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This is a Final draft version of a publication

published by Edward Elgar Publishing

in Khan, Z., Nair, S. R., Lew, Y. K. (eds.) Research Handbook on Knowledge Transfer and International Business

DOI: 10.4337/9781788976114.00008

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Please cite the publication as follows:

Øian, J.-T., Kuivalainen, O., Vanninen, H. (2022). Knowledge transfer and absorptive capacity in the context of a small multinational enterprise: a systematic study of the nexus of relationships. In: Khan, Z., Nair, S. R., Lew, Y. K. (eds.) Research Handbook on Knowledge Transfer and International Business. pp. 26-47. DOI: 10.4337/9781788976114.00008

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Knowledge transfer and absorptive capacity in the context of a small multinational enterprise: A systematic study of the nexus of relationships

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Abstract

Knowledge transfer and absorptive capacity of a small firm enhance the use of its existing, typically limited resources and contribute to building knowledge competency and thus sustainable competitive advantage. Existing knowledge on the role of absorptive capacity in knowledge competency enhancement of rapidly internationalizing firms is scarce. Thus, the focus of this study is on knowledge transfer and absorptive capacity in a small multinational enterprise (MNE). Based on a single case study, we analyse the antecedents that increase and/or hinder absorptive capacity of the small MNE and discuss what kind of consequences being a small MNE have on knowledge transfer, and, eventually, on the firm's capability development in its quest for competitive advantage. The results indicate that by utilizing ICT communication and by encouraging informal communication, a small MNE can overcome the resource constraints related to rapid and early internationalization and the problems this creates for knowledge transfer mechanisms.

Keywords: knowledge transfer, absorptive capacity, small MNEs

Introduction

Of great importance to any firm is what is known as the absorptive capacity—its ability to acquire external resources and knowledge, and then assimilate and apply these (Cohen & Levinthal, 1990; Zahra & George, 2002). An especially interesting context for the study of absorptive capacity are among new ventures as they typically lack resources (Nakos & Brouthers, 2002; Brouthers & Nakos, 2004), meaning that they have to look outside of the firm more often for new knowledge. A high degree of absorptive capacity is likely to significantly enhance the use of existing and often limited knowledge resources, thus contributing to building knowledge competency (Park & Rhee, 2012). If a new venture aims to establish operations in multiple countries and become a small multinational enterprise (small MNE), it needs to possess the skills and capabilities that enable the firm to implement this challenging internationalization strategy (Kuivalainen et al., 2007, 2012). Despite the significance of absorptive capacity in firms that operate internationally and the interest this has attracted over the years (Kogut & Zander, 1993; Subramaniam et al., 2001), especially since 2005 (Apriliyanti & Alon, 2017), there is little research on the role of absorptive capacity in knowledge competency enhancement of rapidly internationalizing firms (Park & Rhee, 2012). Consequently, Cavusgil and Knight (2015, p. 11) suggest that the following questions should be studied: “*What is the role of absorptive capacity in acquiring capabilities for early and successful internationalization? Does absorptive capacity differ in younger firms?*”

Knowledge concerning absorptive capacity in the context of a large, multinational enterprise (MNE) cannot as such be transferred to the context of a small MNE (Shuman & Seeger, 1986) because smaller firms are different in terms of their structure and behaviour (Knight & Liesch, 2016). Small- and medium-sized firms (SMEs) typically have limited financial and personnel resources (Nakos & Brouthers, 2002; Brouthers & Nakos, 2004) and the smaller employee count may especially have an effect on the absorptive capacity. These firms also differ from large MNEs in terms of their ownership structure and management characteristics (Cheng, 2008; Pinho, 2007) as they are often managed by their original founder(s). SMEs are also characterized by flexibility and responsiveness to the constantly changing market conditions in countries where they are operating (Brouthers & Nakos, 2004, Lu & Beamish, 2001). As the rapidly internationalizing firms are often young, their employees usually have new roles that must be learned from scratch. New

ventures have no former employees who can teach new skills as well as tacit know-how and organizational practices to new employees. It is also costly to create structure in the new organization. Further, new firms comprise of people who are usually strangers and must learn to trust each other. Finally, new firms lack stable ties to those who use the firm's products or services—one of the main resources of old organizations (Stinchcombe, 1965).

Rapidly internationalizing firms have attracted significant amount of research over the last decades (Zander et al., 2015). Much is known, for example, about the role of the external networks in the emergence and success of born globals (Coviello et al., 1997; Sullivan et al., 2006) but the internal side of the firm, such as how the absorptive capacity develops in this context, has not been studied much. There are even surprising findings such as those of Fernhaber et al. (2009) who found that top management teams with a low level of international knowledge benefitted more from sources providing external knowledge. To address this gap, the focus of this study is on knowledge transfer and absorptive capacity in small MNEs, and our research question is: How does a small MNE transfer and absorb knowledge in its internal nexus of relationships?

The context of our study is a rapidly internationalized young and resource-constrained firm that has subsidiaries around the globe. We explore what being new and global actually means from the knowledge transfer perspective. Based on a single case study, we analyse the antecedents that increase and/or hinder absorptive capacity of the small MNE and discuss what kind of consequences being a small MNE has for this, including for the firm's capability to eventually develop in its quest for competitive advantage. We conceptualize absorptive capacity by using Zahra and George's (2002) conceptualization and focus on acquisition, assimilation, transformation, and exploitation of knowledge. The results indicate that a small MNE can overcome the resource constraints related to rapid and early internationalization and the problems this creates for knowledge transfer mechanisms by widely utilizing information and communication technology (ICT) within a firm as well as by encouraging informal communication. The young age of the firm also creates advantages, and the earlier expertise of the workers seems to be relevant. In addition, the "learning advantages of newness" (Autio et al., 2000) are an asset for this small MNE. Furthermore, both real ownership and the so-called illusionary ownership as special characteristics of the organizational culture enhance the

absorptive capacity and especially exploitation of the possessed knowledge for the quest of competitive advantage.

Theoretical background

Coordination of operations in the context of large MNEs has been studied extensively (Andersson & Forsgren, 1996; Birkinshaw & Hood, 1998; Andersson et al., 2001) but it remains unclear how the coordination of operations, such as knowledge transfer, evolve in the case of smaller MNEs. Even for large and resource-rich MNEs, it is extremely difficult to design and execute a global strategy and to manage operations across large geographical and psychic distances (Vahlne et al., 2011). If a small firm chooses to establish international subsidiaries instead of focusing on exporting, for instance, different organization structures and management practices have to be implemented (Lu & Beamish, 2006). When employees work from many geographical locations, the firm has to develop new ways of operating since traditional coordination and control mechanisms are less effective in this setting (Herbsleb & Mockus, 2003). The focal concepts in this chapter are knowledge transfer and absorptive capacity, the former being "the process through which one unit (e.g., group, department, or division) is affected by the experience of another" (Argote and Ingram, 2000, p. 151) and the latter being a concept which can be used to study the ability of the an organization to acquire, assimilate, transform and exploit knowledge (Zahra & George, 2002). Consequently, the concepts are intertwined.

Knowledge transfer

The creation and replication of knowledge explains much of how firms grow and internationalize based on their possession of knowledge and their ability to transfer it to other markets (Kogut & Zander, 1993). Knowledge development is an integral part of the rapid international growth (Sullivan & Weerawardena, 2006; Freeman et al., 2010), and foreign direct investment can allow a firm to gain superior knowledge from international markets (Hymer, 1976). MNEs, which transfer knowledge between different geographical locations, can transfer and exploit knowledge, resources, and competences more effectively inside the firm than through external market mechanisms. However, it is not easy to transfer information effectively and efficiently without

significant effort (Gupta & Govindarajan, 2000; O'Donnell, 2000). Knowledge transfer's success is influenced by the characteristics of knowledge transferred, of the source and of the recipient, and of context (Szulanski, 1996). The maintenance of mutual knowledge tends to be problematic in a firm that operates from multiple locations (Cramton, 2001; Sidhu & Volberda, 2011). Distance between the employees and offices reduces the intensity of communications, and cultural differences, such as different languages, values, working and communication habits, as well as implicit assumptions that may cause misunderstandings and conflicts cause challenges for the daily work (Kotlarsky & Oshri, 2005; Sidhu & Volberda, 2011). Time zone differences also reduce opportunities for real-time collaboration, as response time increases considerably when people work in different times in different locations (Kotlarsky & Oshri, 2005). Moreover, it is difficult to identify which distant colleagues have the necessary expertise and to communicate effectively with them (Herbsleb & Mockus, 2003).

One of the main challenges in a dispersed organization is to create rapport and connections between members of the dispersed teams (Kotlarsky & Oshri, 2005). Often, knowledge transfer is best facilitated through social control methods or "clan control" (Ouchi, 1979). The different parts of the global organization can create shared understanding by vertical integrating mechanisms, such as various types of contact and communication between the managers of foreign subsidiaries and the management in the headquarters (O'Donnell, 2000). Geographically dispersed firms may rotate key people between the head office and international subsidiaries (Manning et al., 2008). ICT also provides effective tools for supervision of subsidiaries (Yamin & Sinkovics, 2007). One way to accomplish the transfer of tacit knowledge is linking team members and leaders together by jointly set formal goals and through establishing and preserving routines to achieve these goals (Madhavan & Grover, 1998). Organizations have to articulate and amplify the new knowledge that individuals bring to the table for it to become profitable. The continuous dialogue of both tacit and explicit knowledge spirals creation and thereby enhances competitive advantage (Nonaka, 1994). Trust and interpersonal networking affect how the relationships are being built between subsidiaries and the headquarters. Further, inter-unit communication and a high frequency of contact—both formal or informal—raise the amount of knowledge transfer taken place (Ghoshal et al., 1994). All in all, we can note that characteristics of the knowledge transfer, i.e. what it

transferred, how and when (e.g. frequency of the contact) are important in the process of gaining competitive advantage through absorptive capacity.

Absorptive capacity

In order to harness knowledge and turn it into an innovative capability, it must be processed to a collective understanding (Subramaniam & Venkatraman, 2001). Collective understanding is not a static concept; it needs to be continuously adapted and improved (Barney, 1991). Communication by itself does not necessarily reflect learning and incorporation of new knowledge into daily operations. To begin with, it needs to be understood and absorbed. Absorptive capacity can be defined as “the ability of a firm to recognize the value of new external information, assimilate it and apply it to commercial ends” (Cohen & Levinthal, 1990, 128). In other words, it denotes how the organization acquires knowledge and exploits it to gain competitive advantage (Cohen & Levinthal, 1990). Absorptive capacity can also be specified as “a set of organizational routines and processes by which firms acquire, assimilate, transform and exploit knowledge to produce a dynamic organizational capability” (Zahra & George, 2002, 186). Absorptive capacity can be seen as having two components: potential absorptive capacity (knowledge acquisition and assimilation) and realized absorptive capacity (knowledge transformation and exploitation) (Zahra & George, 2002).

A firm’s ability to learn is dependent on the similarities between units within the firm or between firms. Knowledge bases, dominant logics, organizational structures, and compensation policies are four factors suggested to measure this similarity level (Lane & Lubatkin, 1998). The complexity of the business environment creates a dynamic nature, and much because of constraints of vision, and the wiring of human cognition, there might be unwillingness to acquire tacit procedural knowledge unless through interaction with other individuals (Kogut and Zander, 1993). Not only do organizational routines matter but also the direction that works as a “principal mean” by which knowledge can be transferred between specialists and a larger audience (Grant, 1996a). Organizational routines are a mechanism for coding tacit knowledge into explicit rules and instruction, and these can be categorized as formal means of knowledge transfer. Prior knowledge

has been considered a key determinant for absorptive capacity (Cohen & Levinthal, 1990; Grant, 1996a, 1996b).

Organizational forms and combinative capabilities have also been shown as influential to a firms' absorptive capacity. Given the dynamic environment, both of these aspects might change over time because of path dependency, where previous choices affect the future ones (Teece et al., 1997). Grouping activities, the number of hierarchical levels, and the extent to which management is divided into various functional areas shape organizational forms and absorptive capacity (Van den Bosch et al., 1999). Combinative capabilities are the procedure of synthesizing and applying current knowledge, acquired by competitive consequentiality, to newfound knowledge (Kogut & Zander, 1992). The capability itself can be discerned by systems capabilities, formal and explicit rules changeable by management, coordination capabilities, knowledge enhancement through group relations, as well as socialization capabilities, collective interpretations of reality, and shared ideologies. A calibration of these factors needs to be done on the background of industry context and company history. It cannot be stated in general terms, but if managed successfully, all factors help to increase absorptive capacity (Van den Bosch et al., 1999). Small, rapidly internationalized firms might differ from large, established MNEs because the former do not have to unlearn many of their old, foundational premises before they can adopt new mindsets (Autio et al., 2000). Other reasons might be innovative thinking, entrepreneurial orientation, and resource constraints building on the premise of path dependency (Teece et al., 1997).

In summary, the skill of acquiring knowledge, recognize its value, and the ability to assimilate and use it, i.e. absorptive capacity can bring competitive advantage (Rodríguez-Serrano and Martín-Armario, 2019). It seems that there are two corporeal ways of absorbing knowledge: formally and informally. The former consists of rigid structures such as guidelines, directives, manuals, and rules made by management. The latter is more vulnerable to misunderstanding as it relies on group dynamics and socially embedded knowledge, such as shared visions and collective perceptions of actuality. A combination of both conducts should be applied to augment absorptive capacity, but it is likely that the age of the company, former knowledge, and path dependency all affect which method is favoured by the firm. Communication method, frequency of interaction and topics

transferred do also affect absorptive capacity – how can small rapidly internationalizing firms develop better processes for interaction (Rodríguez-Serrano and Martín-Armario, 2019).

Methodology

We have chosen a qualitative approach for this study due to the exploratory nature of the research question (Miles & Huberman, 1994; Berg, 2009; Ghauri & Grønhaug, 2010). The present study aims at understanding a largely unknown phenomenon, the role of knowledge transfer and absorption in a small MNE's nexus of relationships (Ghauri & Grønhaug, 2010). We chose this unique firm as the single case study as it fulfils both the criteria of rapidly internationalizing firm (Knight & Cavusgil, 2004) and the criteria for an MNE (Hennart, 2009) as it has a global presence with its own offices and employees. This is an ideal representative setting to study knowledge transfer and absorptive capacity (Yin, 2009). The single case company of this study is cXense, a Norwegian software-as-a-service (SaaS) company founded in 2010. cXense was established by a group of former employees of a company called FAST. FAST was sold to Microsoft for USD 1.2 billion in 2008. Cxense's offering is a Data Management Platform (DMP) with Intelligent Personalization that gives companies insight about their individual customers and enables them to action this insight real-time in all marketing and sales channels. In other words, Cxense enables publishers and marketers transform raw data into a valuable resource for business use. Cxense has customers in EMEA, Japan, Latin America, North America, and Asia Pacific. During the time of data collection, Cxense technology was powering approximately 3,000 web and mobile sites worldwide, with more than 160 million active unique users on a monthly basis. Cxense has software development offices in Oslo, Norway and Melbourne, Australia. The sales & marketing and operations & implementation resources are located in Oslo, Melbourne, Tokyo, London, San Francisco, Boston, Miami. The Cxense group is headquartered in Oslo, Norway. The offices in Oslo, Melbourne, Tokyo, and the US all opened in 2010. At the time of data collection, the company employed 44 people and had employees from nine different nationalities. The group revenues amounted to USD 5.26 million.

The informants in this study cover management, sales, and R&D functions on a geographically dispersed level. Only two out of the seven informants had not worked at FAST, where most of the employees in cXense had worked before Microsoft acquired FAST, and cXense was established.

Table 1: Informants of the study

Title	FAST Experience	Location
Chief Technology Officer	Yes	Oslo
General Manager: Japan	Yes	Tokyo
Business Development Manager: North America	No	Boston
Senior Vice President of Engineering	Yes	Melbourne
Technically Responsible for cX::Recs and cX::Search	Yes	San Francisco
Business Development Manager: Europe	Yes	London
Software Engineer: cX::Ad (Mainly)	No	Melbourne

Due to the geographical dispersion of the informants, the data was collected through semi-structured, in-depth interviews via Skype. The criteria used for selecting informants was the following:

1. Representatives from all the different offices
2. Diversity in functions (sales, management, and R&D)
3. A reflected balance of former FAST, and non-former FAST employees

Using these criteria for the selection of informants helped to ensure that the results of the study were credible. The process for the data collection started through a personal contact of one of the authors working in the firm who sent out an email to all the employees, asking if they were willing to participate. Based on the feedback received, the author suggested eight different people, which was the sample size needed to facilitate data saturation (Yin, 2009; Ghauri & Grønhaug, 2010). A sample size of eight was considered sufficient being that the firm currently only has 44 employees. Eight represent an informant percentage coverage of 18 percent, close to one out of every five

employees. One informant was lost due to conflicting schedules, hence, the final data consists of seven primary interviews.

The interviews started with a short introduction of the research and its objectives. In the first part, there were questions about informants' previous experience and current position. After these initial background questions, the interview guide was divided into sections inquiring about the knowledge transfer (what the interviewee considered to be critical knowledge in the firm and how the knowledge was shared inside the firm), absorptive capacity (how the firm managed to absorb knowledge and the challenges related to this) and competitive advantage (what the informants viewed as competitive advantage and if knowledge transfer and absorption of knowledge contributed to this in the informant's opinion). All of the interviews were recorded using computer software. The interviews lasted an average of 45 minutes. Each of the transcripts are about 14-15 pages long (ca. 6,000 words). After transcription, each of the informants received a copy via email, and they were asked to confirm that what they had said had been interpreted correctly. All of the seven informants confirmed positively without any request for changes to the transcripts. This also increased the validity of the findings.

Selective coding was utilized in data analysis for its emphasis on the core categories of knowledge transfer, absorptive capacity (AC), and sustainable competitive advantage (SCA), as well as flexibility around associated themes (Ghauri & Grønhaug, 2010). Four formalized steps were used in the data analysis, following Sinkovics et al. (2008) example: organizing, coding (data reduction), searching, and modelling and interpretation. The selective coding method allowed to prioritize the core categories and identify secondary and tertiary subjects of the data.

Findings

Knowledge transfer

Contact source and frequency

There is a significant amount of communication between the various locations of cXense, and the different subsidiaries and the headquarters communicate with each other on a daily basis. Frequent

communication inside the firm is needed because employees are spread around the globe, and the biggest office in Oslo hosts only 14 employees. The communication between the offices is rather informal, coinciding with the flat organizational structure. An important practice for efficient knowledge transfer inside the company is a weekly call where everyone in the company partake in a web conference. The general agenda of these meetings is to keep everyone updated with company movements, product developments, prospects, and key accounts.

There are some differences in the communication frequency related to the position of the employee. Salespeople seem to communicate more frequently with other subsidiaries than e.g., software engineers, and to some extent that had caused a minor issue in the early months following the inception of the firm. It seemed that there was not a broad enough range of contact between the offices, and that much of the communication related to R&D had to go through gatekeepers, which slowed efficiency. However, it had improved recently, according to two of the informants who focused a lot on this issue, and it seemed that it was easier now for a software engineer in Melbourne, for example, to directly contact a software engineer in Oslo if they needed, rather than having to go through the gatekeeper. In this particular case, both parties encouraged a higher frequency of communication in order to avoid working based on assumptions. Assumptions that influenced the daily work in the early days of cXense's operations may have been the result of cultural differences. Whereas Norwegians were considered egalitarian and self-dependent, employees from both the Australian and Japanese offices tended to ask for confirmation before addressing particular issues. For the Norwegians, this was considered a waste of time, and they believed it would benefit the company if other offices took more initiative. However, the offices that usually asked for confirmation thought it could prevent misunderstandings in the future. Actions needed to be implemented in order for this to happen:

“So, basically, just [make] sure that people are pushed to communicate and collaborate because they tend not to do that by themselves.” (Informant of cXenxe)

Knowledge type

The most common subjects for discussion between the offices were operational requirements and the needs of customers. Again, the role of the employee naturally influenced the preferred subject,

but the creation of value was deemed paramount for all. Being how cXense is a technology and customer-oriented business, innovation came up frequently. Two different perspectives could be found, one being the way ideas were formed:

“It definitely comes from sales, you know, I can always write an email on my own time, telling them some feedback from a specific prospect or customer, or I can post something on the Wiki and start a discussion, then other people will join in and offer comments, and exchange ideas. People love doing that, and I feel it’s a very open environment for everybody to have ideas and opinions and exchange them with other folks...” (Informant of cXense)

The second perspective, sourced from a person in a different role, was:

“So, there are two very distinct conversation types. There is operational type of things: who needs what, and when do they need it by, how many hours work is booked up this week, is he bound in any way that could interfere this week, [those] kind of things. And then there is sort of more kind of loose, research and things, thought processes where we are kind of kicking around ideas and things. Both of those things are done pretty regularly.” (Informant of cXense)

Product innovation was seen as equally important as operational requirements for cXense. Strategically speaking, this focus of conversation might be one of the foremost mechanisms for enhancing and obtaining a sustainable competitive advantage.

Interaction method

Face-to-face communication was the preferred and most-utilized interaction method inside each subsidiary. However, regarding inter-office communication at cXense, four different ICT systems were frequently used: email, Skype, an internal Wiki, and Jira. The Wiki, as employees called it, is an internet relay chat (IRC) room where employees can create and contribute to companywide discussions. JIRA, software created by a company called Atlassian, is a project tracker for product teams and can be used for planning, building, and launching software. The configurable web interface permits agile development planning, keeping track of projects, searching, and reporting.

JIRA was mainly used by the software engineers and the product development team to facilitate the ordering of new features, and to keep track of those developments.

“If [for] example, we need to communicate with R&D, we have that in Norway, and Australia currently, so we have the system, JIRA, which [is] where we can share knowledge [on] technical issues and customer requirements. We always order a ticket on the website, [the] intranet site, which is easier, for we have time differences. We always get feedback in one day.” (Informant of cXenxe)

The Wiki was used for more general issues, and the informants all seemed content on using it for various reasons. However, the many different forms of communication methods were seen as a bit complex.

“People make good use of the Wiki. People are very helpful and share information, and help people figure out, and prepare for different types of opportunities... It can get a little overwhelming. There are definitely multiple systems, and different ways that you are supposed to use them, and [a] processes for each. You have to make sure you use it right, so that the other [party] can do their things right. Other people are relying on you, so you have to make a good effort to do it right, so yeah, it can get a little bit overwhelming.” (Informant of cXenxe)

Nonetheless, the company currently operates on a satisfactory level, even though some informants would have wanted more direct interaction.

“Yeah. I wish our video usage was more pervasive. A lot of the communication we have is text based ... using web pages and things like the Wiki, or Jira tickets, chat, or IRC, especially with [the] Norwegians and Australians.” (Informant of cXenxe)

Not all can be explained through text, and to make sure that tacit knowledge is properly understood, Skype was the preferred form of interaction between offices.

“We use Skype a lot. I think we use the most modern ways of communicating, I mean, Skype is cheap, and it gives you also the opportunity to share things in real time, so I could share my screen, and things that I am actually working on. So, that seems to work really well...”

(Informant of cXenxe)

This type of interaction was made easier by the fact that all employees attended an annual “All Hands” meeting where the informants found the most important goal was to get to know their co-workers.

“I don’t think the most important learning outcome is technical or academic. I think that face-to-face time with everybody gathered at one place.” (Informant of cXenxe)

Time difference has a major impact on interaction method, as it also has on contact frequency. Time differences explain why much of the interaction between subsidiaries and headquarters take place by means of ICT. The vast geographical spread makes it hard to communicate in real time, even though there are some certain work hours that overlap.

Formal coding

Employees who work on technological matters argued that they felt that knowledge was absorbed appropriately by formal coding since the key information they needed to do their jobs could be found in the codebook. However, on matters such as market conditions, sales, and general operational requirements, many felt it was not functioning optimally. In addition, salespeople tend not to be as technologically adept as the engineers, so they are not able to read the codebook without assistance with interpreting it. Proper management of knowledge could be seen as a potential problem in the future.

“Yeah. [Coding is used] in an OK manner, but ... it works OK for now given our current size. If we had been 10 times the size we are, with a lot more people ... 500 instead of 50 in the company, then a need for more formalized procedures would probably arise compared to today’s methods.”

(Informant of cXenxe)

Despite currently managing absorption, structural improvements in the way knowledge is absorbed are imminent. Many felt that it could save the company valuable time if employees could find the information they needed by themselves instead of having to rely on co-workers. Even though the Wiki functions as a form of documentation, it was not considered ideal, since many of the discussions were long and characterized as too conversational. Prioritization became central here as well, since not much of the business operations were in writing and kept where they could be easily located, mistakes had occurred. One example was the delay in delivery on a new feature to a customer, which caused a monetary penalty for cXense. If proper documentation existed, the developers may have had a better chance of understanding that this was a urgent matter and could have prioritized it. Many of the informants were concerned that the tacit knowledge might be lost if there is no attempt at information being documented.

“So that we can make sure when we hear feature requests, ... [the would be] ‘nice to haves’ from customers, ... these can be prioritized in a proper manner against our R&D. ...[O]ur R&D has great ideas, but it may not be what our customers want right here and now. That is sometimes a problem, you know, R&D have the overall direction, but then the customer has requests which [R&D] may have not thought about, and these things, sometimes I would say, gets wrongly prioritized.” (Informant of cXense)

Informal coding

As mentioned earlier, informal coding seems to be the preferred way of absorbing knowledge. Most of the informants favoured talking to someone in person or through Skype rather than having to read messages or comb through documents. Some employees think that informal coding is the best way to do it, until they grow larger, since a more personalized learning environment seems to motivate the acquisition of a deeper understanding.

“I think that there should be more dedicated one-on-one time between technical people and non-technical people. [Also, it would be good to consider]... formal web conference training sessions, and things like that, because I think people learn exponentially better in one-on-one sessions where there is less pressure, and you can ask questions, go at your own pace, and things like that.” (Informant of cXense)

Many informants stated that software engineers tend not to willingly document their work and how they have created or solved problems on new or existing product features. Evidence also suggested that the same mentality could be found in salespeople. Rather than sharing successful stories and making sure that other sales employees learn from their successes, it seemed that they tend to prefer to move on to the next sale. This focus is clearly justifiable in the short-term, but it is possible that a stronger emphasis on sharing sales pitches, prospects, and closing techniques might be more beneficial in the long term.

“Yeah, if you think of it as an engineer, and I ask you to paint a room, then you would have to. If you ... break that process down, you have to measure the room, select colours, wash the walls, paint it, clean up, and put all the furniture back. You basically have to do the same thing over and over again, and from an engineer’s perspective, [documentation is] kind of the same thing. ... [If] I ask you to implement a software feature, then you have to think about what that feature needs, you have to design the feature, write it, and test it. By the time you get through that you really don’t want to document it. Hehe. None are better than us. Most engineers kind of want to move on to the next thing, so it can be pretty hard to get them to communicate.” (Informant of cXenxe)

The lack of formal coding—and consequently preference for informal coding—may result in tacit knowledge remaining tacit instead of explicit. This is not necessarily a problem at the current lifecycle of the focal firm, but in the future, if the company grows or key employees quit to work elsewhere, it could set back their good efforts, and slow down forthcoming progress.

Cross-comparison of dyadic relationships

A dyadic relationship is that between different units, and in this case, it is defined as that between a subsidiary and the headquarters. Knowledge and information flow may go either way in the relationship, and given cXense’s flat organizational structure, it is the case in this study.

The dyadic relationship between the offices in Japan and the headquarters in Oslo seem like the most culturally different, and it was made clear that in order to improve performance, the Japanese would need to understand the Norwegian culture better and vice versa. However, they were mostly

happy in the way it worked, and the informant stated that folks at the headquarters were very helpful and willing to listen to their concerns. The Australian office felt that cultural differences led to misunderstandings, and more of the communication should be conducted using video as it would permit a better reading of emotion than text provides. Sometimes the Norwegians can be quite blunt in their way of communicating, and this could surprise the Australians. This led to misunderstandings that in turn would lower the absorptive capacity due to frustration, and sometimes even anger. Meanwhile, the folks at the Oslo headquarters sometimes felt that the office in Melbourne could try to take a bit more initiative and not seek approval as often as they have done in the past. However, these issues had already been addressed, and positive progress was being made. Both of the offices in the USA requested more one-on-one, personal time between software engineers and salespeople, perhaps due to the fact that there are no R&D offices in the USA and the salespeople may need to be more technologically aware regarding their products. This is a notion the team in Oslo was familiar with and recognized as important for their future success.

Absorptive capacity

The All Hands meeting organized frequently seemed to contribute positively towards the company's AC. When people are acquainted on a personal level rather than solely relying on digital communications, it is easier to understand different people, their culture, and the ways in which they communicate.

“We talked about a very good case study, ... how to sell to customers, [and] how to communicate with prospects. So, after the All Hands [meeting], we can change the sales talk to [focus on] the customer. [T]he big prospects ... liked our stories.” (Informant of cXenxe)

One notion that constantly came up was the issue of prioritization. It seems that there is not enough communication between the different departments—especially between sales and R&D—regarding what products needed to be updated, or new features that needed to be released, and at what times. Problems with prioritization are caused by a lack of understanding for what is crucial for operations, meaning there is room for improvement in AC.

“...[W]e did have a semi-collective understanding that we would hold demonstrations once every month. Nowadays, there is not so much of that anymore. Of course, it is always fun to see stuff like that, but now, purely as a transfer of knowledge, IRC and chat tools like that are used extensively. An advantage of such [tools] is that it’s easy for everyone to see what we are doing, so people automatically pick up on topics they are interested in. By that consideration, I believe we are rather skilled, if people take responsibility and orient themselves on what others are doing.”
(Informant of cXenxe)

Employees stated that they would rather have a system where someone monitored the situation and coordinated prioritization efforts accordingly to operational needs and customer demand. Employees preferred the informal coding rather than the more formal one, but also realized that as the company grows, more formalized procedures become a necessity to sustain their advantages.

Given that nearly 70 percent of the informants had previously worked together at FAST (a company sold to Microsoft), experiences from FAST might affect both positively and negatively the way employees comprehend, interpret, and learn.

”[It’s] certainly been that people [have] changed things, [submitted] applications for others, or they haven’t communicated that the application is coming. And [those applications] been deployed to production and [have] broken the system. That hasn’t happened as often in cXense as it did in the previous company, so I think it’s just that we know each other so well, and most people have known each other for a very long time at cXense or worked together at FAST. We’re pretty atypical for a [vastly] distributed team since we have worked together for a long time although cXense is a new company.” (Informant of cXenxe)

“[W]e removed some of the bad things. We learned from the FAST days. One example could be, you know, that we don’t want to become a big service organization as it has a lot of costs. So, we don’t want to be on the consulting side of things, we just want to ... [create] products and make customers successful. The product at FAST was very complicated, so many times we became consultants as opposed to software specialists.” (Informant of cXenxe)

The interviewees all indicated a positive evolution, where the mistakes had been found and fixed from the previous venture. The employees learn from previous experience but they still have areas in need of improvement. In addition, as pointed out earlier, informality seems to be a key factor:

“The biggest similarity which I like, is that we work in a ‘Norwegian way’ (egalitarian), where everybody [is] worth the same. We have people all over the world, and we have some formal roles to a certain extent. ... We don’t have [a] hierarchical regime like we [had] when [FAST was] acquired by Microsoft, where everything went up and down command lines, [and] you couldn’t speak with anybody directly.” (Informant of cXenxe)

Another facet considered vital to assimilation in the focal case was that of an annual All Hands meeting. The All Hands meeting contributes positively towards the company’s absorptive capacity as well, mainly by getting people acquainted on a personal level rather than solely relying on digital forums. This eases communication through ICT because employees are able to vividly imagine your communication partner and adhere differently to responses than they would have, had they not met in person:

“We talked about a very good case study, and how to sell to customers, how to communicate with prospects. So, after the “All Hands” we can change the sales talk to the customer. Currently, the big prospects, e.g. [company 1] and [company 2], very much liked our stories.” (Informant of cXenxe)

Each and every respondent indicated that being a shareholder lifted their work moral.

“What happens is that when people sign the contract they are offered to buy shares up to a certain price, and [so far] everybody has bought shares. Some have bought many, and some have bought [few]. Everybody has bought some.” (Informant of cXenxe)

Employees constantly seek to better themselves through teaching fellow colleagues/shareholders, and vice versa, to learn from colleagues/shareholders as it would benefit them all to exploit the knowledge acquired, assimilated, and transformed. However, much of the responsibility to learn

for monetary gain lies with each employee - a notion that some did not appreciate. They would rather have a system where someone monitored the situation and coordinated prioritization efforts according to operational needs and customer demand. Such a task could easily be delegated to an employee. A formalised structure was requested:

“I don’t think we [are] that particularly [good at utilizing our market strengths]. We don’t have any formal programmes to sort of push that. So, ideally, I would like to see that. The kind of work that happens in Oslo is a lot more focused on computer science, theoretical things like algorithm design, and compression schemas, and things like that, whereas the work we do in Australia is probably more functional. You know, we build things like final edge extracts, and general ledger checks ... I guess quite boring things like that. We have different kinds of skills, and different kinds of responsibilities, and we don’t have any kind of formal programmes to push the other office to learn about these different areas. So, I don’t think we do that kind of knowledge transfer from a training perspective particularly well.” (Informant of cXenxe)

Again, time and resource constraints show:

“I think, unfortunately, we are just too busy. Being a start-up where we are kind of [are] focused on getting as many features built, and [as many] customers on board as possible. It’s probably just being a small company with too much to do.” (Informant of cXenxe)

Lack of a solution and not having enough time should not be an excuse but it should rather be a motivator to improve and use creative thinking to solve the issues that arise.

Interconnectivity and cross-dyadic relationships

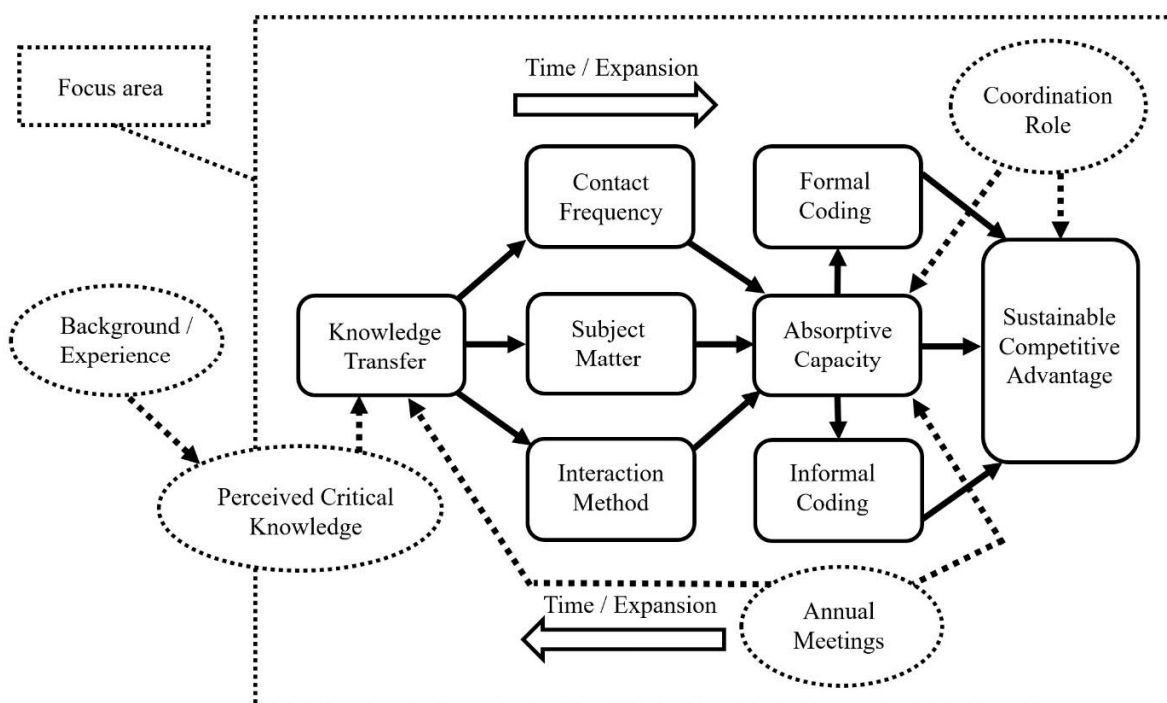
There are interlinkages between the antecedents and determinants and these increase intricacy in understanding how they affect each of the elements in absorptive capacity, i.e., acquisition, assimilation, transformation, and absorption. To understand this, one must first grasp the concept of a dyadic relationship. A dyadic relationship is that of between units, and in this case, it is defined as that between a subsidiary and the headquarters. Knowledge and information flow may go either

way in the relationship, and so does the manner in which absorptive capacity facilitates the knowledge flows.

Development of the framework

As an outcome of our study we put forward a framework of knowledge transfer and absorption. The model (Figure 1) illustrates how the findings of the current study contribute to the understanding of the knowledge transfer and absorptive capacity in the context of small MNEs. The framework has been formulated based on the earlier literature and complemented with the findings of the current study. Several elements have been added to the extant knowledge. The added elements are background/experience, perceived critical knowledge, annual meetings, and coordination role. These are critical for the proper utilization of knowledge transfer and increase of absorptive capacity to enhance sustainable competitive advantage. Earlier international experience of many team members, which is crucial for born global firms (Knight and Cavusgil, 2004; Cavusgil and Knight, 2015) have helped the building process of the coordination and communication mechanisms and speeded up the development of young and small MNE. Some aspects such as personal relationships and cooperative interdependence which lead to trust and development of tacit knowledge, and eventually the development of absorptive capacity have also been mentioned in the extant literature (e.g. Freeman et al., 2010). However, our study opens in detail knowledge transfer mechanisms used in a fast-growing small multinational firm and how they help to increase absorptive capacity.

Figure 1: The model of knowledge acquisition, transfer and absorption in the context of small MNE



Acquisition

Acquisition, or attainment of knowledge, can happen in many different forms and can be accomplished through various procedures and methods. Our case study implies that a widespread use and application of ICT, effectuated informally, may help firms to overcome resource constraints that are typical for many small firms. Modern ICT technologies are enablers of so-called born global firms (Knight and Cavusgil, 2004; Cavusgil and Knight, 2015). Without implying that the four core categories of absorptive capacity attribute to knowledge utilization step by step, these categories can intersect and involve dynamically. As a result, acquisition does prove to be utterly crucial for proper absorptive capacity. The conducted interviews shed light on the importance of information and communication technology. Face-to-face communication was the preferred and most-utilized interaction method internally at each subsidiary. However, regarding inter-office communication at cXense, four different ICT systems were frequently used. Reflecting on these issues leads to an understanding that the focal firm's ability to deliver sought-after

products in today's market would not be possible without the constructive appliance of ICT systems, given the low barrier of exchanging feedback. These low barriers may be more typical for young and small international firms as they may be less locally embedded – whereas for traditional MNCs local embeddedness may create more knowledge deficits (cf. Yamin and Sinkovics, 2007) An informal communication sphere is important in order to facilitate knowledge acquisition.

Assimilation

Assimilation means understanding through interpretation, comprehension, and learning. It is like raw data before analysis, subject to a prior acquisition of knowledge. Dominant logic is often attributed to being decisive in the manner an organization assimilates knowledge, where experience is considered as an antecedent, and the age of the firm and path dependency are the mediators of the assimilation process. The knowledge acquired from earlier endeavours can also benefit how an organization assimilates knowledge. By reflecting on the mistakes made in the past, it is easier to interpret how employees will react to various scenarios. Another facet considered vital to assimilation in the focal case was that of an annual All Hands meeting. The All Hands meeting contributes positively towards the company's absorptive capacity as well, mainly by getting people acquainted on a personal level rather than solely relying on digital forums, but also because when you know someone personally, it is easier to understand them, their culture, and the way in which they communicate. This meeting can also be a trust-building tool and helps employees in different locations see the other party as a trustworthy source, which is important for absorptive capacity (Szulanski, 1996; Freeman et al., 2010). This eases communication through ICT because employees are able to vividly imagine your communication partner and adhere differently to responses than they would have, had they not met in person:

Transformation

A firm's capability to approach exploitation is related to its capability and willingness to develop and refine routines that facilitate using acquired and assimilated knowledge, in other words, its ability to transform. Much like assimilation, transformation is affected by dominant logics, path

dependencies, and internal harmonization of work structures within the company. These three matters can be seen as interconnected as they allow the sharing of meaning and enable innovation and entrepreneurship. This includes development of established products and the creation of new ones. Again, the quote above related to sales pitches demonstrates that it incorporated all aspects of absorptive capacity up until exploitation; acquisition, assimilation, and the topic of this subchapter, transformation. Through the annual meeting, employees feel they can more easily transfer what they learn there into their daily routines, and they emphasized the ease of adjusting their tendencies in everyday work. Despite current ways of managing absorption, structural improvements in the way knowledge is absorbed are imminent. Many felt that it could save the company valuable time if employees could find the information they needed by themselves instead of having to rely on co-workers. For growing firm codifying of the knowledge may be a necessity in the future (Grant, 1996a).

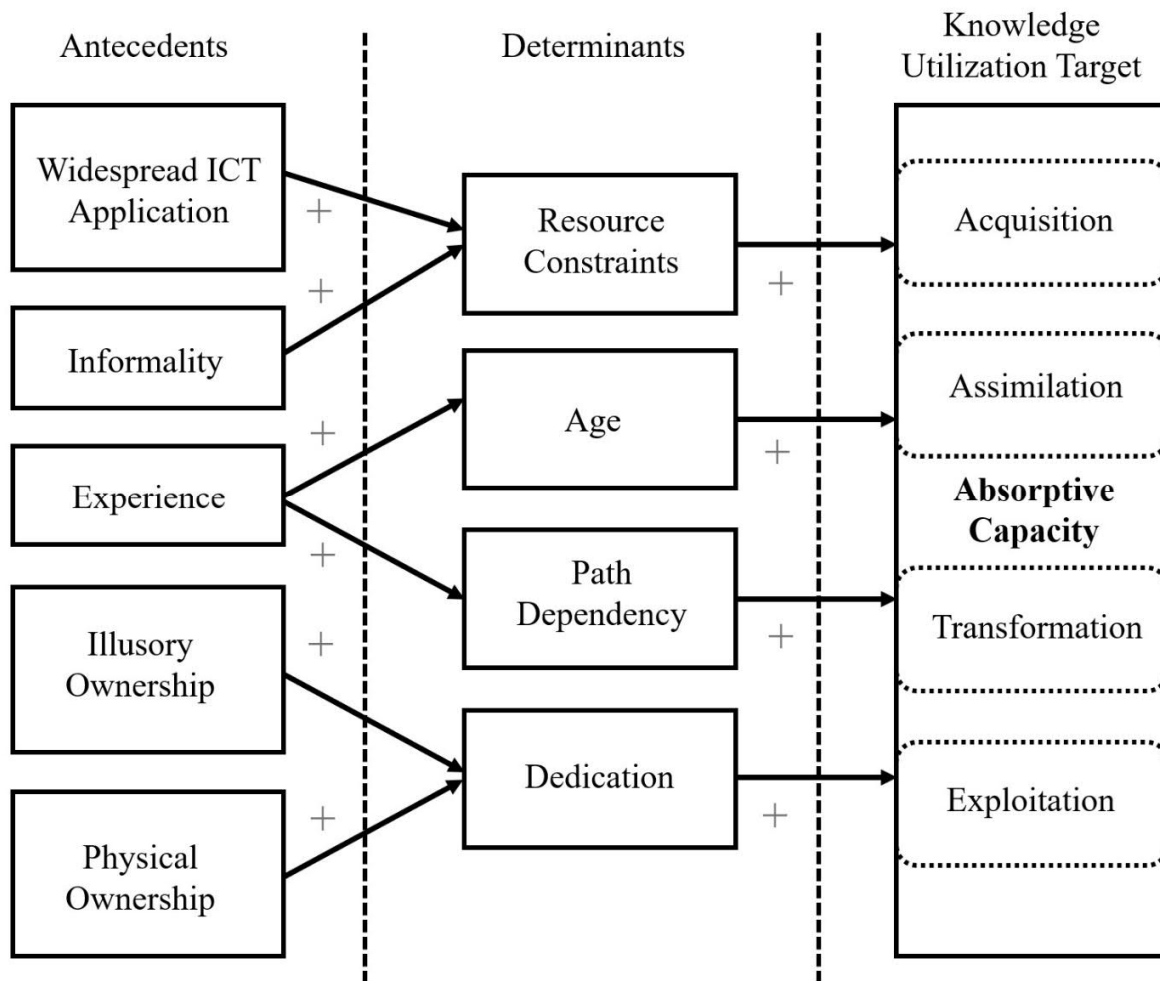
Exploitation

The ability to utilize the market strengths and produce something consumers want, or businesses need to turn a profit, cannot be underestimated. It should be on the forefront at all times, as it is universally acknowledged as a crucial factor for success. Exploitation per our topic, absorptive capacity, is no exception. It relies on mediators such as physical and illusory ownership (as motivational factors to use the knowledge). Physical ownership refers to stocks and a legally valid sets of rights, and illusory ownership refers to a feeling of ownership by giving the individual meaning or purpose, for example. The antecedent for this element of absorptive capacity could be defined as organizational culture, and for a small multinational firm, more specifically a growth-oriented organization culture, where everyone can attribute simultaneously. The firm in this study has all employees as shareholders of the company. In many quantitative studies exploitation has been measured with number of patents but it can be measured on the basis of knowledge component in products and services, for example (Chauvet, 2014). However, all in all, increase in absorptive capacity increases knowledge and can be seen leading to sustainable competitive advantage (e.g. Freeman et al., 2010).

Discussion and Conclusions

This chapter complements the extant knowledge transfer literature in the born global / international new venture domain, which has mostly focused on prior knowledge and knowledge acquisition (Fernhaber et al. 2009; Freeman et al. 2010; Fletcher & Harris, 2012), by focusing on absorptive capacity and knowledge transfer in small multinational firms (MNEs). Extant studies, with the few exceptions (e.g. Freeman et al., 2010) have not focused on absorptive capacity of small multinationals, which have both advantages and disadvantages in relation to knowledge transfer and development of absorptive capacity. After presenting the four factors of absorptive capacity as defined by Zahra & George (2002) in relation to our study and having incorporated antecedents and determinants of small multinational firms in relation to the research question, the visual map below (Figure 2) illustrates how they may affect each other and contribute to absorptive capacity. Hence, we provide a contextualisation—in the small multinational firm setting—what the antecedents and other determinants of absorptive capacity can be like.

Figure 2: Visual map



As portrayed, each of the antecedents have an effect on determinants in the middle, and each one of them are known to be common among rapidly internationalized firms (Oviatt & McDougall, 1994; Caves, 1998; Knight & Cavusgil, 2004; Hashai & Almor, 2004; Zahra et al., 2007). The determinants originate from the data and its analysis and show how they affect absorptive capacity. Each of the antecedents affects different types of determinants towards each of the four elements of absorptive capacity. Though, as noted, it is not always based solely on one singular element, e.g., informality can affect both acquisition and assimilation. The following propositions are made based on the findings:

1. Proper use of a widespread set of ICT systems, utilized and operated in an informal matter, increases absorptive capacity for resource-constrained firms.
2. The lack of manifested truths and foundational premises of young entrepreneurial firms combined with the benefits of positive path dependencies from earlier experiences increase absorptive capacity for small multinational firms.
3. Illusory and physical ownership in growth-oriented organizational cultures increase absorptive capacity in small multinational firms.

The empirical results answer the research question: How does a small MNE transfer and absorb knowledge in its internal nexus of relationships? The results confirm that the creation and replication of knowledge explain much of how cXense has managed to grow so quickly, coinciding with Kogut & Zander (1993). It could be due to employee expertise and experience from a previous venture, FAST, where a large percentage of the staff came from (Preece et al., 1999; Kuivalainen et al., 2007; Gabrielsson et al., 2008). It is also clear that subsidiary isolation is feared for its negative effects on intra-firm knowledge transfer and corporate strategy, especially when employees discussed prospective growth (Monteiro et al., 2008). Consequently, cXense, having realized that threat, has managed to establish an organizational culture inviting frequent communication between the different units. The different forms of communication help reduce uncertainty by easing the process of information exchange, both direct and reverse (Daft & Lengel, 1986; Yamin, 1999).

Furthermore, the potential of these rich processing mechanisms constitutes a greater chance of new product development, and the promises such has on maintaining a sustainable competitive advantage (Subramaniam & Venkatraman, 2001). Continuous dialogue between the different subsidiaries and the headquarters, especially through the annual All Hands meeting and the weekly calls, has led to creation and great advances for cXense (Nonaka, 1994; Ghoshal et al., 1994). Consequently, our findings support general knowledge management practices in many ways, as we can see aspects of positive, professional identity building and interunit knowledge flow provide opportunities for learning and for fostering innovation practices (Tagliaventi et al. 2010).

The young age and relatively small size of the company combined with its path dependency has led the focal firm to prefer informal coding (Teece et al., 1997; Autio et al., 2000). However, the idea of expansion and making all activities increasingly complicated due to a higher amount of replication and additional locations has made employees realize that a higher extent of formal coding will be necessary in the future (Grant, 1996a). It seems that the small multinational firm's focus on obtaining more business rather than documenting wins, and its emphasis on aspects that create value—such as innovation and sales—might be evidence of their tendency to grow fast. Perhaps the fact that all employees are stockholders has created a strong incentive to perform well and has led to a task-driven organizational culture (think 'dedication'). This is emphasized by the notion that the employees do not communicate with teammates for fun.

We contribute to previous literature by highlighting entrepreneurial behaviour, global market orientation, mindset, and networking capability (Knight, 2001; Knight & Gavusgil, 2004; Gabrielsson et al., 2008; Freeman et al., 2010, Cavusgil and Knight, 2015). Additionally, the utilization of ICT has obviously improved the focal firm's absorptive capacity by easing access to offices around the world despite noting that the focal firm has areas which can be improved. This portrays the rather complexly intertwined web that is knowledge transfer and absorptive capacity in the context of a small, multinational firm's nexus of relationships. Small multinational firms seem to have less formal structures, absence of bureaucracy, more openness, and looser social dynamics within the organization. Consequently, firms which have experience and are able to develop coordination and communication structures whilst internationalising early and rapidly, can benefit from flexibility (perhaps also from learning advantages of newness, see Autio et al., 2000), even though there are resource constraints.

Limitations and future research

A qualitative single-case study does not allow generalizing a broader populous or testing hypothesis, nor does it allow for confirming or disapproving suggested causalities (Berg, 2009; Ghauri & Grønhaug, 2010). The choice of utilizing an embedded single-case study as research design also affects this study. An embedded or holistic multiple-case study may have allowed a deeper insight into the phenomenon, but the uniqueness of the focal firm favoured the chosen

approach. Multiple case studies could be utilized in the future studies of this topic. Another direction for future studies could be to explore the motivational aspects of the individual employees, as the data from this single-case study points to a direction that individuals' motivation to share knowledge might be an important factor in knowledge transfer. A process of building a culture of sharing in a small MNE can be tricky, however, especially if a person is alone in an office on the other side of the globe. Virtual mobility (which may be prevalent in small, global firms due to resource constraints) may also increase feelings of isolation (Daniel et al., 2018) — which is also an issue in smaller firms with small office head counts. Further, Rodríguez-Serrano and Martín-Armario (2019) found out that market orientation and entrepreneurial orientation, for example, led to a higher level of absorptive capacity in born global firms and that indicates that organization culture matters, and the study of motivations of individuals could provide more insights about the interplay between different levels of organisation. Our idea about “illusory and physical ownership” could be studied in relation to these well-known strategic orientations in the future.

References

- Andersson, U. and Forsgren, M. (1996), 'Control and embeddedness in multinational corporations', *International Business Review*, **5** (5), 487-508.
- Andersson, U., Forsgren, M., and Holm, U. (2001), 'Subsidiary embeddedness and competence development in MNCs - a multi-level analysis', *Organization Studies*, **22** (6), 1013-1035.
- Apriliyanti, I. and Alon, I. (2017), 'Bibliometric analysis of absorptive capacity', *International Business Review*, **26** (5), 896-907.
- Argote, L. and Ingram, P. (2000), 'Knowledge transfer: A basis for competitive advantage in firms', *Organizational behavior and human decision processes*, **82** (1), 150-169.
- Autio, E., Sapienza, H. and Almeida, J. (2000), 'Effects of age at entry, knowledge intensity and imitability on international growth', *Academy of Management Journal*, **43** (5), 909-924.
- Barney, J. (1991), 'Firm Resources and Sustained Competitive Advantage', *Journal of Management*, **17** (1), 99-120.
- Berg, B., (2009), *Qualitative Research Methods: For the Social Sciences*, 7th Ed. Boston: Pearson Education Inc.

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

Brouthers, K. and Nakos, G. (2004). 'SME entry mode choice and performance: a transaction cost perspective'. *Entrepreneurship: Theory and Practice*, **28** (3), 229-247.

Caves, R. (1998), 'Industrial Organization and New Findings on the Turnover and Mobility of Firms', *Journal of Economic Literature*, **36** (4), 1947-1982.

Cavusgil, S. T., & Knight, G. (2015), 'The born global firm: An entrepreneurial and capabilities perspective on early and rapid internationalization', *Journal of International Business Studies*, **46** (1), 3-16.

Chauvet, V. (2014), 'Absorptive capacity: Scale development and implications for future research', *Management international/International Management/Gestiòn Internacional*, **19** (1), 113-129.

Cheng, Y. (2008), 'Asset specificity, experience, capability, host Government intervention, and ownership-based entry mode strategy for SMEs in International Markets', *International Journal of Commerce and Management*, **18** (3), 207-233.

Cohen, W. and Levinthal, D. (1990), 'Absorptive capacity: a new perspective on learning and innovation', *Administrative Science Quarterly*, **35** (1), 128-52.

Coviello, N. and Munro, H. (1997), 'Network Relationships and the Internationalisation Process of Small Software Firms'. *International Business Review*, **6** (4), 361-386.

Cramton, C. (2001), 'The mutual knowledge problem and its consequences for dispersed collaboration', *Organization Science*, **12** (3), 346-371.

Daft, R., and Lengel, R., (1986), 'Organizational Information Requirements, Media Richness and Structural Design', *Management Science*, **32** (5), 554-571.

Daniel, E., Di Domenico, M., and Nunan, D. (2018), 'Virtual mobility and the lonely cloud: Theorizing the mobility-isolation paradox for self-employed knowledge-workers in the online home-based business context'. *Journal of Management Studies*, **55** (1), 174-203.

Fernhaber, S., McDougall-Covin, P. and Shepherd, D. (2009), 'International entrepreneurship: leveraging internal and external knowledge sources', *Strategic Entrepreneurship Journal*, **3** (4), 297-320.

Fletcher, M. and Harris, S. (2012), 'Knowledge acquisition for the internationalization of the smaller firm: Content and sources', *International Business Review*, **21** (4), 631-647.

- Freeman, S., Hutchings, K., Lazaris, M. and Zyngier, S. (2010), 'A Model of Rapid Knowledge Development: The Smaller Born Global Firm', *International Business Review*, **19** (1), 70-84.
- Gabrielsson M., Kirpalani V., Dimitratos P., Solberg C., and Zucchella A. (2008), 'Born globals: Propositions to help advance the theory', *International Business Review*, **17** (4), 385-401.
- Ghauri, P. and Grønhaug, K. (2010), *Research Methods in Business Studies*, 4th ed. Edinburgh: Prentice Hall
- Ghoshal, S., Korine, H. and Szulanski, G. (1994), 'Interunit Communication in Multinational Corporations', *Management Science*, **40** (1), 96-110.
- Grant, R. (1996a), 'Prospering in Dynamically Competitive Environments: Organizational Capability as Knowledge Integration', *Organization Science*, **7** (4), 375-387.
- Grant, R. (1996b), 'Toward a Knowledge-Based Theory of the Firm', *Strategic Management Journal*, **17** (winter special issue), 109-122.
- Gupta, A. and Govindarajan, V. (2000), 'Knowledge flows within multinational corporations', *Strategic Management Journal*, **21** (4), 473-496.
- Hashai, N. and Almor, T. (2004), 'Gradually Internationalizing Born Global Firms: An Oxymoron?', *International Business Review*, **13** (4), 465-483.
- Hennart, J. (2009), *Theories of the Multinational Enterprise*, Oxford University Press.
- Herbsleb, J. and Mockus, A. (2003), 'An Empirical Study of Speed and Communication in Globally-Distributed Software Development', *IEEE Transactions on Software Engineering*, **29** (3), 1-14.
- Hymer, S. (1976), *The International Operations of National Firms: A Study of Foreign Direct Investment*, Cambridge, Mass: MIT Press.
- Knight, G. and Cavusgil, T. (2004), 'Innovation, organizational capabilities, and the born-global firm', *Journal of International Business Studies*, **35** (2), 124-141.
- Knight, G. and Liesch, P. (2016), 'Internationalization: From incremental to born global', *Journal of World Business*, **51** (1), 93-102.
- Knight, G., (2001), 'Entrepreneurship and Strategy in the International SME', *Journal of International Management*, **7** (3), 155-171.
- Kogut, B. and Zander, U. (1993), 'Knowledge of the firm and the evolutionary theory of the multinational corporation', *Journal of International Business Studies*, **24** (4), 625-646.

- Kogut, B. and Zander, U. (1992), 'Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology', *Organization Science*, **3** (3), 383-397.
- Kotlarsky, J. and Oshri, I. (2005), 'Social ties, knowledge sharing and successful collaboration in globally distributed system development projects', *European Journal of Information Systems*, **14** (1), 37-48.
- Kuivalainen, O., Saarenketo, S., and Puumalainen, K. (2012), 'Start-up patterns of internationalization: A framework and its application in the context of knowledge-intensive SMEs', *European Management Journal*, **30** (4), 372-385.
- Kuivalainen, O., Sundqvist, S, and Servais, P. (2007), 'Firms' degree of born-globalness, international entrepreneurial orientation and export performance', *Journal of World Business*, **42** (3), 253-267.
- Lane, P. and Lubatkin, M. (1998), 'Relative Absorptive Capacity and Interorganizational Learning', *Strategic Management Journal*, **19** (5), 461-477.
- Lu, J. and Beamish, P. (2001), 'The internationalization and performance of SMEs', *Strategic Management Journal*, **22** (6-7), 565-586.
- Lu, J. and Beamish, P. (2006), 'SME internationalization and performance: Growth vs. profitability', *Journal of International Entrepreneurship*, **4** (1), 27-48.
- Madhavan, R. and Grover, R. (1998), 'From Embedded Knowledge to Embodied Knowledge: New Product Development as Knowledge Management', *Journal of Marketing*, **62** (4), 1-12.
- Manning, S., Massini, S., and Lewin, A. (2008), 'A dynamic perspective on next-generation offshoring: The global sourcing of science and engineering talent', *Academy of Management Perspectives*, **22** (3), 35-54.
- Miles, M. and Huberman, A. (1994), *An Expanded Sourcebook: Qualitative Data Analysis*, 2nd Ed. London: SAGE Publications, Inc.
- Monteiro, L., Arvidsson, N. and Birkinshaw, J. (2008), 'Knowledge Flows Within Multinational Corporations: Explaining Subsidiary Isolation and its Performance Implications', *Organization Science*, **19** (1), 90-107.
- Nakos, G. and Brouthers, K. (2002), 'Entry mode choice of SMEs in central and eastern Europe', *Entrepreneurship: Theory and Practice*, **27** (1), 47-63.
- Nonaka, I. (1994), 'A Dynamic Theory of Organizational Knowledge Creation', *Organization Science*, **5** (1), 14-37.

- O'Donnell, S. (2000), 'Managing foreign subsidiaries: Agents of headquarters, or an interdependent network?', *Strategic Management Journal*, **21** (5), 525-548.
- Ouchi, W. (1979), 'A conceptual framework for the design of organizational control of mechanisms', *Management Science*, **25**, 833-848.
- Oviatt, B. and McDougall, P. (1994), 'Toward a theory of international new ventures', *Journal of International Business Studies*, **25** (1), 45-64.
- Pinho, J. (2007), 'The impact of ownership: Location-specific advantages and managerial characteristics on SME foreign entry mode choices', *International Marketing Review*, **24** (6), 715-734.
- Preece, S., Miles, G. and Baetz, M. (1999), 'Explaining the International Intensity and Global Diversity of Early-Stage Technology-Based Firms', *Journal of Business Venturing*, **14** (3), 259-281.
- Rodríguez-Serrano, M. Á., & Martín-Armario, E. (2019), 'Born-global SMEs, performance, and dynamic absorptive capacity: evidence from Spanish firms', *Journal of small business management*, **57** (2), 298-326.
- Shuman, J. and Seeger, J. (1986), 'The theory and practice of strategic management in smaller rapid growth firms', *American Journal of Small Business*, **11** (1), 7-19.
- Sidhu, J. and Volberda, H. (2011), 'Coordination of globally distributed teams: A co-evolution perspective on offshoring', *International Business Review*, **20** (3), 278-290.
- Sinkovics, R., Penz, E. and Ghauri, P. (2008), 'Enhancing the Trustworthiness of Qualitative Research in International Business', *Management International Review*, **48** (6), 689-713.
- Stinchcombe, A. (1965), *Social Structure and Organizations*, in March J. (Ed), *Handbook of Organizations*, Rand McNally, Chicago, IL, 142-193.
- Subramaniam M, and Venkatraman N. (2001), 'Determinants of transnational new product development capability: testing the influence of transferring and deploying tacit overseas knowledge', *Strategic Management Journal*, **22** (4), 359-378.
- Sullivan Mort, G. and Weerawardena, J. (2006). 'Networking capability and international entrepreneurship: how networks function in Australian born global firms', *International Marketing Review* **23** (5), 549-572.
- Szulanski, G. (1996), 'Exploring internal stickiness: Impediments to the transfer of best practice within the firm', *Strategic management journal*, **17** (S2), 27-43.

Park, T. and Rhee, J. (2012), 'Antecedents of knowledge competency and performance in born globals: The moderating effects of absorptive capacity', *Management Decision*, **50** (8), 1361 – 1381.

Tagliaventi, M., Bertolotti, F., and Macrì, D. (2010), 'A perspective on practice in interunit knowledge sharing', *European Management Journal*, **28** (5), 331-345.

Teece, D., Pisano, G. and Shuen, A. (1997), 'Dynamic Capabilities and Strategic Management', *Strategic Management Journal*, **18** (7), 509-533.

Vahlne, J-E., Ivarsson, I., and Johanson J. (2011), 'The tortuous road to globalization for Volvo's heavy truck business: Extending the scope of the Uppsala model', *International Business Review*, **20** (1), 1-14.

Van den Bosch, F., Volberda, H. and de Boer, M. (1999), 'Coevolution of Firm Absorptive Capacity and Knowledge Environment: Organizational Forms and Combinative Capabilities', *Organization Science*, **10** (5), 551-568.

Yamin, M. (1999). 'An Evolutionary Analysis of Subsidiary Innovation and Reverse Transfer in Multinational Companies', In: Burton, F., Chapman, M., Cross, A. (Eds.). *International Business Organization: Subsidiary Management Entry Strategies and Emerging Markets*. Macmillan, London, 67–83.

Yamin, M. and Sinkovics, R. (2007), 'ICT and the MNE Reorganization: The Paradox of Control', *Critical Perspectives on International Business*, **3** (4), 322–336.

Yin, R., (2009), *Case Study Research: Design and Methods*, 4th Ed. London: SAGE Publication Inc.

Zahra, S. and George, G. (2002), 'Absorptive capacity: a review, reconceptualization and extension', *Academy of Management Review*, **27** (2), 185-203.

Zahra, S., Neubaum, D. and Naldi, L. (2007), 'The Effects of Ownership and Governance on SME's International Knowledge-Based Resources', *Small Business Economics*, **29** (3), 309-327.

Zander, I., McDougall-Covin, P., and Rose, E. (2015), 'Born globals and international business: Evolution of a field of research', *Journal of International Business Studies*, **46** (1), 27-35.