

Running title: **DYNAMIC CAPABILITY DEVELOPMENT IN MNES**

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Research summary: Starting from the premise that firms need dynamic capabilities to adapt to changing environments, we discuss how multinational enterprises (MNEs) develop dynamic

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capabilities from internationalization. Unlike domestic firms that develop dynamic capabilities within one organizational system, MNEs are inherently multi-level systems with the headquarters and subsidiaries. In this paper, we focus on how internationalization depth and breadth function as sources of learning and unlearning in the headquarters and subsidiaries, and how this serves as the antecedent for routine reconfiguration and dynamic capability development in the MNE. We theorize that the headquarters' and subsidiaries' brokering capabilities are critical for reconciling routine reconfiguration at the two levels so that dynamic capability development can occur, and the MNE can adapt to environmental changes.

Managerial summary: Our model of dynamic capability development in multinational enterprises (MNEs) via internationalization makes dynamic capabilities actionable for managers in three main ways. First, we emphasize both learning and unlearning from internationalization as important for both the subsidiaries and headquarters to reconfigure routines to adapt to changing environments. Second, the routine reconfiguration that occurs from the subsidiaries or the headquarters serves as the impetus for dynamic capability development in the MNE. Third, for dynamic capability development to occur in the MNE, both the headquarters and the subsidiaries must be able to reconcile routine reconfigurations via the headquarters' and the subsidiaries' brokering capabilities.

Keywords: MNE, dynamic capability development, internationalization, routine reconfiguration

INTRODUCTION

The dynamic capability perspective has garnered increasing attention from international business (IB) research (Teece, 2014) as it describes the multinational enterprise's (MNE's) ability to generate and modify its operating routines to adapt to the changing business environment (Ambrosini, Bowman, & Collier, 2009; Eisenhardt & Martin, 2000; Knight & Cavusgil, 2004; O'Reilly & Tushman, 2008; Sapienza, Autio, George, & Zahra, 2006; Zollo & Winter, 2002). This adaptation resides in the existence of underlying organizational routines for learning but also in the context in which capabilities are developed and deployed (Helfat et al., 2007; Schilke, 2014; Schilke, Hu, & Helfat, 2018).

The organizational structure of the MNE—with a headquarters (HQ) and multiple subsidiaries—is more complex than that of a domestic firm often operating as a single organizational unit. Thus, the adaptation of the MNE to a changing business environment is more complex for at least two reasons. First, the organizational routines for learning in the MNE are based on both the routines of the HQ and those of the subsidiaries. These routines are not always complementary; they are sometimes conflicting, requiring MNE-level reconciliation. Second, these routines give rise to capabilities developed across organizational (i.e., HQ or subsidiaries) and geographic contexts, and these capabilities may or may not be shared across the MNE. Given these complexities, we ask: how do MNEs develop dynamic capabilities given that learning occurs at both the HQ and subsidiary levels and across multiple geographies? Despite its theoretical and managerial importance, this question has not been explored in depth by the global strategy literature.

We investigate this issue by suggesting a multi-level process of dynamic capability development in the MNE. Our multi-level model starts from the premise that internationalization

and dynamic capability development are inherently intertwined. We focus on *learning* and *unlearning* occurring at both the HQ and subsidiary levels (Lessard, Teece, & Leih, 2016a; Nonaka, Hirose, & Takeda, 2016; Tsang & Zahra, 2008; Zollo & Winter, 2002). Because of the situated nature of learning and unlearning (Hargadon, 2002), the HQ and subsidiaries learn differently depending on their unique involvement in the internationalization process. Thus, we argue that HQ learning and unlearning, mainly (but not solely) stems from internationalization breadth, and subsidiary learning and unlearning mainly (but not solely) stems from internationalization depth. From this learning and unlearning, the HQ and the subsidiaries reconfigure routines at their respective levels. For dynamic capability development in the MNE, however, the HQ's routine reconfigurations must reconcile with the subsidiaries' routine reconfigurations. We point to two mechanisms that enable this to occur—assimilation and aggregation—and two supporting organizational capabilities—the HQ's and the subsidiaries' brokering capabilities. We offer that the MNE's internal embeddedness influences routine reconciliation in the MNE. In sum, our multi-level model details dynamic capability development in the MNE through the reconciliation of routines at both the HQ and subsidiary levels.

Our study makes three contributions to the literature on dynamic capabilities and MNEs. First, we focus on internationalization as the trigger to HQ and subsidiary learning, and subsequent routine reconfiguration and dynamic capability development in the MNE (Zahra, Petricevic, Luo, & Zollo, 2017). Whereas the bulk of dynamic capability research focuses on dynamic capabilities as an antecedent to other firm processes (Schilke et al., 2018), we suggest a more recursive path in which internationalization triggers dynamic capability development. Second, we consider both the HQ and subsidiaries in dynamic capability development, highlighting the differential roles they both play. We untangle how routines are reconfigured differently by the HQ and the subsidiaries and how routines interact across levels of the MNE. We uncover two mechanisms that enable dynamic capability development in the MNE:

aggregation and assimilation of routines from the HQ and subsidiary levels. Third, we consider the brokering capabilities of both HQ and subsidiaries in enabling aggregation and assimilation to occur and thus dynamic capability development in the MNE. We finally discuss how MNE internal embeddedness can foster or hinder dynamic capabilities development in the MNE. Taken together, we offer a more nuanced approach to understanding internationalization and dynamic capability development in the MNE.

DYNAMIC CAPABILITIES IN THE MULTINATIONAL ENTERPRISE

The dynamic capabilities view, a theoretical framework that emerged in the field of strategy in the 1990s, appeared first as an “approach to understanding strategic change” (Helfat & Peteraf, 2009: 92). This view subsequently evolved to help explain firm heterogeneity and address how firms adapt to changes in the environment (Luo, 2007). Rather than reacting to environmental shifts (including competition, technology, and market fragmentation) ex-post-facto, the dynamic capabilities view suggests that firms can adapt (Eisenhardt & Martin, 2000; O’Reilly & Tushman, 2008; Teece, Pisano, & Shuen, 1997) via a persistent process (Ambrosini et al., 2009) including both reactive and proactive reconfigurations of capabilities and routines (Teece, 2007, 2014; Zollo & Winter, 2002).

The literature on dynamic capabilities “has been constrained by inconsistencies in the definitions and measurement of key constructs and highly varied theorized relationships among these constructs” (Wilden, Devinney, & Dowling, 2016: 999). However, recent developments in this area demonstrate a coalescence around our understanding of dynamic capabilities as a framework for explaining “why some firms prosper and survive in turbulent operating environments and aims to identify the underlying drivers of long-term firm survival and success” (Wilden et al., 2016: 998). The dynamic capabilities view has proved relevant to a variety of fields including entrepreneurship, operations management, marketing, and IB (Schilke et al., 2018).

Related to its development in IB, scholars recognize that an MNE's ability to sustain success depends, to a large extent, on the discovery, access, and development of opportunities (Lessard, Lucea, & Vives, 2013; Teece, 2007, 2012, 2014). Through the process of internationalization, MNEs discover latent demand, market reactions, and learn to pursue local opportunities (Bartlett & Ghoshal, 1989; Doz, Santos, and Williamson, 2001; Lessard et al., 2013; Riviere, Suder, & Bass, 2018; Teece, 2014; Vahlne & Johanson, 2013). The dynamic capabilities framework, with its focus on how firms develop capabilities to adapt to environmental changes, provides a promising avenue for understanding how MNEs might leverage internationalization for dynamic capability development and subsequent advantage.

Central to these arguments is that firms must acquire knowledge about environmental shifts via learning or unlearning to appropriately reconfigure capabilities and routines (Tsang & Zahra, 2008; Zollo & Winter, 2002). Thus, firms learn and consequently improve at “doing the right things” rather than just “doing things right” (Teece, 2014: 18). We follow Zollo and Winter (2002: 340) and define dynamic capabilities as “a learned and stable pattern of collective activities through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness.” This definition emphasizes collective action that encompasses MNE learning and unlearning at both the HQ and the subsidiary levels (Lessard, Teece, & Leih, 2016b). Despite its relevance for the MNE, much of the literature on dynamic capability development focuses on domestic firms (Zahra, Harry, & Davidsson, 2006; Zollo and Winter, 2002). Dynamic capabilities develop from organizational routines that arise from accumulated and deployed knowledge over time (Barretto, 2010; Helfat & Peteraf, 2009; Zahra et al., 2006; Zollo & Winter, 2002). Thus, dynamic capabilities develop through a process of (1) knowledge acquisition; (2) integration of knowledge with existing routines; and (3) routine reconfiguration to adapt to environmental changes.

However, the MNE may face a more complex process of dynamic capability development than the domestic firm for at least three reasons. First, the MNE is inherently multi-level with both the HQ and the subsidiaries operating within the organizational structure. Each level has different roles, with the HQ responsible for orchestrating the MNE's resources and formulating the strategy, and the subsidiaries responsible for co-invention and initiative formation (Lessard et al., 2016b). Second, in this way, the knowledge acquired at each level is different. Whereas the HQ accrues and deploys knowledge related to opportunities, threats, and ways to increase the (whole) MNE's future prospects (Williams & Lee, 2011), the subsidiaries accrue and deploy knowledge related to the local market driven by external embeddedness (Andersson, Forsgren, & Holm, 2002, 2007; Meyer, Mudambi, & Narula, 2011). Third, the existing routines in each level of the MNE differ based on the differing roles and related knowledge acquisition.

We suggest that although dynamic capability development occurs at both the HQ and the subsidiary levels, the process through which these levels are reconciled for dynamic capability development in the MNE is unclear. Previous research indicates that the relationship between the HQ and the subsidiaries is rarely straightforward, with tensions emerging from multiple-level interactions inside and outside the MNE (Henisz, 2016; Meyer, Mudambi, & Narula, 2011; Zollo, Bettinazzi, Neumann, & Snoeren, 2016). Thus, dynamic capability development in the MNE requires a more complex path than that of domestic firms, but also requires additional consideration of how routine reconfigurations at multiple levels can be reconciled to benefit the MNE as a whole in its efforts to adapt to a changing environment.

In the following section, we outline the roles of the HQ and the subsidiaries in the dynamic capability development of the MNE. We argue that the knowledge accumulated and deployed at each level of the MNE differs based on internationalization, and thus each level develops and reconfigures its routines independent of the other.

THE ROLE OF THE HEADQUARTERS AND SUBSIDIARIES IN DYNAMIC CAPABILITY DEVELOPMENT IN THE MULTINATIONAL ENTERPRISE

Knowledge Acquisition through Internationalization

As described above, dynamic capability development occurs through a process of (1) knowledge acquisition, (2) integration of knowledge with existing routines, and (3) reconfiguring routines to adapt to environmental changes (Barretto, 2010; Helfat & Peteraf, 2009; Zahra et al., 2006; Zollo & Winter, 2002). Knowledge acquisition serves as the initial input in dynamic capability development in the MNE. The HQ and subsidiaries acquire knowledge through internationalization, or by engaging in diverse cross-border activities (Riviere et al., 2018; Zhou, Wu, & Luo, 2007). Internationalization encompasses both the geographic breadth of the MNE's operations (internationalization breadth) and its market commitment to various geographies (internationalization depth). Internationalization breadth and depth serve as the key inputs for knowledge acquisition for both the HQ and the subsidiaries (Williams & Lee, 2011).

Internationalization breadth enables the HQ to manage its risk by diversifying operations across geographic locations but also incorporating knowledge across geographies via resource and capability orchestration (Forsgren, 2002; Kafouros, Buckley, & Clegg, 2012; Lessard et al. 2016b). Multiple embeddedness (Meyer et al., 2011) occurs as MNEs expand across geographies (enhancing internationalization breadth) and benefit from the multiplicity and diversity of tangible and intangible resources (including knowledge) available across borders.

Internationalization breadth serves as the primary source for knowledge acquisition for the HQ.

We graphically depict this relationship in Figure 1.

INSERT FIG. 1 ABOUT HERE

Profiting from exposure to dissimilar environments, the HQ improves its ability to identify what information to look for, how to analyze it, and the implications of expansion

(Dunning and Lundan, 2010; Hitt, Hoskisson, & Ireland, 1997; Kafouros, Buckley, Sharp, and Wang, 2008; Maitland & Sammartino, 2015; Prashantham & Floyd, 2012). This fosters opportunity identification related to global competitive characteristics and the potential to increase future business prospects because it is based on knowledge acquired through interactions with external global stakeholders, governments, and regulators. Thus, we refer to this type of knowledge acquisition as non-market specific based on interactions with strategic international partners and governments or within institutional relationships, and offers a global vision for the MNE.

Though internationalization breadth serves as the primary source of knowledge acquisition for the HQ; it can also serve as a secondary source of knowledge acquisition for subsidiaries (see Figure 1). Subsidiaries have breadth exposure to the extent they maintain lateral ties with sister subsidiaries. Subsidiary knowledge acquisition through internationalization breadth rarely leads to the type of routine reconfigurations that the HQ considers useful to leverage across the MNE, but may be useful between sister subsidiaries. For example, a subsidiary may gain knowledge from a sister subsidiary that operates in the same geographic region, but in a different market. Thus, although this knowledge acquisition is helpful for the subsidiary, it is not the primary way the subsidiary acquires knowledge, which we explore in the following paragraph.

Alternatively, internationalization depth serves as the primary source of knowledge acquisition for the subsidiaries and reflects their commitment to foreign activity, often conceptualized as the extent of an MNE's foreign operations and investments (Casillas & Acedo, 2013; Kafouros et al., 2012). Internationalization depth describes the subsidiary's embeddedness in the host country environment and its market commitment (Hoenen, Nell, & Ambos, 2014). Although the degree to which the MNE is committed to each market varies, through internationalization depth, the subsidiary becomes more established and embedded in the host

market. Local embeddedness is important when the subsidiary seeks to integrate local knowledge and embrace, through investments, local opportunities. Through local embeddedness, subsidiaries understand the local market and can avoid missteps while increasing the awareness of potential opportunities (Forsgren, 2002; Kafouros et al., 2012; Katila & Ahuja, 2002). Knowledge acquisition through internationalization depth fosters opportunity identification for the subsidiary that is mostly related to local competitive characteristics and the potential to increase local business prospects.

As indicated above, internationalization depth serves as the primary source of knowledge acquisition at the subsidiary level. We refer to this type of knowledge acquisition as market-specific based on interactions with local partners and local stakeholders to access regional and local ecosystems (Lessard et al., 2016b). We argue that knowledge acquisition through internationalization depth enables the subsidiaries to create new ideas and pursue initiatives in response to adaptation and development challenges (Durand & Jacqueminet, 2015) as well as opportunities in the local environment (Williams & Lee, 2011).

Internationalization depth serves as the primary source of knowledge acquisition for the subsidiaries but can also serve as a secondary source of knowledge acquisition for the HQ (see Figure 1). The HQ has depth exposure to the extent that it maintains its vertical ties with its subsidiaries (Zollo et al., 2016). The type of internationalization depth knowledge that the HQ acquires may be useful to share between subsidiaries not through lateral sister relations, but through the more centralized channeling of the HQ from one subsidiary to another. Thus, although knowledge acquisition via internationalization depth can be helpful for the HQ, it is not the primary way the HQ acquires knowledge.

In sum, both internationalization breadth and depth offer grounds for knowledge acquisition at the HQ and subsidiary levels. By demonstrating how internationalization feeds knowledge acquisition of the HQ and subsidiaries differently, we suggest that dynamic capability

development correspondingly occurs differently at both levels of the MNE. This follows previous literature suggesting that “the structure and routines of a firm’s internationalization process are built and changed gradually as a consequence of learning both a firm’s capabilities and foreign market needs” (Eriksson, Johanson, Majkgård, & Sharma, 1997: 353). This indicates that internationalization contributes to knowledge acquisition at the HQ level but also that “the access to (and participation within) local and regional ecosystems is necessary to build competitive advantages” (Lessard et al., 2016: 220), demonstrating that internationalization contributes to knowledge acquisition at the subsidiary level. Based on the premise that knowledge acquisition through internationalization is different for the HQ and the subsidiaries, we discuss how this knowledge is integrated with existing routines differently for each level of the MNE.

Integration of knowledge with existing routines

As indicated above, knowledge acquired through internationalization must be integrated with existing routines. Routines, as “repetitive patterns of interdependent actions carried out by multiple organizational members involved in performing organizational tasks” (Tsang, 2008: 7), enable both the HQ and the subsidiaries to engage in collective activities to adapt to environmental changes (Zollo & Winter, 2002). Dynamic capabilities stem from reconfigurations in routines—or collective efforts to generate and modify existing routines based on various internal and external stimuli (Zollo and Winter, 2002). However, these stimuli are different for HQ and subsidiaries because their sources of knowledge acquisition differ. Though knowledge acquisition via internationalization serves as the basis for reconfiguring routines for the HQ and the subsidiaries, it alone is not enough to reconfigure routines. Knowledge must be integrated into the existing knowledge base to reconfigure prevailing routines. Both learning and unlearning is necessary for the HQ and subsidiaries to integrate knowledge acquired through internationalization to adapt to environmental changes (Hedberg, 1991) but each changes routines and the associated behaviors differently (Huber, 1991). Learning refers to the intentional

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processing of new information that can change the organization's behavior or way of doing things (Hedberg, 1991). Thus, through learning, the HQ and subsidiaries can respectively augment existing routines by incorporating new knowledge (Levitt & March, 1988). However, learning occurring at each level is different. For the HQ, learning is related to how the MNE best interacts with its strategic international partners, governments, or institutional relationships. It might also include learning related to how it can vertically channel information from one subsidiary to another. For the subsidiaries, learning is related to how to interact with local partners and local stakeholders. It could also include learning related to how to exchange information with sister subsidiaries.

As the HQ or subsidiaries acquire new knowledge through internationalization depth or breadth, they may incorporate that knowledge into the existing knowledge base, which can augment existing routines (learning), or, if the knowledge proves existing knowledge to be misleading or obsolete, discard existing routines (unlearning) (Hedberg 1991; Tsang & Zahra, 2008). For theoretical clarity, we describe both learning and unlearning as separate mechanisms underlying routine augmentation or abandonment but recognize that both can happen simultaneously by the HQ and subsidiaries (Tsang & Zahra, 2008). The success of the changes in routines is (at least partly) due to the efficiency in unlearning the "old routines." We expand on how learning and unlearning serve as the basis for reconfiguring routines at both the HQ and subsidiary levels below.

Routine reconfiguration at the headquarters level

The last step in the process of dynamic capabilities development is routine reconfiguration. At this stage, both the HQ and the subsidiaries have integrated knowledge with existing routines. Both will, subsequently, reconfigure routines to adapt to what each understands environmental changes to be. Since both the HQ and the subsidiaries consider different environmental changes

and integrated different sources of knowledge, the routine reconfigurations at each level are different as well. This process is depicted in Figure 1 and described below.

Since the HQ is the orchestrator of resources and the initiator of internationalization (Lessard et al., 2016b) with extensive visibility over all country operations, opportunities, and threats, we argue that learning or unlearning is initiated at the HQ to adapt to environmental changes that are relevant for the entire MNE. Because of its global perspective, the HQ is concerned with learning and unlearning that “respond to contextual cues” relevant for the entire MNE (Prashantham & Floyd, 2012: 550).

Learning and unlearning via internationalization breadth can trigger the HQ to replace or refurbish existing facets of operations including business lines, markets, and relationships (Verbeke, Chrisman, & Yuan, 2007). Because the HQ collects dissimilar information from operations across various markets and global partner networks, it can evaluate how general enterprise routines work, or do not, in other contexts, and what the MNE should do to better capture global opportunities and avoid threats. These routines keep the operational routines updated to maintain their relevance to exogenous variation or change. The types of routines and the nature of the reconfigurations that the HQ considers look to how the whole can perform better. The quote below from an International Business Development Director at an architecture MNE provides a glimpse into this dynamic:

We learn when we go abroad, when you go to China and you see that what it takes here in France three days in China only takes three hours, a project that in Europe lasts three years, in China is implemented in 1½ years, you realize you need to change something in the way you function.

Hence, we expect:

Proposition 1 (P1) *Internationalization breadth serves as the input for learning, unlearning, and routine reconfiguration at the headquarters level aimed at maintaining global competitiveness for the whole MNE to perform better.*

Routine reconfiguration at the subsidiary level

Internationalization depth is a means to capture new knowledge from the foreign environment and primarily rests at the subsidiary level (Andersson, Gaur, Mudambi, & Persson, 2015).

Although internationalization depth can be depicted as the number of investments made in a specific foreign market, learning from this market is mostly derived from the subsidiary's activities and development of relationships to local business actors in the foreign market (see subsidiary external embeddedness, Andersson et al., 2002; Birkinshaw, 1997; Birkinshaw, Bouquet, & Ambos, 2007; Rugman & Verbeke, 2001). This enables the subsidiary to better adapt to local market changes.

The more committed to the local market, the more opportunities the subsidiary has to acquire this information and add to its existing knowledge. Some of the knowledge acquired or created through internationalization depth can recombine with the subsidiary's existing understanding of the host market. Locally embedded subsidiaries learn from local partners that can enable the subsidiary to tailor to the expectations of local stakeholders (Zollo et al., 2016).

The type of routines and the nature of the reconfigurations that the subsidiaries consider is related to how the subsidiaries can perform better. These routines are more complex as they also consider the routines of the local partners and the environments in which they act. The following is an example from a country manager at a global software and consumer electronics company that describes this dynamic:

When you start developing a business abroad you meet and deal with new people, with new businesses. The new ones often look at the issue in a different way and because they are looking at things in a different way they often challenge the way you do things, why this way while the other way might be a better or more efficient way. If you are an organization like ours, you listen. Sometimes you have no choice, but listen.

In sum, internationalization depth enables the subsidiary to acquire or create new knowledge about the host market so that it can better adapt to that environment and subsequently

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improve performance. The subsidiary engages in learning when it recombines the new knowledge with the subsidiary's existing knowledge and augments its existing routines. Unlearning occurs when new knowledge makes existing knowledge misleading or obsolete, requiring the subsidiary to discard home-grown routines. Hence:

Proposition 2 (P2) *Internationalization depth serves as the input for learning, unlearning, and routine reconfiguration at the subsidiary level aimed at adapting to the local environment for the focal subsidiary to perform better.*

RECONCILING ROUTINES: DYNAMIC CAPABILITY DEVELOPMENT IN THE MNE

Our discussion of internationalization breadth and internationalization depth as inputs to knowledge acquisition and subsequent learning, unlearning, and routine reconfiguration at the HQ and subsidiary levels raises the question of the tensions that might emerge between these two levels in the process of dynamic capability development in the MNE. In a discussion with a Senior Vice President of Information and Board Member of a global utilities provider we learned that:

When you intend to stop a routine is very difficult to implement across the organization. For wrong reasons most of the time but is very difficult.

Our theorizing thus far is limited in that it has yet to explore how these routine reconfigurations of the HQ and subsidiaries interact and how they are reconciled for dynamic capability development in the MNE. This is necessary because while each level largely uses different sources of knowledge--from internationalization breadth or depth--both use each other's source as a secondary source of knowledge acquisition. Therefore, some knowledge can overlap, be interpreted differently in terms of relevance, and could lead to conflicts that inhibit dynamic capability development in the MNE. We distinguish two mechanisms underlying how routines interact and allow routine reconfigurations by the HQ and the subsidiaries to be reconciled for that dynamic capability development in the MNE happens: aggregation and assimilation.

Aggregation. Aggregation describes the mechanism in which routines reconfigured at both the HQ and subsidiary levels are clustered or linked up for dynamic capability development in the MNE. Through aggregation, there are no redundancies nor synergies between the routine reconfigurations from the HQ or the subsidiaries. That is, the routines reconfigured by the subsidiaries serve as the basis for the development of market-specific dynamic capabilities and the routines reconfigured by the HQ are the basis for non-market specific dynamic capabilities. Aggregation enables reconfigured routines from the HQ to link up with the reconfigured routines from the subsidiaries. This scenario might occur when the MNE follows a local responsiveness strategy with subsidiaries given an important level of autonomy in routine adaptation, and thus supports aggregation of the HQ's and subsidiaries' routines. It may also occur within a global efficiency strategy with the HQ responsible for orchestrating the efforts of all subsidiaries to extend the parent's competencies in a standardized way.

Thus, any routines reconfigured by the HQ based primarily on internationalization breadth are useful for all subsidiaries when following the global standardization strategy. This is exemplified in Motorola's "currency netting system" and the creation of the MNE's cash management system. Each subsidiary's outstanding accounts receivable and payable to other subsidiaries (in foreign currency) were aggregated weekly with the HQ informing each subsidiary about the net single payment each needed to make (or receive) in its own currency. This new routine prompted by the HQ allowed Motorola to achieve enormous savings in bank charges and foreign exchange costs (Verbeke, 2009) and reflected the aggregation mechanism because it allowed routines initiated at the HQ level to link up with routines initiated at the subsidiary level.

Similarly, subsidiaries deploying parent's competencies abroad are encouraged to learn how to best deploy these competencies and thus, develop routines based primarily on internationalization depth that can aggregate to the MNE. That is, the routines at both levels of the MNE do not share commonalities because what is learned and unlearned from

internationalization breadth and depth are distinct from one another, but all routines can be linked up or aggregated for dynamic capability development in the MNE. This is perhaps the simplest form of dynamic capability development because the dynamic capabilities of the whole MNE are merely an aggregation of the routines of the HQ and/or the subsidiaries.

Aggregation is relatively easier to achieve within a global efficiency strategy as the HQ maintains a certain level of authority and control over all subsidiaries' activities (Kostova, Marano, & Tallman, 2016; Meyer & Estrin, 2014). It is also relatively easy to achieve aggregation in a multi-domestic (local responsiveness) strategy. This is because subsidiaries often are mini-replicas of the HQ, which improves the overall organizational logic. Further, the HQ and subsidiaries maintain high levels of interaction and knowledge flow to design the best approaches to recombine the MNE's capabilities with local resources and the right process of adaptation (Meyer & Estrin, 2014). Therefore, with aggregation, tensions over routine reconfigurations from the HQ and the subsidiaries are rare.

Assimilation. Assimilation describes the mechanism of acquiring new routines through either the HQ or the subsidiaries that are worked into the existing routine structure of the MNE. Whereas aggregation refers to routines linking up or clustering together, assimilation refers to the absorption of routines within the existing routine structure. In the case of assimilation, dynamic capability development in the MNE occurs through the absorption of the routine reconfigurations by the HQ and subsidiaries. Assimilation mostly pertains to the transnational strategies wherein the HQ develops routines to coordinate global and regional activities that, in contrast to aggregation, may have relevance for some, but not all, parts of the MNE. Additionally, the subsidiaries develop routines specific to their changing environments based on their local business relationships but might also own a view over reconfigurations of routines at the regional or even organizational level based on their lateral business relationships with sister subsidiaries. Given this, some routines developed at the HQ and the subsidiary levels might be perceived as

inconsistent. In this way, these routines may compete rather than create synergies. However, it may help the MNE accrue and disseminate different kinds of knowledge across the MNE to increase global competitiveness (Meyer & Estrin, 2014).

For example, let's examine an MNE that produces fire control products. For the MNE's R&D and innovation, global coordination by HQ is critical. Product sourcing is regional, therefore requiring lateral business relationships. Yet, fire protection is a highly regulated industry requiring each national operation to become locally embedded with national regulatory bodies and control agencies. In each country, some customers are large multinational corporations but there are also many smaller regional and local customers and competitors. The nature of the business, therefore, requires local adaptation through MNE lateral relations to encourage autonomy and proactivity, but it also needs global coordination by the HQ. The effectiveness of the change process greatly depends on its perceived legitimacy for the MNE (Bartlett & Winig, 2012).

To increase global efficiency, the routines of the HQ may differ from those of the subsidiaries. In this way, routines are not clustered or linked up as with aggregation, but rather negotiated within the existing structure of routines. To maintain local responsiveness, the subsidiaries might have routines that are specific to the local environment, but perhaps not generalizable across the MNE. Through assimilation, these routines are negotiated within the existing routine structure to identify whether they are relevant for some or all units of the MNE.

In the following section, we describe how aggregation and assimilation occur in the MNE. In the context of internationally acquired knowledge, we suggest an organizational capability—the brokering capability—to be critical in enabling aggregation and assimilation to occur and thus dynamic capability development in the MNE.

Headquarters brokering capability

Considering that routine reconfiguration occurs at both the HQ and subsidiary levels, there is a persisting need to resolve tension and reconcile routine reconfigurations for dynamic capability development in the MNE. Compounding the problem is the different degrees of external embeddedness of the subsidiaries (Zollo et al., 2016). The relationship the HQ has with subsidiaries that are highly externally embedded is different from those it has with less externally embedded subsidiaries. For the latter, the decision to reconfigure routines is less dependent or even non-dependent on the subsidiary's relationships with local counterparts, making the transfer of reconfigured routines from the subsidiary to the HQ easier. For the former, the decision to acquire the subsidiaries' reconfigured routines is more challenging as the subsidiary is more interdependent with its local partners. Additionally, the reconfigured routines may be vital to a particular subsidiary but perhaps not to the overall MNE's ability to adapt to its changing environment. This is illuminated by the CEO of a Chinese regional HQ for an innovation and engineering consulting firm:

For instance, the headquarters [MNE headquarters] wants me to open up now in Malaysia and South Korea but if I do that when the moment is not right or for the wrong reasons...that might distract me and my team from our projects in China. The [headquarters] doesn't really ..or always understand what it takes to build strong relationships in a host country.

Subsidiaries are the middle layer between the HQ and their developed local networks (Zollo et al., 2016). The HQ's embeddedness in the subsidiary's network helps the HQ gain a better understanding of the subsidiary-specific strategies. It also augments the HQ's base for its brokering capability, an organizational capability in which the HQ can orchestrate routines from various actors including the external networks of the subsidiaries to secure reconfigured routines in "ways that are grounded in concrete details but not bound to the context in which they are learned" (Hargadon, 2002: 59).

In this way, the HQ's brokering capability extracts relevant reconfigured routines from the subsidiaries, but also potentially shares reconfigured routines with the subsidiaries. In the case of aggregation, the HQ brokering capability combines these relevant reconfigured routines with existing routine structures. In the case of assimilation, the HQ brokering capability absorbs some of the routines into its existing structure. The brokering capability of the HQ is vertically-oriented, channeling relevant routines from the HQ to the subsidiaries, and vice versa. One way in which the HQ might do so is by using boundary spanners as facilitators in cross-boundary coordination, i.e., between HQ and subsidiaries or between the top and line managers. Boundary spanners may be individuals acting as exchange agents between the organization and the external environment (Zhang, Wu, & Henke, 2016). Their role involves managing relationships, resolving tensions, and dealing with complexities related to intra- and inter-organizational socio-cultural and geographical boundaries (Schotter, Mudambi, Doz, & Gaur, 2017). Boundary spanners are actors of the HQ brokering capability.

Boundary spanners, when acting as knowledge brokers, consult in a range of different domains (in our case, the HQ and subsidiaries) recognizing how new routines gained from working in one environment are leveraged to a different environment. The following quote from the International Business Development Director at an architecture MNE that we cited previously, parallels this view:

We have someone from Argentina in our team [the headquarters being in France]. He explains things, he comes up with solutions. To me this isn't enough to make change happens. The only best way is to go to Argentina and figure it out by yourself. I personally visited about 85 country operations. I talk with everyone. Many top managers only book meetings with clients and universities when they go abroad. I talk with everyone.

Thus, the HQ brokering capability conditions the dynamic capability development in the MNE. Thus, we suggest:

Proposition 3 (P3) *The HQ brokering capability reconciles routine reconfigurations between the HQ and subsidiaries, allowing for dynamic capability development in the MNE.*

Subsidiary brokering capability

Routine sharing between the HQ and subsidiaries is a critical organizational ability for dynamic capability development in the MNE. Benefits of this sharing range from routines for simple improvements in local performance to those that develop competitive advantages (Andersson et al., 2015; Asakawa, Park, Song, & Kim, 2018). Despite the utility of the HQ brokering capability to channel routine reconfiguration between the HQ and subsidiaries, the HQ is not the sole provider of routine reconciliation and subsequent dynamic capability development in the MNE. There are impediments to the HQ—subsidiary relationship such as tacitness, ambiguity, and embeddedness of the knowledge to be moved (Andersson et al., 2015; Birkinshaw et al., 2007; Zollo & Winter, 2002), control and coordination mechanisms, and motivational factors (Asakawa et al., 2018; Meyer et al. 2011, Song & Shin, 2008) that may prevent routine reconciliation. The context of transfer, such as the source-target relationship including the subsidiary's bargaining power and intra-firm influence, also determines the success of routine transfer and use of transferred routines (Andersson et al., 2015; Mudambi, Pedersen, & Andersson, 2014; Zollo & Winter, 2002).

In this way, the subsidiary might also contribute to the dynamic capability development in the MNE based on its own laterally-oriented brokering capability or the subsidiary brokering capability. This organizational capability is similar to the HQ brokering capability but enables the subsidiary to extract relevant reconfigured routines from other subsidiaries. It also potentially shares reconfigured routines with other subsidiaries. The subsidiary brokering capability works through springboard subsidiaries. Recent advancements in the MNE literature discuss the concept of “co-parenting” through subsidiaries for value creation (Pla-Barber, Villar, & Madhok, 2017:

536). “Springboard subsidiaries” (p. 536) temporarily assume the HQ function given their institutional closeness and business embeddedness with both the HQ and the regional sister subsidiaries. These subsidiaries also act as routine sharing brokers (Pla-Barber et al., 2017). As reported in the study, a CEO of a French MNE describes the relationship between the springboard and a local subsidiary under its control as a “mother-daughter” relationship.

As in the case of the HQ brokering capability, the subsidiary brokering capability allows for dynamic capability development in the MNE. In the case of aggregation, the subsidiary brokering capability aggregates relevant reconfigured routines to its existing routine structure and might encourage other subsidiaries in the network to do so also. In the case of assimilation, the subsidiary’s brokering capability absorbs some of the routines into its existing structure and helps extend the assimilation of routines across sister subsidiaries. The CEO of a Chinese regional HQ of an innovation and engineering consulting firm that we had an open discussion with alludes to this lateral, subsidiary brokering capability:

There is no perfect organization, if there was one, every other organization would copy the model. It's not about the organization, it's about people. [...] L'oreal is a very strong international organization. And one of the reasons is that they have a transversal organization with people from the country subsidiaries, country managers, and people from the business units working in a matrix type structure, working and influencing each other's.

Thus, we suggest:

Proposition 4 (P4) *The subsidiary brokering capability reconciles routine reconfigurations among the subsidiaries, allowing for dynamic capability development in the MNE.*

Finally, despite the utility of the HQ broker capability (via boundary spanners) and the subsidiary brokering capability (via springboard subsidiaries) to enable dynamic capability development in the MNE, the internal, or corporate, embeddedness can facilitate or hinder the reconciliation of routine reconfiguration between the HQ and the subsidiaries and the subsequent

dynamic capability development in the MNE. Embeddedness refers to the closeness in a relationship that “reflects the intensity of information exchanges and the extent to which resources between the parties in the dyad are adapted” (Asakawa et al. 2018: 744). Internal embeddedness, also known as intra-organizational network embeddedness or corporate embeddedness, refers to the linkages that the subsidiaries have with the rest of the MNE including the HQ (Meyer et al., 2011; Yamin & Andersson, 2011). We argue that when aggregation is the mechanism for dynamic capability development, internal embeddedness can enable its progress, and when assimilation is the mechanism, internal embeddedness can hinder its evolution.

To enable dynamic capability development in the MNE via aggregation, the HQ of internally embedded MNEs seeks to understand the subsidiaries’ contexts to increase the relevance of shared routines (Nell & Ambos, 2013). Internal mobility and socialization in highly internally embedded MNEs make “distance” shorter and help reduce the bounded reliability problem (Rugman, Verbeke, & Nguyen, 2011; Verbeke & Greidanus, 2009) that emerges with the increased complexity of intra-MNE linkages (Rugman et al., 2011). Internal mobility also helps build consensus over the alternative change initiatives that might function for the MNE and those that, depending on the idiosyncratic contexts in which the subsidiary performs, may need to remain local (routines at the HQ and subsidiary levels that do not share any commonality). For these reasons, internal embeddedness enables dynamic capability development when aggregation is the mechanism of routine reconciliation between the HQ and subsidiaries. Internal embeddedness facilitates the HQ’s desire to understand the subsidiaries’ local contexts and efforts to link up routines from the HQ and subsidiaries via aggregation. Within a multi-domestic strategy, internal embeddedness reflects strong dyadic vertical relationships. The HQ brokering capability is used via socialization, with a high level of vertical interactions to design adapted ways for recombination of the MNE’s capabilities with local resources (Meyer and Estrin, 2014).

Similarly, within a global efficiency strategy, the HQ and subsidiary brokering capabilities aggregate reconfigured routines where and when necessary. The HQ's brokering capability is enhanced by the subsidiaries' brokering capabilities as the HQ retains a certain level of authority across all subsidiaries. In this case, the subsidiaries are keen to successfully perform their roles to gain the HQ's attention and resources.

However, internal embeddedness can also hinder dynamic capability development in the MNE when the mechanism for routine reconciliation is assimilation because the HQ's brokering capability may be undermined by internal embeddedness or the lateral relationships that develop among interdependent subsidiaries. These relationships create a system with a fragile equilibrium given that each of the interdependent subsidiaries has its own corporate and local interdependencies (Narula, 2002). To the extent that these local interdependencies are threatened by new routine reconfigurations, integrated subsidiaries might create systems of collective resistance against the introduction of new routines (Andersson et al., 2002, 2007; Mudambi et al., 2014). The HQ can find itself in a potentially disadvantageous position in its ability to improve quality coordination (Pla-Barber et al., 2017) while springboard subsidiaries, previously encouraged to use their lateral brokering capabilities, might refuse to take a back-seat position to the HQ and the routine reconfigurations.

A different situation of the negative moderating effect of internal embeddedness might occur within a multi-domestic strategy where subsidiaries, although not integrated, might resist change. One example is the failure of Philips company to reorganize the subsidiaries under the former multi-domestic model. For Philips, the reorganization efforts with the HQ regaining control over its national subsidiaries took more than two decades (Verbeke, 2013). Subsidiaries might not only develop a bias against reducing their autonomy but they also might resist change (Foss, Foss, & Nell, 2012). Resistance is enabled by rich lateral exchanges of knowledge, people, and influence, specific to internally embedded subsidiaries.

Thus, we expect:

Proposition 5a (P5a) *The MNE's internal embeddedness positively moderates the relationship between the HQ brokering capability and dynamic capability development in the MNE when aggregation is the mechanism for routine reconfiguration.*

Proposition 5b (P5b) *The MNE's internal embeddedness negatively moderates the relationship between the HQ brokering capability and dynamic capability development in the MNE when assimilation is the mechanism for routine reconfiguration.*

DISCUSSION AND RESEARCH AGENDA

All organizations need dynamic capabilities to continuously adapt to the changing environment. For the MNE, this adaptation is often complex and multilayered given the interests and activities of the HQ and the subsidiaries. Dynamic capabilities are developed from routine reconfigurations by both the HQ and the subsidiaries. Routine reconfigurations are realized via learning and unlearning at both the HQ and subsidiary levels through the MNE's internationalization, including internationalization depth and internationalization breadth. However, our theorizing also indicates that there are challenges and limitations to reconciling these routine reconfigurations for dynamic capability development in the MNE.

Our premise is that dynamic capability development is not considered inexorably related to internationalization, not even when internationalization can be described as “doing the right thing” (Teece, 2014). Dynamic capability development across borders is complex and costly, as discussed above (Tsang & Zahra, 2008; Zollo et al., 2016; Zollo & Winter, 2002). Dynamic capability development from internationalization is subject to complexities including those related to the organization and the orchestration of learning and unlearning across the MNE as well as those related to internationalization.

To help shed light on dynamic capability development in the MNE, we draw on advances in both the strategy and IB literatures. By situating our focal dynamic capabilities along

organizational processes related to orchestrating learning and unlearning across borders and the MNE, we build testable propositions for their development from internationalization (Schilke et al., 2018). The outcome of our effort is a theoretical model that offers a more structured understanding of dynamic capability development in the MNE. By focusing on learning and unlearning, we can develop a better understanding of how internationalization depth and internationalization breadth gives rise to routine reconfigurations by the HQ and the subsidiaries. We also offer that dynamic capability development in the MNE may not be the sum of dynamic capabilities at the HQ and subsidiary levels. Rather, it involves dynamic capability development via aggregation or assimilation of the HQ and subsidiary routine reconfigurations. Further, this is enabled or hindered through the HQ and subsidiary brokering capabilities and internal embeddedness. Below we highlight our contributions to research.

Research Implications

First, our model offers that internationalization can trigger dynamic capability development in the MNE. The bulk of dynamic capabilities research in both the IB and strategy fields focuses on dynamic capabilities as an antecedent to other firm processes (Schilke et al., 2018). For example, the IB literature suggests that the theoretical and empirical roots of internationalization point to its multiple motivations and consequences for the firm, including its enhanced ability to thrive over time (Helfat et al., 2007; Narula & Verbeke, 2015). To this end, most of the attention has been on the benefits of dynamic capabilities and their role as antecedents to internationalization (Pitelis & Teece, 2010; Teece, 2014).

We integrate and advance existing research to suggest a more recursive relationship between internationalization and dynamic capabilities with a focus on dynamic capability development via internationalization. Lessard et al. (2016a, 2016b) suggest that the HQ is the orchestrator of assets and initiatives while the subsidiaries are the initiators of these initiatives. We advance this view by discussing the mechanisms that underlie the process of reintegrating

“the resulting knowledge where and when it is needed” to “maintain strong dynamic capabilities” (Lessard et al., 2016b: 217). By focusing on learning and unlearning as critical to routine reconfiguration at the HQ and subsidiary levels, we offer an important addition to the timely and much-needed effort to unbundle dynamic capabilities and internationalization (Schilke et al., 2018). Indeed, the contemporary focus of IB research has shifted towards a more nuanced understanding of the way MNEs interact with relevant locations (Andersson et al., 2015) to develop novel recombination of country-specific advantages (CSAs) and firm-specific advantages (FSAs) as noted by Rugman et al. (2011). Our dynamic capabilities perspective offers a fresh entry point to advance these efforts.

Second, we consider the roles of both the HQ and the subsidiaries in dynamic capability development. By focusing on how routines are reconfigured across the MNE, we can better understand dynamic capability development and how this enables the MNE to adapt to environmental changes. Thus, we make a clear distinction between internationalization depth and internationalization breadth in dynamic capability development, and the roles of the HQ and subsidiaries in each. We suggest that learning and unlearning via internationalization depth are initiated mainly by the subsidiaries and eventually channeled to the HQ where routine reconfigurations may occur. Conversely, learning and unlearning via internationalization breadth, are initiated mainly by the HQ as it accumulates and orchestrates knowledge across the MNE, and can eventually be channeled to the subsidiaries where routine reconfigurations may occur. Our consideration of both the HQ and subsidiary roles provide a more nuanced approach to understanding dynamic capability development in the MNE following recent calls for more attention to learning and knowledge differences in HQ and subsidiaries (Asakawa et al., 2018; Hutzschenreuter & Matt, 2017). Hutzschenreuter and Matt (2017: 1146) note: “A next step ahead is now to integrate other important parts of the MNE nature (i.e., being active in a multitude of host countries with a portfolio of host country subsidiaries) in building a dynamic theory of MNE

internationalization.” Our paper takes a first step toward answering this call by pointing to potential sources of conflict that may hinder the process of dynamic capability development in the MNE.

Third, we uncover the mechanisms that enable dynamic capability development in the MNE via the reconciliation of routine reconfigurations at the HQ and the subsidiary levels. By theorizing the aggregation or assimilation of routines at both levels, we offer a more nuanced approach to understanding dynamic capability development in the MNE. We add that the subsidiaries’ internal embeddedness and the respective brokering capabilities of the HQ and subsidiaries enable (or hinder) dynamic capability development in the MNE. Our theorizing of the HQ and subsidiary brokering capabilities speaks directly to the important question: “what are the capabilities required for integrating local knowledge on a global basis” for developing dynamic capabilities in global organizations (Lessard et al., 2016a). In sum, our model suggests that different paths of internationalization (breadth or depth) trigger learning, unlearning, and routine reconfiguration at different levels of the MNE (HQ or subsidiary), but also that dynamic capability development in the MNE occurs through aggregation or assimilation of these differential routine reconfigurations. Our theoretical effort adds to the literature by offering testable propositions for the moderating role of internal embeddedness to the brokering capability of the HQ depending on aggregation or assimilation as the source of routine reconfiguration in the MNE.

Managerial Implications

Our theoretical model of dynamic capability development in the MNE makes dynamic capabilities actionable for managers. First, we emphasize both learning and unlearning from internationalization as critical processes in the MNE. In our discussions with executives of the HQ and subsidiaries, many pointed to the difficulties associated with “undoing” existing processes. This “undoing” speaks directly to our emphasis on unlearning and that both the HQ

and the subsidiaries must be open to new knowledge that challenges existing knowledge. For HQ managers, this means a focus on not just learning from interactions with subsidiary managers, but also critically evaluating these interactions as an opportunity to unlearn existing, but obsolete, routines. Similarly, subsidiary managers can use interactions with HQ managers or even other subsidiaries to unlearn their existing routines to create space for new routines. Doing so will facilitate the dynamic capability development in the MNE.

Relatedly, a key implication for managers is the channeling of learning and unlearning, and the subsequent reconfigured routines from the HQ or subsidiaries. Though outside the scope of this paper, we believe that contingencies exist that might either enable or hinder these channeling processes. Thus, for managers of MNEs, openness to learning or unlearning and routine reconfigurations from the HQ or subsidiaries is critical for dynamic capability development. One insight related to our framework is the importance of learning and unlearning across subsidiaries. We suggest that subsidiary managers work to identify similar subsidiaries in terms of operating in similar market contexts or with like products or services and share routines with these comparable entities. In doing so, the subsidiary managers can not only capitalize on the learning and unlearning experienced in their markets or from the HQ managers, but also from managers of other subsidiaries.

Future Research

Our research offers a first step in integrating internationalization theory with dynamic capabilities and thus, creates several avenues of future research. For example, we can investigate our propositions using both qualitative and quantitative data. A longitudinal case study would help uncover the process of how learning occurs in both the HQ and subsidiaries and how we can channel this knowledge up or down the MNE. Similarly, an ethnography focused on the culture of the MNE would shed light on the process through which aggregation or assimilation occurs.

Our theorizing also indicates that there are limits and costs associated with dynamic capability development. As suggested by Tsang and Zahra (2008), alterations to existing routines may enhance the MNE's adaptation to changes in the environment but may also create performance decreases. We expect these performance decreases to be more notable for abandoned routines than augmented routines. When routines are augmented, behaviors and processes do not necessarily change, but rather expand in some way. This may manifest through an additional step in a process or an additional service to a product offering. However, when routines are abandoned, the MNE faces costs associated with shedding processes that are well-understood and institutionalized to adopt new routines that are unfamiliar and untested (Tsang & Zahra, 2008). Future research may discuss the likelihood that these performance decreases are temporary as routines become more routinized and the subsequent successfully developed dynamic capabilities enable the MNE to better adapt to environmental changes.

Finally, a case that merits future research is the learning and unlearning related to internationalization depth. Our discussion suggests that the reconfiguration of routines involving subsidiaries that are highly embedded in local milieus involves a certain level of difficulty. This difficulty draws on the interdependency created involving the willingness of subsidiaries' local partners to reciprocate behavior and collaborate in the reconfiguring phase. In case this does not occur, does the subsidiary develop parallel routines, and so local dynamic capabilities, similar to what Rugman and Verbeke (2001) refer to as subsidiary-specific advantages (SSAs) that remain location bound, or do the cannibalizing routines impede the subsidiary to contribute to routine reconfiguration for the MNE? Is unlearning facilitated or even harder in the case of highly embedded subsidiaries?

CONCLUSION

In sum, our analysis offers new perspectives for research related to dynamic capability development in the MNE. We offer that internationalization enables MNEs not only to locally

adapt (doing things right), but also to reconfigure knowledge and capabilities abroad and to adapt to the global environment (doing the right things). We advance the idea that only concentrating on how to distribute external knowledge and capabilities across borders is not enough to explain dynamic capability development in the MNE. Rather, we need more research to understand how internationalization depth and breadth influence dynamic capability development to ensure the MNE's ability to adapt to environmental changes locally and globally. Qualitative research will be able to advance on the mechanisms and capabilities needed to reconcile routines across levels to allow for dynamic capabilities development in the MNE. Empirical research might further add insights into the differentiated role of internal embeddedness. In doing so, we offer a more holistic approach to understanding internationalization and dynamic capability development in the MNE, considering learning and unlearning by both the HQ and the subsidiaries, as well as how routines are reconfigured for the MNE. In sum, our approach highlights the mechanisms and the inherent multi-level nature of dynamic capability development in the MNE.

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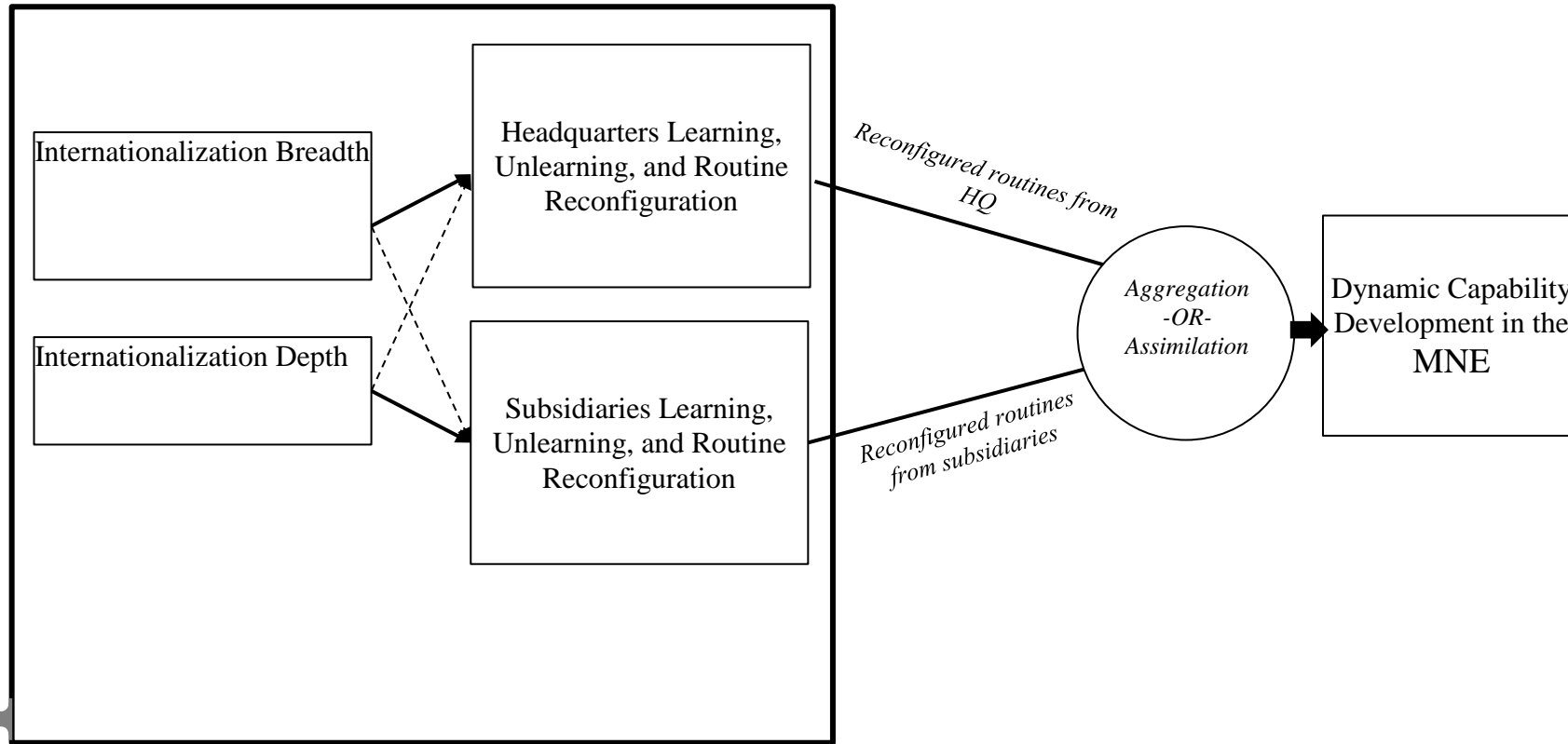


FIGURE 1 Reconciliation of reconfigured routines at the headquarters and subsidiary levels for dynamic capability development in the MNE