Technology sourcing in multinational enterprises and the roles of subsidiaries: An empirical investigation

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Received 8 July 2004; received in revised form 12 October 2004; accepted 7 January 2005

Abstract

This paper views the Multinational Enterprise (MNE) as a differentiated learning network with foreign subunits playing a critical role in managing knowledge. Drawing on a sample of 92 subsidiaries operating in Greece, it empirically tests the relationship between sources of technology acquired and/or generated (internally or externally) and relates them to differently strategically motivated subsidiaries. Our findings record the existence of a multifaceted network of technology generation and transmission, which is differentiated among the different types of subsidiaries. In particular, results confirm the fact that larger and innovative subsidiaries have granted access to wider sources of technology. Moreover, evidence indicates that product mandates, as well as subsidiaries of a more efficiency-seeking nature, are likely to be better embedded in the local environment.

Keywords: Multinational enterprises; Subsidiaries; Greece

1. Introduction

This paper views the Multinational Enterprise (MNE) as a differentiated learning network with subsidiaries playing a critical role in managing knowledge (Birkinshaw, 2005).
Hood, & Jonsson, 1998; Gupta & Govindarajan, 2000). Today, rather than accepting predetermined roles, subsidiaries are asked to actively engage in developing their operations and explore procedures that would increase the efficacy of the whole MNE network (Birkinshaw, 1996; Crookel & Morrison, 1990). Building on recent advances regarding the strategic evolution of subsidiary roles, we argue that the MNE is a vehicle of integrating knowledge generated internally and externally from its global operations (Bartlett & Ghoshal, 1989). There are many cases of subsidiaries that perform specific value-added activities, which are fundamentally ‘embedded’ in their respective host-countries knowledge systems (evidence is provided by Dunning, 1996; Jarillo & Martinez, 1990; Kuemmerle, 1999).

Technological competencies have been theoretically and empirically verified (Asakawa, 2001; Pearce, 1994) as likely to be central to the creation of ownership advantages for many MNEs. Technology acquisition decisions have traditionally examined the firm’s choice either to use internal technology or to acquire technology from outside sources (Murray, Wildt, & Kotabe, 1995). While globalisation of markets and the consequent changes in competitive and technological environments, R&D internationalisation (Peng & Wang, 2000) and the new perspectives of international technology management (Chatterji, 1996) have moved up on the technology research agenda (Chiesa, 2000; Gassman & Von Zedwitz, 1998), there is scope for further exploration of current quantitative and qualitative research. Most firm-level empirical findings and theoretical contexts examined technology transfer (Conner & Prahalad, 1996; Kogut & Zander, 1993), the ‘absorptive capacity’ of firms (Cohen & Levinthal, 1990) and spillover effects of technology and survey the impact of technology in productivity and firm performance (Kotabe, Srinivasan, & Aulakh, 2002). Moreover, the majority of research undertaken in related issues has been done at the level of the parent firm (Cantwell, 2001). Technology sourcing and the strategic role of subsidiaries as organizational units, that could consist an influential factor in technology acquisition and development, has received relatively little attention.

This paper departs from the literature supporting that knowledge generation, deployment, acquisition and diffusion may derive from MNE’s both external and internal environment (Gupta & Govindarajan, 2000; Minbaeva, Pedersen, Bjorkman, Fey, & Park, 2003). Drawing on a unique sample of 92 subsidiaries operating in Greece, the research is centered on MNEs technology inputs and empirically tests the relationship between sources of technology acquired and/or generated (internally or externally) and relates them to differently strategically motivated subsidiaries. Greece was selected as the focal country since the opening up of new markets (mainly Eastern European) accelerated the process of restructuring on behalf of Greece based MNE subsidiaries. Recent developments have turned the attention of foreign investors to Greece’s competitive advantages including the existence and potential of knowledge generating assets. Two are the distinctive contributions coming out of this analysis: First, we show strong evidence that the operations of MNE foreign subunits, in an otherwise peripheral economy of the EU, rely in fact on a multifaceted knowledge creation network that goes beyond mere technology transfer. Second, we present for the first time a detailed subsidiary-level analysis regarding foreign operations in Greece. The rest of the paper is organized as follows: Section 2 sets the theoretical background, Section 3 analyses the proposed research questions
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