THE CORRELATION BETWEEN KNOWLEDGE MANAGEMENT SOFT INFOSTRUCTURE ELEMENTS TOWARDS KNOWLEDGE ASSETS

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Abstract
The fundamental issue addressed in this paper is to describe the correlation between soft infostructure elements namely knowledge network and knowledge-based system towards managing knowledge assets among the selected multinational insurance operators in Malaysia. Since Malaysian announced Knowledge Economy Master Plan in National Budget 2000, knowledge management has gained attention in many business organizations to remain competitive and innovative. Thus, numerous insurance multinational companies started to recognize and realize the importance of the new knowledge disseminations strategy as a main asset to create a greater organizational knowledge base by developing and manipulating the valuable knowledge of their employees. Objectively this paper describe the correlation between soft infostructure elements such as knowledge-based system and knowledge network in analyzing the existing practices of knowledge management in the selected insurance companies in Northern Region of Peninsular Malaysia. In line with the objectives of the study, open-ended interview questionnaires have been distributed to business development managers and human resource development or training managers, as well as respective respondents who dealing with insurance. The result indicated that these soft infrastructure elements namely, knowledge-based system and knowledge network have significant relationship towards respondent’s personal knowledge management experience.

Keywords: Knowledge management; Knowledge capture systems; Knowledge network; Insurance companies.

JEL Classification Codes: M15; O31; O32; O33; O38.

1. Introduction
In brief, to define the knowledge assets is complex as the term ‘knowledge’ itself is widely subjective concept and hard to understand. However, a basic understanding of the concept of knowledge and knowledge assets is crucial in developing the appropriate method of knowledge management studies. For example, Nonaka (1991) early definition of knowledge offered an incredible insight about the topic on knowledge management when discussed about knowledge-creating companies and shared on how Japanese businesses have successfully put knowledge creation at the centre of company’s strategy. Thus in his next work Nonaka and Teece (2001), seeing knowledge from the human resource terminology as to the extent individuals or teams of employees know or the know-how on what to do, that differentiate knowledge as intangible assets. Their argument was true as knowledge by nature was different by its availability and enforceability of property right, where each individual and organization were acquired with specific context based on time and space. Another prudent prominent idea of knowledge management technological proficiency from Microsoft founder Bill Gates, preferred knowledge management as nothing more than managing information flow, ensured getting the right information to the right people who are able to translate the knowledge into tangible products (Call, 2005).

These definitions indeed provide brief understanding of knowledge as output of social interaction scenario amongst individual and group of people. However, the operational aspect of knowledge seems to widely spreads in the scope of organizational knowledge, which embedded in term of structured knowledge located in the set of company’s rules, processes, tools and routine. This definition seems synonymous with

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what have been described earlier by Prusak (1997) when he redefined knowledge as to the degree the companies know, how it knows and how fast the companies can know something new. When linked to insurance businesses, this knowledge perceived and explained through the company’s client-relationship management, as well as in sales and marketing competencies. On the other hand, Abell and Oxbrow (2001), looked at the overall picture of knowledge, which express in the expertise, experience and capability of staff, integrated with operations processes and corporate memory. Therefore, Davenport and Prusak (2000) rapidly suggested, as an intangible asset that is very valuable, the need of systematic attentions and carefully nurture should be the management foremost agenda in this century.

The emerging concepts of knowledge management practices impartially popular in Malaysian business culture since Knowledge-based Economy Master Plan launched in National Budget 2000. The Knowledge-based Economy Master Plan marked as a key initiative of the Government to further accelerates the development of the nation into a knowledge-based economy as well as in achieving the objectives of Vision 2020. The Master Plan provides a strategic framework outlining the changes to the fundamentals of the economy (EPU, 2002). Since then, many companies responded by leveraging heavily on its information and communication technologies (ICTs). Earl’s (2002) justified knowledge management is one set of practices, which takes advantage of the information, communication and technology (ICT) infrastructure, and then mixed it with the use of good human resources practices. As a result, insurance companies being part of the most dynamic financial sector that have responded by managing their knowledge to ensure the ability to compete in this new emerging economy.

An interview with Tan Sri Ahmad Sarji, the Chairman of Permodalan Nasional Berhad (PNB), Malaysian single largest cache investment funds shared remarkable insight and valuable example on how investment and financial institutions utilized its knowledge-based strategy. In PNB Group of companies, technological advancement not only viewed as an knowledge enabler but also worth investment that its implied an outsourcing approach in its integrated soft infrastructures namely Supply*Link, Branch*Link, Bank*Link, Medi*Link and Comys to facilitated its PNB Groups of Companies operational strategy (Management, 2007). Look through the same businesses segments, nevertheless, insurance industry in Malaysia undergoing significant changes especially after throughout The Asian Financial Crisis 1997. There were number of key reasons that led to these changes. First, was the increase in customer expectations as the investors learned a moral hazard shock form the crisis. Secondly, the emerging pace of competition among the domestic insurance market, as well as by implications of mergers and acquisitions of minor players. Third, would be on-going implementation of Malaysian Knowledge-based Economy Master Plan announced by Economic Planning Unit, Malaysian Prime Minister Department (EPU, 2002) outlined the need for development of soft infrastructure support and stimulate the knowledge dissemination, which includes databases, networking, multimedia, Internet services, telecommunications and ICT services, connectivity to the Internet and an enabling legal system for information. In conjunction with the emerging new economy driven master plan, constantly bring forward new input in national economy whereby knowledge has become the key differentiating value-added for modern organization core capabilities, supported by information and communication technologies accessible throughout the organizational hierarchy. Nevertheless, knowledge dissemination seen as part of the strategic operational strategy among the insurance businesses players, especially amongst the multinational insurance companies.

Another importance major issue addresses in the insurance industry is regarding the retaining the pool of talented and skilled human capital. The nature of the industry rapidly faced was high staff mobility with an extremely high turn over rate, which indicate the difficult issued in retaining the pool of knowledge workers in the industry. It was hard to retain the talented people in the industry due to the nature of competitive insurance business segment and fluctuation of Malaysian investment market. For the above reasons, two main questions were address in the effort to understand the knowledge management infrastructures featuring in Earl’s model (Prusak, 1997).

Therefore, the objectives of this study focused on mainly two issues that are (1) to describe the knowledge disseminations infrastructures used to enabling the knowledge management practices in the insurance industry. (2) To examine the correlation between soft knowledge infrastructure elements namely knowledge networks and knowledge-based systems towards knowledge assets embedded in the selective multinational insurance companies. The study focal point would be on how these soft infrastructures help spurred
knowledge management activities carried out within small component of insurances industry and the scope narrowed to analyze the existing practice of knowledge management in the selected insurance companies in Northern Region of Peninsular Malaysia.

In short, this study attempted to answer the following research question;

1. Are there some kinds of integrating knowledge infostructure (knowledge network and knowledge-based systems) within the company to facilitate knowledge sharing and collaboration activities both internally and externally?
2. Are there any significant correlations between knowledge management soft infostructures used to facilitating knowledge management activities in the insurances companies?

2. Knowledge management in the insurance industry
Storey (2001) mentioned Alfred Marshall’s (1890) idea of knowledge management who observed the important element of the organizational capital was organizational knowledge is a part of the organization structure. It was widely known that in today’s global marketplace, knowledge has perceived to be a key corporate asset in term of increasing a firm’s competitiveness (Sanchez, 2001), increase speed of competition and increased customer’s expectation (Knowles et al., 1999). American International Assurance (M) Co. Ltd., Great Eastern Life Assurance (M) Berhad, ING Life Assurance (M) Berhad, and Malaysian national Assurance Berhad (MNI) have built up their internal knowledge-based material with regard to knowledge management components (Ang, 2003a., Ang 2003b, Lee, 2003).

According to Abell and Oxbrow (2001), knowledge organization operated on the bases of several characteristics such as applying business intelligence and maintaining company’s reputation in term of preserving client relationship. This explanation is relevant within the insurance companies, because the key business consideration of managing risk in this industry was client relationship as well as outsourcing business intelligence via online e-business products and services. The Malaysian National Insurance Berhad (MNI) is a good example of outsourcing, where its MNI Online Services outsourced with Siebel Enterprise to provide an integrated networking throughout its Asian branches for transaction and document-oriented information processing. In addition, Croft, Norton and Whyte (1999) commented that in the insurance industry, the companies did spent a great deal of time and investment researching potential new financial products that might be required by the customers, developing the products and training its branch employees to deliver them to targeted customer.

3. Network system and knowledge system in knowledge management model
Within a given framework, a network appears to be a significant component of knowledge acquirement, before being distributed via organizational knowledge-based network. Early work by Earl’s who done a case study at Skandia International and Shorko Films found that network act as both capturing and underwriting transaction cost used to update the corporate database and disseminate knowledge-based parameters, trends and tools (Prusak, 1997). However, knowledge network in this paper describes as both internal and external form of communication behavior among employees within the selected insurance companies. These communication networks representing the accessibility of the information flow and communication structure along the businesses unit within the companies hierarchy.

In order to understand the network function in knowledge management practices, the classic example presented by Botkin (1999) who discussed the successful of managing knowledge would require a network management model that presents the more reliable network structure with three main components. Namely Internet network showed the inter-flow of knowledge sharing relationship, high connectivity and system that are interdependence. This description lithely provide a general overview of the knowledge network as an effective network which includes the basic features and need to be highly integrated of diverse roles in managing best business practices. An example from the work of Ahamed (2007) point out that the Internet is the backbone communication network infostructure of any nation. As such, his analysis suggested that intelligent Internet programmable tend to be major contribution to knowledge flow provided prudence value-added content-based. The main goal of the knowledge network would be generated the new knowledge by converting individual learning to organizational knowledge and recycling of tacit knowledge into explicit knowledge as well as reintegrating it as tacit knowledge throughout the entire organization.
The process of transferring and reusing knowledge within a network would require facilities and resources. Thus, prove the need to optimize communication costs and processing time.

4. Knowledge system in knowledge management model
When constructing knowledge management practices, companies have often relied on its capabilities to apply and on well-developed knowledge-based system. Ahamed (2007) recognized databases as main input in codifying knowledge into understandable nature. The functions of the knowledge-based system are important as a distribution channel of capturing experiences and explicit knowledge through the acquisition of information or data. The functions of the system are important as a distribution channel of capturing experiences and explicit knowledge through the acquisition of information or data. Therefore, many companies have built their corporate databases aimed specifically at securing and storing their intellectual capital or intellectual patterned assets (Prusak 1997). Moreover, a knowledge-based system enabled employees’ accessibility to the organizational experience, and when used together with decision making tools, such as screen-based analyses, allowed firms developed new knowledge-based products.

However, Cafneiro (2000) argued that most of organizations regardless size have difficulty in developing its practical strategic knowledge-based as knowledge tends to flow in continuously and in random manner. Thus, amount of information flow vary across management activities. The same argument indeed outlined basic challenges of knowledge-based system in creating knowledge out of pool of information that described by Dierkes (2004) the shifts from artifact-centered technologies to system-centered technologies.

Swan et al. (1999) mentioned that in order to apply knowledge management strategy in modern knowledge organization, an organization should focused on both technical and social dimensions of managing knowledge flow such as implied in knowledge-based system, as well as be able to exploit the existing knowledge stored in knowledge databases and exploration for new knowledge. However, the limitation of this case study was it has lack of social and culture engagements of organizational change process which linkage different level of organizational hierarchy.

5. Research framework and design
In general, this exploratory study aimed to describe the existing knowledge management practices in the insurance industry, by studying a number of insurance companies operated in Northern Region of Peninsular Malaysia. In line with the objectives of the study, open-ended interview questionnaires distributed to business development managers and human resource development or training managers dealing with insurance.

The research framework
This study is conducted based on Earl’s knowledge management model quoted from the work of Prusak (1997). The model original version of the model offered four interrelated combinations of human resources factors and technologies infrastructures that built up on the strategic capabilities of managing knowledge. However as this paper focused mainly on the technologies infrastructure of knowledge management practices, the model narrowed to the two major knowledge captures architecture namely knowledge network and knowledge-based system.
The respondents and research instrument
The respondents of this study were the 18 (see table 1) insurance companies members of Life Insurance Association Malaysia (LIAM) operated in Malaysia. The main respondents were staffs who were occupying various positions in sales and marketing activities, business development managers and human resource development or training managers dealing with insurance includes unit managers. Open-ended questionnaires adapted from the “Twenty questions about knowledge in organizations” from Ernst & Young Center for Business Innovation and Business Intelligence (1997) with minor modification.

6. Analysis and findings
Objective 1: To describe the knowledge management soft infostructures namely networks and knowledge-based systems used in the insurance company.

The first objective of this paper was to investigate the knowledge management soft infostructures, networks and knowledge system used in the insurance company. There were twelve characteristics of the technology and knowledge tools used for enhancing organization knowledge based systems in this study. Based on the analysis (refer Table 1), there were two main flow of information and knowledge sharing approaches, namely face to face discussion forum (95.3%) and company’s bulletin (74.4%) that have been widely used for enhancing respondents organizational knowledge systems. In term of decision tools, about 56% of the respondents utilized certain statistical and accounting software such Investment Links Software (ILS) and Workplace Safety Insurance System (WSIS) when come to decisions making about certain policies. Moreover, 54% of the respondents used to capture knowledge by attending their internal company conference, annually organized by company headquarters. Nevertheless, one training manager had highlighted a significant tool of his company’s knowledge acquisitions by annually organizing internal managerial conferences as a channel to captures updates of marketing and sales skills, buildup knowledge networks via partnership and reasonable outsourcing of certain critical business technologies based solution. The figure also reveals that a proportion of 23% of the respondents who had connected via groupware and this characterized the internal networks systems of the insurance companies. Additionally, the figure also indicates the characteristics of the basic knowledge networks that appeared within the insurance companies. Groupware, for instances provided a vehicle for any financial organizations to remain flexible and able to reduce service lead-time, yet support the externals salespersons in providing customers focused strategy because groupware was able to provide employees with greater information.
Table 1: Technology and tools for enhancing organizations knowledge based system

<table>
<thead>
<tr>
<th>Characteristics of Technology &amp; Knowledge Sharing Tools</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Face to Face Discussion</td>
<td>95.3%</td>
</tr>
<tr>
<td>Company Conferences</td>
<td>53.5%</td>
</tr>
<tr>
<td>Personal Web Pages</td>
<td>23.3%</td>
</tr>
<tr>
<td>Document Sharing Systems</td>
<td>58.1%</td>
</tr>
<tr>
<td>Emailing</td>
<td>62.8%</td>
</tr>
<tr>
<td>Intranet</td>
<td>67.4%</td>
</tr>
<tr>
<td>Community Chatting</td>
<td>16.3%</td>
</tr>
<tr>
<td>Company Bulletin</td>
<td>74.4%</td>
</tr>
<tr>
<td>Decision Support Tools</td>
<td>55.8%</td>
</tr>
<tr>
<td>Videoconferencing</td>
<td>18.6%</td>
</tr>
<tr>
<td>Corporate/ Company Website</td>
<td>46.5%</td>
</tr>
<tr>
<td>Groupware</td>
<td>23.3%</td>
</tr>
</tbody>
</table>

Objective 2: To examine the significant correlation between both knowledge network and knowledge-based system embedded within the insurance industry.

Based on the open-ended questions, the interviewees understood that strategic knowledge assets found in people who can translate the tacit knowledge into explicit form, stored in databases, disseminated its knowledge via corporate networks. Such understanding therefore made a remarkable insight to the need of knowledge captures systems that enable learning organizations culture be cultivated as majority of the top management concerned this component of knowledge management variables seen as the biggest challenges and issues among respondents.

Table 2: Regression analysis model for knowledge network and knowledge system towards personal knowledge management experience

<table>
<thead>
<tr>
<th>Variable</th>
<th>Personal knowledge management experience</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized coefficients</td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.082</td>
</tr>
<tr>
<td>KM networks</td>
<td>0.108</td>
</tr>
<tr>
<td>KM system</td>
<td>0.421</td>
</tr>
<tr>
<td>F-value</td>
<td>23.663**</td>
</tr>
<tr>
<td>R²</td>
<td>0.542</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.519</td>
</tr>
</tbody>
</table>

**p<0.05

Table 2 above, indicates the regression analysis of the knowledge network and knowledge system markes as independent variable in the knowledge management model towards respondents’ personal knowledge management experience. The R² value of 0.542 indicates that 54.2% of the variances in cited personal knowledge management experience explained by these two ICT infrastructures in the model. The standardized regression coefficient of (Beta = 0.618, p<0.05) suggested that knowledge-based system as the most biggest variable that contribute to the experience of managing personal knowledge while knowledge networks appeared to be second contributing variable towards personal managing knowledge experience (Beta = 0.153, P<0.05). As this paper objectively focuses on the correlation of ICT infrastructures of the knowledge management practices, the results suggest that insurance companies’ knowledge management practices slightly depended on two main variables, namely personal beliefs and knowledge-based system acquired within the company.
7. Conclusion
As engaging knowledge management practices in business operational strategy is seems an expensive yet important decisions, many multinationals companies indeed certainly agreed that this business strategy contributed an organized and planned approach to the insurance companies in encouraging the creation of ideas. An injection of infrastructures renowned as effectively encouraging the learning and spurred collaborative knowledge sharing system within organization through internal and external network as well as collaborative learning databases systems. The result also indicate that insurance companies shared best practice from other organization, whereby agents and executives shared an openness knowledge sharing culture through its communities network internal and externally. On the other hand, from the interviews, managers had defined their companies’ knowledge assets in people who can translate their knowledge into actions that can achieve corporate objectives. Whilst the core competencies of this knowledge assets turn out to be the ability to transfer individual knowledge and know-how business practices such as communication skills and coaching or monitoring sales. These efforts seen to be parallel with human ability that utilized technology aimed at the achievement of company goals.

Therefore, the unique part of managing personnel with individual knowledge as well as organizational knowledge had lead to the combination of ICTs as in this paper known as soft infrastructure to the right people that will help insurance companies’ shaped knowledge-based management. Thus, in order to ensure that successful knowledge management the study suggest that insurance companies overall knowledge based system should be utilized heavily not only for carrying out certain tasks but also for web-based training sessions as the result of the study did imply that the majority of respondents were connected internally and externally throughout the companies. Finally, this study concluded that knowledge management practices in the insurance business directly focus on the creation of innovative service culture supported by collaborative technologies to secure competitive advantage, sustainable marketing policies performance as well enhancing individual productivity, especially when come to business decision making.

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