ABSTRACT

With the emergence of the knowledge economy, organisations are beginning to see a need to apply knowledge management (KM) practices to their business activities. While knowledge management (KM) has gathered considerable momentum in order to be a vital source of competitive advantage, how its role could harvest knowledge assets for innovation has yet to be established firmly. This paper aims to address this issue by examining how innovation can be fostered through knowledge-centred principles. It first describes the globalisation of economies and the coming of the new knowledge age as the backdrop to Singapore's vision of transiting into a knowledge economy. Then, it discusses how KM practices can be harnessed better for innovation management and explains why organisations should foster innovation by adopting an evolving set of knowledge-centred principles. Next, based on a case analysis of Singapore Airlines (SIA), it provides a theoretical review of these principles. Finally, it outlines the future challenges of exploiting knowledge for innovation.

Keywords: knowledge age; knowledge-centred principles; knowledge economy; knowledge innovation; knowledge management; knowledge revolution

BACKGROUND

Globalisation of Economies

The world today is far more interconnected and interdependent than before. As globalisation speeds up and cross-border barriers between nations are dismantled, economic development will depend less on physical resources and more on developments that require nations to be more global in their approach to trade and investment activities. Coupled with the fast pace of technological advancements, national economies not only have to be global in order to stay competitive, but they also must be ready to embrace the demands of innovation (Goh, 2002; Giget, 1997; Grossman & Helpman, 1992). This inadvertently has placed immense pressure on emerging economies to accelerate the process of innovation through knowledge acquisition and application. If the experience of some de-
veloped nations that went through such a wave of economic globalisation could offer some insights, then a change of employment trends, industrial transformation, and economic revolution should be expected in Asia’s emerging economies. Three phenomena seem imminent: (1) outsourcing of transportable jobs to countries offering the most competitive labour cost is now a ubiquitous trend; (2) migration of existing industries up the value chain to new knowledge-intensive ones is increasingly prevalent; and (3) economies are forced to respond to rapid technological changes and constant industrial renewal in order to remain competitive and relevant.

In Asia, a new economy termed knowledge economy\(^1\) has arrived (OECD, 1996). Organisations are pressured to be knowledge-intensive in their activities. As advanced technologies proliferate and new products become obsolete faster than before, organisations that are able to capitalise opportunities arising from the availability of knowledge assets\(^2\) and derive the most value from them will be the industry winners, while those who cannot will be the industry losers. Since innovations constitute the embodiment of knowledge assets in new products and services, innovation pursuits are centred on leveraging the value of knowledge. Thus, corporate leaders are taking a keen interest in effective means of harvesting knowledge to foster the pursuit of innovation and are differentiating themselves from competitors based on new management initiatives (Malhotra, 2001; Nonaka, 1991; Skyrme, 1991). This is fast becoming pervasive in today’s knowledge-intensive enterprises and soon will be mandatory for the economic survival of all organisations.

**Emergence of Knowledge Economy: Singapore’s Opportunities**

In less than one century, the world has gone through several stages of economic transformation, from agricultural economy to industrial economy to information economy, and now, to knowledge economy. Economists have argued that national economies as well as advocates of centralised planning should attribute their economic problems to the utilisation of knowledge and not to the allocation of resources. Strong evidence exists to support that economies that are poor in natural resources but skilled in knowledge creation and utilisation generally outperform those economies that have abundant natural resources but are lacking in knowledge competence and skills. Knowledge has emerged as the primary resource for economic development; land, labour and capital — the economist’s traditional factors of production — have become secondary (Drucker, 1988; Miller & Morris, 1999). It also is argued that traditional factors of production are limited by a threshold of scale and scope, as every marginal increase in land, labour or financial capital results in diminishing returns on additional investment. In contrast, a different law of economic returns seems to govern the returns arising from knowledge, and investment in every additional unit of information or knowledge created and utilised results in much higher returns\(^3\).

For more than a decade, Singapore has viewed the emergence of the knowledge economy as offering a wellspring of opportunities. But what seems most immediate is to identify and nurture strategic industries that would spur steady and sustainable growth based on the economics of knowledge or, put simply, transforming the economy into one that exploits the
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