Knowledge Management as a solution for the shortage of competent employees in SMEs at the developing country
(Case study: Vietnam)

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Abstract: This paper presents partial results from the first empirical study of KM in SMEs of Vietnam. A preliminary survey had revealed that KM is an important issue for SMEs in Vietnam. With scarce resources compared to large firms, SMEs in developing countries normally focus on real and visible practical objectives. KM is perceived as a difficult-to-measure aspect as it belongs to strategic management for the long term and is mainly related to promoting innovation: not a field to which such SMEs are likely to dedicate much effort. Using statistical analysis and fuzzy methodology, this paper formally verifies whether the inferences from the preliminary study really hold for the general population of Vietnamese SMEs, and from there proposes obvious actions to be taken to solve the shortage of competent employees. The findings presented in this paper could help academics and practitioners to understand more about the operations of SMEs in developing countries as well as to suggest a feasible approach to initiate KM for SMEs.

Key words: Knowledge, Knowledge Management (KM), Small and Medium-Sized Enterprise (SME), Vietnam

1. Introduction

Business can be classified by size, although economic statistic categorization may vary somewhat across countries. Small and medium sized enterprises (SMEs) are grouped in all economies as it is recognized that they need a special treatment because of their typical characteristics as well as their important contribution to the national economy. This recognition has been increasing worldwide, but academically, it seems not to receive enough attention. This fact can be seen in the Knowledge Management (KM) field. Most KM research focuses on big and resource-rich corporation (Wong, 2005). After more than 30 years of development, studies about KM practices in SMEs are still rare. The present empirical research was conducted in Vietnam – a developing country in the Southeast Asia – with the desire to partly fill this lacuna in the literature as well as to find out the way to implement KM for SMEs there.

KM is perceived as a difficult-to-measure aspect as it belongs to strategic management for the long term and is mainly related to promoting innovation: not a field to which such SMEs are likely to dedicate much effort. But the preliminary survey conducted by the beginning of 2010 revealed that, while unaware of the academic terminology, SMEs in Vietnam are doing their best to deal with KM issues (Nguyen et al., 2010). They do this primarily to maintain their business, and secondarily to develop it. This confirmed the previous experience of the authors. The result also identified the main motivation for SMEs to implement KM-related activities, which is the search for solutions to a chronic shortage of competent employees. The observation and the mini-consultation with some SMEs business owners have brought up the two probable main causes for this shortage: (1) the departure of knowledge employees from SMEs and/or (2) other employees don’t learn how to work effectively.

This paper partly presents the empirical data selected from 87 SMEs in Ho Chi Minh City – the biggest commercial city of Vietnam. The findings presented in this paper could help academics and practitioners to understand more about the operations of SMEs in developing countries as well as to suggest a feasible approach to initiate KM for SMEs. The paper is divided into six sections including the introduction. The second section briefly reviews the literature of KM and KM for SMEs. The third section presents the current situation of Vietnam economy as well as of Vietnam SMEs. The fourth
section elaborates the methodology applied for the empirical research. The fifth section presents the findings of the research and discusses the results of the study. The implication and the limitations of the research are included in the last section – the conclusion.

2. Theoretical background

2.1 Knowledge and Knowledge Management (KM)

Knowledge is considered a key business resource [2], [4], [11], [10], [14] and knowledge management has received increasing attention. Knowledge may be viewed from several perspectives; accordingly, perceptions of KM vary and KM is defined in enterprises as the formal management of knowledge resources to facilitate knowledge access and reuse (generally enabled by advanced information technology) [13]. Much academic work primarily focuses on IT efforts in KM [8], [9], [19] Focused more on organizational aspects of KM, Von Krogh referred KM to the identification and leveraging of collective knowledge to help the organization compete [21]. Gupta defined KM as “a process that help organizations find, select, organize, disseminate and transfer important information and expertise necessary for activities such as problem solving, dynamic learning, strategic planning and decision making” [7]. Generally, there is a unanimous agreement that people, processes, culture, technology are core components of KM. KM implementation varies depending on context and intent.

Pillania’s definitions of knowledge and KM include the social and professional dimensions and fit well with what is needed for actually doing business. According to him, knowledge is the whole set of intuitions, reasoning, insights and experience related to technology, products, processes, customers, markets, competition etc., that enable effective action; and KM is a systematic, organized, explicit and deliberate ongoing process of creating, disseminating, applying, renewing and updating the knowledge for achieving organizational objectives [14]. This defines KM as a comprehensive concept covering all aspects of business concerning people, process, technology, and the environment as Drucker envisioned [6].

2.2 Knowledge Management for SMEs

There are still very few studies which examine KM issues related to small business, despite the huge number of it in every national economy. If SMEs operate under pressure and suffer a lack of resources in developed countries, they have to face even more difficulties in developing countries, and ‘the issue that small and medium–sized business will face will not be simply a scaled-down replica of large–company experience’ [15], [18] [22]. Existing research reveals only a few studies about KM application in SMEs, especially in the context of developing countries. Those studies recognized significantly different issues for implementing KM in SMEs. Wong identified eleven critical success factors for implementing KM in the SME sector [22]. Sparrow proposed a model to guide knowledge projects in small firms as well as identified the phases in the KM development process in SMEs [18]. There were a lot of efforts to find the answer to the question of how to apply KM effectively into an SME operation, all seeking the optimum way for SMEs to implement/deploy KM in their operation. In all research however, there is no focus on Vietnam. The main reason is that KM is not yet known (or popular) in Vietnam. Current thinking holds that the Vietnamese economy is at a very early stage of development, and that this is not the right time for the application of advanced management tools such as KM. However, we are using a different mindset and thinking process in this paper. As the “late-comers” to the global market, businesses from developing countries need to choose a smarter way and take a short cut in order to play “catch-up” with the competition. Businesses in poor-resource developing countries—starting from ground zero—have no choice other than maximizing intelligent use of scarce resources and acquiring increased knowledge in order to “leap-frog” the competition [11].

3. SMEs in Vietnam and the issues

In this section, some basic economical figures of Vietnam were presented, outlined the “panorama” of Vietnamese economy at the current time. Vietnamese SMEs’ issues were also discussed to help us understand the difficulties that SMEs have to face with in such tough business environment.

3.1 The Vietnamese economic situation

In 1986 Vietnam launched a political and economic renewal campaign (Doi moi) that introduced reforms intended to facilitate the transition from a centralized planned economy to a “socialist-oriented market economy”. The economic reform focused on the three main objectives: (1) Changing from
a centrally planned and controlled economy to a market economy (with a socialist orientation) (2) Involving a shift from the policy of giving priority to the state owned enterprises to the policy of developing multi-ownership businesses and promoting private businesses; and (3) Changing investment policy that formerly emphasized heavy industries into policies of giving higher priority for development of food and consumer goods production, and goods production for exports.

The Vietnamese economy has had many achievements on the road toward a free-market situation, but basically, it still requires a lot of efforts to make the economic panorama brighter. Inflation has been a persistent problem for Vietnam (Figure 1). Last year the inflation rate hit 11.75 percent and it is increasing continuously from the beginning of 2011. The fact that Vietnam dong has devaluated two times during last few months (the latest time – in the first half of 2011 - it was 13%) is a signal of the serious weakness of the national economy and the embarrassment of the central government at the macro economical level.

Vietnam is considered as an attractive place for international investors because of the country’s success in being able to keep prices low and having a stable political regime. But on the other hand, that competitive edge is threatened by its heavy dependence on imported materials (80 percent of its products use imported materials, mainly from China) and Vietnam is “too far downstream in the global supply chain”, where the profit margin is very small [16].

![Inflation rate](image.png)

Figure 1: Vietnam inflation rate from 2005-2010. Source: General statistics office of Vietnam

Despite the GDP has reached 7.26% per year during over last 10 years, Vietnam growth quality, productivity, efficiency and the competitiveness of the economy are still low and macro balances are unstable. Export products from the country are mostly raw materials and industrial goods are mainly manually made. Productivity is much lower than regional economies (e.g. 2.6 times lower than China and 4.3 times lower than Thailand).

These macro-economical issues have caused a lot of difficulties for enterprises in Vietnam. In addition to these challenges, there are still other factors that burden doing business in the country such as the limited access to financing, policy instability, inadequately educated workforce, inadequate supply of infrastructure, foreign currency regulations, tax regulations, poor work ethic in national labor force, corruption, tax rates, etc. [16].

### 3.2 The issues of SMEs in Vietnam

In Vietnam, the role of SMEs is now legally recognized as the driving force of the national economy. Business environment has improved and are more supportive but there are still a lot of obstacles for the real business development in Vietnam (as mentioned in part 3.1), especially for privately – owned SMEs (POE). But there is still the discrimination between state-owned enterprise (SOE) and POE. In comparison with SOE, POE’s access to financing is much more limited. And while SOEs own public lands with very cheap rental fee, POEs have to struggle for having a space for their factories or companies. In most of the cases, POEs have rented infrastructure from SOEs.
The average size of SMEs in Vietnam is rather small with about 50 employees and less than 500,000 USD of property. The most critical issue of SMEs in Vietnam is the low educational background of the business owners who normally also work as the CEOs of firms. A survey conducted by the Vietnamese authorities among 63,000 enterprises throughout Vietnam in 2009 revealed that 43% of enterprises top managers haven’t graduated from high school and only 2.99% were University postgraduates. According to this survey, 51.3% of SMEs had under 10 annual workers, 44% of SMEs employed from 10 to 200 annual workers, and only 1.43% of enterprise employ more than 200 workers [20].

4. Research design

4.1 Hypotheses development

The objective of this paper is to verify whether the inferences of the authors really hold for the general population of Vietnamese SMEs. An oriented survey at the beginning of 2010 revealed that SMEs in Vietnam are doing their best to deal with KM issues despite of the fact that they are struggling to be survived in a very tough business environment. They do this primarily to maintain their business, and secondarily to develop it. The result also identified the main motivation for SMEs to implement KM-related activities, which is the search for solutions to a chronic shortage of competent employees, as well as the two probable main causes for this shortage: (1) the departure of employees from SMEs and/or (2) other employees don’t learn how to work effectively. Accordingly, two hypotheses were developed as follows:

H1: Staff turnover doesn’t harm the business of Vietnam SMEs

H2: Employees of SMEs are learning (how to do the work, how to do work better) effectively at work

![Figure 2: Possible causes for the shortage of competent employees in Vietnamese SMEs](image)

From the point of view of company management, the symptom of hoarding knowledge, the ineffective record system to capture existing knowledge in the organization, the ineffective training policy are determined as main KM-related factors that would influence the learning effectiveness of employees in the organization. In the framework of this research, to examine the existence of these factors, three sub-hypotheses are set as follows (other factors are not focused in this study):

H2a: Firm has an effective training policy

H2b: Employees are willing to share their knowledge

H2c: Firm’s record system has been used as a reliable reference source

The inter-relationships of the hypotheses/sub-hypotheses are demonstrated by figure 2.
4.2 Contact method & sampling

At the beginning, the questionnaire were delivered by post and via emails to more than 500 companies randomly selected in the Yellow Pages of Hochiminh City, but more than 50% of emails was failed to reach the destination (i.e. the email addresses are wrong). The general response rate was too low. The researchers had to proceed the survey via the available networks to contact with CEOs/business owners of SMEs.

At the second round, the questionnaires were sent to more than 300 CEOs/business owners, and the response rate was quite positive – 87 responses were received (~29%). Finally, 71 sets of data met requirements to be analyzed. And with the permission of respondents, 25 visits to companies were made to have better view on what’s really going on inside the firms for the better judgment.

4.3 Research instrument

The survey method was used for this study. A questionnaire for SME’s CEOs or business owners was designed both online and in a printable version (taking into account the fact that there is a big percentage of SME’s CEOs or business owners who are not familiar with using computer yet). CEOs/business owners of SMEs gave their evaluation of the firm’s performance and their views on firm management. The responses were used as the primary data for analysis.

The questionnaire is developed basing on the findings from the intensive review of previous studies. Five point scaled were used in this questionnaire.

The variable “harmfulness level caused by staff turnover to businesses of SMEs” (H1) was measured by a single question. The variable “effectiveness of record system” was measured by average of two related questions basing on the usage of job-related reports and the consulting sources for management in the firm. Other variables were measured by different constructs namely (1) “Knowledge sharing level of working environment” (9 items adopted from Yang [23], (2) “training effectiveness” (5 items); those are needed to check the reliability and validity.

In this study, reliability was evaluated by calculating Cronbach’s coefficient Alpha while face validity was conducted during the pilot test to modify the wording and scales. Basic factor analysis was conducted to ensure the validity of main constructs. The results are presented in Table 1.

<table>
<thead>
<tr>
<th>Construct</th>
<th>No. of items</th>
<th>Alpha value</th>
<th>KMO values</th>
<th>Bartlett’s test (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge sharing level of working environment</td>
<td>9</td>
<td>0.829</td>
<td>0.790</td>
<td>0.000</td>
</tr>
<tr>
<td>Training effectiveness</td>
<td>5</td>
<td>0.780</td>
<td>0.798</td>
<td>0.000</td>
</tr>
</tbody>
</table>

4.4 Data analysis

Fuzzy method, chi-square test were employed to analyze collected data. Linear Discriminant Analysis (LDA) was also used to classify the classes of firms in this research. While chi-square test and LDA are quite popular in economic and management research, fuzzy set (or fuzzy method) is still not used often despite of its advantages such as (1) permit a more nuanced representation of categorical concepts by permitting degrees of membership in sets rather than binary in-or-out membership, (2) can be used to address both diversity and ambiguity in a systematic manner, (3) enable researchers to evaluate set-theoretic relationships such as intersection and inclusion and, thereby, necessity and sufficiency [17]. Most of the primary data collected from the survey in this research is categorical, and somehow presents imprecise concept such as the level of administrative management, or sharing culture and working environment evaluation, etc. The rules to assess the criteria with imprecise dependencies among variables in the research are fuzzy. Thus, the fuzzy method was selected for this study.

5. Survey findings & Discussion

Primary data was obtained from 71 sets of responses. The industry types of SMEs are described in Table 2.
Table 2. Description of SMEs

<table>
<thead>
<tr>
<th>Industry types</th>
<th>Number of firms</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>Construction &amp; Real Estate</td>
<td>06</td>
<td>8.5%</td>
</tr>
<tr>
<td>IT</td>
<td>06</td>
<td>8.5%</td>
</tr>
<tr>
<td>Trading</td>
<td>05</td>
<td>7.0%</td>
</tr>
<tr>
<td>Forwarding</td>
<td>16</td>
<td>22.5%</td>
</tr>
<tr>
<td>Tourist agency</td>
<td>12</td>
<td>16.9%</td>
</tr>
<tr>
<td>Consultancy</td>
<td>02</td>
<td>2.8%</td>
</tr>
<tr>
<td>Other</td>
<td>07</td>
<td>9.9%</td>
</tr>
<tr>
<td>Manufacturing or Mixed</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Garment &amp; textile</td>
<td>04</td>
<td>5.6%</td>
</tr>
<tr>
<td>Furniture &amp; handicraft</td>
<td>03</td>
<td>4.2%</td>
</tr>
<tr>
<td>Construction materials</td>
<td>04</td>
<td>5.6%</td>
</tr>
<tr>
<td>Food processing</td>
<td>03</td>
<td>4.2%</td>
</tr>
<tr>
<td>Other</td>
<td>03</td>
<td>4.2%</td>
</tr>
</tbody>
</table>

The companies are classified into 3 different classes in term of general administrative management practice (named Good, Moderate, and Bad) basing on five criteria: (1) The level of applied IT, (2) The level of applied management tools, (3) The knowledge sharing working culture & environment, (4) The effectiveness of learning of employees at the firm, and (5) The vision of top management (clear long-term vs. not clear vision).

Chi-square test was employed to test the first (null) hypothesis: Staff turnover doesn't harm the business of Vietnam SMEs. The analysis of data brought out the following result:

Table 3. Result for testing H1

<table>
<thead>
<tr>
<th>X^2 (Chi Square)</th>
<th>Test value</th>
<th>Degree of freedom</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood Ratio</td>
<td>8.85</td>
<td>8</td>
<td>0.37549</td>
</tr>
<tr>
<td>Pearson</td>
<td>8.98</td>
<td>8</td>
<td>0.36825</td>
</tr>
</tbody>
</table>

According to this result, we cannot reject the hypothesis H1 as there is no relationship between turnover of employees and the company class. The result can be interpreted that we cannot make the conclusion whether the rate of staff turnover badly affects on the performance of the firm or not. It may be caused by (1) the sample is not pure random (as explained in 4.3) or/and (2) the sample size is not big enough. It also may be the truth in reality of business in Vietnam as among the companies which were visited, there were very few ones who confirmed that they have difficulties with the high staff turnover rate. In SMEs, the turnover rate is high mostly in the manufacturing sector and happens with workers who are not competent enough or who are dealing with simple works in the factories and easy to be replaced by new employees. Normally, SMEs don't have problem with the management positions. This finding rejected the first intuition of the researchers but confirmed the one of the finding of Desouza and Awazu [5] that SMEs never considered knowledge loss caused by the departure of skilled employees a real problem or issue as it was in the large organizations. Only some mature SMEs had deliberate mechanism in the firms to prevent knowledge loss [5]. The reasons may vary, but the fact that in SMEs, CEOs are also the business owners and they are also the people who own the key knowledge in their businesses. And as the size of business is small, they can easily employ new workers to fill in the vacancy and train them. Another fact that can somehow explain this symptom is that in SMEs most of the management positions or key positions are assigned for the people in the same family or close friends who have the good relationship with the CEOs/business owners. Some other SMEs CEOs revealed that high staff turnover rate in their industries is considered as a nature of the business, thus they just purposefully limit the size of business according to the handling capabilities.
For testing the hypothesis 2, the fuzzy logic was used to set up the scale, the rule of assessment [3]. The fuzzy rule is described by the following steps:

$$f_{xi}: \text{If round} \left( \frac{1}{k} \sum_{m=1}^{k} Q_{mx} \right) \geq 3 \text{ Then Positive}$$

$$< 3 \text{ Then Negative}$$

While:

$m$: Number of sub-items 1- $k$

$i$: Observation number from 1 to $n$

$x$: Related measured question from the questionnaire

The results showed that only 56% of companies in the sample have an effective training policy (H2a). Then, according to the set standards, we cannot decide if SMEs in Vietnam has an effective training policy or not. For H2b, the result is rather good: 66% of the sample set evaluated their working environment and the willingness of people to share their experience and know-how. Only 17% of companies asserted that their people have recourse to the company’s record system (H2c). Accordingly, the second hypothesis (H2) was rejected basing on the set standard:

Then we can make the conclusion that according to this research, employees in most of SMEs in Vietnam don’t learn how to work effectively at the firms. This conclusion reflects what is really happening in SMEs in Vietnam. Other results from the survey supported this finding. While 52% (37/71) of companies complained about the serious shortage of competent employees for their businesses, only more than 35% (25/71) of companies revealed that they have a training policy for their employees, and the rest revealed that they don’t have any training policy yet and it depends on the cases to make decision whether they train some employees or not. Answering the question what the reason for business owner to do not train the employees, 29 CEOs (~41%) of SMEs stated the lack of commitment from the employees as the most popular (and decisive) reason. About the record system, more than 46% companies (33/71) revealed that they don’t use any job-related record or if they have it, just to keep in case of needed. This fact can be considered as a most significant weakness of SMEs management. It is understandable when 43% of SMEs’ CEOs has not graduated from the high school yet (see 3.2). The result of H2c was closely connected to this fact: Managers and employees in firms cannot rely on the weak record system in performing their tasks.

6. Conclusion, limitation and implication

The empirical research’s findings revealed that (1) even though it seems that the frequent departure of employees may cause problems to business (as it is often mentioned on Vietnam media) but in fact, for SMEs in Vietnam, there is almost no connection between the high staff turnover and the company’s performance in general, and (2) The employees don’t learn how to do job properly at work. The shortage of competent employees may caused by the latter reason. The results indicated that people don’t learn well at work mainly because of (1) the weak record system (or the absence of record system), (2) the limited access to the record system (if any), (3) the lack of the company’s training policy. This implicates that when firms set up the KM system, ones should set the special priority for building the record system and ensure that people can assess to this record system to learn. While 56% companies positively evaluated the effectiveness of their training system, only 35% companies confirmed that they really have a training policy. The question here is whether CEOs did not tell the truth or it was just the way they perceived the issue. The result from another question supported the latter explanation: 55% CEOs of companies in different ways revealed that they really don’t think the training of employees is important for business (because the job is simple, or just because they don’t have time, nor money to train employees), and some of these CEOs believed that their employees automatically learn well how to do job during working in their firms. This phenomenon confirms an urgent need to improve the management background of CEOs of SMEs in a very practical way.

The research also cannot avoid some limitations. Firstly, due to some objective reasons, the sample size is not big enough and not pure random (see 4.3). This limitation may somehow effects on the results of the research. Secondly, the framework of this research was developed focusing on KM-
related determinants while there may be other factors that can lead to the same phenomenon in the reality.

As the first empirical research in KM in the country, the authors believe that the findings presented in this paper could help academics and practitioners to understand more about the operations of SMEs in Vietnam as well as in other developing countries, and to suggest a feasible approach to initiate KM for SMEs.

7. Bibliography


