Chapter 10
Knowledge Super Corridors in Developing Countries:
A Critical Perspective

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ABSTRACT

Developing countries in Asia are in the process of transitioning from a production economy to a knowledge-based economy (k-economy). Various new knowledge and information communications technology (ICT) mega-projects aimed at pervasive computing are being designed and executed at the international, national, state and industry levels to sustain competitiveness. The structures and processes by which these so-called "knowledge super corridors" are developed and implemented are complex economic-social-political decisions. An in-depth understanding is illustrated and assessed using two case studies concerned with formulating and implementing a k-economy blueprint and decision making to develop a knowledge portal in emerging k-economies in Southeast Asia. From analyses based on the structurational framework, practical implications are drawn for success strategies and implementation of pervasive computing.

INTRODUCTION: A NEW WORLD OF KNOWLEDGE, INNOVATION AND DREAM ECONOMIES

An increasing number of countries around the world are embracing the concept and practice of the knowledge-based economy (hereafter refer to as the k-economy). Just before the beginning of the new millennium, the US, UK, Canada, Ireland, Finland, France, Japan, South Korea, Australia, New Zealand and Singapore have already articulated national positions and strategies for their k-economies. Although each country defines its k-economy somewhat differently, all of these definitions revolved around the New Growth Theory of an economy based on the production, distribution and utilization of knowledge, which constitutes the primary engine of economic growth and wealth creation. More than 50% of the Gross Domestic Product in the major OECD economies is now based on the

production and distribution of knowledge. In the US, more than 60% of workers are classified as knowledge workers, defined as symbolic analysts who manipulate symbols rather than machines, and they include architects, bank workers, fashion designers, pharmaceutical researchers, teachers and policy analysts.

Developing countries, not wanting to be left behind in these developments, are also formulating policies and strategies to transform their production economies (p-economies) based on the conventional inputs of land, labor and capital into the k-economies (Rosenberg 2002). The strategy documents produced in developing countries, however, are fairly similar to those of the developed economies, giving the impression that k-economy and innovation strategies are readily transferable across different countries (Makishima 2002; Masuyama and Vandenbrink 2003; Saperstein and Rouach 2002). An example is Malaysia's developmental strategy known as the Ninth Malaysia Plan 2006-2010 heavily underscored by the concept and practice of the k-economy. First articulated in the 2002 Knowledge-based Economy Master Plan, the country defines its own k-economy and the rationale for the transition as follows:

"….k-economy is one in which knowledge, creativity and innovation can play an ever-increasing and important role in generating and sustaining growth. This differs from the conventional production-based or p-economy where economic growth was driven largely by the accumulation of the traditional factors of production, namely, land, labor and capital. The most valuable asset in the k-economy is human capital or the pool of educated and skilled human resources, whose core competency is the ability to create, acquire and exploit knowledge. ….Why is it imperative that our country makes the transition towards the k-economy? Our international competitiveness has been on the decline, as indicated in the slip in the *World Competitiveness Report*. Increasing foreign competition from countries such as China,

India and Vietnam means that the country has to re-position itself in niches with distinct competitive advantages. Globalization and liberalization make local and world markets indistinguishable, and this requires the country to differentiate its offerings in the marketplace. Furthermore, as costs escalate and profit margins shrink in traditional industries, we would have to seek higher value-added to its products and services, seek new sources of growth, and move into both pre- and post-production stages. The development of the k-economy will enable our country to enhance its international competitiveness and sustain socio-economic development…."

In the last two years, Malaysia's 'k-economy' concept is expanded to capture and highlight the critical aspects of innovation which entails using existing building blocks of knowledge to create new value and customer intimacy, thus encapsulating the innovation and dream economies in which pervasive computing would be embedded. But, the reading of any government public domain document is an interpretive act that reveals to the reader as much as it conceals from him/her. The social-political-organizational dynamics that underpinned the decisions and processes embedded and reflected in strategy and action plan documents are not fully known to those outside the government policy making bodies. Authors such as Hearn and Rooney (2002) argued that "….to provide an appropriate starting point for policy makers, we must first set out a theory of knowledge or, more specifically, of knowledge systems.… and specify key behaviors of such systems....that provide insights about how policy should be formulated". They further asserted that instead of a diminishing role, governments have an important strategic role in designing the policy systems of the twenty-first century, by virtue of the relational nature of knowledge and k-economy. Bhatnagar (2004) used a multi-disciplinary approach covering economic, managerial, public administration and technical dimensions to provide practical guidelines for electronic government

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