Transfer of Social and Environmental Accounting and Reporting knowledge: Subsidiary absorptive capacity and organisational mechanisms

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ABSTRACT

Purpose: This paper investigates the antecedents to the development of the three components of subsidiaries’ absorptive capacity (ACAP): recognition, assimilation and application of transferred knowledge in the context of the vertical flow of social and environmental accounting and reporting (SEAR) knowledge from the HQ to acquired subsidiaries.

Design/methodology/approach: Our analysis is based on an embedded multiple-case study of a UK-based MNC, informed by 44 semi-structured interviews and capitalizing on agency theory and socialization theory.

Findings: Prior knowledge is not a sufficient explanation to the development of ACAP but it is also dependent on organisational mechanisms that will trigger the learning processes. Depending on the nature and degree of the social, control and integration mechanisms, the effects of prior stocks of knowledge on ACAP may vary.

Research limitations/implications: Our propositions only hold for one direction of knowledge transfer. The study is based on an embedded multiple case-study in one sector which restricts its generalization. It excludes the specific relationships between the three ACAP learning processes and the existence of feed-back loops.

Practical implications: Our findings suggest that the HQ’s mix of social, control and integration mechanisms should account for initial stocks of SEAR knowledge.

Originality/value: The contribution lies in uncovering the interaction between heterogeneous levels of prior knowledge and organisational mechanisms deployed by the HQ fostering ACAP. We address emerging issues regarding the reification of the ACAP concept and highlight the potential of agency theory for informing studies on HQ-subsidiary relations.

Key words: absorptive capacity, MNC knowledge transfer, organisational mechanisms, social and environmental accounting and reporting, HQ-subsidiary relationships.
INTRODUCTION

Globalization has intensified calls for multi-national corporations (MNCs) to engage in social initiatives ranging from community outreach and environmental protection, to ethical business practices. Alongside the rise of corporate social responsibility (CSR), there has been a demand for the accountability and the transparency on CSR issues leading to the emergence of social and environmental accounting and reporting (SEAR). 93% of the world’s largest MNCs annually report information about their environmental and social impacts (KPMG, 2013) and research suggests that MNCs can benefit from reporting through improved corporate reputation and brand value, superior competitiveness, benchmarking against competitors and access to capital (Cheng, Ioannou, & Serafeim, 2014).

The ability to create and transfer knowledge internally has been considered one of the main competitive advantages of MNCs (Bartlett & Ghoshal, 1989; Hedlund, 1994). By transferring knowledge, MNCs can replicate competences originated in the home country across their subsidiaries which may recombine this transferred knowledge with related knowledge assets (Hansen & Løvås, 2004) and exploit it to prosper in local markets (Kuemmerle, 1999). The literature in knowledge transfer has extensively discussed the role of internal mechanisms inducing knowledge flows between the HQ and the subsidiary (see Michailova & Mustaffa, 2012 for an extensive review). However, many of these studies assume that the benefit created from the flow is a function of how much knowledge an organisational unit receives (Ambos, Nell, & Pedersen, 2013; Andersson, Gaur, Mudambi, & Persson, 2015) but they seem to disregard that subsidiaries possess heterogeneous knowledge stocks (Ambos et al., 2013; Foss & Pedersen, 2002) and thus require tailored mechanisms to develop the capabilities to filter, assimilate and apply the transferred knowledge. While the MNC literature has acknowledged the role of absorptive capacity (ACAP) as it refers to firm’s capacity to recognize, assimilate and apply external knowledge (Cohen &
Levinthal, 1990), it has rarely discussed its antecedents at the subsidiary level (see Song, 2014 for a recent review).

This chapter fills these research gaps by addressing the question of how prior knowledge as well as control, social and integration mechanisms influence subsidiaries’ ACAP. We build on the intra-MNC knowledge literature and growing literature in ACAP with reference to agency theory and socialization theory. Our analysis is based on an embedded multiple case study (Yin, 2009) conducted in a British MNC (FINEST)¹ with subsidiaries in France, Denmark, Netherlands, the USA and Brazil.

The contribution lies in uncovering the interaction between heterogeneous levels of prior knowledge and organisational mechanisms deployed by the HQ fostering ACAP, as our theoretical understanding of how incoming knowledge is linked to existing knowledge stocks is, to date, scarce and fragmented (Ambos et al., 2013; Michailova & Mustaffa, 2012). We show that the effects of prior stocks of knowledge on the development of ACAP will be contingent on the nature and intensity of the organisational mechanisms supporting the argument that prior knowledge is a necessary condition rather than a sufficient condition for a subsidiary to develop ACAP. The research design addresses emerging issues regarding the reification of the ACAP concept and highlights the value of empirically studying ACAP in a non R&D context capitalizing on qualitative methods. The findings have implications for the study of HQ-subsidiary relationships using agency theory.

The rest of the paper is divided into five sections. The first part is dedicated to our theoretical framework. Following a section describing the research methods, we report the main findings by building propositions regarding the influence of prior knowledge and organisational mechanisms on the development of the three dimensions of ACAP. The discussion highlights the significance

¹ For confidentiality, the name of the MNC has been changed to the pseudonym ‘FINEST’
of the findings. We conclude by reviewing the implications and limitations of the paper and by suggesting future research avenues.

**THEORETICAL FRAMEWORK**

Our theoretical framework defines SEAR knowledge recognizing its explicit and tacit dimensions, and then critically examines current issues in the ACAP literature followed by a review of prior studies investigating antecedents of ACAP.

**Social and environmental accounting and reporting knowledge**

The literature suggests that an important competitive advantage of MNCs is their superior ability to transfer and combine capabilities across geographically dispersed units (Grant, 1996; Gupta & Govindarajan, 2000). HQs possess valuable intangible assets and capabilities that subsidiaries can use to develop context-specific knowledge and which they may exploit in order to address local problems and challenges (Johanson & Vahlne, 1977) and thus prosper in their local markets.

Social and environmental accounting and reporting (SEAR) refers to the practices enabling the production of an account about an organisation’s social, environmental, employee, community, customer and other stakeholder interactions (Gray, 2000). To prepare these reports MNCs’ subsidiaries adopt corporate policies, standardized processes and systematic methods to collect, measure, analyse and communicate the social and environmental impact of their operations. The technical knowledge surrounding the use of management information systems centralizing the collection of data, as well as MNC guidelines for users across subsidiaries (e.g. calculation of KPIs), is considered explicit knowledge because it can be written down, encoded and explained (Kogut & Singh, 1988). Conversely, the knowledge related to the meaning of the data collected, the organisational implications and responses to those social and environmental issues, including solving problems such as quantification and comparability of data, is considered as tacit knowledge or ‘know-how’. Nowadays, SEAR knowledge is considered ‘strategic’ (Child & Rodrigues, 1996).
because of its greater consequences for the operations of the whole MNC as part of reputation risk management processes and enabling access to capital (Cheng et al., 2014).

**Absorptive capacity**

Absorptive capacity (ACAP) is one of the most prominent constructs in organizational research in recent decades which finds its roots with the work of Cohen and Levinthal (1990) who defined it as the firm’s ability to identify, assimilate, and exploit external knowledge to commercial ends. Despite the rapid expansion of the ACAP literature, recent comprehensive reviews (Lane, Koka, & Pathak, 2006; Todorova & Durisin, 2007) have identified several issues such as the omission of insights from the original conceptualization, the lack of specification of the underlying assumptions and its portrayal as a one-dimensional construct (often assessed as a function of the unit’s familiarity with the incoming knowledge or as a sum of employees’ prior knowledge). Most of the empirical studies have examined ACAP in an R&D context—often with R&D intensity as a proxy and relying on quantitative research methods. This has limited the generalizability of findings to other types of business-related knowledge and restricted the possibility of building new theory regarding the processes underpinning ACAP.

Despite current attempts to refine and reconceptualise the ACAP construct, studies continue to exhibit some of the issues outlined above reinforcing its reification (Lane et al., 2006). For example, Zahra & George (2002) reconceptualise ACAP as a dynamic capability embedded in an organization’s routines through which knowledge is acquired, assimilated, transformed and exploited, and they regroup the four dimensions into two distinct factors: potential and realized. Nevertheless, their model does not build systematically enough on Cohen and Levinthal’s original contribution and introduces a new component (knowledge transformation) which recent scholars (e.g. Todorova & Durisin, 2007) do not consider it the step after knowledge assimilation but an alternative process linked to assimilation.

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Given the reification issues in the field and recent contributions, considering ACAP from a process perspective (Easterby-Smith, Graça, Antonacopoulou, & Ferdinand, 2008; Lane et al., 2006; Sun & Anderson, 2010; Todorova & Durisin, 2007) recognising its conceptual affinity with organizational learning, our article draws from the dynamic capability view linking specific learning processes (Lane et al., 2006; Sun & Anderson, 2010) to each of the three dimensions of ACAP originally proposed by Cohen and Levinthal (1990). ACAP is thus defined as the subsidiary’s ability to utilize HQ’s transferred knowledge through three sequential processes: (1) recognizing and understanding potentially valuable new HQ knowledge through exploratory learning, (2) assimilating valuable new knowledge through transformative learning, and (3) applying the assimilated knowledge to create new knowledge and commercial outputs through exploitative learning.

Antecedents of subsidiary ACAP

The literature in knowledge transfer has extensively discussed the impact of internal mechanisms inducing knowledge flows between the HQ and the subsidiary (see Michailova & Mustaffa, 2012 for an extensive review). An often implicit assumption of these studies is that the benefit created from the flow is a function of how much knowledge an organisational unit receives (Ambos et al., 2013; Andersson et al., 2015). While the literature has focused on the occurrence of ‘flows’ it has paid less attention to the means of transferring knowledge which will influence the subsidiary capabilities to filter, assimilate and apply the diffused knowledge and the ways in which these mechanisms interact with heterogeneous subsidiary knowledge stocks (Ambos et al., 2013; Tsai, 2001).

In the context of acquisitions, managing the transfer of SEAR knowledge within MNCs is a challenging task especially as acquired subsidiaries may vary in their level of familiarity with the transferred knowledge. Thus, systems, structures and processes deployed by the HQ are vital for
the effective assimilation and exploitation of knowledge by subsidiaries which may possess either ‘limited competence’ (Hoenen & Kostova, 2014) or ‘too much experience’.

While the MNC literature has identified ACAP as one of the most significant determinants of internal knowledge transfer (Gupta & Govindarajan, 2000), it has rarely discussed its antecedents at the subsidiary level (see Song, 2014 for a recent review). The broader ACAP literature offers interesting theoretical and empirical insights regarding the influence of organisational mechanisms on the development of these capabilities at the intra-organisational level. Van den Bosch, Volberda, & de Boer (1999) argue that the level of ACAP is not only determined by the level of prior related knowledge, but also by the moderating determinants of organization forms and combinative capabilities. Zahra & George (2002) consider knowledge sources and experience as antecedents of potential ACAP and social integration mechanisms as reducing the gap between potential ACAP and realized ACAP.

The study of Jansen et al., (2005) is one of the few empirical studies of organisational antecedents to ACAP which included three types of mechanisms: coordination, systems and socialization capabilities. They found that coordination capabilities (i.e. cross-functional interfaces, participation in decision-making, and job rotation) primarily enhance potential ACAP while organizational mechanisms associated with socialization capabilities (i.e. connectedness and socialization tactics) primarily increase realized ACAP. However, the main weakness of their study is their reliance on the ACAP construct making a neat distinction between potential and realized ACAP reinforcing the reification of the construct.

Our model illustrated in Figure 1, builds from previous models and integrates two clusters of antecedents (1) prior related knowledge and (2) organisational mechanisms deployed by the HQ.
**Prior knowledge**

Prior related knowledge is described as various related knowledge domains, basic skills and problem solving methods, learning experience, learning skills and shared language (Cohen & Levinthal, 1990). One of the main assumptions of ACAP is that organizations will only be able to benefit from incoming knowledge if they possess a stock of knowledge in the respective field that allows them to connect the different knowledge elements (Cohen & Levinthal, 1990). Subsequent studies in the ACAP literature have argued that a unit’s response to knowledge inflows is influenced by its interpretations and perceptions, which are primarily shaped by its existing knowledge stocks (Van den Bosch et al., 1999; Tsai, 2000) but are unclear about how heterogeneous repository knowledge stocks will influence those capabilities. In the MNC literature, some empirical studies equate ACAP to relevant prior knowledge (e.g. Gupta & Govindarajan, 2000) and overlook the process capability aspect initially suggested by Cohen and Levinthal (1990).

**Organisational mechanisms**

To study the influence of organisational mechanisms we capitalize on agency theory and socialization theory integrating three types of mechanisms which we broadly classify as control, social and integration.

The HQ-subsidiary relationship can be viewed as a principal-agent relationship (O’Donnell, 2000), because the HQ delegates decision-making authority to subsidiaries which may have divergent motivations and not behave in the corporate best interest. To mobilize transferred knowledge, HQ relies on various mechanisms to influence subsidiaries’ ACAP to ensure that the outcomes of such transfer are aligned with the strategic goals of the HQ. Traditionally, agency researchers have proposed the use of behaviour and output control.

**Behaviour control.** Direct behaviour control implies intervention by the HQ in the subsidiaries’ operations, through centralized decision making and/or through direct supervision by HQ’s representatives. The authority-based hierarchical mechanisms have been suggested as suitable for
promoting ‘obedience to authority for material and spiritual security’ (Adler & Kwon, 2002:18). These mechanisms stimulate interactions that are based on the latent threat that a lack of cooperation will trigger sanctions. The literature has suggested that rather than ‘consummate cooperation’, hierarchical control mechanisms may result in purely ‘perfunctory compliance’ (Ghoshal & Moran, 1996:25). Examples of these mechanisms are close personal surveillance and budget controls.

**Output control.** Output control implies evaluation of the subsidiary’s performance through use of evaluation criteria such as financial performance, market share, productivity or knowledge development. From an equity theory perspective, employees expect that they receive the rewards they are entitled to, based on their contribution to the organization (Minbaeva, Pedersen, Björkman, Fey, & Park, 2003). MNC’s HQ may put in place financial compensation systems that encourage the subsidiary capabilities to assimilate and use the transferred knowledge. Examples of output mechanisms are financial incentives and specification of performance evaluation.

**Social mechanisms.** In the knowledge transfer literature, the concept of social relations has received substantial attention (Bresman, Birkinshaw, & Nobel, 2010; Gupta & Govindarajan, 2000). Management can positively influence knowledge transfer by deploying non-market, intrinsic incentives (Osterloh & Frey, 2000:541) that ‘allow for establishing psychological contracts based on emotional loyalties’. While the literature has indeed found positive effects of social mechanisms on the transfer of knowledge, particularly of tacit nature (Szulanski, 1996), our review reveals rather opposite conclusions on their impact on any of the three dimensions of ACAP (see Jansen et al., 2005; Zahra & George, 2002).

**Integration mechanisms.** Operational integration through team structures and liaison-mechanisms may facilitate the transfer and assimilation of more tacit knowledge, as processes and practices will have to be articulated and possibly codified. Jensen et al., (2005) found that cross-functional
interfaces not only enhance the knowledge acquisition and assimilation of new external knowledge but also enable employees to combine sets of existing knowledge and newly acquired knowledge thus increasing the transformation and exploitation of new knowledge (thus affecting the three dimensions) and that formalization contributes to a unit’s realized ACAP.

METHODOLOGY

Research design

We adopted an embedded multiple case study design of a British MNC in the information systems’ industry (FINEST). FINEST provides information, analytical tools and marketing services to organisations and assists individuals managing their credit relationships and minimising risks of identity theft. We selected FINEST’s French, Danish, Dutch, American and Brazilian acquired subsidiaries based on a theoretical sample approach (Eisenhardt, 1991) assuming different levels of SEAR prior knowledge in comparison to the HQ’s transferred knowledge. The French and Dutch acquisitions were of software companies with products that filled the gaps in FINEST’s existing portfolio. The Danish acquisition was the first part of the expansion in the Nordic region. The 1980 US acquisition enabled FINEST to enter its largest and most mature market, and the acquisition of the largest credit bureau in Brazil provided access to the Latin American market. The HQ has transferred SEAR knowledge to the five subsidiaries since 2008.

Data sources and interview structure

The data are qualitative, mainly derived from interviews and complemented with internal documents, website information, annual and CSR reports, and brochures. Given that the focus of this study is on the vertical inflows of SEAR knowledge from the HQ to subsidiaries, we conducted interviews with managers and employees involved in the transfer of SEAR knowledge in FINEST’s HQ and its five subsidiaries (Table 1). Forty-four semi-structured interviews in total were
conducted between November 2013 and December 2014 (twenty-four in the first round, twenty in the second round) by one of the authors. Interviewees were selected through purposeful sampling (Patton, 2002) following a key informant approach. Each interview lasted between 45 and 60 minutes. Our interview guide was developed to elicit detailed descriptions of participants’ perceptions of their experiences regarding the HQ’s knowledge transfer. Respondents were asked to outline the forms of engagement that the HQ generally used in promoting and diffusing SEAR knowledge in the subsidiaries, the specific SEAR related activities in which they participated and the processes that unfolded since the transfer of knowledge. Finally, we asked about the challenges and benefits they perceived in these mechanisms used by the HQ. All interviews were taped and transcribed. After completing the first analysis, the same interviewees were interviewed again to clarify issues not initially made clear, expand on interesting topics and confirm emerging insights. The transcripts, reports and organizational documents were entered as project documents into the N-Vivo computerized data management program.

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Table 1
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Data analysis

The overall method of analysis is a hybrid approach of qualitative methods of thematic analysis, as it incorporated both the data-driven inductive approach of Boyatzis (1998) and the deductive a priori template of codes approach outlined by Crabtree and Miller (1999). Previous studies were integral to the process of deductive thematic analysis while allowing for themes to emerge directly from the data using inductive coding. Our research is explanatory in essence and thus, our analysis consisted of different analytic stages described below.

First, we used a template approach in the form of codes to be applied as a means of organizing text for subsequent interpretation. One of the researchers defined the template a priori based on our
The codes developed for the manual were entered as nodes in N-Vivo and one of the authors coded the text by matching the codes with segments of data selected as representative of the code. Based on our literature review, we organised the codes in three clusters: control, social and integration. The segments of text were then sorted, and a process of data retrieval organized the clustered codes for each project document across all the six sets of data (HQ, and the French, Danish, Dutch, American, and Brazilian subsidiaries).

Rather than using a proxy to assess ACAP (as most of prior studies), codes were inductively developed from the data in order to capture each of its dimensions in a manner appropriate for the context (Figure 2). A data structure was developed consisting of first, second and third-order concepts. The data structure was developed through a process of constant comparison (Glaser & Strauss, 1967) between theory and data. We derived labels from the literature to capture the second-order constructs by using items used by previous studies from broader measures of ACAP as recommended by Lane et al., (2006) and tailored to the specific context of SEAR. Our data structure was consistent with the three dimensional conceptualization of ACAP proposed by Cohen and Levinthal (1990). Evidence to support the first-order constructs is provided throughout the text.

In order to develop our propositions, we proceeded with the strategy of ‘stacking comparable cases’ as suggested by Miles, Huberman, and Saldana (2014). Once each case was well understood, we ‘stacked’ the case-level in a meta-matrix condensing the findings from the associated antecedents (prior knowledge and the three types of organisational mechanisms) and level of development of ACAP. It was possible to detect ranges based on the patterns and directions of answers obtained and thus, allocate the precise assessment (Low, Moderate and High); the presence or absence of a particular mechanism was also noted. This systematic comparison allowed us to
establish patterns in the data (Crabtree & Miller, 1999) by identifying the corresponding mechanisms influencing the three components of ACAP (Table 2)

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Reliability was ensured by following the pre-designed interview protocol and organizing a case-data base for each subsidiary. To dynamically construct a valid-theory-creating process (Pauwels & Matthyssens, 2004) three strategies were adopted. To build a coherent justification of the themes, the information gathered from the interviews was triangulated using the evidence from the other secondary sources and from converging perspectives of our interviewees. We used ‘member checking’ procedures (Lincoln & Guba, 1985) taking specific descriptions or themes back to participants to ascertain whether they considered them accurate during our second round of interviews. Finally, our iteration between case selection, data collection, data analysis and comparison with extant theories and emergent theory allowed us to critically assess the possible impact of sources of misfit or invalidity.

\textbf{FINDINGS & PROPOSITIONS}

We present our findings in light of our theoretical framework by analysing separately each of the antecedents and offering a related proposition regarding the antecedents of the three ACAP dimensions.

\textbf{Prior knowledge}

We found that the levels of SEAR prior knowledge varied across the subsidiaries and this was generally explained by the differences of SEAR practices developed historically in the host country and particularly regarding the employees’ awareness of SEAR laws and regulation, competitors’ behaviour and national social and environmental agendas.
In the European subsidiaries, on average only one out of three employees interviewed had experience with SEAR, and this only between one and two years. Differences across the European subsidiaries emerged when we enquired about SEAR practices of the competitors, current regulation and national SEAR. French employees had a low awareness of these topics followed by the Dutch employees who possessed moderate levels of prior knowledge. Danish employees were highly cognizant of the SEAR topics, claiming that SEAR is a ‘big thing’ (P8) and that ‘going green’ (P10) is characteristic of the Nordic countries.

The Brazilian subsidiary had the highest level of SEAR prior knowledge. Since 1960 it had developed a strong commitment to SEAR and was the only subsidiary of FINEST that produced a CSR report following the Global Reporting Initiative (GRI) B+ standard. The local SEAR team was integrated by highly experienced employees (both in terms of working with SEAR as part of FINEST and previous professional experience in other companies and CSR-related institutions). The American subsidiary was also characterized by a high level of SEAR previous knowledge; employees had also been involved in SEAR related jobs and identified current trends, behaviours of competitors and were aware of the pressures for SEAR in the American context.

The cross-case analysis (Table 2) shows that subsidiaries with moderate to higher levels of prior knowledge (American and Danish subsidiaries) with exception of the Brazilian subsidiary were generally better at coping with the processes of recognising, understanding, assimilating and applying the transferred SEAR knowledge than the French and Dutch whose employees were introduced to that knowledge by FINEST’s HQ. Thus we can propose that:

Proposition 1: Prior knowledge eases the ability of subsidiaries to utilize transferred knowledge through the three sequential processes of ACAP.
Control (output) mechanisms

Specification of performance evaluation. From the entire interviewee sample, we found that only three managers in the Danish, Dutch and Brazilian subsidiaries were aware of the existence of performance evaluation criteria related to SEAR. The interviews with employees implementing SEAR processes revealed uncertainty about the inclusion of SEAR as part of the evaluation criteria particularly in the French subsidiary where employees considered that SEAR was neither relevant, nor ‘strategic’ for FINEST and only committed themselves to implement routinely the new processes (application of the knowledge at the very low level) but did not dedicate additional efforts in analysing and understanding the purposes of the transferred knowledge nor incorporating the knowledge to address local organizational objectives. Thus we can propose that:

Proposition 2: The absence of SEAR specification of performance evaluation for employees is likely to limit the subsidiary’s processes of recognition, understanding and assimilation of transferred knowledge.

Financial incentive systems. We found a general lack of market incentives across all the subsidiaries, including those subsidiaries with permanent CSR or SEAR related positions. The message sent by the lack of financial incentive systems was similar to what we observed with the performance evaluation criteria. Although from a HQ perspective SEAR was considered as a source of competitive advantage and thus SEAR knowledge was seen as ‘strategic’, the French, Danish and Dutch subsidiaries that relied on non-permanent voluntary positions did not share this perception and did not view SEAR as a ‘business priority’ and thus they ‘shouldn’t’ dedicate more effort and time to it. While the Danish subsidiary managed to quantify the monetary impact of the exploitation of SEAR knowledge which represented a measure of subsidiary performance and thus, could use this evidence to obtain rewards from the HQ, the other European subsidiaries lacked these performance measures. So, other than the indirect financial incentive through subsidiary
performance, our interviewees did not mention any rewards, promotions and/or increments which for many employees underscored their doubts about the strategic nature of the SEAR knowledge.

Employees occupying permanent positions (i.e. Brazilian and American subsidiaries) had as part of their job descriptions the identification, application and use of SEAR knowledge so the need for compensation as a salient issue did not emerge during our interviews. In contrast, employees performing voluntarily SEAR roles (e.g. French, Dutch and Danish subsidiaries) limited their engagement to the lowest level of application of knowledge and committed their efforts to the implementation of repetitive routines of the processes but did not display extensive exploratory nor transformative learning. We can thus propose that:

**Proposition 3: The absence of financial incentives is likely to limit the subsidiary’s processes of recognition, understanding and assimilation of transferred knowledge.**

**Control (behaviour) mechanisms**

**SEAR budget control.** We identified that SEAR budgetary control over the CSR function varied across the subsidiaries and was related to the subsidiary’s respective strategic significance within the MNC. For instance the Brazilian, American and Dutch offices had a budget allocated by the local management while for the Dutch and French subsidiaries this budget was allocated by the HQ. We found that this form of control inhibited the way subsidiaries applied SEAR knowledge as subsidiaries were dependent on resources from the HQ. Our data suggest that those subsidiaries with a relatively higher autonomy to allocate their budget, as in Brazil, the US and Denmark, had leveraged the knowledge to develop specific projects and tasks without the constant need to justify the purposes to the HQ. For example, in the American subsidiary this money was used to develop tailored training and buy a complementary management system. In the Danish subsidiary, the employees could access this budget to propose new projects incorporating the knowledge. For the
French and Dutch subsidiaries, it was felt that the resources allocated by the HQ were insufficient to apply the knowledge transferred. Thus, we can propose that:

*Proposition 4: The greater the subsidiary autonomy of SEAR budget, the more likely the subsidiary will engage in processes of application of the transferred knowledge.*

**Social mechanisms**

*Intensity of communications.* We found differences in the intensity of the communications across the five subsidiaries. In France, employees receiving and implementing SEAR knowledge participated in one conference call each year to give feedback on the results of reporting to the HQ. The quarterly email conversations between the CSR corporate team and the local managers were overall perceived as ‘very poor’ (P7, P8) and more of a ‘control’ mechanism (P7) rather than a two-way communication between the HQ and the subsidiary:

> ‘They (HQ) look for people that are interested in projects and when they find them, they ask them what is happening in their country and what have they done, and in fact it works more in that way than a real communication system’ (P7)

A lack of communication also created uncertainty and anxiety among Dutch employees who considered they were missing some information from the HQ:

> ‘Well, what I found coincidentally last year is that we have also been audited on the details we submit in the system. What happened in the past is that every month I would enter all the details and then forget about the background and not collect all the supporting details in a certain way. I did not expect being audited ... that was something that we were a little bit surprised about and found out a little bit late’ (P13)

The Brazilian and American subsidiary CSR managers had direct contact with the corporate CSR team and reported a greater intensity of communications than did the European subsidiaries for whom SEAR knowledge was filtered through the local managers or liaison personnel.

Interestingly, those subsidiaries with greater intensity of communications between HQ and subsidiary were able to obtain key information from the HQ regarding the value of the knowledge which allowed employees to process and understand the tacit knowledge. Not surprisingly, the
French and Dutch subsidiaries were those offices in which the tacit knowledge was the most difficult to understand. Thus the evidence suggests that:

**Proposition 5**: The greater the intensity of communications between the HQ and the subsidiary, the greater is the opportunity for the subsidiary to engage in the processes of recognition and assimilation of the new knowledge.

**Corporate socialization.** In 2012, FINEST hosted its first CSR conference in Mumbai, India with 150 delegates to enable the HQ to sensitize employees about the importance of SEAR for the MNC as suggested by the former Head of Global CSR (P1):

‘They didn’t understand SEAR and the business benefits weren’t clear enough. It was not becoming central enough, so we took the opportunity of encouraging our management team to understand it, we went to Mumbai ... it was not a normal conference it was something that I deliberately did ... I used that opportunity to get my message across’

CSR managers in the Danish, American and Brazilian subsidiaries attended the conference and assessed the outcome of such conference as ‘very positive’. They considered this event as a ‘turning point’ which helped them to see the ‘bigger picture’ about the importance of SEAR knowledge. These managers developed a shared mission and a unitary corporate culture around SEAR, demonstrated the capability to recognize the value of SEAR for FINEST and the impact that it had for its shareholders and the reputation for the global company. Upon their return, these individuals also diffused these values to other local employees involved in SEAR who increasingly appreciated internal knowledge.

Another corporate socialization mechanism was the employee program driven by HR which served as the ‘social responsible arm’ (P20) that linked the employees with their community and SEAR activities and was rebranded as the ‘FINEST’ employee corporate social responsibility program’ in 2013 (CSR report, 2014).
As illustrated by P14, socialization through interaction with the employee program, allowed employees to share experience, discuss and gain ‘common knowledge’ about SEAR and learn each other’s experiences

‘I mean everybody is working in their own specialism, but the employee culture program gives the opportunity for people from different professions to work together and engage more than in the past, communicating about these things’ (P14)

Based on these two illustrations of corporate socialization one can propose that:

Proposition 6: Corporate socialization mechanisms will enhance the processes of recognition, understanding and assimilation of the transferred knowledge.

Visits from the HQ to the subsidiary. Visits to the acquired subsidiaries took place at the beginning of the knowledge transfer, at which time the Global Head of CSR visited numerous subsidiaries (including those in our sample) to introduce SEAR and find the ways in which the subsidiaries could leverage their own capabilities:

‘We really didn’t have our arms around a CSR reporting strategy… the Global head of CSR took a pragmatic approach saying: Ok what do we already have in the country that we can build on?’ (P10)

Our interviews highlight that between 2008 and 2010, these visits encouraged employees to embrace the new processes and establish a dialogue with the corporate managers regarding the HQ expectations. The knowledge that was diffused through these visits was mostly articulated, explicit knowledge about management systems but it also gave a framework for employees to develop an initial sense of the reasons for this transfer of knowledge. Nevertheless, the visits subsequently stopped when the HQ considered that most subsidiaries had attained an ‘integration’ level in which the transferred knowledge was becoming routinized.

Our interviewees in the Brazilian subsidiary described that the way in which the HQ determined SEAR targets were considered very ‘top-down’ and ‘distant’ (P18) and that visits could help to solve these issues:
'It would be very good if the CSR manager could visit our country again, see our reality, our way to work at least once per year to structure our future aligned with the global targets and guidelines.'

We learnt from our interviews that following the acquisition of the Brazilian subsidiary, the transfer of SEAR was not smooth because of the long-standing SEAR engagements that the previous company had had since the 1960s. Thus, our findings support the argument that visits to the country in the early stages of the transfer are positively related to the development of the capacity to analyse, process and interpret new knowledge but may be also crucial for acquisitions after the ramp-up process where the subsidiary will go through a restructuring process and will need support in understanding how to best apply the knowledge based on the local conditions as illustrated in the Brazilian case. Thus, we can propose that:

**Proposition 7:** HQ visits to the country during the integration process will positively influence the processes of recognition and assimilation of the transferred knowledge. After the ramp-up process, HQ visits may enhance the application of the transferred knowledge.

**Integration mechanisms**

**Temporary and voluntary structures versus permanent structures.** Our findings suggest that the incorporation of formal SEAR teams into the subsidiary structure had a more positive influence on subsidiary’s assimilation and application of knowledge than the voluntary structures. Permanent teams were only found in Brazil and in the USA with five permanent positions in each country dedicated to coordinate the SEAR and related programs. Meanwhile, in all the European subsidiaries the structures were both temporary and voluntary. HR, marketing and sales managers had adopted SEAR roles as part of their core roles and were supported by a local network of temporary ‘ambassadors’ who were either nominated by the HQ and the local management or voluntarily self-nominated as ‘data providers’. The informal nature of the ambassadors’ role in supporting the SEAR activities meant that there was a lack of continuity in the role (turnover rate of ambassadors was very high). As noted above, the ambassadors adopted this role driven by their
personal beliefs but this commitment was bounded to their core role responsibilities. This issue was particularly pronounced in the European subsidiaries which relied on these ambassadors to receive and apply the knowledge. This was acknowledged in the HQ as illustrated in the following quote:

‘I think having people where SEAR is not part of their core role it’s difficult. People will sometimes come and go, will leave the business which means that there is another challenge of how do you ensure that there is some continuity and learning that they will pass to the next person’ (P13)

In contrast, the permanent teams in the USA and Brazil managed to leverage the knowledge by building on experiences over time, accumulated in individuals, team processes, procedures and routines (Persson, 2006). Thus, formalization and permanency of their teams allowed employees to devote their resources not only to assimilate the new processes and routines but to go further and apply the knowledge in the development of strategies to create impact for the whole subsidiary. Continuity was ensured and previous knowledge was not lost but rather transferred to whoever adopted the new position. We find an example of the development of this capacity in the American subsidiary where the permanent positions engaged in SEAR skill development tailoring an intensive training program across the 39 offices trying to emphasize the importance of SEAR and all the activities carried out throughout the country.

Overall, with the exception of the Brazilian subsidiary, our data show that rigidity and formal team composition was more favourable to the assimilation and exploitation of SEAR knowledge than the more flexible structures. Thus, we can propose that:

Proposition 8: Permanent positions will have a greater positive influence on the processes of assimilation and application of the transferred knowledge than temporary positions.
**Liaison mechanisms.** The ‘liaison mechanism’ existed in Europe but neither in Brazil nor the USA, and we found that this was a decision that came from the HQ to compensate for the absence of SEAR:

‘So when I started this role, the CSR teams were developed in completely different ways, so North America and Latin America were fantastic, they had great processes, they had projects, they were very strong at reporting but in Europe there wasn’t that CSR leader... (P6)’

In 2008, the HQ indicated that one of the HR or Marketing managers in Europe would act as coordinators of SEAR knowledge across the European subsidiaries on an annual rotation basis.

Some of our interviewees highlighted many benefits of this liaison role such as deeper personal relationships to others involved in SEAR. A liaison role holder reported that:

‘What we also did was not only the calls, I had bi-weekly meetings so if I felt that if a certain country was a little bit silent, I used to phone the ambassadors directly, on a personal level and have some chat with them to find out if there was anything that I could help with’ (P14)

Given the lack of communications highlighted before between the HQ and the European subsidiaries, the liaison personnel served as a bridge between these two as suggested by the CSR manager in the HQ:

‘She was taking responsibility for the European group and she would organise quarterly if not more frequent conference calls... we provided a lot of information about what standards they were reporting to, what type of information we needed... ’

This manager was actively engaged in communications with the region, where she would address some of the difficulties transferring SEAR knowledge and particularly those related to its *tacit* nature:

‘We had a monthly conference call and on each conference we would go through what is in the pipeline for the next quarter...What other data we need to collect...if it was electricity data for instance you have differences in how the data is collected in France and Denmark...so we cannot adopt the same approach’ (P10)

At the country level, employees testified the benefits of the liaison personnel who gave clear direction to the team. Moreover, as part of this role, the manager earned a significant level of discretion from the HQ to develop tailored tasks in the subsidiaries such as local training.
In contrast to the low intensity of the communications between the HQ and the European managers, the liaison coordinator organised between one and two video conferences per month with all the European subsidiaries and every two weeks only with the local team. Not only did liaison personnel adopt a translator role, helping employees to recognize the value and interpret the knowledge, but they also invested time in grounding and applying the knowledge to the local conditions of the subsidiary. For instance, the liaison mechanism identified that a ‘saving costs’ strategy could be developed in Denmark applying the knowledge transferred by the HQ. Thus, we suggest that liaison mechanisms have a positive impact in the three processes of ACAP.

*Proposition 9: Liaison mechanisms will positively influence the subsidiary’s processes of recognition, assimilation and application of the transferred knowledge.*

**DISCUSSION**

Our work has offered a set of propositions regarding the relationship between prior knowledge, social, control and integration mechanisms and the three components of ACAP by specifying their respective independent influence. The comparative perspective yields a number of insights regarding their interaction that require further consideration.

Among the Dutch and French subsidiaries (those with the lowest levels of prior knowledge) the moderate level of control and extensive social mechanisms helped to foster the three ACAP dimensions in the former subsidiary (Table 2). Intense control and weak social mechanisms exacerbated the effects of a lack of prior knowledge in the French subsidiary leaving the three ACAP dimensions underdeveloped. An interesting outcome is that those subsidiaries with moderate levels of prior knowledge (Danish and American) developed the three capabilities with particular unfolding of the exploitative learning capabilities (e.g. embedded the new knowledge in the subsidiary operations and reflected on how to continuously improve those learning processes).

Trade-offs between integration mechanisms can be identified in these two cases. Despite having
temporary and voluntary team structures, the liaison mechanisms helped the Danish subsidiary to enhance its learning capabilities. Conversely, American subsidiaries lacked liaison mechanisms but benefited from the permanent structures.

The Brazilian subsidiary illustrates the negative effects of high initial stocks of knowledge. Despite its high level of expertise, the control and social mechanisms limited its learning capabilities. This finding supports the argument that different types of mechanisms need to be deployed in subsidiaries with high levels of experience in SEAR knowledge to avoid damaging their learning processes and instead, ensure that their capabilities are of potential use and diffused in the wider MNC context (Yang, Mudambi, & Meyer, 2008).

Contrary to Jansen et al., (2005) in which socialization mechanisms were found to increase both the transformation and exploitation capabilities, we found that the social mechanisms influenced only the processes of recognition and assimilation of knowledge. This might be explained by the fact that Jansen et al., (2005) adopted a broad definition of knowledge and conceptualized ACAP into the ambiguous potential and realized subsets.

The literature has recognised that tacit knowledge is difficult to codify and thus its transfer requires intense communications (Szulanski, 1996), personal presence and face to face interactions in order to enable the development of a single social community suitable for the transmission of ‘rich’ information. Our findings confirm that most of the social mechanisms such as communications, visits, and corporate socialization practices are significant predictors of the capability to assimilate ‘know-how’; we expand those findings by highlighting that in the absence of face to face interaction and expatriate managers, experienced liaison personnel may enable the development of tacit knowledge stocks. The fact that the liaison personnel were local managers—speaking several languages and adopting translating roles not only in the literal sense but also interpreting the meaning of SEAR—enhanced the credibility of the transfer and the potential to
apply this knowledge. Our study also suggests that HQ visits to the country of acquisitions during the ramp-up process enhance recognition and assimilation of the transferred knowledge, but they may be also crucial during the integration process where knowledge application processes may start to unfold.

Formal team structures have a positive impact on the development of the three dimensions permitting continuous exploitation and refinement of acquired knowledge (Sun & Anderson, 2010) in contrast to the argument in the literature that formal structures damage the integration of knowledge in an organization (Grant, 1996). Our finding is thus related to some extent to the results of Jansen et al., (2005) where formalization procedures such as documenting rules, procedures, processes and systems positively influenced the capability of exploitation.

Although our findings could not be conclusive about the impact of control (output) mechanisms we found an effect of their absence limiting the three processes of ACAP. This finding is in line with the literature in social capital which has suggested that a consistent use of mechanisms such as rewards sends ‘a signal to organizational members about the kinds of activities and habits that are valued by the organization’ (Leana & Van Buren, 1999:545). In our cases, the absence of financial incentives was perceived by employees as a signal that SEAR was neither a ‘business priority’ nor ‘strategic’, contrary to the HQ’s intention to make SEAR a competitive advantage. A similar perception was also identified with the lack of specification of performance criteria which raises questions on the choice of mechanisms by the HQ matching its strategic objectives.

Our findings suggest that the control behaviour mechanism exerted by the HQ in the form of budget control was detrimental to the application of SEAR knowledge. Thus, in the context of transfer of vertical inflows of SEAR knowledge from the HQ to acquired subsidiaries, control (output) mechanisms may be more beneficial than behaviour mechanisms. An interesting finding is that integration mechanisms and visits from the HQ (contingent on the time of the visit) can
trigger the three dimensions of ACAP and thus are crucial for HQs to include in the transfer given their cost-effectiveness.

**CONCLUSIONS**

This study builds and contributes to our theoretical as well as empirical understanding of the antecedents of subsidiaries’ ACAP in the context of intra-MNC knowledge transfer and contributes to the ACAP and MNC transfer of knowledge literatures in several ways.

The main contribution of this research lies in considering the interaction between heterogeneous levels of prior knowledge and organisational mechanisms fostering ACAP, as the theoretical understanding of how incoming knowledge is linked to existing knowledge stocks is, to date, scarce (Ambos et al., 2013; Michailova & Mustaffa, 2012). Our findings demonstrate that prior knowledge is not a sufficient explanation to the development of the capability to recognise, assimilate and apply external knowledge (Cohen & Levinthal, 1990) but is also dependent on organisational mechanisms that will trigger those learning processes. Depending on the nature and degree of organisational mechanisms, the effects of previous stocks of knowledge on the development of ACAP may vary from positive to negative. In other words, prior levels of knowledge can be an asset or an obstacle for subsidiaries to trigger learning processes. Our findings thus suggest that HQs aiming at increasing the learning processes of subsidiaries need to manage their foreign subsidiaries so as to stimulate the development of capabilities of recognition, assimilation and application through a mix of control, social and integration mechanisms that complement their repository stocks of knowledge. These findings thus, echo the argument by agency theorists that a variety of mechanisms to control and coordinate their foreign subsidiaries is necessary as the different mechanisms are predominantly complementary rather than substitutes of one another (Tosi, Katz, & Gomez-Mejia, 1997).
Our paper highlights the potential of agency theory informing studies of HQ-subsidiary relations (Hoenen & Kostova, 2014). The fact that some subsidiaries did not develop the processes of recognition, assimilation and application of the transferred knowledge highlights that the problem in essence was not the incompatibility of goals between the principal (HQ) and the agent (subsidiary) but rather a combination of very low or very high levels of prior knowledge and control, social and integration mechanisms that did not compensate for those levels of knowledge. If SEAR is considered strategic to the MNC and key to the development of local competitive advantages to solve social and environmental dilemmas, the HQ must consider the different existing stocks of knowledge and capabilities of the subsidiaries when designing the organisational mechanisms underpinning the transfer of knowledge. Our research highlights the need for agency theory to consider more than the usual control mechanisms and consider their combination with the other types such as social and integration mechanisms.

Based on our findings, our work engages with recent critiques questioning the overemphasis in the literature on the occurrence of ‘flows’ and the underlying assumption that the benefit created from these knowledge flows is a function of how much an organisational unit receives knowledge (e.g. Ambos et al., 2013; Andersson et al., 2015), our findings in the Brazilian case provide evidence to break this misconception by revealing that the transfer disrupted and ultimately damaged the learning capabilities of the subsidiary, shedding light on a ‘darker side’ of knowledge transfers (Reus, Lamont, & Ellis, 2015).

Following the calls in the field to address the reification of the construct of ACAP (Lane et al., 2006), our work builds from a rather novel perspective linking ACAP and OL and drawing from the dynamic capability view linking specific learning processes (Lane et al., 2006; Sun & Anderson, 2010) to each of the three dimensions of ACAP originally proposed by Cohen and Levinthal (1990). We believe that the use of a qualitative study has helped to inductively examine
the processes of ACAP specific to the SEAR context and determine the mechanisms that trigger the three processes of ACAP, contributing to clarify how the construct operates in a non R&D context.

This paper has managerial implications. Based on the available resources, HQ managers may consider liaison mechanisms, which less costly than permanent positions can act as substitutes of direct communication with the HQ in small size subsidiaries and have the advantage to enhance the three processes of ACAP. Based on our finding that integration mechanisms can be mutually compensated, managers could also choose one that suits the MNC structure (e.g. liaison mechanisms instead of permanent positions or the opposite).

Our study has some limitations. It is limited in explaining the relationships between the three processes and accounting for the existence of feed-back loops (Song, 2014). Future work could examine these phenomena through the lens of system dynamics so as to uncover the complexity of the capabilities and time-dependent contingencies involved.

This paper is based on an embedded multiple case-study in one sector and has some limitations in terms of generalization to MNCs operating in other sectors. Nevertheless, the conceptual framework developed in this research has generated contingent generalizations which should assist in further comparisons. For instance, the findings are probably relevant in other settings such as the transfer of other business-types of knowledge (non R&D)—for example regarding diversity management or quality management—to MNC acquired subsidiaries with heterogeneous stocks of knowledge. In our study, SEAR knowledge was transferred arbitrarily by the HQ to subsidiaries. In this sense, the arguments of this study should be limited to knowledge transfers in which receivers have low discretion.

Our propositions only hold for one direction of knowledge transfer although subsidiaries also engage in knowledge flows in other directions. Future work could consider the processes of reverse
diffusion of SEAR knowledge from subsidiaries with higher levels of repository knowledge that contribute to build the HQ’s ACAP. While we have considered the local stocks of knowledge, we have not considered the influence of different kinds of distance between the HQ and the subsidiary that may interact with organisational mechanisms enhancing or deterring processes of ACAP. Further studies could investigate the impact of cultural, institutional and linguistic distance on the development of subsidiaries’ ACAP.

REFERENCES


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**APPENDICES**

Figure 1 Antecedents of ACAP
Table 1 Conducted interviews

<table>
<thead>
<tr>
<th>At HQ</th>
<th>Ex-Global Head of CSR (P1), Global Head of CSR (P2), CSR Reporting Manager (P3), Corporate Responsibility Advisor (P4), Managing Director UK (P5), Global Head of Communications (P6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In French subsidiary</td>
<td>Financial Responsible and Coordinator of Reporting (P7), HR Manager (P8), Sales Effectiveness Director (P9)</td>
</tr>
<tr>
<td>In Danish subsidiary</td>
<td>CSR and Marketing Manager (P10), Finance Assistant (P11), Head of Data Service (P12)</td>
</tr>
<tr>
<td>In Dutch subsidiary</td>
<td>HR Manager (P13), Marketing &amp; Communication Executive (P14), Sales Support Manager (P15)</td>
</tr>
<tr>
<td>In Brazilian subsidiary</td>
<td>Sustainability Manager (P16), Corporate Citizenship Manager (P17), former CSR Coordinator (P18), Financial Education Ambassador (P19), Employee Ambassador (P20)</td>
</tr>
<tr>
<td>In American subsidiary</td>
<td>Community Relations Manager (P21), Director of Public Education (P22), Consultancy Business Analyst (P23), Vice-president of Corporate Marketing (P24)</td>
</tr>
</tbody>
</table>

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Recognition that data collected is relevant for shareholders
Recognition that CSR reporting is a source of competitive advantage for a global company
Employees discuss the practice with other colleagues
Employees examine the practice and develop opinions regarding it
Employees make questions about the practice
Employees analyse how the new knowledge fits in the institutional environment
Understanding of the purposes of the practice
Understanding of the processes of the practice
Consideration that SEAR may be used to develop competitive advantage locally
Use of institutional context to legitimize the practice
New knowledge integrated with works councils, dialogues, storytelling, PR and external communications.
Existing practices are modified to accommodate new knowledge
Internal communications with other departments to obtain data
CSR performance is communicated across the organization
New processes used to save costs
Data collected is used to increase reputation with customers and enhance customer engagement
Development of local KPIs
Routine processes become taken for granted
Knowledge becomes part of the employees’ identity
New knowledge is consistent and works in concert with previous practices
Development of training to new employees
Recognition of the usefulness of SEAR knowledge transferred from the HQ [Adapted from Cohen & Levinthal, 1990]
Analysis and assessment of transferred knowledge [Adapted Lane & Lubatkin, 1998]
Identification of new opportunities to use knowledge [Adapted from Lane et al., 2006]
Combination of new acquired knowledge with existing knowledge [Adapted from Lane et al., 2006 and Fichman & Kemerer, 1997]
Knowledge is shared between and transferred to different parts of the subsidiary [Adapted from Lane et al., 2006]
Application of transformed knowledge for subsidiary strategic objectives
Transformed knowledge is incorporated in subsidiary operations [Adapted from Zahra & George, 2002]
Recognition of the usefulness of SEAR knowledge transferred from the HQ [Adapted from Cohen & Levinthal, 1990]
Analysis and assessment of transferred knowledge [Adapted Lane & Lubatkin, 1998]
Identification of new opportunities to use knowledge [Adapted from Lane et al., 2006]
Combination of new acquired knowledge with existing knowledge [Adapted from Lane et al., 2006 and Fichman & Kemerer, 1997]
Knowledge is shared between and transferred to different parts of the subsidiary [Adapted from Lane et al., 2006]
Application of transformed knowledge for subsidiary strategic objectives
Transformed knowledge is incorporated in subsidiary operations [Adapted from Zahra & George, 2002]

Figure 2 Data structure

Capability to recognize and understand transferred knowledge (Exploratory learning) (Lane et al., 2006)

Capability to assimilate transferred knowledge (Transformative learning) (Lane et al., 2006)

Capability to apply assimilated knowledge (Exploitative learning) (Lane et al., 2006)
Table 2 Predictor-outcome matrix

<table>
<thead>
<tr>
<th>Antecedents</th>
<th>French subsidiary</th>
<th>Danish subsidiary</th>
<th>Dutch subsidiary</th>
<th>American subsidiary</th>
<th>Brazilian subsidiary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior knowledge*</td>
<td>Very Low</td>
<td>Moderate</td>
<td>Low</td>
<td>Moderate</td>
<td>Very High</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td>Specification of performance evaluation</td>
<td>Unknown</td>
<td>Known</td>
<td>Unknown</td>
<td>Known</td>
</tr>
<tr>
<td>Financial incentive systems</td>
<td>Absent</td>
<td>Absent</td>
<td>Absent</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>Behaviour</td>
<td>SEAR budget control from HQ</td>
<td>High</td>
<td>Absent</td>
<td>Moderate</td>
<td>Absent</td>
</tr>
<tr>
<td>Social mechanisms</td>
<td>Intensity of communications</td>
<td>Low</td>
<td>Moderate</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Corporate socialization</td>
<td>Low</td>
<td>High</td>
<td>Moderate</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Visits from the HQ to the subsidiary</td>
<td>Present**</td>
<td>Present**</td>
<td>Present**</td>
<td>Present**</td>
<td>Present**</td>
</tr>
<tr>
<td>Integration</td>
<td>Liaison mechanisms</td>
<td>Existent</td>
<td>Existent</td>
<td>Existent</td>
<td>Absent</td>
</tr>
<tr>
<td>Structure of local teams</td>
<td>Temporary and voluntary</td>
<td>Temporary and voluntary</td>
<td>Temporary and voluntary</td>
<td>Permanent</td>
<td>Permanent</td>
</tr>
<tr>
<td>ACAP</td>
<td>Capability to recognize new external knowledge</td>
<td>Low</td>
<td>High</td>
<td>Moderate</td>
<td>High</td>
</tr>
<tr>
<td>Capability to assimilate valuable external knowledge</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td>Capability to apply assimilated external knowledge</td>
<td>Low</td>
<td>High</td>
<td>Moderate</td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>

* Relative to knowledge transferred by the HQ** Present at the start of the transfer

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