

Chapter 3

**AN EMPIRICAL INVESTIGATION OF
KNOWLEDGE MANAGEMENT IN VIETNAMESE
SMEs**

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ABSTRACT

Knowledge management (KM) is a discipline that improves the ability of companies in solving problem, adapt with changing in business, also helping them to gain and sustain their competitive advantages. This study is carried out with the objective to identify the measurement scale of KM practices, and to explore the impact of KM practice on the performance of small and medium enterprises in Vietnam. The data collection was analyzed by SPSS software with the sample size of 103. The participants are directors, managers and employees of Vietnamese SMEs. Analysis results showed that 3 main KM practices have positive impact on business success, including: Culture (0.321), Policy (0.099), and Knowledge acquisition (0.033), but the impact of Training on business success is not confirmed. The result also showed that there is a difference in understanding and applying KM across three categories of firm size: medium, small and very small enterprises. Some managerial implications have been suggested for managers of Vietnamese SMEs to enhance their performance based on KM approach in the future.

Keywords: Knowledge management; Vietnamese SME; KM practice; Empirical

INTRODUCTION

In knowledge economy, knowledge has become one of the most important resources for business success. Today, organizations of all sizes are becoming

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more knowledge intensive, and the needs for leveraging the value of knowledge are increasing (Wong, 2005).

Currently, small and medium enterprises (SMEs) play a main role in economic development of any country. Nearly 99% of Vietnamese businesses are SMEs; These SMEs hired about 77% of the total workforce and accounted for over 40% of total GDP.

In addition, in context of knowledge management, SMEs are facing some troubles such as knowledge loss due to high rate of employees turnover, capacity of employee to share their knowledge; also difficult to attract skilled talents, reluctant to share knowledge. Vietnamese SMEs' managers are realizing the importance of knowledge resource and are going to apply KM practices in sustaining their businesses (Pham, 2010). However, the real impact of applying KM in the business success of SME in a developing country like Vietnam is not confirmed yet.

So that, this study aims is to investigate the practices of knowledge management and to measure the impact of KM practices on the business performance of Vietnamese SMEs. This research's objectives include: (1) Measuring the impact of KM practices on business success of Vietnamese SMEs, and (2) Suggesting managerial implications for improving the success of Vietnamese SMEs based on KM approach.

The structure of this paper is organized as follows: (2) Definitions & research model; (3) Research method; (4) Analysis result; and finally, (5) Conclusion & Implications.

DEFINITIONS & RESEARCH MODEL

Knowledge and Knowledge Management Process

Knowledge is defined as "justified belief" (Nonaka & Takeuchi, 1996). Nonaka also clarified that knowledge is a dynamic process of human beings for proving personal belief and truth. From the viewpoint of science of cognition, knowledge is related to data and information by 2 dimensions: understanding and context independence (Serban & Luan, 2002). Besides, Polanyi (1966) classified knowledge into 2 groups: (1) tacit knowledge, which is located in human brain and difficult to capture, and (2) explicit knowledge, which is easier to capture and to present in some form.

Knowledge management is a process of realizing, sharing, using and practicing knowledge inside of an organization. For managing knowledge effectively, a knowledge management process should be established. Dalkir (2005) combined previous KM cycles and introduced an integrated KM cycle,

including 3 steps: (1) knowledge capture and creation, (2) knowledge sharing and dissemination, and (3) knowledge acquisition and application.

Knowledge Management Practice

KM practices have been grouped into four categories in OECD (2002) research as below: (1) communication; (2) training and mentoring; (3) policies and strategies; and (4) knowledge capturing and acquisition.

Based on a framework of Bozbura (2007), KM practice is measured in four complementary dimensions, including: (1) training and mentoring employees; (2) policies and strategies of knowledge management; (3) knowledge capturing and acquisition from outside; and (4) effect of organizational culture.

SME and Success of SME

SMEs can be defined by various measurement criteria such as number of employees, volume of sales, value of assets, insurance in forces and volume of deposits. Additionally, definition of SMEs varies depend on different industries. Other common measures are the use of turnover and operating capital, but as it may be sensitive to ask for this information it is suggested to use number of employees in designing research for easier data collection (Burgess et al., 2009).

In the scope of Vietnam, a small enterprise is any business with 10 to 50 regular employees and the capital requirement is not over 10 billion VND; from 50 to 100 employees is called medium enterprises and the capital requirement is in the range from 10 billion VND to 50 billion VND. For this study, Vietnamese SMEs are classified based on number of full-time employees, as the following: a business that employed 1 to 9 employees is very small enterprise, small enterprise is business that employed from 10 to 50 employees and medium enterprise has from 50 to 100 employees.

The success of SMEs is defined differently by owner-manager, business support agencies and others. Success, in general, related to the achievement of goals and objectives. In business researches, the notion of success is often mentioned to firm's financial performance. Yet, business success can be defined in many ways (Foley & Green, 1989). There are at least two important dimensions of success: 1) financial vs. other success; and 2) short-term vs. long-term success. Therefore, the form of success is different such as survival, profit, sales growth, return on investment, happiness, reputation, number of employed... Generally, success can be explained differently. In this research context, business success is measured by overall perception of SMEs' managers about their business situation.

Research model

Based on Bozbura (2007) and real observations about the impact of Knowledge Management practices on the success of Vietnamese SMEs, the hypothesis and research model are suggested as follows:

H1: Training and mentoring employee process has a positive impact to the success of SMEs.

H2: Policies and strategies of KM has a positive impact to the success of SMEs

H3: Knowledge capturing and acquisition from outside has a positive impact to the success of SMEs

H4: Effect of organizational culture has a positive impact to the success of SMEs.

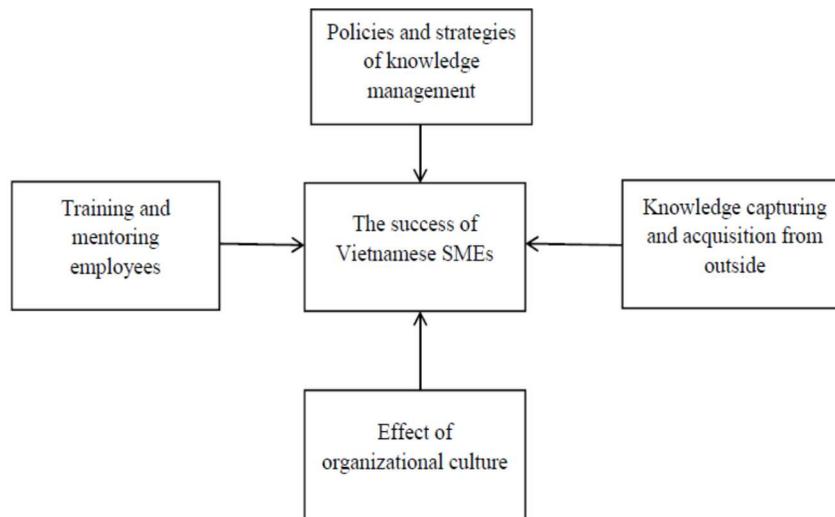


Figure 3.1. Research model (Source: Bozbura, 2007)

RESEARCH METHOD

General approach: The combined qualitative and quantitative methods are used for this research, divided into two stages: Stage 1 is for qualitative research, stage 2 is for quantitative research. The findings from the qualitative research will be a fundamental basis to finalize the questionnaire used for quantitative research.

The measurement scale of this study was based on Bozbura (2007), including 19 items of 4 dimensions of KM and the success of SMEs.

Qualitative analysis: group discussion with experts, managers and employees of Vietnamese SMEs for revising the questionnaire. Please see the finalized questionnaire in the appendix.

Quantitative analysis: conducting survey for data collection, data evaluation and analysis, including: descriptive statistics, regression analysis, ANOVA analysis.

DATA ANALYSIS & RESULTS

The survey questionnaire was sent out to 150 interviewees who worked in 150 different SMEs. The interviewees can be the general manager, directors, assistant director or functional managers who worked at least 3 years in enterprises. There were 103 validated responses (suitable position, answer all the questions, not the same answer for all questions...).

Descriptive statistics

Table 3.1. Descriptive statistics of sample

	<i>Item</i>	<i>Frequency</i>	<i>Percent</i>
Size	<10	15	14.6
	10-50	43	41.7
	50-100	45	43.7
	<i>Total</i>	<i>103</i>	<i>100.0</i>
Field of business	Architecture	25	24.3
	Construction	24	23.3
	Garment & Textile	19	18.4
	IT	19	18.4
	Others	16	15.5
	<i>Total</i>	<i>103</i>	<i>100.0</i>
Year of existence	>5 years old	41	39.8
	<= 5 years old	62	60.2
	<i>Total</i>	<i>103</i>	<i>100.0</i>

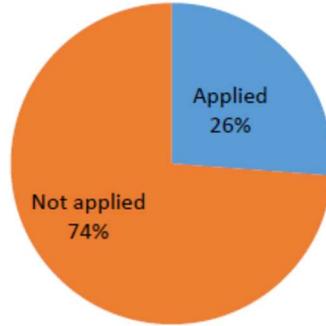


Figure 3.2. Percentage of SMEs applied KMS in Vietnam

In this sample, all of the businesses is small and medium sized enterprises, in which 50-100 size is the majority group (#44%). Most of the SMEs belong to architecture or construction industry (#48%). The age of sample SMEs is fairly young - less than 5 years old (60%). This sample structure is similar to the overall structure of SMEs in Vietnam. Therefore, it could be a proper representation for the whole population of Vietnamese SMEs.

However, although the responding SMEs already applied some forms of KM practices, but most of them (74%) have not applied KMS inside of their businesses. This situation is suitable with previous researches [10, 11] about KM application in Vietnamese SMEs.

Exploratory factor analysis (EFA) & Cronbach alpha analysis

Assessment of the scales is executed by two steps:

- Step 1 is for testing the reliability of individual scale.
- Step 2 is for testing the all scales together to measure the discriminability and validity of scales.

According to Tho (2012), the reliability of scales for individual factor is valid with Cronbach alpha ≥ 0.6 and its correlation must be ≥ 0.3 . To test convergent validity and discriminant of the scales, a joint EFA is executed.

The result of Cronbach Alpha analysis is summarized in the following table.

Table 3.2. Cronbach alpha analysis result

Variable	Items	Cronbach's alpha
Training & mentoring employees	4	0.699
Policies & strategies of KM	5	0.785
Knowledge capturing & acquisition from outside	5	0.636
Effect of organizational culture	4	0.616

The Exploratory Factor Analysis (EFA) method conducted to test the validity of the measurement of scales. The EFA testing has showed the result that KMO values (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) of all the independent factors are greater than 0.5 at the KMO and Bartlett's Test significance of .000 (< 0.05). So, the extracted variance meets the requirement of EFA testing.

After EFA, 3 questions were deleted because they were not qualified, including: hiring consultant to work with workforce, using internet to obtain knowledge, and has an encouraging environment to develop ideas and express opinions. The scales reduced from 18 items to 15 items and regroup into 4 groups. With the Eigenvalues of 4 factors is greater than 1, the result of this has showed that the factors in this construction were not changed. Besides, the percentage of cumulative has explained of the 54.086% of the variances.

Hypothesis Test

The linear regression analysis result is summarized in the table below. Conclusions for hypothesis test are included also. The R-square is 0.536 and the adjusted R-square is 0.525, which is good to use the model to explain the impact of KM practice on the success of SMEs in Vietnam.

Table 3.3. Linear regression analysis result

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.490	1.125		1.325	.000
	Training	.107	.139	.075	.769	.443
	Policies	.187	.181	.099	1.034	.004
	Culture_1	.483	.144	.321	3.346	.001
	Capture 1	.046	.134	.033	.347	.029

a. Dependent Variable: The success of SMEs

Table 3.4. Hypothesis test result

H	Relationships	Beta	p-value	Conclusion
H1	Training & mentoring => Success	0.075	0.443	Rejected
H2	Policies & strategies => Success	0.099	0.004	Supported
H3	Knowledge capture => Success	0.033	0.029	Supported
H4	Organizational culture => Success	0.321	0.001	Supported

ANOVA analysis

In order to test whether there is a difference of KM practices according to firm size, year of running... ANOVA analysis and Post Hoc test are used. The analysis results are summarized as follows:

- There is a difference between companies with different size. For example, in the scope of “investing R&D and technology”, medium sized companies seem to surpass compared with small size companies (mean difference is 0.273). The differences between medium sized enterprises and very small sized enterprise were described in “taking professional support from outside to obtain knowledge about the company’s environment” (mean difference is 0.5). Lastly, “using knowledge obtained from its supply and competitors” is more important for small enterprises compared to medium sized enterprises (mean difference is 0.339).

- However, there is no difference in effect of organizational culture across three categories of firm size.

- There is a difference in training and mentoring employees between SMEs according to their ages. The companies which run over 5 years think that training activities are more important than companies which run less 5 years.

CONCLUSION & IMPLICATIONS

In summary, this research explored the impact of knowledge management practices on business success of Vietnamese SMEs. Based on research model of Bozbura (2007), there are 4 dimensions of knowledge management practice impacting on the success of SMEs, including: training and mentoring employee, policies and strategic of KM, knowledge capturing and acquisition from outside, effect of organizational culture.

The research model has been tested with sample data from Vietnamese SMEs. Analysis results showed that 3 main KM practices have positive impact on business success including: Culture (0.321), Policy (0.099), and Knowledge acquisition (0.033), but the impact of Training on SME’s success is not confirmed.

The result also showed that there is a difference in understanding and applying KM across three categories of firm size: medium, small and very small enterprises.

In conclusion, the most difficult thing of KM in Vietnamese SMEs is the awareness of managers on knowledge importance. This issue relates to

organizational culture and requires SMEs' manager to pay attention to build a knowledge sharing culture.

This research could be a good reference for Vietnamese SMEs in order to apply knowledge management practices. Based on the analysis results, the following managerial implications are proposed for ensuring the success of Vietnamese SMEs based on KM practices:

- Building a knowledge-sharing culture is necessary for SMEs to support knowledge sharing, and to raise productivity.
- Pay attention to human resource management and knowledge oriented reward policy, such as: teamwork, co-working, training new employees, and rewards.
- The companies should build an up to date document management system or knowledge portal to facilitate knowledge flow. Applying modern ICT in companies to support communicating, collaborating and knowledge management processes.
- Besides, the managers also need to focus on building a good training, coaching and mentoring program for improving the effectiveness of knowledge sharing activities.

There are some limitations and future directions for further researches, including:

- Small sample size and limited in Ho Chi Minh City. Further research could conduct a survey for the whole country to increase reliability.
- Comparison of KM practices of SMEs in Vietnam and in other countries at the same developing level is also a good direction for future research.
- Some other determinants of SMEs' success were not put in the research model. Further factors should be added and evaluated in the future research for better forecasting of SMEs' success.
- Current measurement scale of business success based on perception of managers is somehow subjective; it could be replaced by adding some quantitative and objective scales.

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APPENDIX 3.1. QUESTIONNAIRE

Part A – General Information of the enterprise

1. The size of your company
 - < 10 employees
 - 10 to 50 employees
 - 50 to 100 employees
 - > 100 employees
2. Industry type of your company
 - Architect
 - Construction
 - Garment and textile
 - Information technology
 - Other

3. How long have your company existed
 - More than 5 years
 - Less than 5 years
4. What is your position in company?
 - Employee
 - Team leader
 - Director
 - Manager/ Head of department
 - Other

Part B – KM related factors (7 levels Likert scale)

5. Formal training given to employees in work-related subjects
6. Formal training given to employees in personal skill
7. Encouraging workers to continue their education
8. Provide formal mentoring practices
9. Access quick and easy to information
10. Existence of a bureaucratic system
11. MIS contains all knowledge, including strategic definition
12. Investing R&D and satisfactory technology
13. Access to and update of the database frequency
14. Using knowledge obtained from supply chain and competitors
15. Using knowledge obtained from public institutions
16. Take professional support from outside to obtain knowledge about the company's environment
17. Using the internet to obtain external knowledge
18. Hiring consultants to work with the internal workforce
19. Experienced workers or managers transfer their knowledge to new or less experienced workers
20. Has a value system or culture promoting knowledge sharing
21. Teamwork is encouraged
22. Has an encouraging environment to develop and implement ideas and express opinions.

Part C – KM application & business success

23. Have your business ever applied a KM system?
24. How do you rate the current level of success of your business?

THANK YOU!