Chapter 3

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

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This article has the following objectives: developing the need for assessing knowledge capital at the national economic level; review of 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 businesses or nations, better understanding of new valuation and assessment techniques are necessary for information resource management policymakers, practitioners and researchers.

“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 99

Emergence of the service society after the last world war brought increased realization of the role of employees’ knowledge and creativity in adding value to the

This chapter appears in the book, Intelligent Support Systems: Knowledge Management by Vijayan Sugumaran.
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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 information and communication technologies (ICT). 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).

In contrast to the knowledge of individual employees, such corporate knowledge does contribute to the company’s value-creation capabilities as well as financial valuation by analysts. Hence, such organizational knowledge or intellectual capital must be accounted for in the company’s balance sheet that has generally focused on the traditional factors of production such as land, labor and capital. 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 article 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 (San Jose Mercury News, 2000).
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