ABSORPTIVE CAPACITY, VALUE CREATION AND NEW SERVICE DEVELOPMENT IN MULTINATIONAL ENTERPRISES: THE ROLE OF KNOWLEDGE FLOWS BETWEEN CUSTOMERS, SUBSIDIARIES AND HEADQUARTERS

Authors:

Tiina Leposky, Assistant Professor, School of Marketing & Communication, University of Vaasa, Finland. (Email: tiina.leposky@univaasa.fi)

Ahmad Arslan, Professor, Department of Marketing, Management & International Business, Oulu Business School, University of Oulu, Finland. (Email: ahmad.arslan@oulu.fi)

Ismail Gölgeci, Associate Professor, School of Business & Sciences, Department of Business Development & Technology, Aarhus University, Denmark. (Email: <u>i.golgeci@btech.au.dk</u>)

Deborah Callaghan, Senior Lecturer, Liverpool Business School, Liverpool John Moores University, UK. (Email: D.L.Callaghan@ljmu.ac.uk)

This is an author accepted manuscript version of the chapter published by Edward Elgar in the book "Research Handbook on Knowledge Transfer and International Business". Kindly cite this chapter as:

Leposky, T., Arslan, A., Gölgeci, I., & Callaghan, D. (2022). "Absorptive Capacity, Value Creation and New Service Development in Multinational Enterprises: The Role of Knowledge Flows Between Customers, Subsidiaries and Headquarters" in Z. Khan et al. (Eds) *Research Handbook on Knowledge Transfer and International Business*. Cheltenham: Edward Elgar Publishing, pp. 210-225.

ABSTRACT

Absorptive capacity has been widely used in management and international business (IB) studies to explain the way organisations use external information to their benefit in commercial exchanges. This chapter attempts to extend the concept by applying it to the relationships between customer—subsidiary—headquarter (HQ) of multinational enterprises (MNEs), where the subsidiary acts as the focal unit for knowledge flows. We further use absorptive capacity concept to explain the knowledge inflows, in terms of new service development and knowledge outflows, leading to value creation. Based on in-depth theoretical discussions, we present propositions addressing the organisational and social dynamics in the four phases of absorptive capacity, from acquisition and assimilation, to transformation and exploitation.

Keywords: Absorptive capacity, customer knowledge, value creation, new service development, subsidiary – HQ relationship.

1. INTRODUCTION

Absorptive capacity has been widely recognised as a crucial element of an organisation's ability to transfer knowledge and utilise it in their customer relationships (Lewin *et al.*, 2011; Winkelbacher and Walter, 2015). In fast-changing global market environments, firms are increasingly focusing on their customers to understand their unfulfilled needs and provide services accordingly (Lightfoot *et al.*, 2013; Zimmerling *et al.*, 2017). To gain competitive advantage from these customer relationships, firms must not only be able to source information from the field and transfer it to decision-makers but must also make changes in their service offering to those customers within a reasonable timescale and be able to provide them value.

In international business (IB) contexts, the capacity to absorb external knowledge and apply it for commercial ends is a more complex exercise than in domestic business, due to the varied host locations and the organisational dynamics colouring HQ-subsidiary relationships. This is evident for example in the influence of language for knowledge transfer, as in MNEs, local subsidiaries must use the organizational language to convey their message to HQ, preventing a natural flow of information if language skills on either side are lacking (Peltokorpi, 2017). MNEs must also manage their subsidiaries dual embeddedness in order to gain most benefits from their international presence (Achcaoucaou *et al.*, 2014), and balance the needs of individual subsidiaries with the needs of the network as a whole (Bouquet and Birkinshaw, 2008a; Weng and Cheng, 2018).

As a construct absorptive capacity has been used to examine firms' ability to learn from the external environment and capitalise on their learning (Cohen and Levinthal, 1990). It has also been conceptualised as a capability, a dynamic capability, a process, a mechanism, and a stock of prior knowledge (Lane *et al.*, 2006; Song, 2014). This definitional proliferation has caused some confusion in the field, leading to fears of reification of the term (Lane *et al.*, 2006) and, consequently, a need to reconceptualise it by taking into account the wider concept of organisational dynamics (Marabelli and Newell, 2014) as well as internal and external networks (Ebers and Maurer, 2014; Kotabe *et al.*, 2017). Recent academic research has enhanced understanding of absorptive capacity as an embedded element in a firm's learning process. However, a gap still remains in mapping out the path from local customer input to global corporate

boardroom resulting in new service development and new value offers that are applicable at host locations.

In this book chapter, we aim to offer a conceptual discussion, where customer knowledge from external relationships in host countries is linked internally with new service developments resulting in value creation with the customer. According to the knowledge-based view (KBV), knowledge is the most essential resource possessed by a firm, and the ability to use it for commercial ends determines the competitiveness and therefore success of an enterprise (Kogut and Zander, 1993). In a bid to enhance competitiveness, many MNEs are attempting to offer innovative services that differentiate them from their competitors and increase their customer loyalty (Javalgi *et al.*, 2014; Zhang *et al.*, 2015). Knowing what customers view as a valued product or service in varying locations and cultures and being able to balance the needs of global standardisation with local adaptation and responsiveness through innovative and transformational processes is of utmost importance to the firms. This chapter applies KBV in the specific context of new service development, arguing that an MNE's absorptive capacity is associated with its ability to offer customers new and valuable services.

By connecting service development with value creation in subsequent customer engagements, our book chapter enhances understanding of absorptive capacity not only as a process that transfers intangible knowledge but also as a vehicle that has the potential to change MNE service offers and operations leading to new value offers and revenue streams. The main contribution of this book chapter is therefore to the intersection of IB literature focused on subsidiary – HQ relationships, and knowledge transfer through the lens of absorptive capacity. Our novel conceptualisation of absorptive capacity as a process through external and internal relationships provides a further contribution to this literature, as it provides a stepping stone for understanding and measuring the effects of knowledge absorption within the different frameworks of the international firm.

In the following section, we outline the premise of absorptive capacity and how it interacts with the practices of new service development and value creation in the external and internal networks of MNEs. This discussion is followed by theoretical propositions addressing the conceptualisation, organisational dynamics and customer relationships in the context of knowledge transfer and absorptive capacity of MNEs. The book chapter concludes with a discussion of the implications, limitations and future research directions of absorptive capacity.

2. ABSORPTIVE CAPACITY IN MULTINATIONAL ENTERPRISES

Cohen and Levinthal (1990) are credited with conception of absorptive capacity in strategy and management literature. In their seminal work on absorptive capacity, Cohen and Levinthal (1990: 131-132) state that: "an organisation's absorptive capacity does not simply depend on the organisation's direct interface with the external environment. It also depends on transfers of knowledge across and within subunits that may be quite removed from the original point of entry". Some recent studies have focused on the subsidiary–HQ bond (e.g., Schleimer and Pedersen, 2014; Song, 2014; Ferraris et al., 2017; Weng and Cheng, 2018) and others on the external-internal dichotomy (e.g., Ebers and Maurer, 2014; Zhang et al., 2015; Shaw and Luiz, 2018). In these studies, absorptive capacity has been presented as an innovation that builds on existing organisational knowledge embedded in routines and processes aimed at recognising the value of external knowledge, assimilating it, and applying it for monetary gains. Thus, it has been argued that high absorptive capacity leads to high innovation in firms including MNEs (e.g., Ferraris et al., 2017: Shaw and Luiz, 2018). However, scant attention has been paid to the dilemma of knowledge acquisition and subsequent decision-making taking place in these vastly different spaces.

The conceptual discussion offered in this chapter follows four phases of absorptive capacity as presented by Zahra and George (2002); acquisition, assimilation, transformation and exploitation. These phases have been widely used since their conception over a decade ago and offer a workable process for absorptive capacity, especially when complemented by a feedback channel which adds a dynamic dimension to the discussion (e.g., Todorova and Durisin, 2007; Leposky, 2017). The discussion offered in the current book chapter enhances earlier conceptualisations of absorptive capacity by specifically highlighting the significance of IB context. In doing so, it acknowledges how the external environment influences customer interactions in host country locations (acquisition and exploitation) and how the internal environment between culturally and geographically distant units has an impact upon knowledge integration (assimilation and

transformation). Furthermore, our study conceptually highlights the specific context of customer knowledge leading to new service development, thereby contributing to the intersection of literature spanning knowledge transfers and business models.

The MNE context is especially pertinent for knowledge development as foreign subsidiaries are embedded in their local contexts and they create knowledge-laden linkages with supply chain members, collaborative and alliance partners, and institutions (Giroud and Scott-Kennel, 2009). Foreign subsidiaries can hold a significant role within the MNE if their local knowledge through these linkages provides a competitive advantage for the overall organization (Birkinshaw and Hood, 1998). Indeed, the access to new knowledge can be an important motivating factor for MNEs to acquire foreign subsidiaries, even when it is widely acknowledged that cultural differences can present significant barriers to gaining integration benefits (Björkman *et al.*, 2007). Therefore, MNEs differ from domestic firms in that they have access to a wider knowledge base, which can be leveraged across a differentiated network (Nohria and Ghoshal, 1994), while at the same time facing complexities and balancing integration and autonomy within a multiplicity of national contexts.

Foreign subsidiaries also hold a strategic position within the MNE network as they implement HQ marketing strategies in their own localities. Standardisation vs. adaptation of marketing strategies is an age-old question within the IB literature, as MNEs seek economies of scale through standardisation but may be unable to benefit from them if the strategy does not fit the local market (Katsikeas *et al.*, 2006). Especially in uncertain conditions that may differ significantly from the home country, understanding the performance implications of strategic fit are important, particularly when local market conditions do not conform to the theoretical expectations formulated in Western economies (Lukas *et al.*, 2001). Consequently, in this chapter, we discuss the MNE context with the stated assumption that it contains unique characteristics relevant to IB. For the purposes of clarity, these have been divided to external knowledge and networks, which are not accessible to HQ in an international structure, and internal network dynamics, which are influenced by cultural differences and distance.

It should also be noted that in the MNE context, direct contact with local customers is done through local subsidiaries (Ciabuschi *et al.*, 2017). MNE subsidiaries tend to have a variety of mandates including customer connection specifically for sales and marketing subsidiaries (Birkinshaw, 2016). MNEs with network structures have long acknowledged the crucial role of local subsidiaries as knowledge sources (Bartlett and Ghoshal, 2002) even though their performance is usually measured in terms of sales and profitability (Birkinshaw, 2016). Moreover, the ultimate strategic direction and apportion of support resources is often decided by MNE HQ. HQ attention has often been found favourable for subsidiary success in many studies (e.g., Ambos and Birkinshaw, 2010; Leposky, 2017). However, at the same time, other studies have cautioned that if HQ enforces authority, it tends to negatively influence value creation (Foss *et al.*, 2012; Balgoun *et al.*, 2019).

As noted earlier, the absorptive capacity of MNEs is influenced by both internal and external sources. External information is generated by market actors and MNEs must be able to respond to the requisition and acquisition of it. (e.g., Iurkov and Benito, 2018). Moreover, internal forces that generate information tend to range from individual preferences to organisational routines assimilated in different knowledge streams (Scott-Kennel and Giroud, 2015; Lim *et al.*, 2017). These internal and external sources of information and knowledge are also referred to as networks and have received significant attention in recent absorptive capacity studies s (e.g., Ferraris *et al.*, 2017; Iurkov and Benito, 2018; Shaw and Luiz, 2018). These internal-external networks (sources of knowledge) are found to be useful, if the absorptive capacity of the focal MNE is in line with its learning objectives (e.g., Ferraris *et al.*, 2017; Cenamor *et al.*, 2017). This complementarity is further dependent on relationship dynamics, as external knowledge may not always be readily available from the partner firms (e.g., Kotabe *et al.*, 2011; Ferraris *et al.*, 2020). As a result, MNEs may need to search for this external knowledge from other sources including customers (Leposky, 2017).

As social interactions are recognised as an essential part of any knowledge transfer activity, the absorptive capacity of MNEs is also influenced by social context (e.g., Hotho *et al.*, 2012; Presutti *et al.*, 2019). Social interaction and integration mechanisms have been found to lower knowledge transfer barriers (Zahra and George, 2002; Presutti *et al.*, 2019), introducing the actors to useful

sources of knowledge (Enkel and Heil, 2014) and aiding to establish connections through shared values, norms and formal structures (Lewin *et al.*, 2011; Schleimer and Pedersen, 2014).

A key element of the social context-knowledge transfer discussion in MNEs relates to the subsidiary-HQ relationship; a topic which has already received significant scholarly attention (e.g., Leposky *et al.*, 2017; Ciabuschi *et al.*, 2017). Different MNE subsidiaries, and their HQs, are considered to have unique embedded knowledge sources (Song, 2014; Zeng *et al.*, 2018). Subsidiaries in particular have been noted to hold dually embedded knowledge sources that include specific operational mandates from their HQs, along with localised mandates that are driven by market forces that may sometimes challenge HQ mandates (Schleimer and Pedersen, 2013, 2014; Zeng *et al.*, 2018). The HQ can force normative integration to offset these dual pressures on subsidiaries (Schleimer and Pedersen, 2014), but this integration does not always occur (Ferraris *et al.*, 2020).

Along with the internal network, the subsidiary is exposed to the external environment, which may also be complicated to decipher. A central position in the internal network exposes the subsidiary to knowledge flows from across the organisation (Tsai, 2011; Ferraris *et al.*, 2020), including different markets and cultural contexts adding layers to the information. The immediate external environment is no less complicated to decipher and absorbing the amassed complexity requires continuous effort in order to maintain existing knowledge and to acquire and assimilate a new knowledge base. Understanding, on one hand, the subsidiary's motivation to engage in knowledge activities (Song, 2014), and on the other hand, the power balance that influences the separate phases of absorptive capacity (Marabelli and Newell, 2014) can shed light on the absorptive capacity based on the dyadic internal relationships between subsidiaries and HQs. This can be further linked to new service development and value creation by MNEs, a core premise of discussion in the current chapter.

It should be further noted that absorptive capacity has been conceptualised as a process of four phases where focal MNE, its subsidiaries, and customers exchange knowledge in a dynamic manner resulting in value creation and new service development (Leposky, 2017). These four phases are acquisition, assimilation, transformation and exploitation (Zahra and George, 2002;

Leposky, 2017). This dynamic of relationship between customers, subsidiary and MNE HQ is presented in following figure 1.

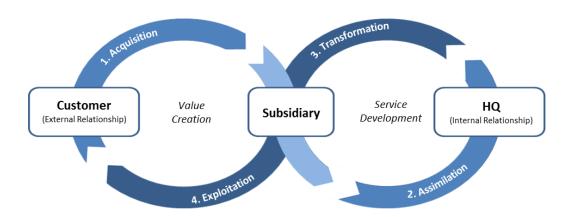


Figure 1. The Four Phases of absorptive capacity in Customer-Subsidiary-HQ relationships of MNEs (Adapted from Leposky, 2017: 66)

The current book chapter builds on the work by Leposky (2017) on the four phases of absorptive capacity, to specifically address new service development and value creation by MNEs based upon internal and external knowledge sources in relation to all the above-mentioned four phases. We present the discussion leading to theoretical propositions addressing all these factors in a step-by-step manner in the next section.

3. VALUE CREATION, NEW SERVICE DEVELOPMENT AND ABSORPTIVE CAPACITY IN MULTINATIONAL ENTERPRISES

In order to capture the two-way flow of knowledge between external and internal environments of MNE, our focus is only on the relationships between customer—subsidiary and subsidiary—HQ. The inflow from external to internal networks represents the innovation flow, in line with Cohen and Levinthal (1990), with a delimitation on new service development, while the outflow is concerned with value creation. This mapping is presented above in Figure 1.

The role of these relationships is further stressed in the development of new services as the process generally requires a higher input of external information or customer involvement compared to selling more traditional products (Hipp and Grupp, 2005; Storey and Larbig, 2018). Moreover, service delivery appears to go through less formal planning than product development, as service propositions can be formulated based on customer needs and wants, rather than what a physical product is capable of delivering (Ettlie and Rosenthal, 2011; Gebauer *et al.*, 2017). The competence of the MNE managers in interpreting the organizational value proposition offers has been referred to as a significant determinant of success for such service offers (Santamaria *et al.*, 2012). Such an offering also enhances the link between the organization and its external environment through the customer relationship, and the internal links between the customer-facing actors and the enabling actors from support functions and management.

In the absorptive capacity literature, potential absorptive capacity maps a firm receptiveness to external knowledge and a greater potential absorptive capacity prevents a repetitive or path dependent mind set unwilling to consider new information or new ways of doing things (Zahra and George, 2002). The absorptive capacity therefore enhances an innovative approach, especially in the international context since innovations and new ideas are typically not based on completely new knowledge but rather recombination of knowledge from sources distant to each other (Enkel and Heil, 2014). Considering the recent success of global platform businesses such as Uber or Airbnb based on service business models utilising existing infrastructures and technologies, novel knowledge constellations combining external knowledge in ways that fit the firm's internal strategic direction can therefore be used to drive service development.

In contrast to the potential absorptive capacity of MNEs, realised absorptive capacity corresponds with the stages of value creation, specifically value in exchange occurring in the enterprise sphere (Cuervo-Cazuura and Hui, 2017) and culminating in the specific point of value delivery through exploitation (Grönroos and Voima, 2013). The original rationale behind Zahra and George's (2002) conceptualisation of potential and realised absorptive capacity centred on the different forces that can affect each of them, the ability to measure them separately, and the insight in understanding MNE absorptive capacity performance. The authors were intrigued by firms' demonstrable skill in some parts of the process but lack of overall success, which they could

explain by comparing the levels of potential and realised absorptive capacity and determining the difference as an efficiency ratio. This rationale remains valid even if potential and realised absorptive capacities are viewed as new service development and value creating processes, but further benefits can also be gained from this classification. Firstly, this allows accounting for outcomes for the phases of acquisition and assimilation in the form of the resulting innovation. Using the innovation as a tangible result will help not only researchers in examining absorptive capacity taking place in firms but also practitioners in measuring success of initiatives. Secondly, this approach may help clarify antecedents affecting value creation as it is placed in a continuum of knowledge transfer practices and organisational capabilities.

In the current book chapter, we posit that absorptive capacity occurs in two distinct relationships of which one, the external, is value creating and the other, internal, is service innovating. Furthermore, it is argued that the sequential steps of the absorptive capacity process take place in these separate relationships. An interesting feature of this approach is that coincides with the conceptualisation of potential absorptive capacity and realised absorptive capacity of MNEs as functions of knowledge inflows and outflows. We argue that potential absorptive capacity of MNEs is synonymous to new service development, as it requires the intake and processing of knowledge in a way that leads to the creation of something new through the combination and exchange of relationship- and firm-specific resources. The combination refers to the deployment of resources, in this instance knowledge, in new ways, which generates ideas and insights, while exchange is the mechanisms through which the outcome of the combination is validated (Moran and Ghoshal, 1996). The ability to acquire knowledge, integrate it with existing knowledge – thereby creating inroads to new knowledge - and store and share it effectively with others, is the critical capability of MNEs resulting in a competitive advantage in the market (Kang et al., 2010; Cenamor et al., 2017). Figure 2 illustrates the process similarities of absorptive capacity in external and internal relationships.

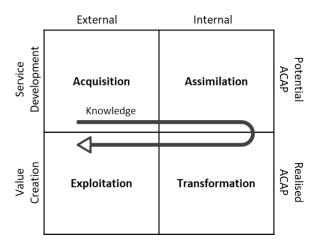


Figure 2. Illustration of the absorptive capacity process overlaying service development and value creation with potential and realised absorptive capacity (ACAP).

Categorising the phases of absorptive capacity based on the relationships allows the inclusion of dynamics from different sides of the subsidiary's sphere of influence. After highlighting the importance of phases of absorptive capacity for MNEs, we specifically address them in the context of new service development and value creation below.

Dual embeddedness of MNE subsidiaries has been referred to earlier as an important aspect that needs deliberation in the context of new service development and value creation, especially as it is a phenomenon unique to firms operating in an international context. Dual embeddedness and dual direction of knowledge transfer within MNE units (HQ and subsidiaries) have been positively linked to influencing the absorptive capacity of subsidiaries (Najafi-Tavani *et al.*, 2018). Dual embeddedness represents a particular network position of subsidiaries because they are exposed to different knowledge flows (Achcaoucaou *et al.*, 2014). A subsidiary's external embeddedness refers to a network of links to local partners (Ferraris *et al.*, 2020). Specifically, subsidiaries have alliances with local partners that constitute a source of crucial knowledge for reaching a competitive advantage (Cenamor *et al.*, 2017). New knowledge outside the organisation can enhance the development of products, processes, and innovation in the subsidiaries (Ciabuschi *et al.*, 2012, 2017). Thus, instead of being totally dependent on the parent firm, subsidiaries in foreign

locations where they have greater access to knowledge than the HQ, can use their external embeddedness to contribute to MNEs' competitive advantage (Zhang *et al.*, 2015).

This access to external knowledge also improves subsidiary standing within the MNE network, and improves its bargaining position (Bouquet and Birkinshaw, 2008a; Birkinshaw, 2016). As a result, subsidiary propositions receive weight in HQs and have more chances on being accepted or adapted (e.g., Bouquet and Birkinshaw, 2008a; Ciabuschi *et al.*, 2017) On the other hand, a subsidiary's internal embeddedness denotes its relationship with their intra-corporate counterparts. In this respect, the subsidiaries can receive strategic knowledge from the parent that may reduce dependence on local contexts and successfully respond to challenges in host environments (Luo, 2003; Najafi-Tavani *et al.*, 2018). This dual embeddedness in external and internal networks offers subsidiaries the potential for learning opportunities that may become the source of competitive advantage (Ghoshal, 1987; Johanson and Vahlne, 2009; Oehmichen and Puck, 2016). As depicted in figure 2 above, both new service development and value creation must happen in both the external and internal relationships of MNE subsidiaries. This means that by necessity, both are subject to, at the very least, two different sets of contextual influences for new service development.

Based on the above discussion, we propose that:

Proposition 1: Customer knowledge-based new service development in MNE subsidiaries is conveyed by the inflow of knowledge and takes place in both external and internal relationships sequentially through knowledge acquisition and assimilation.

Proposition 2: Customer knowledge-based value creation in MNE subsidiaries is conveyed by the outflow of knowledge and takes place in both internal and external relationships sequentially through knowledge transformation and exploitation.

It has been established earlier that subsidiary and customer interaction leads to knowledge acquisition (e.g., Ferraris *et al.*, 2017; Zimmerling *et al.*, 2018). For MNEs, this cooperation with customers has been deemed very important specifically to gain valuable information on local conditions and potentially service requirements (Bhawe and Zahra, 2017), given that foreign

customer base requires heightened adaptation needs (Hakanen, Helander and Valkokari, 2017). In case of a lack of information or market ambiguity, it might not necessarily lead to increased customer involvement (Zhang *et al.*, 2015). Customer involvement may even decrease unless the subsidiary has a strong willingness to incorporate customer knowledge in service development via clear absorptive capacity strategy (Najafi-Tavani *et al.*, 2018). Prior research has also revealed that a firm's knowledge acquisition capabilities from its customers are linked to absorptive capacity, and influence overall firm performance (Tzokas *et al.*, 2015; Ferraris *et al.*, 2017). Due to this fact, MNE subsidiaries attempt to develop their relational capabilities to deal effectively with customers including knowledge sourcing (e.g., Robodello *et al.*, 2009; Ebers and Maurer, 2014). These relational capabilities also help these subsidiaries to improve their standing and legitimacy in the eyes of MNE HQs (Balogun *et al.*, 2019).

It is important to mention that the customer is part of the broader market and is influenced by market forces like any other market player (Tzokas *et al.*, 2015). As a result, customer willingness to share knowledge or market information with the focal MNE subsidiary is not guaranteed especially in cases, where there is a competing service offering by other players. In such situations, it is pivotal for MNE subsidiary to be able to create inroads to this external environment so that required customer knowledge gathering can be undertaken (Matusik and Heeley, 2005; Storey and Larbig, 2018). Prior research has signified the importance of relational capabilities of firms (and MNE subsidiaries) to create inroad to the external environment (Ferraris *et al.*, 2020). It should be further noted that this knowledge acquisition is also influenced by the specificities of the external environment, as well as efficiency, scope and flexibility of the acquisition (Van den Bosch *et al.*, 1999; Kazadi *et al.*, 2016). Therefore, we argue that MNE subsidiaries are operating in changing environments and must adapt to their environmental context to make required inroads to acquire customer knowledge to a greater extent than local businesses, where knowledge is more readily available. Based on this discussion, we propose that:

Proposition 3: Foreign subsidiary acquisition of customer knowledge is influenced by relationship-specific factors at the individual level and contextual factors at the organisational level.

The subsidiary's position in the internal network has a significant bearing on the successful assimilation of the knowledge because power dynamics within MNE structures have been found to strongly influence a subsidiary's legitimacy (Balogun et al., 2019). Earlier studies have mentioned that recognition of external knowledge value is a primary condition for absorptive capacity development (Todorova and Durisin, 2007; Lewin et al., 2011; Ferraris et al., 2017). However, this recognition is not guaranteed to take place at every level and part of large organisations with complex structures such as MNEs (Schleimer and Pedersen, 2014). So, in such circumstances, it is highly likely that the MNE subsidiary may value service-specific knowledge from the customers based on customer feedbacks, inputs and overall scoping of market trends (e.g., Javalgi et al., 2014). However, prior research has established that customer knowledge can only be applied in new service design if it assimilated at the organisational level (e.g., Storey and Libarg, 2018). So, in such situations, taking the HQ on board becomes very important. It is also likely that MNE HQ lacks this specific localised contact with the customer and market specificities due to its cultural and geographic distance, so it may not value service proposition in foreign markets out of sheer ignorance (Ciabuschi et al., 2012) or, by either inadvertently or knowingly, blocking knowledge transfer efficiency (Birkinshaw, 2016).

Moreover, knowledge appropriability mechanisms may also be different for subsidiaries and HQs, and different appropriability mechanisms have been found to create hindrance (Ho, 2014). Therefore, in such situation, the MNE subsidiary must possess the means to overcome the HQs resistance to subsidiary initiatives by wielding sufficient power (Bouquet and Birkinshaw, 2008a; Marabelli and Newell, 2014). This may, however, be difficult for foreign subsidiaries especially in peripheral positions (Gammelgaard *et al.*, 2012) and is dependent on the subsidiary's motivation to engage in a possibly costly and time-consuming knowledge transfer process (Minbaeva *et al.*, 2014; Song, 2014) and its position in the network to be able to do so (Bouquet and Birkinshaw, 2008a; Ferraris *et al.*, 2017).

Along with the subsidiary specific element, there is also a set of predetermined factors, from the point of view of the subsidiary, in the form of social integration mechanisms, which influence the free flow of information between the subsidiary and MNE HQs (Zahra and George, 2002). It should be noted that although a subsidiary can influence its own activity level in social

engagements, it can only have a limited impact on other mechanisms that either foster or hinder knowledge transfer. Based on this discussion, we propose that:

Proposition 4: Assimilation of knowledge is influenced by the subsidiary's power, motivation and position in the internal network, and the social integration mechanisms prevalent in the MNE.

In this chapter focus is on the MNE subsidiary as a focal unit. Therefore, we address transformation in terms of the subsidiary's response to new service development. It has been argued that even when a specific service innovation is customer-led, and its benefits can be clearly communicated, the people responsible for carrying out the transformation may not know how to do it or are intimidated by the consequences of changing their existing patterns of selling and marketing (Witell and Löfgren, 2013). This "inertia" in organisational routines, processes, and strategies has been highlighted in past studies as a major hindrance to change including new service development (e.g., Lenka *et al.*, 2018). To address this concern a reasonable approach is to decrease the gap between sales and marketing functions, as this can facilitate knowledge exchange leading to better internal buy-in of value proposition changes (Biemans *et al.*, 2010; Lenka *et al.*, 2018). However, a transformation in the business model of the MNE can potentially result in partial organisational support for such an endeavour. However, a true transformation of MNE's business model is expected to entail the support of the organisation as a whole.

Using a broad definition of a business model, Amit and Zott (2012), state: "A business model depicts the content, structure, and governance of transactions designed to create value through the exploitation of business opportunities." We second their definition by arguing that business models can be examined in the light of service value propositions and their exploitation. Todorova and Durisin (2007) have suggested that social integration mechanisms hold a pertinent position in all phases of absorptive capacity. However, it should be noted that their research viewed absorptive capacity as only an internal phenomenon of a firm. As mentioned earlier, we view absorptive capacity as influenced by both internal and external forces. Therefore, while it seems reasonable that all internal social exchanges are influenced by the context in which they take place, this is not necessarily true for external exchanges in the environment. Hence, the role of social integrations

mechanisms is limited to assimilation and transformation phases. Based on this discussion, we propose that:

Proposition 5: Transformation in the subsidiary is influenced by social integration mechanisms and alignment of support functions with the business model.

Finally, exploitation occurs in the customer relationship as the subsidiary agent and customer negotiate an agreement of value proposed and value perceived (Grönroos and Voima, 2013; Eggert *et al.*, 2018). The customer alone experiences the service value and realises it in its use (Grönroos and Voima, 2013). However, the subsidiary agent and subsequent customer relationship events (e.g., sales and service events) can be used to enforce the value proposition (Leposky, 2017). The employees or subsidiary agents who directly interact with customers can filter knowledge based on its suitability for exploitation (e.g., Tippins and Sohi, 2003; Storey and Larbig, 2018). These considerations lead us to argue that knowledge application plays a vital role in the creation of customer value since it represents the capability to apply appropriated knowledge to refine the existing services offered by the organisation and to improve its customer value (Bierly *et al.*, 2009; Eggert *et al.*, 2018).

The application of knowledge means, that the organisation can quickly respond to resolve problems quickly (Fahey *et al.*, 2001; Winer, 2001). This is expected to help employees to coordinate customer relations across all points of interaction and audiences (Chang and Li, 2007). This response provides a common space of trust between the client and the organisation, restoring customer confidence in the organisation (Cabrera and Cabrera, 2002; Stein and Bowen, 2003). As, Kotler (2000) noted, when information or knowledge is not fragmented within an organization, customer feedback (and, by extension, customer value) is easy to obtain. In the specific context of knowledge exploitation, it has been argued that ambiguity in knowledge exploitation can be reduced by a structured approach to customer interaction during service design (e.g., Storey and Larbig, 2018). Therefore, the exploitation of knowledge is dependent on how the customer perceives the proposition and this perception can be affected by developing relationship building capabilities in MNE subsidiaries. Based on this discussion, we propose that:

Proposition 6: Exploitation is influenced by customer's perception of value and relationshipspecific capabilities.

IMPLICATIONS, LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Absorptive capacity has proven to be at the epicentre of innovation and knowledge development. However, less is known about the absorptive capacity as manifested in the customer—subsidiary—HQ interface in context of MNEs, and how social and relational mechanisms shape its manifestation and leverage. This chapter aims to conceptualise absorptive capacity in relation to the MNE subsidiary's external customer relationships and internal relationship with MNE HQs, arguing that the IB context creates unique circumstances due to the specificity of local knowledge that indicates adaptation needs on the strategic level, and the organisational dynamics inherent in a differentiated structure. Through these two discrete relationships, in which new service development and value creation occur, this chapter attempts to show how absorptive capacity can be used to examine the differences in firms' success in engaging in new service development efforts across borders.

This chapter makes two major contributions to the knowledge transfer and IB literature. First, we examine absorptive capacity within the under-researched context of the customer-subsidiary-HQ interface. Exploring the role of absorptive capacity in the service development and value creation in this unique context which both expands the domain of absorptive capacity beyond extensively researched areas of innovation and knowledge management and highlights the active role of customers in learning and information processing procedures in relation to the subsidiary and its HQs. This marks a departure from the dominant view of absorptive capacity as a firm-centric set of capabilities and routines (Cohen and Levinthal, 1990; Lane et al., 2006; Zahra and George, 2002) capturing a better view of the external sources and agents of knowledge and applies it specifically to IB literature in line with Bouquet and Birkinshaw (2008b).

The chapter also specifically highlights the initial role of customers in the very value that is offered to them by the firms. In this vein, absorptive capacity can be viewed as the main underlying capability of the sequential knowledge-related processes and it forms a positive closed-loop of

knowledge-centred service development and value creation. Therefore, this chapter contributes to the existing -extensive but fragmented- literature on absorptive capacity by applying it in the specific context of cross-border customer–subsidiary–HQ relationships and to studies on new service development and value creation by using absorptive capacity as a process underlying their inception.

Second, we incorporate the role of social and relational mechanisms into the knowledge management processes underpinned by absorptive capacity. Our propositions explain how each step of absorptive capacity routines (i.e., acquisition, assimilation, transformation and exploitation) is shaped by a unique set of social and relational mechanisms, which are specific to the MNE context due to local embeddedness in the customer-subsidiary relationship, and organisational dynamics exacerbated by cultural and geographical distance in the subsidiary – HQ relationship. In particular, we advance that while relationship-specific factors influence subsidiary acquisition of customer knowledge, subsidiary's power, motivation and position in the internal network, social integration mechanisms prevalent in the organization influence how subsidiaries assimilate customer knowledge during the service development stage. During the value creation stage, social integration mechanisms and alignment of support functions with the business model influence knowledge transformation at the subsidiary level, and customer's perception of value and relationship-specific capabilities influence the knowledge exploitation. These arguments extend the conversation on absorptive capacity and link the concept to the relational view of the firm within and across organizational boundaries (Dyer & Singh, 1998; Bradbury & Lichtenstein, 2000; Capaldo, 2007; Leischnig et al., 2014). Thus, we contribute to the IB literature by showing that absorptive capacity in MNEs must follow organisational and structural lines of knowledge transfer and is subject to the same forces that influence MNE strategy development.

Our arguments in the chapter also differs from the extant literature in that it considers the directionality of knowledge flows jointly with absorptive capacity and ties these to tangible knowledge outcomes through measurable innovations and value propositions. While many prior studies have considered knowledge transformation as a cognitive process, here transformation is considered from the point of view of changing business models and the dynamics that are at play in bringing the transformation from strategic to the operational level.

The chapter has some limitations in that it is conceptual, so it only proposes possible antecedents but does not empirically verify them. Future studies will hopefully use the foundations laid here to do further testing on the applicability developed propositions. Furthermore, the chapter takes a narrow view on the networks, consciously limiting itself to a triad of customer – subsidiary – HQ in context of MNEs. This choice allows for the examination of specific issues around these relationships but does not include knowledge flows from multiple other sources that subsidiaries are in contact with. Therefore, the model does not claim to be all-inclusive or generalisable to other contexts.

References

Achcaoucaou, F., Miravitlles, P. & León-Darder, F. (2014). Knowledge sharing and subsidiary R&D mandate development: A matter of dual embeddedness. *International Business Review*, 23: 76–90.

Ambos, T. C., & Birkinshaw, J. (2010). Headquarters' attention and its effect on subsidiary performance. *Management international review*, 50(4), 449-469.

Amit, R., & Zott, C. (2012). Creating value through business model innovation. *MIT Sloan Management Review*, *53*(3), 41-49.

Balogun, J., Fahy, K., & Vaara, E. (2019). The interplay between HQ legitimation and subsidiary legitimacy judgments in HQ relocation: A social psychological approach. *Journal of International Business Studies*, 50(2), 223-249.

Bartlett, C. A., & Ghoshal, S. (2002). *Managing across borders: The transnational solution*. Harvard Business Press.

Biemans, W. G., Brenčič, M. M., & Malshe, A. (2010). Marketing–sales interface configurations in B2B firms. *Industrial Marketing Management*, 39(2), 183-194.

Birkinshaw, J. (2016). Multinational corporate evolution and subsidiary development. Springer.

Birkinshaw, J. & Hood, N. (1998). Multinational subsidiary evolution: Capability and charter change in foreign-owned subsidiary companies. The Academy of Management Review, 23(4); 773-795.

Bhawe, N., & Zahra, S. A. (2017). Inducing heterogeneity in local entrepreneurial ecosystems: the role of MNEs. *Small Business Economics*, 1-18.

Björkman, I., Stahl, G. K. & Vaara. E. (2007). Cultural differences and capability transfer in cross-border acquisitions: the mediating roles of capability complementarity, absorptive capacity, and social integration. *Journal of International Business Studies*, 38: 658–672

Bouquet, C., & Birkinshaw, J. (2008a). Weight versus voice: How foreign subsidiaries gain attention from corporate headquarters. *Academy of Management Journal*, *51*(3), 577-601.

Bouquet, C., & Birkinshaw, J. (2008b). Managing Power in the Multinational Corporation: How Low-Power Actors Gain Influence. *Journal of Management* 34: 477 – 508.

Bradbury, H., & Lichtenstein, B. M. B. (2000). Relationality in organizational research: Exploring the space between. *Organization Science*, 11(5), 551-564.

Cabrera, A., & Cabrera, E. F. (2002). Knowledge-sharing dilemmas. *Organization studies*, 23(5), 687-710.

- Capaldo, A. (2007). Network structure and innovation: The leveraging of a dual network as a distinctive relational capability. *Strategic Management Journal*, 28(6), 585-608.
- Cenamor, J., Parida, V., Oghazi, P., Pesämaa, O., & Wincent, J. (2017). Addressing dual embeddedness: The roles of absorptive capacity and appropriability mechanisms in subsidiary performance. *Industrial Marketing Management*. Available online at https://doi.org/10.1016/j.indmarman.2017.06.002
- Chang, W. C., & Li, S. T. (2007). Fostering knowledge management deployment in R&D workspaces: a five-stage approach. *R&D Management*, *37*(5), 479-493.
- Ciabuschi, F., Forsgren, M., & Martin, O. M. (2012). Headquarters involvement and efficiency of innovation development and transfer in multinationals: A matter of sheer ignorance?. *International Business Review*, 21(2), 130-144.
- Ciabuschi, F., Kong, L., & Su, C. (2017). Knowledge sourcing from advanced markets subsidiaries: political embeddedness and reverse knowledge transfer barriers in emerging-market multinationals. *Industrial and Corporate Change*, 26(2), 311-332.
- Cohen, W.M., & Levinthal, D.A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128-152.
- Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23(4), 660-679.
- Ebers, M., & Maurer, I. (2014). Connections count: How relational embeddedness and relational empowerment foster absorptive capacity. *Research Policy*, 43(2), 318-332.
- Eggert, A., Ulaga, W., Frow, P., & Payne, A. (2018). Conceptualizing and communicating value in business markets: From value in exchange to value in use. *Industrial Marketing Management*, 69, 80-90.
- Enkel, E., & Heil, S. (2014). Preparing for distant collaboration: Antecedents to potential absorptive capacity in cross-industry innovation. *Technovation*, 34(4), 242-260.
- Ettlie, J. E., & Rosenthal, S. R. (2011). Service versus manufacturing innovation. *Journal of product innovation management*, 28(2), 285-299.
- Fahey, L., Srivastava, R., Sharon, J. S., & Smith, D. E. (2001). Linking e-business and operating processes: The role of knowledge management. *IBM Systems Journal*, 40(4), 889-907.
- Ferraris, A., Santoro, G., & Dezi, L. (2017). How MNC's subsidiaries may improve their innovative performance? The role of external sources and knowledge management capabilities. *Journal of Knowledge Management*, 21(3), 540-552.

- Ferraris, A., Santoro, G. and Scuotto, V. (2020), "Dual relational embeddedness and knowledge transfer in European multinational corporations and subsidiaries", *Journal of Knowledge Management*, Vol. 24 No. 3, pp. 519-533.
- Foss, K., Foss, N. J., & Nell, P. C. (2012). MNC organizational form and subsidiary motivation problems: Controlling intervention hazards in the network MNC. *Journal of International Management*, *18*(3), 247-259.
- Gammelgaard, J., McDonald, F., Stephan, A., Tüselmann, H. & Dörrenbächer, C. (2012). The impact of increases in subsidiary autonomy and network relationships on performance. *International Business Review*, 21: 1158–1172.
- Gebauer, H., Saul, C. J., Haldimann, M., & Gustafsson, A. (2017). Organizational capabilities for pay-per-use services in product-oriented companies. *International Journal of Production Economics*, 192, 157-168.
- Ghoshal, S. (1987). Global strategy: An organizing framework. *Strategic Management Journal*, 8(5): 425-440.
- Giroud, A. & Scott-Kennel, J. (2009). MNE linkages in international business: A framework for analysis. *International Business Review*, 18: 555–566.
- Grönroos, C., & Voima, P. (2013). Critical service logic: making sense of value creation and cocreation. *Journal of the Academy of Marketing Science*, 41(2), 133-150.
- Hakanen, T., Helander, N. & Valkokari, K. (2017). Servitization in global business-to-business distribution: The central activities of manufacturers. *Industrial Marketing Management*, 63: 167–178.
- Hipp, C., & Grupp, H. (2005). Innovation in the service sector: The demand for service-specific innovation measurement concepts and typologies. *Research Policy*, 34(4), 517-535.
- Ho, Y. C. (2014). Multilateral knowledge transfer and multiple embeddedness. *The Multinational Business Review*, 22(2), 155-175.
- Hotho, J. J., Becker-Ritterspach, F., & Saka-Helmhout, A. (2012). Enriching absorptive capacity through social interaction. *British Journal of Management*, 23(3), 383-401.
- Iurkov, V., & Benito, G. R. (2018). Domestic alliance networks and regional strategies of MNEs: A structural embeddedness perspective. *Journal of International Business Studies*, 49(8), 1033-1059.
- Javalgi, R. G., Hall, K. D., & Cavusgil, S. T. (2014). Corporate entrepreneurship, customeroriented selling, absorptive capacity, and international sales performance in the international B2B setting: Conceptual framework and research propositions. *International Business Review*, 23(6), 1193-1202.

- Johanson, J. & Vahlne, J.-E. (2009). The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies*, 40: 1411–1431.
- Kang, J., Rhee, M., & Kang, K. H. (2010). Revisiting knowledge transfer: Effects of knowledge characteristics on organizational effort for knowledge transfer. *Expert Systems with Applications*, 37(12), 8155-8160.
- Katsikeas, C. S., Samiee, S. & Theodosiou, M. (2006). Strategy fit and performance consequences of international marketing standardization. *Strategic Management Journal*, 27: 867–890.
- Kazadi, K., Lievens, A., & Mahr, D. (2016). Stakeholder co-creation during the innovation process: Identifying capabilities for knowledge creation among multiple stakeholders. *Journal of Business Research*, 69(2), 525-540.
- Kogut, B., & Zander, U. (1993). Knowledge of the firm and the evolutionary theory of the multinational corporation. *Journal of international business studies*, 24(4), 625-645.
- Kotabe, M., Jiang, C. X., & Murray, J. Y. (2017). Examining the complementary effect of political networking capability with absorptive capacity on the innovative performance of emerging-market firms. *Journal of Management*, 43(4), 1131-1156.
- Kotler, P. (2000). Marketing management, millenium edition. Hoboken, NJ: Prentice-Hall, Inc..
- Lane, P. J., Koka, B. R., & Pathak, S. (2006). The reification of absorptive capacity: A critical review and rejuvenation of the construct. *Academy of management review*, *31*(4), 833-863.
- Leischnig, A., Geigenmueller, A., & Lohmann, S. (2014). On the role of alliance management capability, organizational compatibility, and interaction quality in interorganizational technology transfer. *Journal of Business Research*, 67(6), 1049-1057.
- Lenka, S., Parida, V., Sjödin, D. R., & Wincent, J. (2018). Exploring the microfoundations of servitization: How individual actions overcome organizational resistance. *Journal of Business Research*, 88, 328-336.
- Leposky, T. (2017). Servitisation in Value Creating Relationships: Views from Headquarters, Subsidiaries and Customers. Ph.D. dissertation, available online at http://osuva.uwasa.fi/bitstream/handle/10024/7602/isbn_978-952-476-783-5.pdf?sequence=1
- Leposky, T., Arslan, A., & Kontkanen, M. (2017). Determinants of reverse marketing knowledge transfer potential from emerging market subsidiaries to multinational enterprises' headquarters. *Journal of Strategic Marketing*, 25(7), 567-580.
- Lewin, A. Y., Massini, S., & Peeters, C. (2011). Microfoundations of internal and external absorptive capacity routines. *Organization Science*, 22(1), 81-98.

Lightfoot, H., Baines, T., & Smart, P. (2013). The servitization of manufacturing: A systematic literature review of interdependent trends. *International Journal of Operations & Production Management*, 33(11/12), 1408-1434.

Lim, M. K., Tseng, M. L., Tan, K. H., & Bui, T. D. (2017). Knowledge management in sustainable supply chain management: Improving performance through an interpretive structural modelling approach. *Journal of cleaner production*, *162*, 806-816.

Lukas, B.A., Tan, J.J. & Hult, G.T.M. (2001). Strategic fit in transitional economies: The case of China's electronics industry. *Journal of Management*, 27: 409–429

Luo, Y. (2003). Market-seeking MNEs in an emerging market: How parent—subsidiary links shape overseas success. *Journal of International Business Studies*, 34: 290–309.

Marabelli, M., & Newell, S. (2014). Knowing, power and materiality: A critical review and reconceptualization of absorptive capacity. *International Journal of Management Reviews*, 16(4), 479-499.

Matusik, S. F., & Heeley, M. B. (2005). Absorptive capacity in the software industry: Identifying dimensions that affect knowledge and knowledge creation activities. *Journal of Management*, *31*(4), 549-572.

Minbaeva, D. B., Pedersen, T., Björkman, I., & Fey, C. F. (2014). A retrospective on MNC knowledge transfer, subsidiary absorptive capacity, and HRM. *Journal of International Business Studies*, 45(1), 52-62.

Moran, Peter & Ghoshal,S. (1996), Value Creation by Firms. In *Academy of Management Best Papers Proceedings*, Bernard J. Keys, and Lloyd N. Dosier, (Eds.). Georgia: Georgia Southern University, 41-50.

Najafi-Tavani, Z., Robson, M. J., Zaefarian, G., Andersson, U., & Yu, C. (2018). Building subsidiary local responsiveness: (When) does the directionality of intrafirm knowledge transfers matter?. *Journal of World Business*, *53*(4), 475-492.

Nohria, N. & Ghoshal. S. (1994). Differentiated fit and shared values: Alternatives for managing headquarters-subsidiary relations. *Strategic Management Journal*, 15(6), 491-502.

Oehmichen, J., & Puck, J. (2016). Embeddedness, ownership mode and dynamics, and the performance of MNE subsidiaries. *Journal of International Management*, 22(1), 17-28.

Peltokorpi, V. (2017). Absorptive capacity in foreign subsidiaries: The effects of language-sensitive recruitment, language training, and interunit knowledge transfer. *International Business Review*, 26: 119–129.

Presutti, M., Boari, C., Majocchi, A., & Molina-Morales, X. (2019). Distance to customers, absorptive capacity, and innovation in high-tech firms: the dark face of geographical proximity. *Journal of Small Business Management*, 57(2), 343-361.

Rebolledo, C., Halley, A., & Nagati, H. (2009). The effects of absorptive capacity on operational performance within the context of customer-supplier relationships. In *Supply Chain Forum: An International Journal* (Vol. 10, No. 2, pp. 52-56). Taylor & Francis.

Santamaría, L., Nieto, M. J., & Miles, I. (2012). Service innovation in manufacturing firms: Evidence from Spain. *Technovation*, *32*(2), 144-155.

Schleimer, S. C., & Pedersen, T. (2013). The driving forces of subsidiary absorptive capacity. *Journal of Management Studies*, 50(4), 646-672.

Schleimer, S. C., & Pedersen, T. (2014). The effects of MNC parent effort and social structure on subsidiary absorptive capacity. *Journal of International Business Studies*, 45(3), 303-320.

Scott-Kennel, J., & Giroud, A. (2015). MNEs and FSAs: Network knowledge, strategic orientation and performance. *Journal of World Business*, 50(1), 94-107.

Shaw, B., & Luiz, J. M. (2018). The impact of distance (external) and organizational factors (internal) on the knowledge chain of multinational corporations: South Africa as a host country. *Thunderbird International Business Review*, 60(3), 295-311.

Stein, M. M., & Bowen, M. (2003). Building a customer satisfaction system: Effective listening when the customer speaks. *Journal of Organizational Excellence*, 22(3), 23-34.

Song, J. (2014). Subsidiary absorptive capacity and knowledge transfer within multinational corporations. *Journal of International Business Studies*, 45(1), 73-84.

Storey, C., & Larbig, C. (2018). Absorbing customer knowledge: how customer involvement enables service design success. *Journal of Service Research*, 21(1), 101-118.

Tippins, M. J., & Sohi, R. S. (2003). IT competency and firm performance: is organizational learning a missing link? *Strategic management journal*, 24(8), 745-761.

Todorova, G., & Durisin, B. (2007). Absorptive capacity: Valuing a reconceptualization. *Academy of management review*, 32(3), 774-786.

Tsai, W. (2001). Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance. *Academy of management journal*, 44(5), 996-1004.

Tzokas, N., Kim, Y. A., Akbar, H., & Al-Dajani, H. (2015). Absorptive capacity and performance: The role of customer relationship and technological capabilities in high-tech SMEs. *Industrial Marketing Management*, 47, 134-142.

Van Den Bosch, F. A., Volberda, H. W., & De Boer, M. (1999). Coevolution of firm absorptive capacity and knowledge environment: Organizational forms and combinative capabilities. *Organization Science*, *10*(5), 551-568.

Weng, D. H., & Cheng, H. L. (2018). The more, the merrier? How a subsidiary's organizational identification with the MNE affects its initiative. *Long Range Planning*. Available online at https://www.sciencedirect.com/science/article/abs/pii/S002463011730403X

Winer, R. S. (2001). A framework for customer relationship management. *California management review*, 43(4), 89-105.

Winkelbach, A., & Walter, A. (2015). Complex technological knowledge and value creation in science-to-industry technology transfer projects: The moderating effect of absorptive capacity. *Industrial Marketing Management*, 47, 98-108.

Witell, L., & Löfgren, M. (2013). From service for free to service for fee: business model innovation in manufacturing firms. *Journal of Service Management*, 24(5), 520-533.

Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of management review*, 27(2), 185-203.

Zimmerling, E., Purtik, H., & Welpe, I. M. (2017). End-users as co-developers for novel green products and services—an exploratory case study analysis of the innovation process in incumbent firms. *Journal of Cleaner Production*, *162*, S51-S58.

Zeng, R., Grøgaard, B., & Steel, P. (2018). Complements or substitutes? A meta-analysis of the role of integration mechanisms for knowledge transfer in the MNE network. *Journal of world business*, 53(4), 415-432.

Zhang, X., Zhong, W., & Makino, S. (2015). Customer involvement and service firm internationalization performance: An integrative framework. *Journal of International Business Studies*, 46(3), 355-380.