Chapter 13
A Knowledge Framework for Development: Empirical Investigation of 30 Societies

Ravi S. Sharma
Nanyang Technological University, Singapore

Ganesh Chandrasekar
Nanyang Technological University, Singapore

Bharathkumar Vaitheeswaran
Nanyang Technological University, Singapore

ABSTRACT
In this article, the authors investigate the diverse dimensions of a knowledge society. First, the relevant literature on post industrial societies is reviewed to identify the key constituents of successful growth and development. The authors then propose a 10-dimension framework within political, economic, social and technological parameters that describe the state of evolution of a given knowledge society. Knowledge assessment scores, human development indices, technology readiness scores and competitiveness scores are selected as composite indicators of knowledge societies. Proxy indicators are assigned for the dimensions, and secondary data was gathered from reputed international sources. Partial Pearson Correlation Analysis was done between the proxy indicators and the composite scales to determine the direction and strength of relationships. Hygiene factors and competitive factors of a knowledge society are distilled from the empirical results and recommendations are suggested to address some areas of concern when pursuing policies for knowledge based development.

INTRODUCTION
“Development is neither smooth nor linear—at any geographic scale. Growth comes earlier to some places than to others” declared a World Bank (2009, p. 8) report. Indeed waves of development do not appear to reach all societies alike, and so are their growth and development cycles. This article examines why sustainable development comes to some societies earlier for reasons other than natural advantages. Field research has shown that knowledge based economies are directly based
on the effective production, distribution and use of knowledge and information (OECD, 1996; UNDP, 2007; World Bank, 2009). In these economies, knowledge is created, shared and transferred as commodities for the welfare of society and hence it requires a change in other facets of life (Kahin & Foray, 2006). Unlike land and capital wherein sharing results in diminished wealth for its owners, knowledge is a non diminishing resource. In fact knowledge owners liberally share for reputation and reciprocity (Davenport & Prusak, 2000), and profit commercially by diffusion through licensing or franchising.

This article considers knowledge globally pervasive, inviting enabled individuals and societies to adopt and apply knowledge to solve real problems. The concept of a knowledge society is incomplete without taking globalization into consideration because knowledge is ubiquitous. Gupta and Govindarajan (2000) have studied barriers of knowledge flows within multi-national corporations while work of Simard and Rice (2007) analyzed the linkages between best practice transfer and knowledge creation. Friedman (2007) has proposed ten flatteners which drive knowledge exchange and concludes that the convergence of new platform, new processes and new players have made developing countries compete and excel in chosen sectors of the knowledge economy. Prahalad (2005) suggested that once societies evolve as knowledge societies there is a real possibility that the flow of knowledge from developed to developing countries will be complimented by reverse flows as well. While knowledge creation is a requisite for knowledge society, it should make efforts to understand the nuances of making knowledge flow to absorb external knowledge and penetrate internal knowledge. A knowledge society needs to have virtues of creation, absorption and mobilization.

Technology infrastructure and usage is the basis for a knowledge society and the penetration of technology is hence critical (OECD, 2004; Sharma & Mokhtor, 2006). According to Prahalad and Krishnan (2008), the growth of future businesses invariably depends on accessing global assets to co create with customers which requires social and technical architectures as fundamental building blocks. Technology in itself does not lead to knowledge creation and but provides a universal platform for sharing knowledge. Porter (1998) argues that such a platform is part of the business environment for competing firms and plays a major role to attract fresh players and help existing players to leverage their competitive advantages. Though monopoly and state control are major inhibitors for innovation (Kotler et al., 1997), in the post-industrial society, governments have an important role of empowering the individuals by providing education, infrastructure and consistency in national policy.

From a knowledge based economy there is a natural evolution to transform into a knowledge society wherein knowledge is the key differentiator and has penetrated not only high technology sectors but also traditional industries (Foray, 2006). To achieve such a society, a combination of social, political, technological and business assets should coalesce to achieve critical mass. A goal driven strategy to develop a state as a knowledge society along the lines of the Millennium Development Goals (Spence, 2008) would lead to a flatter world, where increased knowledge transfer and unleashed markets help economies create, share and transfer knowledge equitably.

It is therefore relevant and timely to attempt to construct and measure macro indicators for knowledge creation and diffusion that supplement general indicators like Gross Domestic Product and Annual Growth rate. The World Bank Knowledge Assessment Methodology (World Bank, 2008a) and the United Nations Human Development Index (2007) account for many such non-economic factors and give a composite score. However, the knowledge society rests on other blocks as well – for example, infrastructure, governance, human capital and culture and each block has supporting columns (Sharma et al., 2008,