Product innovation and decision-making autonomy in subsidiaries of multinational companies

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A B S T R A C T

This paper investigates the relationship between subsidiary decision-making autonomy and their development of product innovations. Using survey data from 563 subsidiaries located in six European countries, we show how the degree of decision-making autonomy, as well as the functional area in which the subsidiary has decision-making autonomy, affect the probability of a subsidiary developing product innovations. We find that higher decision-making autonomy increases the probability of a subsidiary developing a product innovation. This effect is particularly pronounced, but not restricted to, decision-making in the area of R&D or the adoption of technologies. The positive effect extends also to functional areas such as investment, finance, supplier selection as well as marketing and sales. In addition, our study suggests that higher degrees of novelty of product innovation still benefit from subsidiaries’ autonomy, but may require higher degrees of managerial involvement by headquarters.

1. Introduction

The profitability and competitiveness of multinational enterprises (MNEs) is, to a large extent, driven by its ability to accumulate technological knowledge and innovate (Cantwell, 1989, 1995; Kogut & Zander, 1993). The contemporary network-based theory of the MNE views subsidiaries as strategic actors that augment the technological capabilities of the MNE at foreign locations by developing subsidiary-specific advantages (Birkinshaw, Hood, & Jonson, 1998; Cantwell & Piscitello, 2014). Firms’ external linkages or networks play an important role for product innovation (Powell, Koput, & Smith-Doerr, 1996; von Hippel, 1988), and subsidiaries’ embeddedness in the local external network serves as a key mechanism of the MNE to source knowledge (Cano-Kollmann, Cantwell, Hannigan, Mudambi, & Song, 2016). Subsidiaries’ local network ties are perceived as a resource and a valuable input for product innovation (Andersson et al., 2001, 2002; Andersson, Forsgren, & Holm, 2007; Ciabuschi, Dellestrand, & Martin, 2011; Frost, 2001; Luo, 2003; Mu, Gnyawali, & Hatfield, 2007).

Product innovation in MNE subsidiaries and the ability of subsidiaries to access local external networks are fundamentally related to the managerial question on the degree and nature of decision-making autonomy within the MNE (Hoenen & Kostova, 2014). This paper argues that MNE subsidiaries are not able to develop product innovations when they lack the required decision-making autonomy. When subsidiary decision-making autonomy has been previously studied, it has been related to financial performance, but not to subsidiary innovativeness (see Kawai and Strange (2013) for an overview). It is unknown if and how subsidiary decision-making autonomy translates in the development of new products in a subsidiary (Michailova & Zhan, 2015; Mudambi, Pedersen, & Andersson, 2014). Embedded in the integration-responsiveness framework (Bartlett & Ghoshal, 1989) and starting from the premise that the MNE can be seen as a network of subsidiaries each with their own capabilities (Birkinshaw et al., 1998; Strutenberger & Ambos, 2014), this paper relates the degree and the nature of decision-making autonomy to product innovation in subsidiaries.

We explore decision-making autonomy along two dimensions; a) the degree of autonomy, and b) the functional area in which a subsidiary has a certain degree of decision-making autonomy. We test our hypotheses using unique survey data from a representative sample of 563 multinational subsidiaries located in six Central and Eastern European countries (Poland, the Czech Republic, the Slovak Republic, Hungary, Romania and (East) Germany). MNEs entered these emerging economies in the 1990s mainly to exploit market opportunities and labour cost advantages. Yet more recently, they co-located R&D and innovation in the region (Manea & Pearce, 2006; Pavlinek, 2012; UNCTAD, 2005). Central and Eastern European countries share many economic and institutional characteristics. For example, they have all adopted the
EU legal framework with respect to intellectual property rights protection. Yet, the effectiveness of intellectual property rights protection varies (European Union, 2013) affecting the inflow of foreign direct investment (Javorcik, 2004) as well as the knowledge-sourcing strategies by MNEs (Santangelo, Meyer, & Jindra, 2016). Against this background, we explore how decision-making autonomy affects product innovation at subsidiary level.

Our results indicate that higher levels of decision-making autonomy are associated with a higher probability of a subsidiary generating product innovations. This conclusion applies specifically to decision-making autonomy in the area of research and development, but extends to investment and financial decisions as well. All else equal, a subsidiary that takes all R&D decisions itself has a 0.35 higher probability of generating a new product than a subsidiary that has no decision-making autonomy. The positive effect of autonomy on product innovation is highest for innovations that are new to the subsidiary and lowest for product innovations new to world. We conclude that the network-based theory of the MNE emphasizing subsidiaries’ external embeddedness requires a simultaneous recognition of the relevance of the internal distribution of decision-making autonomy. In the face of the current emphasis in the literature on the need of MNEs to be externally embedded, we think this is an important conclusion with clear managerial implications.

2. Theory and hypotheses

2.1. Product innovation in MNEs and subsidiaries’ competence-creation

Product innovation is a key strategy for firms to generate a sustained competitive advantage (Cantwell, 1989; Danneels, 2002). New product development is a cumulative and gradual process of continuous adjustment and refinement based on the development of new technology and its use in production (Pavitt, 1987). Innovation strategies constitute of not only the development of new technology (as in the case of R&D and inventions) but especially its use in production and commercial applications. A product innovation is thus generally defined as the implementation of a new or significantly improved good or service (OECD, 2005). In the case of MNEs, product innovation is associated with the accumulation of knowledge and technology in international networks and considered central to MNEs’ overall competitiveness (Cantwell, 1989, 1995).

The contemporary view relates MNEs’ ability to generate product innovations to internal economies of scale due to the transfer of knowledge within the internal network, as well as external economies associated with the absorption of knowledge available at foreign locations (Cantwell, 1989, 1995; Castellani & Zanfei, 2006; Tippmann, Sharkey, & Mangematin, 2014). MNEs not only exploit, but also augment their technological capabilities at foreign locations (Piscitello, 2005, 2014; Kuenmerle, 1999). This view of the MNE emphasizes the ability of subsidiaries to source knowledge from its external environment (Cano-Kollmann et al., 2016). This approach fundamentally challenges earlier views on the MNE (Kindleberger, 1969; Stopford & Wells, 1972; Vernon, 1966) that assumed a “quasi-colonial relationship between the parent company and foreign subsidiaries, wherein the latter are in charge of replicating the former’s activities abroad, with strategic decisions—including R&D and innovation strategies—being rigidly centralised” (Zanfei, 2000, 515).

The shift toward integrated innovation strategies within MNEs coincides with the emergence of an international network of specialized subsidiaries (Cantwell & Mudambi, 2005). While some of the subsidiaries within such a network may have a competence-exploiting role, others take on a more technologically creative function and the level and complexity of their R&D differ accordingly (Cantwell, 1989). The distinction between competence-exploiting and competence-creating activities is analogous to the distinction between exploitation and exploration in organizational learning theory (March, 1991; Danneels, 2002). The emphasis on innovation has led to an increased scholarly interest in the role of subsidiaries. In their overview of fifty years of headquarters-subsidiary research, Kostova, Marano, and Tallman (2016) document this increased interest in the subsidiary and the simultaneous interest in knowledge creation and transfer.

The literature on competence-creation in subsidiaries stresses the embeddedness of foreign subsidiaries in the business networks of the host country and emphasizes the reliance on local knowledge sources (Almeida, 1996; Frost, 2001). Subsidiaries’ external embeddedness is seen as a critical factor for subsidiary performance, including the development of new knowledge (Andersson et al., 2002, 2007; Ciabuschi et al., 2011; Ciabuschi, Holm, & Martin, 2014; Rugman & Verbeke, 2001). The access to localised knowledge in a host country is a crucial factor in explaining the capacity of MNEs for exploratory activity (Andersson et al., 2002; Forsgren, Holm, & Johanson, 2005).

The notion of competence-creation is broad and refers to different business functions and/or activities of subsidiaries (see Cantwell and Mudambi (2005) for an overview). Whereas some subsidiaries implement product innovations they developed themselves, other subsidiaries merely implement product innovations developed elsewhere in the MNE, for example, by the parent or other units of the MNE network. In addition, we need to distinguish between product innovations on the one hand, and R&D or inventions (patents) on the other. R&D is an input into the innovation process (rather than an output), and only one source of innovation (Archibugi & Pianta, 1995). Patents constitute a direct outcome of the inventive process but not all inventions become innovations (OECD, 2009), and a high share of patented inventions are not turned into a commercial applications (Giuri et al., 2007).

A number of studies have focused on subsidiaries’ participation in R&D (Asakawa, 2001; Ambos 2005; Ambos & Reitsperger, 2004; Chiesa, 2006; Kuenmerle, 1999; Nobel & Birkinshaw, 1998) or have used patents as an indicator of subsidiaries’ innovation (Almeida & Phene, 2004; Frost, 2001; Mudambi et al., 2007; Phene & Almeida, 2008). Here, we contribute to this line of work by focusing on product innovations developed in focal subsidiaries. In what follows, we relate the subsidiaries’ ability to develop product innovations to the degree and nature of their decision-making autonomy.

2.2. Subsidiary product innovation requires decision-making autonomy

As argued earlier, prior research on subsidiaries’ competence-creation explicitly recognizes the relevance of subsidiaries’ external embeddedness to the development of new knowledge (Andersson et al., 2002, 2007; Ciabuschi et al., 2011; Ciabuschi et al., 2014; Rugman & Verbeke, 2001). We contend that the shift towards external embeddedness to generate new knowledge needs to be facilitated by a simultaneous shift in the allocation of decision-making autonomy to optimize the conditions under which subsidiaries generate such product innovations. “The greater the variety of challenges and opportunities offered by local contexts ... the greater will be the need for autonomy within the MNC’s organization” (Zanfei, 2000, 524–525). The extent to which a subsidiary is embedded in the local context is fundamentally related to the extent to which strategic decision-making resides with the subsidiary relative to the headquarters (Ambos, 2005; Doz & Prahalad, 1984; Mudambi & Navarra, 2004; Meyer et al., 2011).

Although subsidiary autonomy has been studied before (see, for overviews, Kawai and Strange (2013) and Reilly and Scott (2014), evidence regarding the relation between subsidiary autonomy and subsidiary innovative performance is mostly conceptual (e.g. Michailova and Zhan (2015)). Empirical evidence is partial (e.g. Lazarova, Peretz, and Fried (2017) only looks at autonomy in the human resource domain) or indirect (e.g. Mudambi et al. (2007) use patents as an indicator of product innovation) and still limited (Gammelgaard, McDonald, Stephan, Tüselman, & Dorrenbacher, 2012: 1162). Early research by Bartlett and Ghoshal (1989) hinted at a positive relationship between autonomy and innovation in MNEs.
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