Chapter XIV

Knowledge Assets in the Global Economy: Assessment of National Intellectual Capital

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“Our government is filled with knowledge…We have 316 years’ worth of documents and data and thousands of employees with long years of practical experience. If we can take that knowledge, and place it into the hands of any person who needs it, whenever they need it, I can deliver services more quickly, more accurately and more consistently.”
— From ‘Knowledge Management: New Wisdom or Passing Fad?’ in Government Technology, June 1999

ABSTRACT

This chapter has the following objectives: developing the need for assessing knowledge capital at the national economic level; reviewing a national case study of how intellectual capital assessment was done in case of one nation state; suggesting implications of use of such assessment methods and needed areas of advancement; and highlighting caveats in existing assessment methods that underscore the directions for future research. With increasing emphasis on aligning national information resource planning, design and implementation with growth and performance needs of business or nation, better understanding of new valuation and assessment techniques is necessary for information resource management policymakers, practitioners and researchers.

INTRODUCTION

Emergence of the service society after the last world war brought increased realization of role of employees’ knowledge and creativity in adding value to the company. Attempts to capitalize company investments in people on the balance sheet in the 1970s failed because of measurement problems. The subject gathered increased interest more recently in the 1990s, with the rapid emergence of informa-
tion and communication technologies (ICTs). As business processes became increasingly ‘enabled’ by large-scale information systems, information systems designers attempted to capture employees’ implicit and explicit knowledge in ‘corporate memory’ by means of intranets and other similar applications (Malhotra, 2000a, 2000b).

It was recognized that in contrast to the knowledge of individual employees, such corporate memory does form part of a company’s capital. Accordingly, “knowledge” has become a key production factor, however the financial accounts are still dominated by traditional factors of production, including buildings and machinery. Hence, there is an imperative need for developing an understanding of “knowledge capital,” or the so-called intangible assets. The topic is not only pertinent to individual enterprises, but also to national economies that are making a rapid transition to a society based on knowledge work.

This chapter develops the case for assessment of national intellectual capital by drawing upon existing research, practice and a recent study of an Asian nation representative of countries making a transition from ‘developing’ to ‘developed’ status. The issues discussed herein are important for information resource management policymakers, practitioners and researchers for assessing their contributions in terms of new measures of performance. More importantly, as the world economies transition from the world of “atoms” to world of “bits,” they would be expected to plan, devise and implement information and knowledge management systems that provide differential advantage in terms of ‘intellectual capital.’

**KNOWLEDGE ASSETS AND INTELLECTUAL CAPITAL**

Traditional assessment of national economic performance has relied upon understanding the GDP in terms of traditional factors of production—land, labor and capital. Knowledge assets may be distinguished from the traditional factors of production—in that they are governed by what has been described as the ‘law of increasing returns.’ In contrast to the traditional factors of production that were governed by diminishing returns, every additional unit of knowledge used effectively results in a marginal increase in performance. Success of companies such as Microsoft is often attributed to the fact that every additional unit of information-based product or service would result in an increase in the marginal returns. Given the changing dynamics underlying national performance, it is not surprising that some less developed economies with significant assets in ICT knowledge and Internet-related expertise are hoping to leapfrog more developed economies.

Despite the increasingly important role of knowledge-based assets in national performance, most countries still assess their performance based on traditional factors of production. Today’s measurement systems are limited in their capability to account for tacit knowledge embedded in the human resources, although there is some agreement on measuring other categories of knowledge, including patents and trademarks. However, the emerging knowledge economy is characterized by industries that are more knowledge intensive and by goods and products that are more intangible than they were in the post-industrial economy. Knowledge assets or intellectual capital may be described as the “hidden” assets of a country that underpin
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