

Knowledge Management As Strategy For K-Economy: Looking At Malaysia Environment

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ABSTRACT

The paper study on the knowledge management contribution in K-Economy. Every company faces the challenge of how to best manage its knowledge assets to generate value for the marketplace and obtain competitive advantage. Such advantage derives from special capabilities that are rare, valuable, non-substitutable, and costly to imitate. Historically, the focus was on capabilities involving tangible assets, knowledge is widely recognized as the source for competitive advantage, with the tangible assets representing the physical manifestation of but a fraction of this knowledge. As companies scramble to develop strategies for more proactively and strategically managing their knowledge, the field of knowledge management (KM) receives increasing attention from trade organizations and academic journals. From this study it was found that to improve the chances of conclusively demonstrating value to the K-Economy, a new KM implementation in an innovation organization should address issues such as organization's goals and strategies, access tacit knowledge, provide search tools, promote creativity, capture new learning, and build a supportive culture, insufficient communication, failure to integrate knowledge, lack of time to learn, lack of training. A senses there was little personal benefit in knowledge management.

Keyword

Knowledge management, k- economy, Concept of Knowledge, creativity

1.0 INTRODUCTION

Before the term knowledge management (KM) surfaces, many organizations examined alternative ways of doing business. Information and communications technology (ICT) has widened their internal and external networks, which enables different and more flexible arrangements with staff, suppliers, and customers. According to Abell (2000), of the management themes developed and explored in the last 25 years, five have been particularly influential in

changing the way that people and organizations work. These are: total quality management, business process reengineering, intangible assets, learning organizations, and knowledge management. As the growing demand for knowledge-based products and services is changing the structure of the global economy, the role of knowledge in achieving competitive advantage is becoming an important management issue in all sectors. In creating wealth, knowledge is increasingly taking a front seat to the traditional factors of production, that is, physical and fiscal assets. The gap between a company's market value and its tangible asset value is widening; the key variable explaining this gap is a firm's stock of knowledge. Unlike land, labor, and capital - the economist's traditional, finite factors of production - knowledge and ideas are infinite economic goods that can generate increasing returns through their systematic use (Kim & Mauborgne, 1999).

Though there little consensus as to what knowledge actually is, many do accept that knowledge is a primary competitive factor in business today (Dzinkowski, 2000). A survey conducted by the Canadian Institute of Chartered Accountants (CICA) shows that the top executives of both the Canadian Financial Post 300 firms and US Fortune 500 firms view knowledge resources as critical for a firm's success. Meanwhile, the Brookings Institute demonstrates that the value of these and other intangible assets has grown significantly since 1982. Hard assets represent 62% of the companies' market value in 1982, whereas in 1992 this figure drops to 38%. Microsoft is used as the ultimate example of the unrecorded value of the intangible assets of the firm. In 1996 Microsoft's market value was 11.2 times its tangible asset value. For organizations to compete effectively in the knowledge economy they need values that focus on creating and using intellectual assets. To be successful in these environments, individuals need to acquire new combinations of skills. In particular, they need to learn skills that enable them to find, acquire, manage, share, and apply information and knowledge - they need information literacy skills.

2.0 WHAT IS CONCEPT OF KNOWLEDGE?

Knowledge is defined as information combined with experience, context, interpretation, and reflection (Davenport et al., 1998). Knowledge is commonly distinguished from data and information (Zack, 1999). Data represent observations or facts out of context that are, therefore, not directly meaningful. Information results from placing data within some meaningful context. Knowledge is believed and valued on the basis of the meaningfully organized accumulation of information through experience, communication, or inference. Knowledge can be viewed both as a thing to be stored and manipulated and as a process of simultaneously knowing and acting - that is, applying expertise (Blackler, 1995). For example, Mrs. Fields Original Cookies develops process knowledge (i.e., cookie baking) to an explicable level and articulates the process in recipes that result in cookies of consistently high quality throughout the franchise network. Ray Kroc, founder of McDonald's, gains tremendous leverage in articulating and routinising the process of hamburger making to produce a consistent level of quality. Thus, as a practical matter, organizations need to manage knowledge both as object and process.

Further, knowledge can be tacit or explicit (Lave & Wenger, 1991). Tacit knowledge is subconsciously understood and applied, difficult to articulate, developed from direct experience and action, and usually shared through highly interactive conversation, storytelling, and shared experience. In contrast, explicit knowledge is more precisely and formally articulated, although removed from the original context of creation or use (e.g., an abstract mathematical formula derived from physical experiments or a training manual describing how to close a sale). Explicit knowledge plays an increasingly larger role in organizations, and many consider it the most important factor of production in the knowledge economy. Imagine an organization without procedure manuals, product literature, or computer software.

3.0 TYPE OF KNOWLEDGE AND IT IMPACT ON K- ECONOMY

By distinguishing between 'knowledge of information' and contextual knowledge, Miller et al. (1997) classifies knowledge into five categories: (1) Catalogue knowledge - that is know-what; Explanatory knowledge - that is know-why; Process knowledge - that is know-how; Social knowledge - that is know-who; and Experiential knowledge - that is what-was. For Millar, catalogue and explanatory knowledge are symbolic and more readily transferable compared with the contextually sensitive encultured knowledge categories: process, social and experiential knowledge.

With a focus on organizational design and management, Blackler (1995) proposes five categories of knowledge: Embroiled knowledge - abstract knowledge dependent on conceptual skills and cognitive skills; generally conflated with scientific knowledge and accorded superior status; Embodied knowledge - action-oriented and likely to be only partly explicit; transmission requires face to face contact, sentient and sensory information and physical cues; acquired by doing and context-dependent; Encultured knowledge - related to the process of achieving shared understanding; embedded in cultural systems, likely to depend strongly on language, and hence to be clearly socially constructed and open to negotiations; Embedded knowledge - knowledge that resides in systemic routines; relies on the interplay of relationships and material resources; may be embedded in technology, practices, or explicit routines and procedures; Encoded knowledge - knowledge recorded in signs and symbols, such as books, manuals, codes of practice, and electronic records; encoding requires the distillation of abstract codified knowledge from other richer forms of knowledge.

Finally, Fleck (1997) classifies knowledge based on their source and storage, as well as how it might be acquired and how the different knowledge components might be linked economically with each other: Formal knowledge - embodied in codified theories, formulae; usually encoded in written or diagrammatic form; acquired through formal learning; Instrumentalities - embodied in tool and instrument use; requires other components informal, tacit and contingent for effective use; learnt through demonstration and practice; Informal knowledge - embodied in verbal interaction, rules of thumb, tricks of the trade; held in verbal and sometimes written form (manuals, guidebooks); learnt interaction within a specific milieu; Contingent knowledge - embodied in the specific context; distributed, apparently trivial information, specific to a particular context; sometimes available as data which can be looked up; acquired by on-the-spot learning; Tacit knowledge - embodied in people; rooted in practice and experience, transmitted by apprenticeship and training; Meta-knowledge - embodied in the organization; general cultural and philosophical assumptions; can be local or cosmopolitan; acquired through socialization.

Based on these various classifications, a new framework for the categorization of knowledge has been developed by Blumentritt and Johnston (1999) which is designed to encompass all the above models, and to identify the relative degree of difficulty in transferring the categories of knowledge (Table 1). The difficulty in transferring knowledge is reflected in the order from left to right. Transfer of the left column category of codified knowledge is relatively easy; transfer of common, social and embodied knowledge is progressively more difficult. This framework can be

used to develop a reliable and coherent basis for effective knowledge management strategies and practices. The knowledge categories used in this framework are: codified knowledge - in this model essentially equivalent to information-knowledge that has been made explicit by a human; the method of making it explicit may involve writing it down or using other means of capturing, or may be in the form of a demonstration; it is in a readily transferable form. Common knowledge - knowledge that is accepted as standard without having been made formally explicit, often in the form of routines or practices; commonly learned through working in a particular context., social

knowledge - knowledge about interpersonal relationships and cultural issues; includes the knowledge of 'who can help me in this situation' to cultural issues in different roles, embodied knowledge - the experience, background and skill a person has accumulated during their lifetime; for this reason it is strongly connected to the person themselves. It relies on pattern and links a person can make to a given set of information to build and create appropriate knowledge to solve a problem.

Table 1
Framework for categorisation of knowledge
Source: Blumentritt and Johnston (1999)

Codified knowledge <i>Information of all kinds -- facts and figures</i>	Common knowledge <i>Knowledge that is accepted as standard without being made formally codified</i>	Social knowledge <i>Knowledge of social links and shared values</i>	Embodied knowledge <i>Knowledge that is rooted in experience, background and skill of a person. It is strongly related to the person that holds it</i>
<ul style="list-style-type: none"> • Knowledge of things and objects • Knowledge of statements and propositions • Know what • Know why • Explanatory knowledge • Catalogue knowledge • Symbolic knowledge • Encoded knowledge • Formal knowledge • Contingent knowledge • Explicit knowledge 	<ul style="list-style-type: none"> • Embedded knowledge • Embrained knowledge • Experiential knowledge • Informal knowledge • Meta knowledge • Knowledge of how to do things • Process knowledge 	<ul style="list-style-type: none"> • Know who • Social knowledge • Encultured knowledge 	<ul style="list-style-type: none"> • Embodied knowledge • Tacit knowledge • Instrumentalities • Know how

4.0 DEFINITION OF KNOWLEDGE MANAGEMENT

Manville and Foote (1996) define knowledge management as a systematic process for the purpose of collecting and controlling employee resources and abilities, just as a company controls its inventories, raw materials, and other physical resources. Sveiby (1997) refers to two theories of knowledge management knowledge management as managing economic information - knowledge consists of objects which can be identified economically and processed in information systems, knowledge management as managing people - knowledge is equivalent to processes consisting of complex and dynamic human

capabilities, behavior, etc. all of which are constantly changing.

The knowledge management philosophy states that no single department or function alone can deliver corporate objectives. Corporate capability is created by the following: skills and expertise of staff; staff's ability to learn and to build knowledge from learning; processes that enable the staff's skills and evolving knowledge to be applied and shared; culture and values that encourage knowledge building and sharing; an infrastructure (technology and physical) that supports knowledge building, flow, and sharing; and intellectual assets the organization builds, organizes, maintains, and exploits. Information is a necessary and foundational precursor to knowledge. Individuals - rather than organizations - identify and acquire information. Then they combine it with experience and

additional information. Although information management (including records management, archives management, librarianship, and information systems) is very much part of the knowledge management environment, but it is only truly effective when applied with an understanding of the full knowledge management picture. The end product of the knowledge management that can contribute to knowledge economy process can then be identified and valued as: a patent, consulting process, or trademark, an improvement in organizational efficiency and measured by cost savings, profits, revenue growth, return of investment, improved innovative capabilities of the firms, measured by a variety of individual and team-based performance indicators

5.0 KNOWLEDGE-INFORMATION MODELS

In knowledge management initiatives, the complexity of human factors to be managed is much greater than for most data or information management projects. Unlike data, knowledge is created invisibly in the human brain, and only the right organizational climate can persuade people to create, reveal, share and use knowledge. Data and information are constantly

transferred electronically but knowledge travels most felicitously through a human network. The implication of this assumption is that knowledge can only exist within intelligent systems. Information management systems may assist intelligent systems to create new knowledge, but they cannot disseminate knowledge itself. This distinction between information and knowledge is used to develop frameworks that explain the relationships between knowledge and information in an organizational context.

Blumentritt and Johnston (1999) have developed frameworks that explain relationships between knowledge and information in an organizational context. The knowledge-information cycle as in Figure 1 is designed to reflect the relationship between knowledge and information. This cycle can be used to identify appropriate contexts and possible support systems for the creation and use of knowledge and information. On the knowledge side of the cycle, creation and use requires an intelligent system. The information side of the cycle offers the possibility of using information management systems or information technology to support the process and further steps like information capture, storage, and distribution.

Figure 1: Knowledge-information cycle
Source: Blumentritt and Johnston (1999)

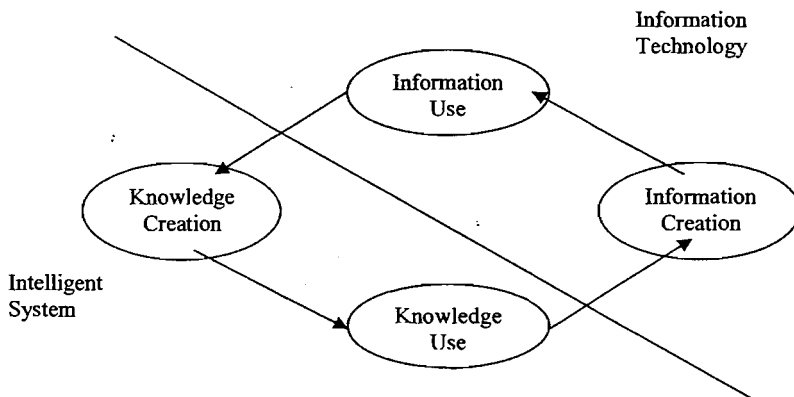


Figure 2 has been developed to provide a schematic presentation of an organization's knowledge and information assets. Any organization will possess both knowledge and information assets, but the mixture may vary according to the extent to which activities are largely routine, and hence based on established procedures and information, or highly innovative and novel, which will require the support of a strong knowledge capability. However, information content can never substitute totally for all knowledge necessary. This area in the model is called 'core knowledge'. The concept of core knowledge can be applied also to organization. In the manufacturing

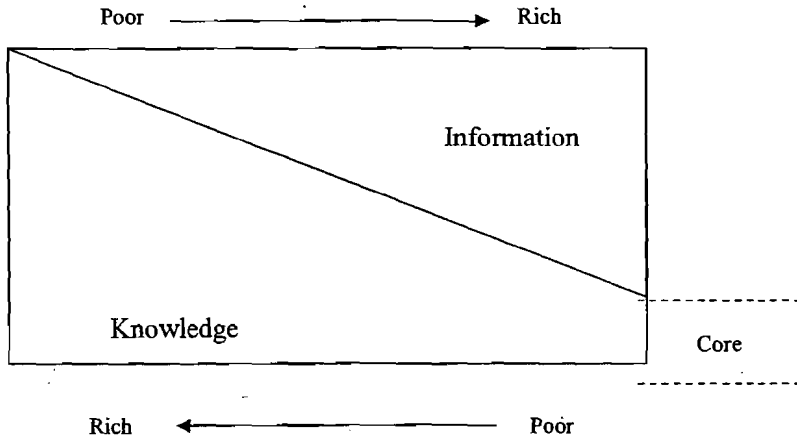
scenario the necessary core knowledge is small because processes are mainly standardized and tasks are repetitive. In the service industry many tasks are based heavily on customer involvement and substantial flexibility is required to meet varying customer needs and to create and design new service products. Hence the core knowledge in such scenario constitutes the major component of these intangible assets.

6.0 HOW DOES KNOWLEDGE MANAGEMENT AFFECT PRESENT AND FUTURE ECONOMIC PRACTICES GLOBALLY AND LOCALLY?

Organizational knowledge has been reckoned as a valuable strategic asset. Therefore, in order to remain competitive, an organization must efficiently and effectively create, locate, capture, and share knowledge and expertise in order to apply that knowledge to solve problems and exploit opportunities. As more firms begin to incorporate knowledge management into their overall business strategy, many are showing tremendous interest in implementing knowledge management processes and technologies. Despite the

fact that knowledge management is gaining wider acceptance, few organizations today are fully capable of developing and leveraging critical organizational knowledge to improve their performance. Many organizations are so complex that knowledge is fragmented, difficult to locate and share, and therefore redundant, inconsistent, or not used at all. In today's environment of rapid change and technological discontinuity, even knowledge and expertise that can be shared often quickly becomes obsolete. Knowledge management is a more detailed and 'everyday management' approach than intellectual capital management; it focuses on facilitating and managing knowledge-related activities, such as creation, capture, transformation and use of knowledge.

Figure 2: Knowledge-information balance
Source: Blumentritt and Johnston (1999)



The management consultant fraternity has largely driven the knowledge management, which have identified a large new market. In a 1997 survey 94% of respondents said, they believe they could leverage the knowledge in their organization more effectively through deliberate management. This is being transferred into substantial business opportunities. US companies paid US\$1.5 billion in 1996 for knowledge management and are estimated to spend \$ 5 billion a year by 2001. The scale of this potential market has attracted major software companies such as Lotus, Canon, and Microsoft to offer knowledge management applications. Information and communication technology packages such as intranets, groupware, list servers, knowledge repositories, database management and 'knowledge action networks' are now available and in intensive development.

7.0 WHAT STRATEGIES CAN BE TAKEN BY THE COMPANY TO ENHANCE AND FOSTER K- ECONOMY THROUGH KNOWLEDGE MANAGEMENT?

Knowledge is in the people's heads and managing it is an impossible task. What we can do and what knowledge management is all about, is stimulate and manage an environment in which knowledge is created, shared, harnessed, and used for the benefit of the organization, its people, and its customers. If organization believes that creating such environment is important then it needs to understand what new roles and what new skills are required within the organization to enable it to succeed (Oxbrow, 2000). To manage knowledge effectively, organizations need to: understand their strategic knowledge requirements, devise a knowledge strategy appropriate to the firm's business strategy, and implement an organizational and technical architecture appropriate to the organization's knowledge processing needs. These factors enable the organization to apply maximum effort and commitment

to creating, explicating, sharing, applying, and improving its knowledge.

Information cannot be a direct substitute for knowledge. The transmission (or diffusion, or sharing) of knowledge requires that it be translated into information and transferred. Not all knowledge can be translated into information at any given time; the translation will depend on processes of codification of common, social and embodied knowledge. This knowledge is involved in building the core knowledge of a person. Each of these classifications has a part that can not be translated into or expressed as information. The sum of these parts is the core knowledge of the person. A person with a lot of social contacts, experience, and skills has a larger core knowledge than someone without them. Too much information for employees with a lot of knowledge might be a waste of resources; not enough information for employees with a small knowledge base might pose a threat to the success of the organization.

In the era of knowledge economy, the economic dynamic is totally different from the industrial economy. If in the industrial economy wealth comes from leveraging tangible assets such as machines, property and labor, in the knowledge economy wealth is derived from the exploitation of intangible assets such as experience, know-how and knowledge. There is a universally recognized shift in the value placed on intangible assets and the vital role that such assets play in the fast moving knowledge economy. Therefore, to succeed in the knowledge economy, regions, nations, organizations, and individuals need to both accept and adapt to an environment where intangible assets are a key driver in the economy. They need to develop new processes, cultures, and behaviors that encourage the creation of new knowledge, the sharing of existing experience and know-how, and the efficient utilization of those assets for the benefit of all (Oxbrow, 2000).

A knowledge economy is more than a commitment to manage and tap into the accumulated knowledge within the business. It requires ongoing investment in the skills and capabilities of all in the economy, from the CEO to the part-time/twilight -hours employee (Harrison, 1999). Small business however, in general is bad in making this investment. With one of the lowest levels of per capita spending on employee education, training and development, small and medium-sized enterprises are hardly likely to close the knowledge gap between themselves and their major competitors. Education, training and development are a requirement for survival and growth – not a luxury or an optional extra (Harrison, 1999).

Malaysia has a large manufacturing sector which accounts approximately 34% of GDP. Yet future growth will be squeezed by an acute labor shortage. No other Asian developing nation has as many migrant

workers, reckoned at a million or about 10% of the population. Unlike India and Philippines, which must look to sell their services abroad, Malaysia has a ready-made domestic market for such new efficiencies as can come from IT. It makes better sense for the country's IT industry to focus on helping domestic industries move up the value-added ladder. To do this, you don't need the physical presence of more companies like Microsoft or Sun Microsystems. Instead, the Multimedia Supercorridor (MSC) would be better configured as a centre for smaller IT companies to focus on adapting available technology for the specific needs of locally based companies. Rather than hope to write software for export, or being technology originator, think instead about building companies that best use the best software already in existence. The real challenge for Malaysia and others in Asia is not to produce world-ranked IT companies. It is for IT companies to help make domestic companies as efficient as the best in the world. And that may be the real purpose of the MSC rather than it meant to recreate Silicon Valley (Anonymous, Far Eastern Economic Review 2000).

8.0 CONCLUSION

Effective knowledge management at all levels be the societal, organizational, and individual is critical for creating a strong economically, creating a knowledge and learning society. The presence of this type of society is pre-requisite for the emergence of a knowledge driven economy or widely known as knowledge economy or K-economy. A knowledge economy can be defined as an economy in which the creation of wealth is predominantly driven by the use or exploitation of knowledge. In order to survive or quickly adapt with the new economy there is an urgent need for a nation to enhance its capabilities by building its strategy around knowledge management theme.

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