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The Driving Forces of Subsidiary Absorptive Capacity

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ABSTRACT The study investigates how a multinational corporation (MNC) can promote the absorptive capacity of its subsidiaries. The focus is on what drives the MNC subsidiary's ability to absorb marketing strategies that are initiated by the MNC parent, as well as how the subsidiary enacts on this absorptive capacity in order to compete in its focal market. The dual embeddedness of MNC subsidiaries plays a key role in this investigation, as subsidiaries belong to the MNC network and are simultaneously embedded in their host country environment. We argue that subsidiary absorptive capacity is formed as a purposeful response to this dual embeddedness. An analysis of marketing strategy absorptions undertaken by 213 subsidiaries reveals that MNCs can assist their subsidiaries to compete in competitive and dynamic focal markets by forming specific organizational mechanisms that are conducive to the development of subsidiary absorptive capacity. The findings hold important theoretical and practical implications.

Keywords: marketing strategy, MNC organizational mechanisms, subsidiary absorptive capacity, subsidiary markets

INTRODUCTION

Researchers in the management field agree that organizations' potential for long-term prosperity lies in their ability to transfer and absorb knowledge (Eisenhardt and Martin, 2000; Gupta and Govindarajan, 2000; Teece et al., 1997). This is particularly relevant for multinational corporations (MNCs), which derive their competitive advantage from managing the flows of knowledge within their global networks (Roth and Morrison, 1992). Here, parent–subsidiary knowledge flows are especially important for MNCs' survival and growth, as they affect the ways in which parents leverage their advantages internationally. At the same time, parent–subsidiary knowledge flows also carry direct benefits for individual MNC subsidiaries: they allow subsidiaries to receive strategic knowledge from the MNC parent, whose enactment can permit responding successfully to the challenges subsidiaries face in their host market environments (Birkinshaw and

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Morrison, 1995; Luo, 2003). Despite the substantial benefits an internalization of key strategic knowledge can play for the competitiveness of MNC subsidiaries (Gupta and Govindarajan, 2000; Jensen and Szulanski, 2004), variations exist across MNC subsidiaries in relation to their ability to absorb and integrate MNC parent-initiated strategic knowledge (Enright and Subramanian, 2007; Gupta and Govindarajan, 2000). What drives these variations, however, remains not sufficiently understood.

Contributing to the lack of our understanding is the fact that even though the literature on absorptive capacity is substantial (for reviews, see Lane et al., 2006; Volberda et al., 2010; Zahra and George, 2002), research on absorptive capacity for MNC subsidiaries is comparably scarce. The relatively small number of studies that focus on knowledge absorption by organizational units, tend to examine the ability to absorb knowledge that is external to the firm (i.e. knowledge generated in collaboration with suppliers or customers), while the same process inside organizations (i.e. subsidiaries' absorption of knowledge from the MNC parent) remains, with a few notable exceptions (Almeida and Phene, 2004; Minbaeva et al., 2003), largely under-investigated. Hence, although we know that absorptive capacity represents a key organizational capability, existing knowledge is limited largely to whether the enactment on this ability was successful or not. However, the organizational configurations within which absorptive capacity emerges and factors driving this emergence remain largely unknown (Jansen et al., 2005).

The study aims at enriching our understanding of the knowledge absorption process by investigating how the MNC can promote the subsidiary's absorption of marketing strategies that are initiated by the overseas MNC parent. The focus here is on what drives the ability to absorb this knowledge as well as on how the subsidiary enacts on this absorptive capacity. The dual embeddedness of MNC subsidiaries plays a key role in this investigation. In particular, although MNC subsidiaries share similarities with organizational units of independent firms in that they create relationships with and are affected by their immediate environments, they are also distinct from these firms in that they belong to the internal MNC network (Bradley et al., 2011). As a consequence, unlike their independent counterparts, MNC subsidiaries are able to respond to their environmental market conditions by absorbing and consequently using knowledge (i.e. in the form of marketing strategies) that is initiated elsewhere in the MNC network. MNC subsidiaries therefore have the advantage of absorbing knowledge from within the MNC network and adapt this knowledge based on their experience in the subsidiary market. Consequently, building on the literature on learning dyads (Lane and Lubatkin, 1998), we investigate what specific organizational mechanisms are conducive for the subsidiary's ability to absorb MNC parent-initiated marketing strategies and whether these mechanisms are, at the same time, the best response to competitive and dynamic subsidiary markets.

The study's empirical setting centres on 213 absorptions of marketing strategies by MNC subsidiaries. The findings confirm that specific organizational mechanisms (decentralization, normative integration, innovative culture) foster the subsidiaries' capacity to absorb parent-initiated marketing strategies and, at the same time, permit the MNC to effectively respond to competitive and dynamic subsidiary market environments. The results also confirm that an increased subsidiary absorptive capacity leads to a successful

enactment on this ability in the form of an integration of the marketing strategy by the subsidiary. Lastly, the findings illustrate that subsidiary absorptive capacity fully mediates the impact of all drivers on the enactment of strategy implementation, which reinforces the existence of the latent construct of absorptive capacity and its distinctiveness from the enactment on this ability.

The study makes important contributions. By fusing elements from the literature on absorptive capacity with international business research, we derive essential insights into what drives domain-specific knowledge absorption (i.e. marketing strategies) in an international intra-firm context and what drives this absorption process. Here, this study is one of the first to empirically test how the subsidiary's market conditions and specific organizational mechanisms jointly impact on the ability of subsidiaries to absorb MNC parent-initiated strategies and the enactment on this ability. By considering this dual embeddedness and exploring absorptive capacity 'in use', this study allows a better understanding of how particular organizational configurations both nurture the development of essential organizational abilities, such as absorptive capacity (and their enactments) and simultaneously are a way of responding to competitive and dynamic market conditions in subsidiary markets. The study also adds to the absorptive capacity literature by empirically validating absorptive capacity as a (second-order) latent construct that captures the original dimensions of value recognition, assimilation, and application (Cohen and Levinthal, 1990).

The remainder of this study is structured as follows. The following section introduces the theoretical model, including all constructs and relationships of interest. Subsequently, a series of hypotheses are introduced and empirically tested. A discussion of results, findings, and their key implications follow. We conclude with limitations and future research opportunities.

THEORETICAL BACKGROUND AND HYPOTHESES

Setting the Scene: Marketing Strategies, Subsidiary Absorptive Capacity, and Drivers of this Process

The theoretical framework developed and tested in this study encompasses three sets of factors: (1) drivers of subsidiary absorptive capacity (specific organizational drivers and drivers in the subsidiary's market environment); (2) the latent construct of the subsidiary absorptive capacity; and (3) the enactment on the absorptive capacity. In this section, we introduce the study's setting, including all constructs and relationships of interest, which are delineated in Figure 1.

The determination and implementation of appropriate strategies and supporting organizational structures for international operations lie at the core of an MNC's ability to compete. Success on a global scale also depends to a great extent on the MNC's ability to create and transfer marketing knowledge, in the form of marketing strategies (Hewett and Bearden, 2001; Menon and Veradarajan, 1992; Menon et al., 1999). Marketing strategies, or the enactment of marketing knowledge, represent the process of marketing products and/or services to customers (Roth et al., 2009). They are commonly concerned with decisions related to brand cultivation, and include market segmentation,

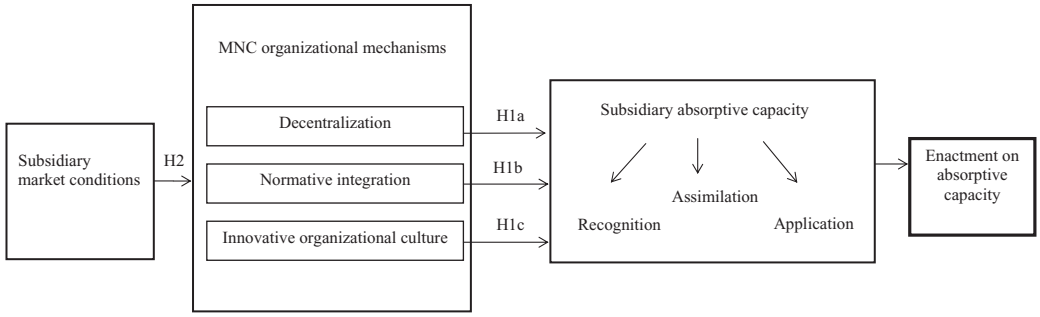

Figure 1. Theoretical framework

marketing-mix strategies, and development of positioning strategies based on product, price, distribution, and promotion decisions (Kostova, 1999). The development of marketing strategies around new products and services is an expensive endeavour for organizations (Kotle, 1999). Therefore, once these strategies are developed in the MNC, their global diffusion represents a major advantage MNCs try to capitalize on (Jain, 1989). Despite the advantages their diffusion promises, marketing strategies are tacit and complex in nature and their absorption in the subsidiaries is complex (Slater and Narver, 1995). The complexity stems foremost from the fact that the marketing strategies developed overseas represent 'the theory in use in a different market location for enacting a specific marketing strategy' (Roth et al., 2009).

Recognizing that a multitude of different knowledge flows exist in the MNC along lateral and hierarchical dimensions and acknowledging the differences that these different perspectives have on knowledge absorption processes (Mudambi, 2002; Mudambi et al., 2007), we focus on one common knowledge flow only, namely that between the MNC parent and one of its subsidiaries. Unlike knowledge absorption between competing MNC subsidiaries (Roth et al., 2009), the MNC parent–subsidiary dyad offers an opportunity to investigate the absorption process where the knowledge source has a clear interest in and holds direct financial benefits from increasing the receiver's absorptive capacity (Enright and Subramanian, 2007; Geppert et al., 2003).

We thus argue that MNC parents can endorse subsidiary absorptive capacity by designing specific *organizational mechanisms* that promote the ability of subsidiaries to learn. Here, MNC parents grant decision-making authority (i.e. *decentralization*) (Bradley et al., 2011), by creating a trusting and open atmosphere (i.e. *normative integration*) (Birkinshaw and Lingblad, 2005; Ghoshal and Nohria, 1989; Hedlund, 1986), and by fostering creativity and entrepreneurial behaviour (i.e. *innovative organizational culture*) (Tsai, 2001). Note that while we posit here that these three organizational mechanisms represent complementing forces, other studies have found that they can also represent opposing forces for capability development in the organization (i.e. Evan and Black (1967) posited that centralized organizational structures can be superior for the implementation of innovative ideas). Consequently, we treat them as three related but independent mechanisms of specific organizational configurations that are potentially conducive to subsidiary absorptive capacity development.

The environmental conditions of the MNC's global markets influence the organization's strategic actions in these markets (Bartlett and Ghoshal, 1986, 1989; Gupta and Govindarajan, 1991). In particular, the nature of *competition and dynamism* in the subsidiaries' local markets is likely to affect how well the MNC performs in these markets (Almeida and Phene, 2004). Therefore, we examine whether the MNC parent can respond to the environmental conditions in the subsidiary markets by utilizing those organizational mechanisms that are conducive of nurturing the subsidiary's absorptive capacity.

Leaning on the original definition provided by Cohen and Levinthal (1990), this study defines *subsidiary absorptive capacity* as the ability to recognize the value of new knowledge, to assimilate, and to apply it. We here argue that the subsidiary's capacity to absorb a new marketing strategy is a latent (second-order) construct that is comprised of three (first-order) dimensions: value recognition, assimilation, and application (Cohen and Levinthal, 1990). Therefore, subsidiary absorptive capacity represents an ability to absorb new knowledge but is different to the enactment on this ability.

The *enactment* of the marketing strategy refers to whether the subsidiary successfully integrates the newly acquired strategy into its focal systems and processes. Note that since knowledge absorption requires an effort by the subsidiary, the willingness to absorb knowledge also matters for both the capacity to absorb and the enactment on this ability (Minbaeva et al., 2003; Szulanski, 1996). However, although they co-exist, the willingness and ability to absorb new knowledge differ. While the willingness to absorb new knowledge reflects the inclination to do (or not to do) a particular task, the ability to absorb new knowledge represents an organizational capacity to perform the task. In this study, we are interested in what drives this important organizational capacity, namely to absorb new knowledge and the consequent reaction based on this ability.

Lastly, although we examine organizational drivers of absorptive capacity that are at the discretion of the knowledge initiating MNC parent, we explore their impact at the level of the subsidiary. We do so because we are interested in the cognitive processes that shape the absorptive capacity as well as the enactment on this ability, which take place at the MNC subsidiary.

Hypotheses

The MNC's organizational mechanisms that drive subsidiary absorptive capacity. Organizational mechanisms stimulate multiple knowledge-related tasks, including the evaluation, assimilation, and utilization of knowledge, and influence how a firm processes knowledge (Gupta and Govindarajan, 2000). Despite substantial evidence that the firm's organizational context – the context in which the transfer of knowledge is embedded – affects the nature of this transfer (Kostova, 1999; Szulanski, 2000), there is comparatively little research on the impact of organizational mechanisms for knowledge absorption in different parts of an organization (Foss and Pedersen, 2002; Szulanski, 2000, 2003). For instance, in their widely cited theoretical study, Zahra and George (2002) introduce the concept of organizational activation triggers of absorptive capacity, but do not specify which triggers actually promote absorptive capacity or how they do so. Similarly, Cohen and Levinthal (1990), who mention organizational issues, do not provide any details about organizational drivers as antecedents of absorptive capacity.

This study focuses on a number of distinct organizational mechanisms that represent key links between MNC parents and their subsidiaries. Although a small number of studies have already examined the role organization plays in absorptive capacity, they have usually looked at mechanisms created by the knowledge-receiving unit (i.e. Jansen et al., 2005; Van den Bosch et al., 1999). In contrast to these prior efforts, this study focuses on the role of organizational mechanisms that are enforced by the knowledge-initiating MNC parent. We argue that organizational mechanisms related to hierarchical structure, normative integration, and organizational culture are conducive to the diffusion of valuable marketing knowledge into the subsidiary. Furthermore, in a recent study, Todorova and Durisin (2007) theorize that organizational mechanisms, such as social integration mechanisms, do not influence selected absorptive capacity dimensions (Zahra and George, 2002), but influence all dimensions of absorptive capacity. We lean on this recent theorizing and argue that organizational mechanisms impact on all three dimensions of the subsidiary's ability to absorb new knowledge.

Hierarchical structure is known to influence the relationships that MNC parents share with their subsidiaries (Birkinshaw and Morrison, 1995). However, while the impact of formalization and lateral coordination have been examined in relation to knowledge absorption (Jansen et al., 2005; Van den Bosch et al., 1999), the role of centralization remains much less understood (Volberda et al., 2010). Centralization refers to governance mechanisms in which the decision-making process is hierarchically organized, with headquarters usually making most of the crucial strategic and policy decisions (Ghoshal and Nohria, 1989). *Decentralization*, however, moves the locus of decision-making down the hierarchy and reflects the extent to which decision-making is dispersed among an organization's subunits (Daft, 1983; Zenger and Hesterly, 1997).

The division of decision-making authority represents an important mechanism in relation to absorptive capacity, as it is closely related to organizational effectiveness and adaptiveness (Gates and Egelhoff, 1986). For instance, increasing levels of decentralization have been associated with greater diversity of knowledge structures and modes of engagement within organizations (Van den Bosch et al., 1999). In relation to the MNC, studies have also found that subsidiaries enhance their ability to tap into new knowledge sources as they gain additional decision rights (Vermeulen and Barkema, 2001). Higher levels of decentralization also provide subsidiaries with more scope to engage in deeper collaboration and interaction with other subunits in the MNC's network and partners in their focal markets. This diverse pool of knowledge, in turn, provides a more robust basis for learning, as it increases the chance that incoming knowledge is related to what is already known (Cohen and Levinthal, 1990, p. 131). We therefore propose:

Hypothesis 1a: Decentralized decision-making authority enhances the level of subsidiary absorptive capacity for marketing strategy absorption.

One idea central to relationship marketing is to nurture relationships that are characterized by closeness and mutual benefits for all parties involved (Mohr and Spekman, 1994; Morgan and Hunt, 1994). At the centre of marketing relationships also lie such characteristics as trust and openness (Stephen and Coote, 2007). Complementary units within the organization are generally believed to share such relationships, which are

commonly known as normative integration. For instance, Cohen and Levinthal (1990) argue that congruent values and beliefs among functional units of a firm enhance the successful exchange and absorption of knowledge. This argument is supported by Jansen et al.'s (2005) findings.

Scholars also frequently refer to normative integration when describing the convergence of objective, values, and norms of behaviour between MNC parents and their subsidiary marketing operations (Hewett and Bearden, 2001). Ghoshal and Bartlett (1988, p. 371), for instance, found that the normative integration (i.e. the '-ization' of values and goals) at Unilever helped to establish a common context between the parent firm and its subsidiaries, which ultimately contributed to enhanced knowledge absorption. The normative integration of different subunits of an organization can serve as a form of cultural control, whereby trusting and open relationships emerge (Ghoshal et al., 1994) that encourage the absorption of knowledge (Szulanski, 1996). Furthermore, Szulanski (2000, p. 11) finds that the effectiveness of successful knowledge absorption is commonly reflected in 'the ease of communication and in the intimacy of the overall relationship between source and recipient'.

Normative integration among subunits also reduces the risk of the not-invented-here syndrome (Katz and Allan, 1982) and consequently promotes the recognition of the value of knowledge residing in other MNC units (Dirks and Ferrin, 2001; Ghoshal and Nohria, 1989). At the same time, it can enhance the ability to assimilate knowledge from one another because of shared mental schema and subsequently promote the successful application of the knowledge in other subunits of the organization (Schulz, 2003; Uzzi, 1996). Thus, when the MNC parent fosters normative integration with its subsidiaries, it is more likely that knowledge residing in one part of the organization will be absorbed by others (Minbaeva et al., 2003). In line with the arguments above, it follows that:

Hypothesis 1b: Normative integration enhances the level of subsidiary absorptive capacity for marketing strategy absorption.

Consistent with prior research, we refer to innovative organizational culture as 'the set of beliefs and ways of doing things that influence an organization's perspective on how innovation and change should be managed' (Menon et al., 1999, p. 25). An innovative organizational culture is also characterized by an emphasis on openness to new ideas and by quick responses to decision-making within the organization (Menon and Veradarajan, 1992). Organizations embracing innovative and entrepreneurial cultures aim for constant renewal of ongoing and new strategies by leveraging their core resources in unique and superior ways (Slater and Narver, 1995). Cohen and Levinthal (1990) argue that the resulting diversity of knowledge provides these organizations with a more 'robust basis for learning because it increases the prospect that incoming information will relate to what is already known' (p. 131) and that 'if an organization conducts much innovative activity, it increases its awareness of opportunities' (p. 138).

Innovative organizational cultures are also known to reduce incidences of fragmentation, resource jockeying, and not-invented-here syndrome between different organizational subunits (Ruekert and Walker, 1987; Slater and Narver, 1994). Hence, the greater an organization's skill for learning new knowledge, the easier it can identify the value of

new knowledge, assimilate it with existing cognitive structures, and apply it (Hurry et al., 1992). For MNCs, in which the parent fosters a culture that values innovative ideas and thinking, an increased ability to absorb knowledge emerges throughout its parts (Mudambi et al., 2007). Hence, an increasingly innovative culture enforced by the MNC parent is likely to promote the subsidiary's ability to absorb the complex and tacit components of marketing strategies. We thus propose:

Hypothesis 1c: An innovative organizational culture enhances the level of subsidiary absorptive capacity for marketing strategy absorption.

The influence of environmental market conditions on the MNC's organizational mechanisms. The environmental-strategy–performance framework, having its roots in the strategic co-alignment literature and strategic choice research, theorizes that the environment shapes the context of business and that organizations react to environmental conditions by implementing processes and strategies that ultimately determine the organization's performance (Luo and Park, 2001). More specifically, according to this perspective, organizations have to align their organizational mechanisms to fit with the environmental conditions in which they operate (Child, 1972; Doty et al., 1993). Especially in markets which are competitive and where the underlying market mechanisms fluctuate, the importance of environmental conditions for setting organizational configurations is high (Luo and Park, 2001). Therefore, where subsidiary markets are competitive, the MNC subsidiary must increasingly rely on marketing strategies that enhance the understanding of customer needs and thus communicate unique benefits, as customers have many alternatives to choose from (Kohli and Jaworski, 1990). At the same time, in a market with frequent change, MNC subsidiaries have to be able to absorb new knowledge both quickly and effectively in order to continuously adjust their competitive strategies accordingly (Cui et al., 2005). In sum, an increased embeddedness in and understanding of the local market increases the MNC subsidiary's chance to succeed in this focal market (Andersson et al., 2005).

However, the MNC subsidiary is not only embedded in its local market, but also can take advantage of the fact that it is also part of the MNC network. The MNC responds to competitive and dynamic environmental conditions in the markets it operates with specific configurations of organizational mechanisms that enhance the absorptive capacity of its subsidiaries located in these markets. In particular, with increasingly competitive and dynamic markets, the subsidiary becomes more reliant on absorbing the marketing strategies generated in other MNC units (Hewett et al., 2003). As a result, the successful absorption of this knowledge enables the MNC to respond to the subsidiary's dual embeddedness by acting in the focal market faster than independent firms competing in these markets with contested marketing strategies developed elsewhere in the MNC's international network (Roth et al., 2009).

We thus posit that the MNC subsidiary's market pushes the MNC to nurture those organizational drivers that enable the subsidiary to increase its capacity to absorb new knowledge successfully. Put differently, we suggest that the MNC responds to fluctuations in the MNC's competitive and dynamic subsidiary markets by adjusting organizational mechanisms (Van den Bosch et al., 1999), which, in turn, nurture the

organizational capabilities that are conducive to new knowledge absorption. In the first set of hypotheses we suggested that decentralized decision-making authority, normative integration, and an innovative culture are conducive of higher levels of subsidiary absorptive capacity for MNC-initiated marketing strategies. Following from that, we posit:

> *Hypothesis 2*: Competitive and dynamic market conditions in the subsidiary's market lead the MNC parent to adopt organizational mechanisms (i.e. decentralization, normative integration, innovative organizational culture) that are conducive of higher subsidiary absorptive capacity.

Although not included in our hypotheses, a final link in the subsidiary's absorptive capacity process represents the path from the absorptive capacity construct to the enactment on this ability (see Figure 1). That is, even if the subsidiary has developed a sound capacity to absorb the marketing strategy in that it is able to recognize the value, assimilate, and apply the strategy, it does not necessarily mean that the subsidiary is able use the strategy in a manner that is conducive to commercial success. We thus treat the integration of the marketing strategies, which we term the enactment on the subsidiary's absorptive capacity, as the ultimate dependent variable in the absorption process.

METHOD

Sampling and Data Collection

We tested the hypotheses on a sample of 213 Australian subsidiaries with overseas parent firms. Before designing the main questionnaire, we conducted a pilot test of a draft questionnaire with 30 senior marketing managers and 8 academic experts. Each of these individuals was first given the draft to read, and then subsequently asked to clarify and comment on the questions and measures during a semi-structured interview. In this process, we found that the individuals needed to be able to clearly distinguish between the dimensions of subsidiary absorptive capacity due to the centrality of the construct for this study. Subsequently, several of the questions in the questionnaire to be administered to the full sample, were altered according to the suggestions made during the pilot study. No responses obtained from the managers in the pilot sample were used in the final sample.

To derive our sample, we utilized a list from Dun and Bradstreet that provided full mail contact details for 1500 senior executives and senior marketing managers located in Australian subsidiaries with overseas MNC parents. These types of executives were chosen because they are usually at the centre of the parent–subsidiary relationship and are the actors likely to be most aware of marketing strategies transferred between MNC parents and subsidiaries (Roth and Nigh, 1992). A total of 398 of the original 1500 executives in the sample were removed because their questionnaires were returned due to incorrect addresses. The sample size therefore decreased to 1102 potential respondents.

Each of the questionnaire packages included a cover letter explaining the purpose of the study and instructions on how to complete the survey. In addition, a postage-paid

envelope was included with each questionnaire. In the survey's introductory letter, subsidiary managers were asked to report on the latest marketing strategy they could recall being transferred from their MNC headquarters for which performance data were available (for a similar approach, see Menon et al., 1999). We asked the managers to consider marketing strategies concerned with marketing segmentation and the targeting of the MNC's most recent product(s) or service(s), including strategies focused on brand recognition, channel access, or market-specific functional expertise in relation to price, distribution, and promotion decisions (Hunt and Morgan, 1995; Slater and Olson, 2001). Two follow-up questionnaires were sent in the weeks following the initial mailing.

The final sample included 213 completed surveys from subsidiaries belonging to headquarters located in Europe, the USA, and Asia, with the split being almost even among the three countries. Over 75 per cent of the subsidiaries were less than 25 years old and belonged to parent firms that were between 50 and 100 years old; 70.4 per cent of subsidiaries had between 100 and 200 employees and belonged to MNCs that had between 10,000 and 20,000 employees. Furthermore, the majority (89 per cent) of subsidiaries belonged to private enterprises active in a variety of industry sectors, including manufacturing, wholesale, retail, mining, finance, and other service sectors. No statistical differences emerged in terms of the relationships of interest when the sample was split according to either the country of headquarters or broad industry sectors (manufacturing, wholesale, retailing, and services).

Although the response rate of 19 per cent was lower than expected, it is similar to response rates seen in recent research that sampled senior managers on their observations of organizational knowledge transfer (Sarkar et al., 2009). However, the possibility of non-response bias still needed to be addressed. Non-response bias was examined on the basis of basic information provided by Dun and Bradstreet. The mean differences between responding and non-responding firms were compared along the dimensions of firm size, firm age and industry using *t*-tests; all statistics were non-significant ($p > 0.10$). In addition, non-response bias was assessed by comparing early respondents to late respondents, as late respondents are believed to be more similar to non-respondents because they only respond due to the increased stimulus (Armstrong and Overton, 1977). This comparison indicated no significant differences between early and late respondents in terms of such characteristics as knowledge absorption, application of organizational mechanism, or the ultimate dependent variable of enactment on the absorbed knowledge.

Measures

For the majority of the items for the drivers and outcomes of the hypothesized absorptive capacity process, we adopted measures used in prior empirical studies. In addition, when it was necessary to develop a new scale, it was based on suggestions and findings in the existing literature. All of the main constructs were measured using multiple items requiring an indication of intensity on a five-point Likert-type scale for each item, with 1 = 'strongly disagree' and 5 = 'strongly agree'. With the exception of two control variables (subsidiary size and age), all constructs included at least three items (as recommended for latent construct models by Hancock and Mueller, 2001). In fact, seven of the

nine constructs were formed by four items, while only two constructs were based on the recommended minimum of three items. All items – including their exact wordings, factor loadings, and reliability scores – are presented in the Appendix.

Absorptive capacity. Precise scales for the learning dimensions of absorptive capacity were not available due to the context specificity of our study as well as the fact that we were examining the absorption of specific strategies. Therefore, we adopted an approach similar to that used by Lichtenthaler (2009) in that we generated the items for these scales based on the original definitions (Cohen and Levinthal, 1990; Lane et al., 2006), descriptions (Volberda et al., 2010) and, when available, existing tested scales of related constructs in the literature (i.e. Jansen et al., 2005; Lane et al., 2006; Lichtenthaler, 2009). In addition, the insightful comments made by managers during the pilot study assisted in the design of these constructs.

Based on the core concept of its definition (Lane et al., 2006), the four-item scale for *value recognition* ability captured the subsidiary manager's ability to recognize and understand the benefits, components, and importance of the marketing strategy. The items for this construct were based on the related construct of 'recipient motivation', which was tested in an empirical study of MNC strategy transfer by Jensen and Szulanski (2004). Strategy *assimilation* ability was also captured along four items that aimed to examine whether the subsidiary manager was able to understand how the strategy could be successfully applied at the subsidiary level. All items were based on the related construct of 'recipient absorptive capacity' found in Szulanski's (1996) study. Lastly, the construct of strategy *application* ability had three items that were adopted from Lichtenthaler's (2009) related construct of this measure. These items addressed whether the subsidiaries were able to apply the assimilated marketing strategy in the focal context (Lane et al., 2006) and whether they were able to find ways to better exploit the strategy on an ongoing base after its integration (Lichtenthaler, 2009).

The underlying construct of absorptive capacity was formed as a second-order construct based on the three dimensions (first-order constructs). However, we tested for alternative specifications of this relationship in different structural equation models (SEMs). As it is difficult to measure absorptive capacity unless it is in use (Lichtenthaler, 2009), all items measuring absorptive capacity asked about the subsidiary's procedures and routines (in terms of recognition, assimilation, and application) in relation to the specific case of the absorption of a marketing strategy that was transferred by the MNC's parent.

Drivers of absorptive capacity. We followed prior empirical studies (Menon et al., 1999) in measuring *decentralization* along three items to capture the degree of decision-making authority held by the respective subsidiaries within the MNC. The respondents reported on their freedom to make decisions without checking with MNC parents, latitude in the choice of means to accomplish goals, and the flexibility to complete their work. The four items resembling *normative integration* were adopted from Jaworski and Kohli's (1993) study of inter-unit connectedness and related to characteristics describing the subsidiary's relationship with the parent firm. *Innovativeness* was measured using four items based on prior measures of this construct undertaken by Menon et al. (1999). Questions here asked

the respondents to describe to which their organization values innovation and change. The scales for the subsidiary's *market environment conditions* were also based on prior studies (Cui et al., 2005; Jansen et al., 2005; Menon et al., 1999) and captured changes in the subsidiary's focal market (i.e. in terms of changes in the marketing and promotional tactics of competitors).

Enactment on absorptive capacity. The mere introduction of a marketing strategy does not imply that the MNC subsidiary is able to use this knowledge for commercial success. Therefore, once the MNC subsidiary is able to recognize the value, assimilate, and apply a marketing strategy, it must enact on this ability by integrating the knowledge successfully into its focal operations. Note that the ability to recognize, assimilate, and apply differs from the enactment on this, as the former represents an ability, which does not necessarily lead to an enactment on this ability. Therefore, we lean on prior measures of existing constructs (Kostova, 1999; Szulanski, 1996) to measure the *enactment on the absorptive capacity* for the marketing knowledge as a separate variable. We here use four items that measure how well the MNC subsidiary applied, implemented, and integrated the strategy into its own processes and operations.

Control variables. Better *financial performance* permits organizations to more safely experiment with new, uncertain strategies and to enter new markets (Moses, 1992), and might therefore affect the implementation of marketing strategies. We controlled for financial performance using four indicators for financial resources that the subsidiary could utilize to influence performance over a one-year cycle (Nohria and Gulati, 1996). In addition, we controlled for *subsidiary size* and *age*, as larger and more experienced subsidiaries have been found to be able to implement marketing strategies more successfully than their smaller, more inexperienced counterparts (Minbaeva et al., 2003). These two control variables are single-item measures, as they capture factual and manifest data rather than latent information.

Discriminant and Convergent Validity Tests

As our model included a number of latent constructs (9) in a path diagram with no less than eight equations, we tested our hypotheses using an SEM, which allows for the simultaneous formation of underlying constructs (the measurement model) and the testing of structural relationships (i.e. hypotheses) among these constructs (the structural model). This implies that the weights of each item (i.e. factor loading) belonging to a construct are determined endogenously in the model, while in alternative methods, like simultaneous equation models, constructs are formed by applying some exogenously-determined weight (typically equal weights for all items belonging to the same construct). SEM also explicitly captures the degree of measurement reliability in the model, which, in theory, allows the structural relations between latent variables to be accurately estimated.

It is recommended that the measurement model in SEM be assessed independently prior to the assessment of the structural model (Anderson and Gerbing, 1988; Hancock and Mueller, 2001). In relation to the measurement model, the convergent validity (i.e.

the degree of association between measures of a construct) and the discriminant validity (i.e. the degree to which measures of constructs are distinct) were tested for all constructs.

To ascertain whether the constructs were internally coherent, we ran several tests of *convergent validity* (see Appendix), which were based on the saturated measurement model in which all inter-factor correlations are specified (the goodness-of-fit of the measurement model is shown in Table IV, Model 2; the fit is very good with $\chi^2[539] = 794$). First, the strengths of the linearity in relations between constructs and items – the R-squared values – are shown in the Appendix. In all cases, the strengths of the linearity are relatively strong with R-squared values of 0.42 or higher, which are clearly above the usual threshold of 0.20 (Hair et al., 1995). We also conclude that the *t*-values for all items are highly significant (all greater than 12) and that their (standardized) factor loadings are strong (all greater than 0.65). Second, the reliability of each construct is calculated. All constructs are well above the recommended threshold of 0.70 (Anderson and Gerbing, 1988) (all greater than 0.85). Several measures of *discriminant validity* are obtained from the data. By constructing 99.9% confidence intervals around the correlations and causal paths, we can confirm that none of them are close to 1. Also, with regard to the variance extracted, the overall model is clearly robust, as all constructs are above the recommended threshold of 0.50 for AVE values (between 0.66 and 0.81). In sum, the measurement model provides strong validity for all of our constructs.

Although collecting data through a questionnaire seemed to be the optimal way to obtain the desired information given that the context of interest was organizational processes, we were aware of concerns related to this data collection method. We therefore addressed a number of issues. First, in designing the survey, the measures for the criterion variable related to performance were separated from the predictor variables, as suggested by Parkhe (1993). Furthermore, the performance variables were placed after the predictor variables in order to diminish the likelihood of consistency artefacts (Salancik and Pfeffer, 1977). Third, the criterion and predictor variables were methodologically separated through the use of different response formats (different Likert scales). Fourth, by ensuring respondent anonymity, biases related to evaluation apprehension and social desirability were reduced (Podsakoff et al., 2003). Lastly, we used confirmatory factor analysis (CFA) to test whether a single factor accounted for all of the variance in the data (Podsakoff et al., 2003). The goodness-of-fit of the single-factor model, where all items in the model (i.e. the 36 items listed in the Appendix) form one factor, is listed in Table IV (Model 1). The single-factor model offered a poor representation of the data (GFI = 0.41, NNFI = 0.37 and RMSEA = 0.16), which indicated that a common variance factor did not explain a sizeable portion of the variation in our data.

RESULTS

Absorptive Capacity Construct

We tested the construct validity of subsidiary absorptive capacity as a second-order confirmatory factor analysis using SEM, which enables testing the exact relationships between the manifest variables and proposed latent constructs, because it explicitly tests both the overall qualities of the proposed model and the specific parameters composing

Table I. Descriptive statistics for the absorptive capacity variables

		1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1.	Recognition1	1.00										
2.	Recognition2	**0.84**	1.00									
3.	Recognition3	**0.78**	**0.75**	1.00								
4.	Recognition4	**0.67**	**0.68**	**0.68**	1.00							
5.	Assimilation1	0.52	0.48	0.48	0.52	1.00						
6.	Assimilation2	0.56	0.52	0.49	0.53	**0.57**	1.00					
7.	Assimilation3	0.52	0.56	0.51	0.52	**0.68**	**0.71**	1.00				
8.	Assimilation4	0.54	0.50	0.54	0.55	**0.65**	**0.71**	**0.65**	1.00			
9.	Application1	0.40	0.38	0.42	0.37	0.34	0.38	0.34	0.35	1.00		
10.	Application2	0.50	0.44	0.47	0.45	0.48	0.45	0.38	0.49	**0.61**	1.00	
11.	Application3	0.30	0.29	0.29	0.26	0.25	0.24	0.24	0.27	**0.63**	**0.66**	1.00
Mean		3.81	3.96	3.70	3.55	4.02	3.56	3.78	3.77	4.01	4.03	4.00
SD		0.93	0.89	1.06	1.07	0.89	1.06	0.86	0.92	0.85	0.83	0.90
Min. values		1	1	1	1	1	1	1	1	1	1	1
Max. values		5	5	5	5	5	5	5	5	5	5	5

Notes: n = 213. Bold type indicates within-dimension variable correlations.
All correlations are significant at the $p < 0.001$ level.

the model. The first-order constructs are value recognition, assimilation, and application. These three constructs together define the second-order construct 'subsidiary absorptive capacity'.

The descriptive statistics (Table I) reveal significant correlations between the constructs of interest. This is not surprising. Theoretically, the different dimensions of subsidiary absorptive capacity are not orthogonal constructs. The magnitude of correlations is as expected: the within-dimension variable correlations (bold in Table I) are higher than the correlations of variables between dimensions. Interestingly, the items of *value recognition* have slightly higher correlations with the items of *assimilation* than the items of *application* have with the other items. This is also expected, because although the processes of value recognition and assimilation are separate, they are also highly connected, and they are more connected with each other than with application. In fact, this distinction was also the underlying logic behind the separation of potential and realized absorptive capacity, as originally proposed by Zahra and George (2002).

In order to unfold the relationships between the 11 items and the construct of absorptive capacity, we used SEM models with alternative relationship specifications. We provided multiple measures to assess the overall fit of the model, as tests that fit along multiple indices are more robust and valid than tests that fit along fewer indices. For example, we used the Satorra–Bentley scaled chi-square model, which adjusts for non-normality in the data and assesses whether the difference between the data-driven covariance matrix and the model-driven covariance matrix is significant. In addition, we examined other model fit measures, such as the goodness-of-fit index (GFI), the non-normed fit index (NNFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). Values of GFI and NNFI ranging from 0.9 to 1 indicate good fit, while RMSEA should be below 0.08. CFI is mainly used to compare models.

Table II. Goodness-of-fit statistics for alternative models of absorptive capacity

	Model 1 Uni-dimensional first-order factor	*Model 2 Uncorrelated first-order constructs*	*Model 3 Correlated first-order constructs*	*Model 4 Second-order constructs*
Chi-square (d.f.)	314 (43 d.f.)	339 (41 d.f.)	105 (38 d.f.)	80 (37 d.f.)
GFI	0.76	0.79	0.92	0.94
NNFI	0.83	0.81	0.96	0.97
RMSEA	0.17	0.19	0.09	0.08
CFI	0.82	0.81	0.96	0.97

Four alternative models were specified to test the dimensionality as well as convergent and discriminant validity of absorptive capacity as a second-order construct (see results provided in Table II). Model 1 has a uni-dimensional first-order factor that accounts for the variance among all 11 items. In Model 2, the 11 items form three uncorrelated, independent first-order constructs. Model 3 has the 11 items forming three correlated first-order constructs. Finally, in Model 4, we posit a second-order construct that accounts for the relationships among the three first-order constructs. A comparison of the goodness-of-fit for the four models, as depicted in Table II, shows that Models 1 and 2 obtain unsatisfactory fit. Only Models 3 and 4, which allow for three independent and correlated dimensions, obtain satisfactory fit in terms of GFI and NNFI scores of more than 0.90. Hence, the results highlight the multidimensionality of the absorptive capacity construct and indicate that these dimensions (constructs) are distinct from each other. When comparing these two models, Model 4's fit ($\chi^2[37] = 80$) is superior to that of 3 ($\chi^2[38] = 105$), as it has a much lower chi-square for only one less degree of freedom. The superior fit of Model 4 is also reflected in the slightly lower RMSEA and higher results for GFI, NNFI, and CFI. Collectively, these results support the multidimensionality, and convergent and discriminant validity of a second-order absorptive capacity construct.

The implication is that a latent second-order construct exists that is based on and formed by the intersection of the three first-order dimensions of value recognition, assimilation, and application.

Structural Model

The second step in the analytical process is to form the structural model by specifying the causal relations in accordance with the hypotheses. Table III illustrates the bivariate correlations among the 11 variables included in the structural model. As expected the correlations among the three dimensions of recognition, assimilation, and application (that are forming the subsidiary absorptive capacity construct) are high. The same is true for the correlations between the three organizational mechanisms of normative integration, decentralization, and innovative culture. Although each of these specific mechanisms can be separately promoted by the MNC parent, they are also linked with one

Table III. The correlation matrix among the variables included in the structural model

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1. Recognition	1.00										
2. Assimilation	0.74	1.00									
3. Application	0.51	0.49	1.00								
4. Market turbulence	0.05	0.14	0.10	1.00							
5. Normative integration	0.33	0.40	0.22	0.13	1.00						
6. Decentralization	0.25	0.34	0.17	0.12	0.48	1.00					
7. Innovative culture	0.36	0.39	0.25	0.29	0.60	0.38	1.00				
8. Enactment	0.61	0.65	0.56	0.09	0.28	0.36	0.29	1.00			
9. Financial performance	0.14	0.18	0.14	0.02	0.29	0.26	0.32	0.30	1.00		
10. Size	–0.01	0.05	–0.15	0.04	–0.01	0.05	0.04	0.01	0.06	1.00	
11. Age	0.06	0.10	0.09	–0.04	–0.10	–0.02	–0.13	0.06	–0.02	0.34	1.00
Mean	3.76	3.78	4.01	3.34	3.69	3.75	3.68	3.58	3.64	4.20	4.54
SD	0.88	0.81	0.71	0.97	0.91	0.95	0.98	0.92	0.97	2.10	2.15
Min. values	1	1	1	1	1	1	1	1	1	1	1
Max. values	5	5	5	5	5	5	5	5	5	8	8

Notes: n = 213.
All correlations above 0.13 are significant at the $p < 0.05$ level.

another as they are often used at the same time by the MNC parent. In addition, the three dimensions of subsidiary absorptive capacity share high correlations with the enactment on absorptive capacity. The remaining correlations are relatively moderate and follow a priori expectations.

Through repeated iterations, an SEM analysis proceeds with the fine-tuning of the model to obtain a more coherent representation of the empirical data. The purpose of the SEM analysis is to arrive at and confirm a model consisting of specified causal relations. A number of alternative specifications of the entire process model of absorptive capacity were conducted (see Table IV). Model 3 includes paths for both market conditions and organizational mechanisms to affect absorptive capacity, which in turn affects the related outcome, or the enactment of strategy. In Model 4, the link from market conditions to organizational mechanism is also added, resembling the relationships of Hypothesis 2.

As can be seen in Table IV, Model 4 is superior to the alternative specifications. Model 4 is also the only one that reaches the recommended thresholds for the goodness-of-fit indices. It reveals a chi-square value of $\chi^2[568] = 954$, while the GFI that is based on residuals has a value of 0.92, which indicates the good fit of the model to the data (Bollen, 1989). Finally, the Bentler–Bonett NNFI represents the proportion of improvement in fit relative to the null model, while controlling for model parsimony. The obtained value (NNFI = 0.94) also indicates the good fit of the model to the data. In addition, RMSEA is only 0.05 and therefore below the suggested threshold of 0.08. Thus, based on the GFI, NNFI, and RMSEA measures, we can confidently conclude that the data fit the proposed model well. The obtained parameters of Model 4 are illustrated in Figure 2.

Table IV. Goodness-of-fit statistics for alternative specification of the process model of absorptive capacity

	Model 1 Single factor model	*Model 2 Measurement model*	*Model 3 Market turbulence and organizational mechanism → Absorptive capacity → Enactment*	*Model 4 Market turbulence → Organizational mechanism → Absorptive capacity → Enactment*
Chi-square (d.f.)	3841 (593 d.f.)	794 (539 d.f.)	997 (571 d.f.)	954 (568 d.f.)
GFI	0.41	0.93	0.82	0.92
NNFI	0.37	0.97	0.90	0.94
RMSEA	0.16	0.03	0.06	0.05
CFI	0.40	0.98	0.91	0.94
R-square for subsidiary absorptive capacity	–	–	15%	16%

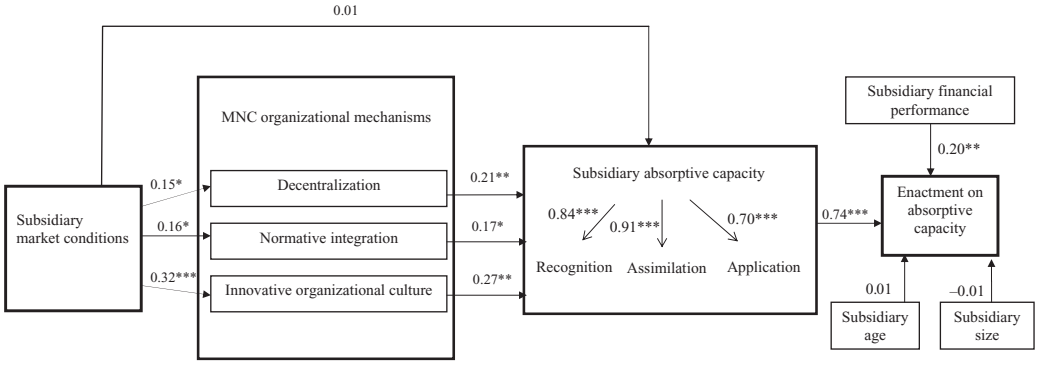

Figure 2. Empirical model

Notes: n = 213; *, **, *** indicate significance at the 5%, 1%, and 0.1% levels, respectively. All reported coefficients are standardized.

Hypotheses 1a, 1b, and 1c, which link three specific organizational mechanisms to subsidiary absorptive capacity, are supported. We find that decentralization promotes subsidiary absorptive capacity ($\beta = 0.21$, $p < 0.01$). The same is true for innovative culture ($\beta = 0.27$, $p < 0.01$) and normative integration ($\beta = 0.17$, $p < 0.05$). Hypothesis 2 proposes that host country market conditions influence the emergence of the specific organizational mechanisms proposed in the first set of hypotheses. Hypothesis 2 is also confirmed, as competitive and dynamic subsidiary markets positively affect decentralization ($\beta = 0.15$, $p < 0.05$), normative integration ($\beta = 0.16$, $p < 0.05$), and innovativeness ($\beta = 0.32$, $p < 0.001$), while the main effect of local market conditions on subsidiary absorptive capacity is insignificant ($\beta = 0.01$, $p = 0.35$). Lastly, the findings show that the latent construct of absorptive capacity leads directly to the successful integration ($\beta = 0.74$, $p < 0.001$) of the marketing strategy at the subsidiary level.

In relation to the three control variables, the subsidiary's financial performance has a significant and positive ($\beta = 0.20$, $p < 0.01$) impact on the enactment of subsidiary absorptive capacity and thus confirms prior empirical findings (Minbaeva et al., 2003). As indicated in Table IV, no less than 16 per cent of the total variation in the subsidiary absorptive capacity is explained in our model.

DISCUSSION AND IMPLICATIONS

The underlying premise of this study was to extend our understanding on what drives subsidiary absorptive capacity in the context of MNC parent-initiated marketing strategies. We fused research on absorptive capacity with international business literature to capture this absorptive capacity process 'in use', including organizational and focal market drivers, the three dimensions that represent the capacity itself, and the enactment on this capacity. The findings carry several noteworthy implications for theory and practice.

Implications for Literature on Absorptive Capacity and Knowledge Absorption

Although the concept of absorptive capacity has been one of the most cited phenomena in the management literature, it remains one of the least understood in terms of its meaning (Todorova and Durisin, 2007; Volberda et al., 2010) and in relation to the drivers influencing its evolution (Lane et al., 2006; Zahra and George, 2002). Our study contributes to the absorptive capacity literature in several ways.

First, although absorptive capacity is inherently organizational, our study is only one of a few to reveal specific organizational mechanisms that promote its evolution. Causes of variations in the subsidiary's absorptive capacity are directly attributable to the promotion of these specific organizational mechanisms. In addition, the findings underscore the importance of other contextual drivers, in this case the subsidiary's market environment and its influence on the absorptive capacity of the subsidiary. Especially interesting in our study is the role of the dual embeddedness of the knowledge receiving subsidiary: the actual enactment of the marketing strategy takes place in the subsidiary's market environment and its success is therefore influenced by the nature of this market. However, as the subsidiary gains the marketing strategy from elsewhere in the MNC network, the success of the strategy's use in the market is a direct product of the capacity to absorb this important knowledge, which, in turn is promoted by organizational mechanisms that are at the discretion of the MNC parent. This study thus responds to urgent calls to examine the impact of drivers of absorptive capacity in relation to one another rather than in isolation (Jansen et al., 2005; Lane et al., 2006).

The results therefore suggest that the development of subsidiary absorptive capacity is a product of the combined influence of specific MNC organizational mechanisms and the subsidiary's environmental market conditions. The MNCs can respond to competitive and dynamic subsidiary markets by fostering specific configurations of organizational mechanisms that are most conducive for enhancing the absorptive

capacity of its subsidiaries located in these markets. These results are different to those found in a recent study by Cui et al. (2005), which suggest that subsidiary market environments directly influence the development of specific subsidiary capabilities (they examined the influence of market conditions on the subsidiary's knowledge management capabilities). Hence, whilst other capacities at the subsidiary level might be directly affected by the immediate environment, the subsidiary's market conditions only have an indirect impact on capability building in relation to new knowledge absorption within the MNC.

Second, this study measured absorptive capacity along the three original dimensions (Cohen and Levinthal, 1990) rather than substituting these dimensions with proxies (i.e. R&D intensity) or extending them into additional dimensions (Lane et al., 2006; Phene and Almeida, 2008; Robertson et al., 2012; Volberda et al., 2010). In particular, instead of a 'potential' versus 'realized' absorptive capacity, we argue that there is the ability to absorb, which is what Cohen and Levinthal (1990) originally defined as absorptive capacity and there is the enactment on this ability. Our empirical examination confirms the original multidimensional nature of absorptive capacity in the form of a latent, second-order construct with three distinct dimensions that has a direct impact on observable outcomes, or enactments on this ability. Simultaneously, our findings suggest that the latent construct of subsidiary absorptive capacity fully mediates the impact of all drivers on related outcomes (i.e. the enactment on the absorptive capacity by using the knowledge). These findings confirm the explanatory power of Cohen and Levinthal's (1990) original work.

Lastly, although 'any serious discussion of a phenomenon can happen only if its contexts (of occurrence) are carefully described and studied' (Das, 1983, p. 393), most absorptive capacity studies limit their examinations on the absorption of general, non-specified knowledge that is gained from somewhere outside the firm's boundaries (Jansen et al., 2005; Lichtenthaler, 2009). However, without investigating what is being absorbed, the context the absorption takes place, what drives the absorption, and what consequences this has on the use of the absorbed knowledge, our understanding of knowledge absorption as an organizational capability remains limited. Absorptive capacity, like other unobservable phenomena, is difficult to study unless it is in use (Lichtenthaler, 2009). Our study represents one of the first attempts to understand absorptive capacity in relation to the context it takes place, the different drives impacting its evolution, and the enactment on this important organizational phenomenon in a specific context.

Implications for Management of Absorptive Capacity in the MNC

Although the global internalization of strategic knowledge represents a significant source of competitive advantage for MNCs (Gupta and Govindarajan, 2000; Jensen and Szulanski, 2004), the absorption of strategies in the MNC's global markets is difficult to achieve (Gupta and Govindarajan, 2000; Monteiro et al., 2008). Furthermore, existing empirical research fails to provide guidance about the absorption process itself, or about the design and implementation of organizational mechanisms that support this process (Foss and Pedersen, 2004). Our findings suggest that a subsidiary's capacities for value recognition, assimilation, and application in the absorption of marketing strategies

explain its successful enactment – or lack thereof. Therefore, MNC managers can measure, evaluate, and directly nurture their subsidiaries' ability to absorb marketing knowledge along these three elements. At the same time, doing so allows managers to distinguish between whether the causes of a successful (or failed) marketing strategy integration are due to the subsidiary's ability (or lack of the ability) or whether the outcomes were caused by the ways the subsidiary enacted on this ability.

International business researchers (Foss and Pedersen, 2004; Ghoshal and Bartlett, 1988) and absorptive capacity scholars (Lane et al., 2006; Volberda et al., 2010) have stressed that we know little about how managers can use organizational mechanisms to successfully orchestrate knowledge processes. In this study, we find that MNC parents do indeed have the discretion to promote subsidiary absorptive capacity and that this discretion becomes central when the subsidiary markets are competitive and dynamic. The application of organizational mechanisms that create more scope for exposure to new knowledge (i.e. by granting decision-making rights and fostering normative integration) and a learning culture (i.e. by stimulating an innovative organizational culture) improve the subsidiary's capacity to absorb new, domain-specific knowledge and thus successfully respond to turbulent host market environments. Ultimately, this means that absorptive capacity within the MNC is an organizational ability that evolves and can be directly managed through organizational mechanisms. Simultaneously, it represents a capability that permits purposeful adjustments to environmental changes in the MNC's global markets.

LIMITATIONS AND CONCLUSION

This study highlights some interesting findings related to subsidiary absorptive capacity. As in the majority of absorptive capacity studies, our study lacks a longitudinal research method, which may better capture the 'true' process aspects of absorptive capacity over time. Future research may therefore explore the subsidiary's absorptive capacity over a period of time and through the distribution of a number of different strategies from MNC headquarters. This could enhance our understanding of the role that absorptive capacity plays in the evolutionary fitness of the firm. Also, although the transfer of marketing strategies across borders represents one of the most internationalized knowledge flows in the MNC (Schlegelmilch and Chini, 2002), which leads to suggest (at least) some generalizability of our findings, future research should test the absorption process of this study using different types of strategic knowledge and different subsidiary markets than those sampled in this study. For instance, future research could test whether upstream capabilities would be represented by a different nexus of predictive factors as well as consequences, or whether the knowledge absorption process would differ substantially.

In addition, we do not mean to imply that the drivers discussed here are the only drivers or the most important drivers in relation to subsidiary absorptive capacity. Arguably, the list of drivers that can be included in an analysis of the subsidiary absorptive capacity process is virtually endless, especially considering the wealth of organizational and market drivers that affect the transfer of strategies and organizational practices between subunits of an organization in general and the MNC in particular. Furthermore, although our data on the absorption process are based on where the

absorption takes place, future research should aim to include data from both the MNC parents and subsidiaries on the process.

In conclusion, our study offers a number of novel, empirical findings about the drivers of subsidiary absorptive capacity in relation to marketing strategies. It also validates the original dimensions that constitute absorptive capacity, and it reveals a link between absorptive capacity and related implementation outcomes. We therefore propose that this study's findings can assist in the rejuvenation of this phenomenon whose empirical relevance for different organizational contexts, including MNC subsidiaries, certainly validates the central attention it has enjoyed since its inception.

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APPENDIX

Construct	*Factor load.*	*t-value*	R^2*-value*	*Construct reliability*	*AVE*	*Cronb. alpha*
Subsidiary absorptive capacity						
Strategy recognition						
The following statements describe the extent to which management in your office was able to recognize and understand the potential benefits of implementing the strategy locally:				0.91	0.73	0.92
1. We recognized the benefits of the strategy	0.87	38.19	0.75			
2. We understood the importance of the strategy	0.87	40.12	0.76			
3. We recognized the potential of the strategy to create value for the organization	0.86	39.27	0.75			
4. Thought that the justification for implementing the strategy made sense	0.81	29.29	0.65			
Strategy assimilation						
The following statements describe the extent to which management in your office was able to understand the components of the new strategy and how to make the strategy work locally:				0.89	0.67	0.89
1. We understood the key components of the strategy	0.75	19.82	0.56			
2. We understood how the components of the strategy fitted together to make it work in the local market	0.90	46.01	0.81			
3. Even if the strategy included some new components compared to previous strategies, management were still able to understand it	0.81	29.17	0.65			
4. Management recognized what steps we had to take to make the strategy successful	0.81	29.37	0.65			

APPENDIX *Continued*

Construct	*Factor load.*	*t-value*	*R^2-value*	*Construct reliability*	*AVE*	*Cronb. alpha*
Strategy application						
The following statements describe the extent to which management in your office was able to experiment with the strategy, and if necessary, learn from these experiences to make the strategy work locally:				0.85	0.66	0.82
1. We were able to further adapt the strategy, if we discovered that changes were necessary once we started rolling it out	0.87	18.05	0.75			
2. We were able to monitor the performance of the strategy and corrected problems as they surfaced	0.90	19.03	0.80			
3. We were able to fine-tune some components of the strategy to make it work successfully	0.65	12.87	0.43			
Subsidiary market conditions						
Competitiveness and market dynamism						
The following statements ask you to reflect on how dynamic the markets are in which your organization operates:				0.89	0.68	0.90
1. There are frequent changes in products offered by our competitors	0.79	26.94	0.62			
2. There are frequent changes in the operations and strategies used by our competitors	0.84	33.67	0.71			
3. There are frequent changes in marketing and promotional tactics used by our competitors	0.88	39.62	0.78			
4. The marketplace in which we operate is a dynamic one	0.77	24.25	0.59			
Organizational mechanism						
Normative integration						
The following statements describe the extent to which organization values openness and a climate of trust:				0.91	0.72	0.90
1. In our organization, there is a feeling of trust and confidence between different units	0.77	26.01	0.59			
2. Our organization's management style encourages a high level of participation from employees	0.89	40.85	0.78			
3. Information is shared honestly and openly in our organization	0.88	40.01	0.78			
4. In our organization, people feel that their ideas and input are listened to by others.	0.85	38.71	0.73			
Decentralization						
The following statements describe the extent to which decision-making within your organization is concentrated in the head office or subsidiary:				0.92	0.79	0.89

APPENDIX *Continued*

Construct	*Factor load.*	*t-value*	R^2*-value*	*Construct reliability*	*AVE*	*Cronb. alpha*
1. Subsidiary managers generally make decisions as they relate to their work without the need to check with head office	0.65	12.92	0.42			
2. Subsidiary managers have wide latitude in the choice of means to accomplish goals	0.98	19.03	0.97			
3. Subsidiary managers are allowed flexibility in completing their work	0.99	19.45	0.98			
Innovative organizational culture						
The following statements describe the extent to which organization values innovation and change:				0.93	0.76	0.92
1. Our organization values quick responses to changing market conditions	0.81	32.27	0.66			
2. Our organization is dynamic and entrepreneurial	0.90	45.75	0.80			
3. Our organization emphasizes innovation and change	0.87	45.35	0.76			
4. Creativity and innovation are highly valued by our organization	0.91	51.57	0.83			
Enactment on absorptive capacity						
Within our subsidiary:				0.89	0.67	0.88
1. We have integrated the new strategy successfully into our organizational routines	0.97	56.41	0.93			
2. The strategy was applied successfully, or better	0.85	93.14	0.72			
3. The process of implementing the strategy has been a success for our organization	0.94	84.73	0.89			
4. The strategy implementation effort is generally considered a success within our organization	0.86	45.14	0.75			
Controls						
Financial performance						
The following statements ask you to reflect on the financial performance of your subsidiary. How would you rate the performance of your subsidiary in achieving financial goals over the past 12 months?				0.94	0.76	0.94
1. Overall revenue	0.76	23.48	0.58			
2. Growth of revenue	0.81	21.24	0.65			
3. Overall profitability	0.93	57.31	0.87			
4. Growth in profit	0.85	38.72	0.72			
Size of subsidiary (logarithm of employees)						
How many full-time employees does your subsidiary have?	n.a.	n.a.	n.a.			
Age of subsidiary (in years)						
How many years has your subsidiary operated in the host country?	n.a.	n.a.	n.a.			

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