilities across a number of prior studies in these measures. Secondly, they represented the behavior and attitude that is relevant for the current study.

3.2.1. Emotional intelligence

We adopted five items used in (Wong and Law, 2002b) to measure emotional intelligence. These items are suitable for this present research. We used a five-point Likert scale (1 "totally disagree", 5 "totally agree) in the questionnaire what required subordinates indicate their perceptions about behavior of emotional intelligence in the team. One item of which is "I always know my friends` emotions from their behaviour". The authors used a confirmatory factor analysis to validate this scale. The result stated that Chi-square/df = 2.607, Normed Fit Index [NFI] = .926, Goodness of Fit Index [GFI] = .922, Comparative Fit Index [CFI] = .926, Incremental Fit Index [IFI] = .926. The scale is unidimensional. This procedure allowed selection of five items. The cronbach`s alpha for emotional intelligence was .772 indicating good reliability.

3.2.2. Knowledge sharing

To assess knowledge sharing, we used five items developed by (Lee, 2001). We used a five-point Likert scale (1 "totally disagree", 5 "totally agree) for these items. These items are duly adapted to this present research. One item of which is "we and our service provider share business proposals and reports with each other". The authors develop a confirmatory factor analysis to validate the employee trust (Chi-square/df = 2.520, Normed Fit Index [NFI] = .942, Goodness of Fit Index [GFI] = .938, Comparative Fit Index [CFI] = .946, Incremental Fit Index [IFI] = .946) and show that the scale is unidimensional and has high validity and reliability (cronbach`s alpha = .811).

3.2.3. Team performance

We adopted (Tjosvold, 1988) five– item team Performance Scale which uses a Likert-type 5-scale (1 "totally disagree", 5 "totally agree). These items are duly adapted to this present research. One item of which is "our group accomplished our goals well". The authors develop a confirmatory factor analysis to validate the organizational performance (Chi-square/df = 12.716, Normed Fit Index [NFI] = .92, Goodness of Fit Index [GFI] = .927, Comparative Fit Index [CFI] = .925, Incremental Fit Index [IFI] = .926) and show that the scale is unidimensional and has high reliability (cronbach`s alpha = .865).

4. Results

This section presents the main study results.

The first, as shown in Table 1, knowledge sharing was positively related to team performance (r = .31, p < .01). Emotional intelligence was positively related to team performance (r = .36, p < .01), and knowledge sharing (r = .48, p < .01).

The second, discriminant validity refers to the degree to which items differentiate between constructs, and it is assessed by applying the following criteria: (1) The square root of the average variance extracted of each latent variable from its indicators should exceed that construct`s correlation with other constructs; (2) the items should load more highly on constructs they are intended to measure than on other constructs (Chin et al., 2003). As shown table 1, the square root of the average variance extracted (AVE) of each latent construct is greater than

IISTE

that construct`s correlation with other constructs.

Table 1 Mean, standard deviation, Correlation and Reliabilities

		Mean	SD	1	2	3
1	**Team performance**	3.93	0.53	**0.707**		
2	**Knowledge sharing**	3.72	0.58	0.31**	**0.768**	
3	**Emotional intelligence**	3.65	0.62	0.36**	0.48**	**0.711**

** Correlation is significant at the 0.01 level (2-tailed).
The values of square root of AVE for discriminant validity are in parentheses along the diagonal

In addition, as shown table 2, the items load higher on constructs they are intended to measure than other constructs. The results suggest good discriminant validity.

Table 2. Item loading of the latent constructs

Items	Team performance	Knowledge sharing	Emotional intelligence	Conronbachs` alpha
TP1	.706			.865
TP2	.812			
TP3	.723			
TP4	.647			
TP5	.618			
KS1		.837		.811
KS2		.819		
KS3		.732		
KS4		.622		
KS5		.672		
EI1			.870	.772
EI2			.865	
EI3			.849	
EI4			.799	
EI5			.782	

Note: (1) Extraction Method: Principal Axis Factoring
(2) Rotation Method: Promax with Kaiser Normalization

Moreover, significant and positive correlations exist among team performance, knowledge sharing, and emotional intelligence. Initially, a series of regressions (table 3) shows the direct effects analyzed in the research and uses a series of tests (e.g., tolerance, variance inflation factor) to confirm the non-presence of multi-colinearity (Hair et al., 2009).

Table 3: Regressions

Dependent variables	Knowledge sharing		Team performance	
Independent variables	**Coefficients (t statistic)**	**TOL (VIF)**	**Coefficients (t statistic)**	**TOL (VIF)**
Constant	1.326*** (4.763)		2.607***	
Emotional intelligence	.573*** (6.093)	1.00 (1.00)	.165* (2.416)	.823 (1.203)
Knowledge sharing			.138* (2.484)	.823 (1.203)
R^2	.368		.257	
Adjusted R^2	.366		.243	
F	65.322		53.562	
Standard Error	.865		.678	

*Note: * p<.05; ** p<.01; *** p<.001 (two-tailed), TOL = Tolerance; VIF = Variance Inflation Factor*

On the other hand, the authors used structural equations modeling to estimate direct and indirect effects using AMOS 22 program. This type of analysis has advantage of correcting for unreliability of measures and also provides information on the direct and indirect paths between multiple constructs after controlling for potentially confounding variables. Figure 2 shows the standardized structural coefficients. The magnitude of coefficients reflects the relative importance of variables.
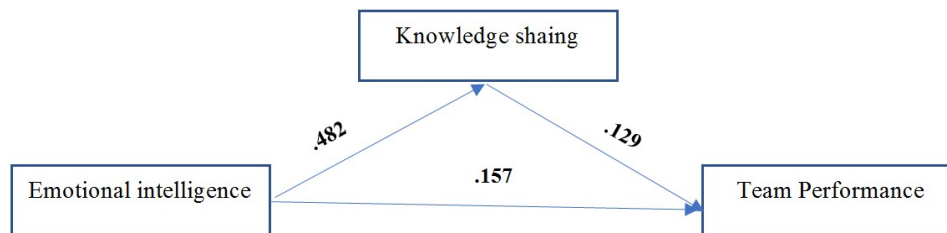
Figure 2. Results of structural equation model

For the quality of measurement model for the sample, the scales display satisfactory levels of reliability, because the composite reliabilities range from 0.764 to 0.912 and the Average Variance Extracted from 0.548 to 0.672. The authors examine both the significance of the factor loadings and the Average Variance Extracted. The Average Variance Extracted should be greater than the amount of measurement error (AVE>0.5).

All of multi-item scales meet this criterion; each loading (λ) is significantly related to its underlying factor (t-values>7.93) in support of convergent validity. The overall fit measures, multiple squared correlation coefficients of the variables, and signs and significance levels of the path coefficients indicate that the model fits the data well (Chi–square = 216.241 (p=0.00) Chi-square/df=2.102 IFI=.926 GFI=.901 TLI=.926 CFI=.926 RMSEA=.048).

Table 4 shown that emotional intelligence is closely related to and effects knowledge sharing ($\gamma 11$=.482, p<.001), team performance ($\gamma 12$=.157, p<.001), as predicted in hypotheses 1 and hypotheses 2, respectively. Knowledge sharing influences directly team performance ($\beta 21$=.129, p<.05), supporting H3. Moreover, the results show an indirect effect of emotional intelligence on team performance (.09, p<.001) by knowledge sharing (.482x.129). Comparing the magnitudes of these effects indicates that the effect of emotional intelligence on team performance is larger than the total effect of knowledge sharing on team performance. Globally, the model explains team performance well, supporting H4.

Table 4: Structural model results

Effect from	To	Direct effects [a]	Indirect effects[a]	Total effects[a]
Emotional intelligence	Knowledge sharing	.482***		.482***
Knowledge sharing	Team performance	.129*		.129*
Emotional intelligence	Team performance	.157***	.09***	.247***
Goodness of fit statistics		Chi–square = 216.241 (p=0.00) Chi-square/df=2.102		
		IFI=.926 GFI=.901 TLI=.926 CFI=.926 RMSEA=.048		

Note: [a]Standardized structural Coefficients; *p<.05, **p<.01, *** p<.001

5. Discussion
This study makes three contributions to the literature.

First of all, we developed and examined a model that integrates the theories of emotional intelligence and performance. Although a number of past studies have reviewed the relationship between emotional intelligence and team performance (Sosik and Megerian, 1999), this is the first to investigate the direct and indirect effects of emotional intelligence on team performance in SMEs firm context. Since SME organizations have clearly outcome, the main contribution of this work is thus this model, which has a strong theoretical foundation and can be used to assess the influences of emotional intelligence based on SME firms` data in Vietnam. Moreover, the results of this empirical study support the conclusion of prior behavior scholars that emotional intelligence has significant effects with regard to fostering team performance.

Second, our results show that increases in employee knowledge sharing related to increases in their team performance. As predicted, our findings reveal that strengthening employee knowledge sharing can enhance their team performance. Our findings also show that if employees can be made to foste their individual emotional intelligence, then both their knowledge sharing and team performance can be enhanced due to this causal chain mechanism, especially in SMEs research.

Third, we examine knowledge sharing as a mediator of the impact of emotional intelligence on team performance. Most important of all, the results of our study contribute to the literature by treating knowledge sharing as variable that connect emotional intelligence theory and performance theories in the SMEs context.

6. Study limitations and future research
This investigation has several limitations. First, the study measures the variables based on the employees` perceptions (single respondents), which involve a certain degree of subjectivity. A second limitation of this study concerns the measures of emotional intelligence. Although some studies used CEOs or managers to interview in their surveys (Wong and Law, 2002a, Sosik and Megerian, 1999), this study concentrated to interview employees. Because, many researches affirmed that "interviewing and administering questionnaires to all other

organizational members world have been preferable to verify leaders` self-report of their behavior". On the other hand, we could also use different scales to measure emotional intelligence, knowledge sharing, and team performance. Third, the model only analyzes the relation between emotional intelligence and team performance through employee knowledge sharing. Although selected variable explaining an acceptable amount of variance in employee`s team performance, research could analyze other intermediate constructs, such as organizational commitment, employee satisfaction. Future studies might also examine other mediating constructs in the relationship between transformational leadership and performance. Moreover, we might investigate in other`s context.

References

BANDE, B., FERNÁNDEZ-FERRÍN, P., VARELA, J. A. & JARAMILLO, F. 2015. Emotions and salesperson propensity to leave: The effects of emotional intelligence and resilience. *Industrial Marketing Management,* 44**,** 142-153.

BARUCH, Y. & LIN, C.-P. 2012. All for one, one for all: Coopetition and virtual team performance. *Technological Forecasting and Social Change,* 79**,** 1155-1168.

CHIN, W. W., MARCOLIN, B. L. & NEWSTED, P. R. 2003. A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. *Information systems research,* 14**,** 189-217.

DE GEOFROY, Z. & EVANS, M. M. 2017. Are emotionally intelligent employees less likely to hide their knowledge? *Knowledge and Process Management,* 24**,** 81-95.

HAIR, J. F., BLACK, W. C., BABIN, B. J., ANDERSON, R. E. & TATHAM, R. L. 2009. *Análise multivariada de dados*, Bookman editora.

HENDRIANI, S. 2020. The influence of emotional intelligence on team performance through knowledge sharing, team conflict, and the structure mechanism. *Journal of Management Development*.

HUANG, M.-C., CHIU, Y.-P. & LU, T.-C. 2013. Knowledge governance mechanisms and repatriate's knowledge sharing: the mediating roles of motivation and opportunity. *Journal of Knowledge Management*.

LEE, J.-N. 2001. The impact of knowledge sharing, organizational capability and partnership quality on IS outsourcing success. *Information & management,* 38**,** 323-335.

MAJEED, N., JAMSHED, S., NAZRI, M. & MUSTAMIL, N. M. 2019. Walk the Talk: Bringing Spirituality to Workplace through Transformational Leadership and Emotional Intelligence in Higher Education Institutions. *Jurnal Pengurusan*.

MIAO, C., HUMPHREY, R. H. & QIAN, S. 2017. Are the emotionally intelligent good citizens or counterproductive? A meta-analysis of emotional intelligence and its relationships with organizational citizenship behavior and counterproductive work behavior. *Personality and Individual Differences,* 116**,** 144-156.

NAZ, S., LI, C., NISAR, Q. A. & RAFIQ, M. 2019. Linking emotional intelligence to knowledge sharing behaviour: mediating role of job satisfaction and organisational commitment. *Middle East Journal of Management,* 6**,** 318-340.

PRADHAN, R. K. & NATH, P. 2012. Perception of entrepreneurial orientation and emotional intelligence: A study on India's future techno-managers. *Global Business Review,* 13**,** 89-108.

PRIYADARSHI, P. & PREMCHANDRAN, R. 2019. Millennials and political savvy–the mediating role of political skill linking core self-evaluation, emotional intelligence and knowledge sharing behaviour. *VINE Journal of Information and Knowledge Management Systems*.

REZVANI, A., KHOSRAVI, P. & ASHKANASY, N. M. 2018. Examining the interdependencies among emotional intelligence, trust, and performance in infrastructure projects: A multilevel study. *International Journal of Project Management,* 36**,** 1034-1046.

SALOVEY, P. & MAYER, J. D. 1990. Emotional intelligence. *Imagination, cognition and personality,* 9**,** 185-211.

SCHLAERTH, A., ENSARI, N. & CHRISTIAN, J. 2013. A meta-analytical review of the relationship between emotional intelligence and leaders' constructive conflict management. *Group Processes & Intergroup Relations,* 16**,** 126-136.

SOSIK, J. J. & MEGERIAN, L. E. 1999. Understanding leader emotional intelligence and performance: The role of self-other agreement on transformational leadership perceptions. *Group & organization management,* 24**,** 367-390.

TAMTA, V. & RAO, M. 2017. Linking emotional intelligence to knowledge sharing behaviour: organizational justice and work engagement as mediators. *Global Business Review,* 18**,** 1580-1596.

TJOSVOLD, D. 1988. Cooperative and competitive interdependence: Collaboration between departments to serve customers. *Group & Organization Studies,* 13**,** 274-289.

VAN DEN HOOFF, B., SCHOUTEN, A. P. & SIMONOVSKI, S. 2012. What one feels and what one knows:

The influence of emotions on attitudes and intentions towards knowledge sharing. *Journal of knowledge management*.

WONG, C.-S. & LAW, K. S. 2002a. The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *The leadership quarterly,* 13**,** 243-274.

WONG, C.-S. & LAW, K. S. 2002b. Wong and law emotional intelligence scale. *The Leadership Quarterly*.