

# MNE Knowledge Management Across Borders and ICT

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## INTRODUCTION

Firms are consumers, producers, managers, and distributors of information (Egelhoff, 1991; Casson, 1996) and as such a repository of productive knowledge (Winter, 1988). Consequently the ability to generate, access, and utilize relevant knowledge is an essential organizational activity in order both to reduce uncertainty about the firm's external environment and improve the efficiency of its internal operations.

Particularly for multinational enterprises (MNEs), efficient implementation of knowledge management processes is of competitive importance. In contrast to their set of indigenous competitors, MNEs face liabilities of foreignness (Zaheer, 1995) and a more complex organizational structure that transcends cultures and countries.

Advances in location insensitive information and communication technology (ICT), in particular the Internet's marketplace (Rayport & Sviokla, 1994), could significantly facilitate MNEs' knowledge management efforts. Ease of information gathering, communication, and knowledge management is no longer a strict function of geographical proximity. As a result of the Internet, the location specificity of knowledge (von Hayek, 1945) is becoming less location dependent, and thus less costly. Despite this, the role of the Internet in knowledge management has its limits due to its inherent media characteristics and the aforementioned liabilities particular to the operations of MNEs.

This article explores the possibilities and limitations of the Internet in supporting knowledge management in the specific context of MNEs. It is structured as follows. First we will provide a background to the article by discussing and defining the specifics of MNEs, MNEs' knowledge management challenges, and the specifics of the Internet. Subsequently the article will analyze and explore the potential impact of the Internet on MNEs' knowledge management processes. A discussion of future trends and an overall conclusion close the article.

## BACKGROUND

Global trade has grown 16-fold since the 1950s, by far outstripping the growth in GDP (Economist, 1998). A key driving force behind this trend is foreign direct investment (FDI), whereas FDI is defined as an acquisition of an asset in a foreign country (host country) made by an investor in another country (home country) with the intention to manage this asset (WTO, 1996). MNEs are the main driver behind FDI. Although definitions vary, an MNE can be defined as a firm that is engaged in FDI in several countries outside its home country (for a more detailed discussion the reader might refer to, e.g., Vahlne & Nordström, 1993; Rugman & Verbeke, 2004).

Before discussing the specific knowledge management challenges of MNEs and the role of the Internet therein, it is vital to understand why MNEs exist at all. International business theory has addressed this. The core idea of international trade theory—the idea of market imperfections—was utilized by international business researchers to explain international activities at the firm level by projecting these imperfections into the firm. This helped to explain the emergence and existence of MNEs, as opposed to firms only trading with each other by means of importing and exporting. In 1960 (published in 1976), Hymer's market imperfections theory in essence postulated that firm specific advantages like technology and management skills are the core source enabling firms to successfully operate abroad, offsetting cost and information advantages enjoyed by indigenous firms. Hymer's idea was then further refined and developed by Buckley and Casson (1976) to become internalization theory. Buckley and Casson conceptualized the MNE as a firm that responds to pre-product or intermediate-product market imperfections by internalizing these markets (like components, semi processed goods, knowledge, skills, and technology) across national boundaries (via FDI). Internalization means that a firm makes use of its organizational hierarchy and in-house resources to manage a

specific business transaction as opposed to buying it on the market. By internalizing the transfer of a firm’s assets and capabilities, firms mitigate transfer problems and at the same time exploit their internal advantage(s) internationally.

At the heart of internalization is the management of knowledge-related imperfections (Kogut & Zander, 1993), which makes effective knowledge management a central task for MNEs. Knowledge management within MNEs is about two interrelated tasks:

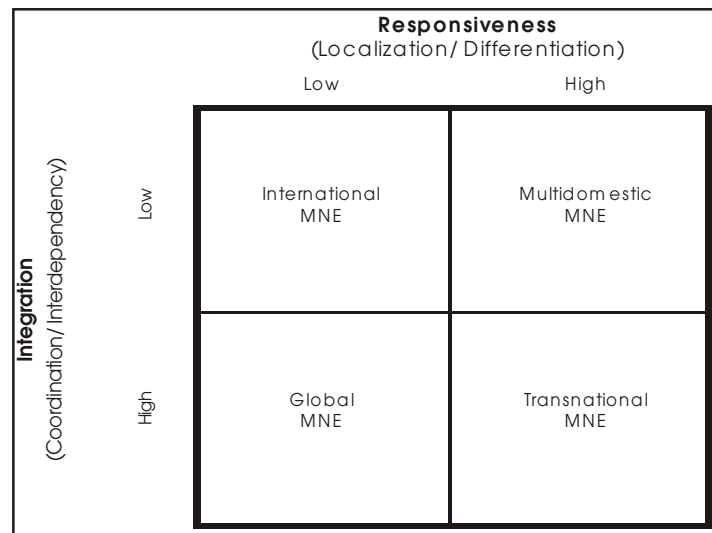
1. Knowledge management within the MNE (intra-MNE) which focuses on continuous knowledge creation, transmission, use, and retention between and within headquarters and subsidiaries.
2. Interface knowledge management (extra-MNE) which is about the continuous identification of the MNEs’ external knowledge environment, its scanning, the collection of relevant external knowledge, and synthesis with existing intra-MNE knowledge.

This categorization can be related to types of MNEs (see Figure 1). Intra-MNE knowledge management mainly relates to the integration dimension, and extra-MNE knowledge management mainly relates to the responsiveness dimension. Obviously, as an MNE moves from low to high on both dimensions, knowledge management (intra- and extra-MNE) requirements increase.

This article will focus on the first knowledge management task (intra-MNE knowledge; integration), because it is unique to MNEs.

The key challenge for intra-MNE knowledge management is knowledge transmission (Kogut & Zander, 1993). Transmitting knowledge is costly (Teece, 1977). The more tacit—or personal (Polanyi, 1958)—and complex the information, the more difficult and expensive it will be to transmit it. This is so because the codification and teaching costs in the transmission process increase as tacitness and complexity increases. Transmitting knowledge across different cultures and countries further increases the costs due to different norms, habits, languages, and interpersonal processes that can inhibit communication flows (Johanson & Vahlne, 1977). These differences operate at two levels, the intra-organizational level and the extra-organizational level, both defining the communication complexity in the knowledge transmission process (see Figure 2). While the former refers to differences between the different organizational cultures within MNEs (mainly headquarters to subsidiary/-ies), the latter refers to differences at the national level (home country to host country/-ies). However, the intra-MNE transfer of knowledge can be eased by the development of a common understanding and of capabilities—combinative capabilities according to Kogut and Zander (1993)—how to manage this transmission. Such development emerges—

Figure 1. Types of MNEs



Source: Derived from Harzing’s MNE typology synthesis (Harzing, 1997)

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