

## Chapter 8.14

# The Role of ICTs in the Management of Multinational Intellectual Capital

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### ABSTRACT

This chapter provides a systematic multidisciplinary framework that defines the role of technology in leveraging IC across borders and between headquarters and subsidiaries. In reaching this conclusion, this chapter investigates the strategic importance of Information and Communication Technologies (ICTs) in the management of Intellectual Capital (IC) within a Multinational Company (MNC) ecosystem. The chapter addresses the transubstantiation of MNC into boundaryless Global Knowledge-Based Organization (GKB-

MNC) which ultimately propagates into Learning MNC (LMNC). The latter is a suggested MNC category that sustains competitive advantage through systemic adoption of “Knowledge Iterative Supply Network (KISN)” model proposed by the authors. The chapter suggests a new multinational ICT/IC governance strategy that handles the emerging complexities associated with modern intangible resource synthesis. In effect, these complexities originate from the introduction of functionalities such as just-in-time knowledge supply, elicitation of tacit knowledge, and leveraging of the core competencies for the creation and maintenance of geographically distributed value proposition.

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## **PROLEGOMENA**

The current global economical transformations have resulted in a turbulent marketplace that needs continual IC value rejuvenation to create and sustain companies' competitive advantage. This fact has been highlighted by Guthrie (2001) who reports that "the rise of the 'new economy', one principally driven by information and knowledge, international competitiveness and changing patterns of interpersonal activities is attributed to the increased prominence of intellectual capital (IC) as a management and research topic." Hence, this evolution in the IC is highly correlated with the growth of Knowledge Management (KM) as a new management discipline. Meso & Smith (2000) testify that with the developments in KM, intellectual capital is gaining a reputation as the only strategic asset.

It has been reported by many investigators that ICTs help to establish social networks through their deployment via digital networks. In addition, ICTs provide channels for communication and learning for the improvement of products and services (Jitsuzumi et al. (2001), Hedelin & Allwood (2002), Mansell (2002), Baddii & Sharif (2003), Mohamed (2007b). Galán et al. (1999) report that ICTs form one of the pillars for global competitive advantage, in which there is a high competition in the marketplace. Furthermore, Stromquist & Samoff (2000) report that "as globalization expands the twin forces of the market and information technologies are pervading the educational arena. One instance is the Knowledge Management System (KMS), which proposes to produce easily retrievable materials via the Internet and hypertext. KMS attempts to be more than a mere data bank, for it seeks to provide highly selected and targeted knowledge". However, Duffy (2001) states that it is difficult to capture all valuable knowledge needed by the organization. There is an opportunity now to harvest, transform, share, and reuse knowledge instantaneously though modern technology. We would add that it is unlikely that competitors will

have the same mixture of technology and human capital to replicate the same kind of knowledge. Nevertheless, Mohamed (2007b) states that "ICT tools compress global business life-cycle through the ease of data exchange and analysis at various global levels. The mobilization of explicit knowledge through virtual communication significantly contributed to the sharing of knowledge, but mostly at the operational levels and less at the managerial level; this can be attributed to the fact that ICTs lack the ability to transform knowledge as they transfer it."

This article argues that although the world is experiencing the upshots of the knowledge-based economy (Havens & Knapp (1999), Civi (2000), and Lubit (2001), in which knowledge is the most important sustainable competitive advantage (Williams (2001), Bristow (2000), Gupta et al. (2000), IC elements for many MNCs still exist in disconnected islands. This scattered IC, in various MNCs' subsidiaries, resulted in loss of what could have been a significant added value for these companies. ICTs may contribute to the solution of such a complex problem; however, one of the bona fide challenges facing the use of technology to manage IC is "knowledge de-contextualization" or "knowledge dilution". These effects happen during the codification and externalization processes. However, proper consolidation of different types of ICs with diverse types MNCs may help in lessening such negative impacts. Nonetheless, this may happen only, if a true synergetic integration of IC stream from different MNCs' subsidiaries is reached.

## **MNCs' Typology and IC Classification**

Perlmutter developed the first typology of MNCs that consists of three categories: ethnocentric which is a home-country oriented MNCs, polycentric that describes host-country oriented MNCs, and geocentric that is characterized by a world orientation profile (Michailova & Nielsen (2006),

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