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Absorptive capacity in foreign subsidiaries: The effects of language-sensitive recruitment, language training, and interunit knowledge transfer

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ABSTRACT

Are multinational corporations able to enhance the development of absorptive capacity in foreign subsidiaries through language-oriented human resource management (HRM) practices? Taking into account that a shared language enhances absorptive capacity and that many multinational corporations are multilingual entities, this question is relevant but given little focused attention in international business research. In this paper, we hypothesize that two language-oriented HRM practices – language-sensitive recruitment and language training – enhance absorptive capacity in foreign subsidiaries. In addition, we hypothesize that interunit knowledge transfer partially mediates the positive relationship between these language-oriented HRM practices and absorptive capacity. Analyses of survey data derived at three points in time from 574 foreign subsidiary units in Japan provide support for these hypotheses.

1. Introduction

Absorptive capacity, the "ability to recognize the value of new external information, assimilate it, and apply it to commercial ends" (Cohen & Levinthal, 1990, p. 128), is argued to contribute to the competitive advantage in organizations (Cohen & Levinthal, 1990; Lenox & King, 2004; Volberda, Foss, & Lynes, 2010). Since its introduction by Cohen and Levinthal (1989, 1990), scholarly interest in the absorptive capacity theory has accelerated (Volberda et al., 2010). In contrast to abundant research on absorptive capacity in various types of organizations, less about it is known in multinational corporations (MNCs) (Schleimer & Pedersen, 2013). In particular, scholars have paid little attention to the important question of whether MNCs are able to enhance the creation and development of absorptive capacity in their foreign subsidiaries (Schleimer & Pedersen, 2013).

Are MNCs able to enhance the development of absorptive capacity in foreign subsidiaries through language-oriented HRM practices? Taking into account that a shared language enhances absorptive capacity (Cohen & Levinthal, 1990) and that many MNCs are multilingual entities (Luo & Shenkar, 2006), this question is relevant but given little focused attention in international business (IB) research. In this paper, we examine the effects of two commonly used language-oriented HRM practices, (1) language-sensitive recruitment and (2) language training, on absorptive capacity development in foreign subsidiaries. In line with previous research (Chang, Gong, & Peng, 2012; Schleimer & Pedersen, 2013), we conceptualize absorptive capacity as the employee ability in foreign subsidiaries to absorb MNC internal (but foreign subsidiary external) new information. In MNCs, language-oriented HRM practices are used as a concrete means to improve employees' foreign language proficiency and to develop a "shared language" or lingua franca for corporate communication (Marschan-Piekkari, Welch, & Welch, 1999b). Although a shared language can also be understood as professional or technical language, and company jargon (Welch & Welch, 2008), we focus in this paper on natural language, such as English or Japanese. In MNCs, English is used predominately as a lingua franca (Piekkari, Welch, & Welch, 2014). Natural language (hereinafter "language"), in turn, can be defined as a purely human and non-instinctive method of communicating ideas, emotions, and desires by means of a system of voluntary produced symbols (Sapir, 1921). Since knowledge transfer-related learning processes further influence which new knowledge and practices transferred are likely to be absorbed (Cohen & Levinthal, 1990; Lenox & King, 2004), we expect that language-sensitive recruitment and language training can enhance HCN employee ability to transfer knowledge across language boundaries, which in

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turn contributes to absorptive capacity in foreign subsidiaries. In line with the absorptive capacity theory (Cohen & Levinthal, 1990), this suggests that interunit knowledge transfer (i.e., knowledge transfer from one MNC unit to another) examined in this paper precedes absorptive capacity.

In this paper, we endeavor to make three contributions. First, we contribute to theory and research on absorptive capacity by shifting the focus from general HRM practices (Cohen & Levinthal, 1990; Minbaeva, Pedersen, Björkman, Fey, & Park, 2003) to two language-oriented HRM practices and their effects on absorptive capacity through interunit knowledge transfer in foreign subsidiaries. While given little attention in IB research, the absorptive capacity theory maintains that HRM practices play an important role in developing individual and organizational absorptive capacities (Cohen & Levinthal, 1990). Second, we answer to a recent call to elaborate ability-related dimensions of collective absorptive capacity (Minbaeva, Pedersen, Björkman, & Fey, 2014) by proposing that language-oriented HRM practices in part facilitate absorptive capacity development in foreign subsidiaries. The focus on language-oriented HRM practices in foreign subsidiaries is important because qualitative research suggests that HCN employees' low foreign language proficiency hinder absorptive capacity (Monks, 1996) and its antecedent, interunit knowledge transfer (Buckley, Carter, Glegg, & Tan, 2005). However, surprisingly few studies on language-oriented HRM practices and their outcomes are conducted in MNCs (Peltokorpi, 2015b). In particular, we are not aware of any previous publications that conceptually/empirically link language-oriented HRM practices, interunit knowledge transfer, and absorptive capacity. In addition to their conceptual and empirical novelty and relevance, these linkages provide important information to practitioners. Third, we contribute to quantitative research on language in MNCs by the data collected at three time points in time from 574 MNC subsidiary units in Japan. The three-wave data collection enriches research on language and knowledge transfer in MNCs that has predominately relied on data collected at a single time point (Michalova & Mustaffa, 2012; Piekkari et al., 2014).

The rest of this paper is organized as follows. The following, second section reviews theory and research on absorptive capacity and interunit knowledge transfer, as well as language in absorptive capacity and interunit knowledge transfer. The third section provides hypotheses on the effects of language-sensitive recruitment, language training, and interunit knowledge transfer on absorptive capacity. The fourth section discusses the study sample and methods. The fifth section presents the results. The sixth section discusses the theoretical contributions and practical implications of this paper; study limitations are discussed and suggestions for future research are also provided.

2. Conceptual framework

2.1. Absorptive capacity and knowledge transfer

The absorptive capacity theory is based on the notion that the organization needs prior related knowledge to recognize the value of, assimilate and apply new external information to commercial ends (Cohen & Levinthal, 1990). At the most elemental level, this prior related knowledge includes basic skills and a shared language. An organization's absorptive capacity is thus rooted in and emerges from individual absorptive capacities. Indeed, Cohen and Levinthal (1990, p. 131) argued: "An organization's absorptive capacity will depend on the absorptive capacities of its individual members. To this extent, the development of an organization's absorptive capacity will build on prior investment in the development of its constituent, individual absorptive capacities". Individual absorptive capacity refers to memory development, in which accumulated prior knowledge enables the ability to store new knowledge into one's memory and to recall and use it (Cohen & Levinthal, 1990). It is important to note that organizational absorptive capacity is more than the sum of the absorptive capacities of its individual employees; it also depends on various distinctive organization-level factors, such as an organization's culture, HRM practices, structure, and research and development (R&D) expenditure (Cohen & Levinthal, 1990). Despite their different characteristics, individual and collective absorptive capacities are interrelated and coexist in organizations (Cohen & Levinthal, 1990; Zhao & Anand, 2009). For example, Cohen and Levinthal (1990) argued that by recruiting employees with needed skills and competencies, and investing in training, managers are able to develop both individual and organizational absorptive capacities. In a related vein, general HRM practices are found to enhance foreign subsidiary absorptive capacity through staff competence development (Minbaeva et al., 2003). Specifically, Minbaeva et al. (2003) demonstrated with a sample of 169 foreign subsidiaries in the USA, Russia, and Finland that competence/performance appraisal, merit-based promotion, performance-based compensation, training, and internal communication enhanced the development of absorptive capacity.

Knowledge transfer, defined as "knowledge communicated from one agent to another such as from one individual to another or from a group to an entire organization" (Hedlund & Nonaka, 1993, p. 123), is conceptualized and empirically shown to enhance the creation and development of absorptive capacity. Importantly, Cohen and Levinthal (1990, p. 131) argued that an organization's absorptive capacity "depends on transfers of knowledge across and within subunits." Based on this argument, scholars have touched the relationship between knowledge transfer and absorptive capacity in domestic organizations and foreign subsidiaries. For example, Lenox and King (2004) proposed that knowledge transfer enhances an organization's absorptive capacity and in a sample of information and technology manufacturers in the USA found that managers are able to develop absorptive capacity through information provision (i.e., transfer of practice-specific data). In addition, Liao, Fei, and Chen (2007) with a sample of 170 Taiwanese firms empirically established that knowledge sharing within an organization increases its stock of prior knowledge, thereby enhancing its absorptive capacity.

In MNC subsidiaries, transfer of ownership-specific assets from HQ is further shown to enhance the creation and development of absorptive capacity, helping them to compete more successfully in host countries (Miao, Choe, & Song, 2008). In a related manner, knowledge transfer is argued to contribute to the MNC subsidiary's absorptive capacity so that the subsidiary is able to recognize the value of new external knowledge more effectively and efficiently (Song, 2014). Phene and Almeida (2008), in turn, noted that the range of external and internal knowledge sources available facilitate the absorption and utilization of knowledge in MNC subsidiaries. In summary, theory and research suggest that prior transferred knowledge influences which new knowledge and practices are likely to be absorbed in MNC subsidiaries.

2.2. Language in absorptive capacity and knowledge transfer

Drawing on the absorptive capacity theory (Cohen & Levinthal, 1989), IB scholars have conceptualized employees' foreign language proficiency and language-oriented HRM practices as antecedents of absorptive capacity in MNCs. Welch and Welch (2008) proposed that employees' foreign language competences facilitate an MNC's absorptive capacity development. In a related manner, employees' foreign language proficiency is conceptualized to increase the ability of an MNC to absorb and use knowledge that

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crosses language boundaries; either entering or moving around the MNC (Piekkari, Welch, Welch, Peltonen, & Vesa, 2013). More recently, Welch and Welch (in press) argued that MNCs are able to enhance absorptive capacity development by recruiting people with requisite foreign language proficiency and developing employees' foreign language proficiency through language training. While not drawing on the absorptive capacity theory, qualitative studies further suggest that a lack of shared language inhibits HCN employees' ability to absorb transferred knowledge in foreign subsidiaries. For example, Monks (1996) described how the HRM director of an Irish subsidiary of a French bank admitted that HCN employees seldom paid any attention to documents written in French due to their limited French proficiency. Another study in Nordic MNC subsidiaries in Japan suggests that HCN employees had limited ability to absorb information transferred from HQ due to their limited corporate language proficiency (Peltokorpi & Clausen, 2011).

In addition to absorptive capacity, language is linked to interunit knowledge transfer in MNCs. For example, qualitative studies suggest that language homogeneity fosters knowledge flows in the MNC global networks (Marschan-Piekkari, Welch, & Welch, 1999a; Mäkelä, Kalla, & Piekkari, 2007). These studies suggest that interunit knowledge transfer occurs in language-homogeneous networks even in the case of geographic distance among individuals in MNCs. HCN employees' foreign language proficiency in subsidiaries (Peltokorpi, 2015a) and language relatedness (i.e., structural overlap between two languages) (Schomaker & Zaheer, 2014) are further found to enhance interunit knowledge transfer in MNCs. In contrast, a qualitative study in four MNC subsidiaries in China suggests that interunit knowledge transfer, due to a lack of shared language, required all documents to be translated into Chinese, delaying knowledge transfer and increasing transfer costs (Buckley et al., 2005). In a more indirect way, a survey study in 164 MNC subsidiaries in China and Finland suggested that language similarity had a positive effect on two antecedents of interunit knowledge transfer: shared vision and perceived trustworthiness (Barner-Rasmussen & Björkman, 2007). Language similarity is further proposed to facilitate corporate identity, which in turn enhances interunit knowledge transfer in MNCs (Phene, Madhok, & Liu, 2005).

Language or a shared language may also have different effects on knowledge transfer and absorptive capacity in MNC subsidiaries. For example, Gupta and Govindarajan (2000) argued that a shared language provides the basic, but integral ability to encode and decode linguistic signals (e.g., words) in knowledge transfer. A firm's absorptive capacity is further proposed to be enhanced by a shared language (Cohen & Levinthal, 1990) and employees' foreign language proficiency (Piekkari et al., 2013). However, comprehension of transmitted knowledge entails more than the decoding of a linguistic signal (Brannen, 2004; Welch & Welch, 2008). In addition to a shared language, prior transferred knowledge influences which types of new knowledge and practices are likely to be absorbed in MNC subsidiaries (Cohen & Levinthal, 1990; Lenox & King, 2004). For example, knowledge transfer may trigger learning processes that enhance the creation and development of absorptive capacity (Minbaeva et al., 2003). Interunit knowledge transfer conducted in foreign language(s) may also enhance the development of absorptive capacity by providing HCN employees opportunities to improve their language proficiency. For example, a qualitative study suggests that French employees were able to improve their English proficiency through English-language interactions (Neeley, 2013). Based on the evidence provided above, we expect that a shared language enhances interunit knowledge transfer which precedes absorptive capacity in MNC subsidiaries. In the next section, we develop hypotheses that link language-oriented HRM practices, interunit knowledge transfer, and absorptive capacity in MNCs.

3. Hypotheses: the effects of language-sensitive recruitment, language training, and interunit knowledge transfer on absorptive capacity

Scholars argue that language-oriented HRM practices can be used to improve employees' foreign language proficiency and to develop a shared language or lingua franca for corporate communication (Lester, 1994; Peltokorpi, 2015b; Peltokorpi & Vaara, 2014; Reeves & Wright, 1996; Welch & Welch, in press). For example, Lester (1994, p. 43) argued that hiring employees with sufficient language proficiency is "the easiest and cheapest way to approach the language problem." Taking into account both language-oriented HRM practices examined in the present study, scholars have also proposed that MNCs are able to remove language barriers by recruiting employees with the needed language proficiency and providing language training for employees who need it (Reeves & Wright, 1996; Welch & Welch, in press). In a more general manner, Cohen and Levinthal (1990) conceptualized that by recruiting employees with the needed skills and competences and investing in training, managers are able to develop both individual and collective absorptive capacities. Employees, in turn, are "central to absorptive capacity as they engage in knowledge sharing with colleagues across teams, business units and subsidiaries" (Caligiuri, 2014, p. 64). Integrating these ideas and drawing on research on language-oriented HRM practices in MNCs, we develop two hypotheses (see Fig. 1). These hypotheses suggest that language-sensitive recruitment and language training facilitate HCN employee ability to transfer knowledge across language boundaries. This ability to transfer knowledge provides HCN employees a greater exposure to external new knowledge, which in turn contributes to MNC subsidiary absorptive capacity.

3.1. Language-sensitive recruitment

Language-sensitive recruitment refers to practices in which a certain proficiency in the corporate or some other foreign languages is used as a precondition for employment (Peltokorpi & Vaara, 2014). MNCs rely on language-sensitive recruitment to "buy" or hire employees with the needed language proficiency from the external labor market (Marschan-Piekkari et al., 1999b). Qualitative studies suggest that language-sensitive recruitment is used to staff MNC subsidiaries with HCNs with sufficient language proficiency. For example, a study in MNC subsidiaries in China suggests that HCN managers and engineers had to demonstrate their foreign language proficiency in the recruitment process, such as by passing examinations in reading, speaking, and writing (Buckley et al., 2005). These language requirements helped the

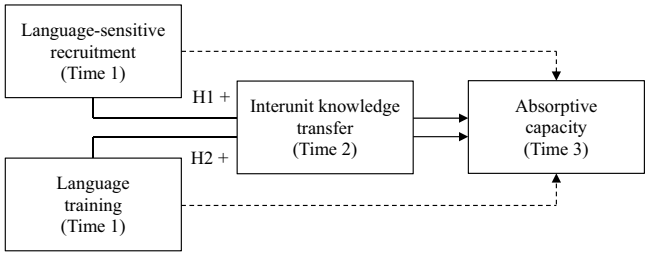

Fig. 1. Research model and hypotheses.
Note: time 1 refers to the first, time 2 to the second, and time 3 to the third point of data collection.

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subsidiaries to tackle the language problem, hindering knowledge transfer and absorptive capacity, in the recruitment stage. Another study in Nordic subsidiaries in Japan suggests that expatriate top managers used language-sensitive recruitment to staff their subsidiaries with HCN employees with sufficient English proficiency (Peltokorpi, 2007).

In line with the argument that individual and organizational absorptive capacities can be developed by recruiting people with needed skills and competences, and that knowledge transfer is critical to absorptive capacity development (Cohen & Levinthal, 1990), two studies have linked language-sensitive recruitment to interunit knowledge transfer and absorptive capacity. First, a qualitative study in four Western subsidiaries (Alcatel Bell, Daimler Chrysler, Motorola, and Volkswagen) in China suggests that stringent recruitment requirements in English language skills in Motorola China increased the "speed" of knowledge transfer from corporate HQ and contributed to subsidiary absorptive capacity (Buckley, Clegg, & Tan, 2004). In Motorola China, interunit knowledge transfer was described to contribute to subsidiary absorptive capacity due to the special attention given to understanding transferred knowledge. This special attention given may have triggered individual and collective learning processes that enhanced the development of absorptive capacity. Second, a study based on interviews in 101 Western subsidiaries and surveys in 285 Western subsidiaries in Japan suggests that language-sensitive recruiting to a certain extent facilitated interunit knowledge transfer due to improved HCN employee corporate language proficiency (Peltokorpi & Vaara, 2014). Integrating the findings from these studies with the above specified relations between language, knowledge transfer, and absorptive capacity, we formulate the following hypothesis.

Hypothesis 1. Interunit knowledge transfer partially mediates the positive relationship between language-sensitive recruitment and absorptive capacity.

3.2. Language training

Language training refers to development of incoming and/or existing employees' proficiency in the corporate or some other foreign languages (Marschan-Piekkari et al., 1999b). MNCs rely on language training to "make" or develop employees' language proficiency (Marschan-Piekkari et al., 1999b). Rigorous and systematic language training is argued to improve the overall language standard within an MNC, resulting in a reduced reliance on a small number of language nodes (bi/multilingual employees) (Yang & Kwong, 2013). Case studies also suggest that language training is frequently used to improve employee foreign language proficiency in MNCs (Charles & Marschan-Piekkari, 2002; Harzing, Köster, & Magner, 2011; Peltokorpi, 2007; Wang, Tong, & Koh, 2004). For example, an interview study in seven German subsidiaries in Japan suggests that language training was considered both important and used extensively to reduce language barriers (Harzing et al., 2011). Another study in a Finnish MNC suggests that language training helped to reduce language barriers in interunit communication flows (Charles & Marschan-Piekkari, 2002).

As mentioned above, Cohen and Levinthal (1990) proposed that firms are able to develop absorptive capacity by investing in functional training. Interunit knowledge transfer, in turn, enhances a subsidiary's absorptive capacity (Almeida & Phene, 2004; Song, 2014). In a related vein, two previous studies suggest that language training facilitates interunit knowledge transfer and absorptive capacity in MNC subsidiaries. First, a mixed-method study in Western MNC subsidiaries in Japan suggests that language training both enhanced HCN employee language proficiency and facilitated interunit knowledge transfer (Peltokorpi & Vaara, 2014). Second, Wang et al. (2004) linked language training to individual and collective absorptive capacity in MNC subsidiaries in China. Specifically, Wang et al. (2004, p. 178) argued that "training will enhance individual absorptive capacities and cumulatively improves the overall learning capacity of the subsidiary". Their interview study in 62 MNC subsidiaries from Asia, Europe, and the USA suggests that language training contributed especially to young, highly educated HCN employees' ability to absorb knowledge transferred from corporate HQ. Interpreted through the absorptive capacity perspective (Cohen & Levinthal, 1990), the findings suggest that language training facilitated interunit knowledge transfer which in turn contributed to absorptive capacity development through knowledge transferred triggered processes. Integrating the findings from these studies with the above specified relations between language, knowledge transfer, and absorptive capacity, we formulate the following hypothesis.

Hypothesis 2. Interunit knowledge transfer partially mediates the positive relationship between language training and absorptive capacity.

4. Method

4.1. Research method and settings

To test the hypotheses, we conducted a study in 574 MNC subsidiary units in Japan. We considered Japan to provide an ideal setting for this study in part because of the low English proficiency of average HCNs can affect language-oriented HRM practices, interunit knowledge transfer, and absorptive capacity in foreign subsidiaries. For example, the Test of English for International Communication (TOEIC) (TOEIC, 2012) and the Test of English as a Foreign Language (TOEFL) (TOEFL, 2013) average scores in Japan are among the lowest among all participating countries. It is also unlikely that HCN employees in the present study use Japanese language in interactions with HQ and other overseas MNC units because Japanese language is spoken primarily in Japan and because HCN employees in Japan in general to have low motivation to develop their careers in the foreign MNC global networks (Peltokorpi & Vaara, 2012). Foreign subsidiaries may also find recruiting high-quality work force in Japan challenging since HCNs in general are not interested in working in foreign companies because of their unwillingness to forgo the "life-time" employment security offered in domestic companies (Ono, 2007; Peltokorpi, 2013). In summary, foreign subsidiaries in Japan are likely to have problems to recruit HCN with sufficient language proficiency, which can affect interunit knowledge transfer and absorptive capacity.

4.2. Data and procedures

Data were collected by a large Japanese research company through three online surveys. We collected data through a research company because researchers have identified them to help to access a diverse sample of respondents and to prescreen potential respondents on a variety of characteristics to ensure the sample is representative of the population of interest (Ng & Feldman, 2013). In Japan, collecting data is also challenging without personal contacts (Takeuchi, Lepak, Wang, & Takeuchi, 2007). Because all individuals in the research company's database had identity numbers for screening and data collection purposes, we were also able to use the recommended ex ante measures to reduce common method bias by collecting data through three surveys at three different points in time (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). To further reduce common method bias, participants were

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not informed that three surveys were related and used in one study; the research company used identity numbers to contact the same respondents without referring to previous surveys. Due to these and the related benefits, researchers in various scholarly areas, ranging from IB (Peltokorpi & Vaara, 2014) to organizational behavior (Ng & Feldman, 2013), are increasingly using research companies to collect data.

We specified the surveys be sent to HCN middle managers with more than five years of work experience in the present foreign MNC subsidiary in the greater Tokyo region (Chiba, Kanagawa, Tokyo, and Saitama prefectures). We targeted middle managers because they are identified to have greater awareness of HRM and other organizational practices than top managers in domestic corporations (Williams & Lee, 2011) and foreign subsidiaries (Peltokorpi & Vaara, 2012). For example, research shows that expatriate top managers have limited understanding of HCN employee activities in foreign MNC subsidiaries in Japan (Peltokorpi & Vaara, 2012). Top managers are more familiar with HRM and organizational policies that might not influence HRM practices and organizational practices in lower echelons (Wright & Boswell, 2002). We collected data from functional departments due to the related differences in department-level specialization and inter-unit knowledge transfer in MNCs (Foss & Pedersen, 2002). Further, we expected HCN department managers with more than five years of work experience in the present subsidiary to be familiar with practices in their units. We limited our survey to the greater Tokyo region because most foreign MNC subsidiaries in Japan are located there (JETRO, 2004; Toyo Keizai Research, 2013) and these subsidiaries also have frequent interactions with HQs (JETRO, 2004).

The research company informed us that they had 1363 HCN middle managers meeting our screening requirements in their databank. The first survey that included the independent and control variables was sent to those 1363 managers in 2012. Of those 1363 managers, 998 (73%) replied. The second survey that included the mediating variable was sent to those 998 managers one month after the first survey. Of those managers, 771 (77%) replied. The third survey that included the dependent variable was sent to those 771 managers three months after the second survey. Of those 771 managers, 658 (85%) replied. The overall response rate was 48%. We linked these three surveys to each other by the respondents' identity numbers, age, and gender provided by the research company. In addition to the identity numbers, the respondents reported their age and gender in each survey. After linking the surveys by the identity numbers, we used the age and gender data to ensure that the same respondents filled all surveys. To examine non-response bias, we examined whether respondents and non-respondents in the surveys differed in terms of foreign subsidiary size and age, but found no significant differences. The respondents were primarily male (96%) and on average 47 years old. They represent 425 MNC subsidiaries from 14 countries. The most common parent company nationality was the USA (59%), followed by Germany (9%), France (6%), and Switzerland (5%). The parent company nationality in our sample was in line with foreign MNC subsidiary distribution in Japan (JETRO, 2004; Toyo Keizai Research, 2013).

4.3. Survey design and measures

All of the measures used in this study were based on existing scales. From the flow of the survey and data collection at three different points in time and respondents being unaware that these there surveys were used in one study, it is unlikely that the respondents could map hypothesized relations between constructs. This way, we sought to avoid social desirability bias, which may cause common method bias (Podsakoff et al., 2003). To further reduce the likelihood of social desirability bias, we asked questions regarding employees in their functional departments rather than individual respondents. In the survey, a brief description of the corporate language was given. In line with Brislin (1980), two bilingual HCNs translated and back translated the survey from English to Japanese. To ensure face validity, the Japanese language survey was checked by eight bilingual HCNs working for foreign MNC subsidiaries in Japan.

4.3.1. Dependent variable: absorptive capacity

Absorptive capacity was measured by a modified 6-item scale from Chang et al. (2012). Instead of statements of subsidiary-level absorptive capacity (Chang et al., 2012), we asked the HCN managers to respond to six questions on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree) about department-level absorptive capacity. We considered this scale to be applicable to this study because it is designed to assess how absorptive capacity improves "the ability of the local staff to absorb and apply the knowledge" from the MNC global network (Chang et al., 2012, p. 937). A sample item is: "In my department, Japanese employees have the ability to convert knowledge or practices from corporate headquarters and other overseas operations" (see Chang et al., 2012, p. 937, for scale items). To test the internal consistency of this scale, we calculated Cronbach's alpha. The received value of 0.95 was above the recommended threshold level of 0.70 (Nunnally, 1978), indicating an excellent internal consistency.

4.3.2. Mediating variable: interunit knowledge transfer

Interunit knowledge transfer was measured by a 3-item scale from Peltokorpi and Vaara (2014). We considered this scale to be applicable to this study because it is designed to access HCN employee interunit knowledge transfer in foreign subsidiaries. In line with Hedlund and Nonaka's (1993) definition of knowledge transfer, this scale focuses on knowledge/idea exchange and can thus be conceptually and operationally separated from the above absorptive capacity scale. A sample item is: "In my department, Japanese employees exchange ideas with headquarters and other overseas units" (see Peltokorpi & Vaara, 2014, p. 615, for scale items). We asked the HCN managers to assess scale items on a 7-point scale (1 = strongly disagree, 7 = strongly agree). Cronbach's alpha for the interunit knowledge transfer scale was 0.94, indicating excellent internal consistency (Nunnally, 1978). In the survey, an additional question reveals that interactions with HQ and other MNC overseas units were conducted in English in 95% of the foreign subsidiary departments.

4.3.3. Independent variables: language sensitive recruitment and language training

Language-sensitive recruitment was operationalized by a modified scale from Collins and Smith (2006). Instead of general statements on recruitment practices (Collins & Smith, 2006), we focused on language-sensitive recruitment practices. We asked the HCN managers to respond to three questions on a 7-point scale (1 = strongly disagree, 7 = strongly agree). The items were: (1) "In my department, we emphasize proficiency in the company language when hiring employees", (2) "In my department, we ensure that all people hired are proficient in the company language", and (3) "In my department, job candidates proficient in the company are given consideration over candidates not proficient in the company language". Cronbach's alpha for the scale was 0.84, indicating good internal consistency (Nunnally, 1978).

Language training was measured by a modified scale from Collins and Smith (2006). Instead of general statements on training (Collins & Smith, 2006), we focused on language training. We asked the HCN managers to respond to three questions on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). The items

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were: (1) "In my department, language training is not available to Japanese employees (reverse coded)", (2) "In my department, language training is given to employees if needed", and (3) "In my department, language training is provide to increase employees' proficiency in the company language". Cronbach's alpha for the scale was 0.87, indicating a good internal consistency (Nunnally, 1978).

4.3.4. Control variables

We used seven control variables in this study that had the potential to confound the results. First, subsidiary age may affect interunit knowledge transfer because older subsidiaries have more time to develop the mechanisms and relationships to transfer knowledge from and to HQ and other MNC units (Monteiro, Arvidsson, & Birkinshaw, 2008). Absorptive capacity in subsidiaries can also improve as they gain experience over time (Song, 2014). We assessed subsidiary age by asking the HCN managers to provide the year of subsidiary establishment in Japan. By using the year book of foreign company operations in Japan (Toyo Keizai Research, 2013), we were able to validate 81% of their answers. In line with Monteiro et al. (2008), we measured subsidiary age by subtracting the year of the establishment from the year of data collection.

Second, subsidiary size may affect interunit knowledge transfer in part because larger subsidiaries have a greater pool of resources dedicated to knowledge creation and transfer more knowledge (Gupta & Govindarajan, 2000). We measured subsidiary size by asking the HCN managers to provide the number of employees in their subsidiaries. By using the year book of foreign company operations in Japan (Toyo Keizai Research, 2013), we were able to validate 79% of their answers. In line with Zhang, George, and Chan (2006), we measured subsidiary size as the logarithm of the total number of employees.

Third, national cultural distance may affect interunit knowledge transfer in MNCs. For example, Ambos and Ambos (2009) noted that cultural distance has negative effects on knowledge transfer due to misunderstandings and reduced communication effectiveness. We used Kogut and Singh's (1988) index to measure cultural distance between MNC subsidiaries in Japan and the country-of-origin of their HQs. To calculate the cultural distance, we used Hofstede's (2001) country scores on the dimensions of power distance, uncertainty avoidance, individualism, and masculinity.

Fourth, expatriate presence is argued to contribute to both interunit knowledge transfer (Gupta & Govindarajan, 2000; Minbaeva et al., 2003) and absorptive capacity (Chang et al., 2012) in subsidiaries because of a shared language and experiences with HQ personnel as well as appropriate functional knowledge. We asked the HCN managers to assess whether the top manager in their department is either HCN or expatriate. We then created a dummy variable coding HCNs as 0 and expatriates as 1.

Fifth, the language proficiency of HCN employees in the MNC-level corporate language (Peltokorpi & Vaara, 2012) and the degrees of knowledge transfer (Foss & Pedersen, 2002) are shown to vary across functional departments in MNCs. We assessed functional areas by asking the managers to indicate to which of the following 12 functional areas their department belongs: accounting, general affairs, customer service, logistics, finance, HR, law, manufacturing, marketing, R&D, and sales. Using this information, we created 12 dummy variables.

Sixth, social integration mechanisms are argued to facilitate absorptive capacity through increased interpersonal networks and more extensive interunit knowledge transfer MNCs (Nobel & Birkinshaw, 1998). Using a modified scale from Nobel and Birkinshaw (1998), we asked the HCN managers to answer questions on four social integration mechanisms in their departments on a 7-point scale (0 = never, 1 = less than annually, 2 = annually, 3 = quarterly, 4 = monthly, 5 = weekly, 6 = daily). Cronbach's alpha for the scale was 0.88, indicating a good internal consistency (Nunnally, 1978).

Seventh, interunit communication frequency may affect absorptive capacity in subsidiaries (Cohen & Levinthal, 1990). Using a modified scale from Ghoshal, Korine, and Szulanski (1994), we asked the HCN managers to answer three questions on interunit communication frequency in their units on a 7-point scale (0 = never, 1 = less than annually, 2 = annually, 3 = quarterly, 4 = monthly, 5 = weekly, 6 = daily). A sample item is "please indicate the typical frequency of communication with overseas headquarters in your department." Cronbach's alpha for the scale was 0.84, indicating a good internal consistency (Nunnally, 1978).

4.4. Factor and common method bias analyses

Since modified scales were used in this study, we conducted exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) on all multi-item variables. First, we conducted an EFA with Varimax rotation. The results showed six factors with Eigenvalues greater than one. All items loaded as expected. We then used the Harman's single factor test to check for common method bias. If common-method variance exists in the data, one general factor accounts for most of the variance. This did not occur because the first factor with an eigenvalue of 5.939 accounted for 27% of the variance.

Second, we conducted a CFA to verify the factor structure that emerged from the EFA. The six-factor structure provided an appropriate fit with the data [$\chi^2 = 266.9_{(182),}$ $p < 0.001$, root-mean-square error of approximation (RMSEA) = 0.03, confirmatory fit index (CFI) = 0.99, goodness-of-fit index (GFI) = 0.96] (Hair, Anderson, Tatham, & Black, 1998). We compared the six-factor model on five-factor model in which language-sensitive recruitment and language training were conceptualized as one factor. The five-factor model provided a worse fit with the data ($\chi^2 = 1549.4_{(187),}$ $p < 0.001$, RMSEA = 0.10, CFI = 0.87, GFI = 0.84). We then compared the six-factor model on five-factor model in which interunit knowledge transfer and absorptive capacity were conceptualized as one factor. The five-factor model provided a worse fit with the data ($\chi^2 = 2024.2_{(187),}$ $p < 0.001$, RMSEA = 0.12, CFI = 0.82, GFI = 0.79). We also compared the six-factor model on one-factor model. The single-factor model provided a worse fit with the data ($\chi^2 = 6178.5_{(197),}$ $p < 0.001$, RMSEA = 0.21, CFI = 0.44, GFI = 0.53). All other combinations also provided a worse fit with the data than the six-factor model.

We further checked for common-method variance by introducing a common latent factor (CLF) in the six-factor model (Podsakoff et al., 2003). We measured common-method variance by subtracting standardized weights without CLF from standardized regressions weight with CLF. The results did not exceed 0.2, suggesting that there was no common method variance problem in the data. Based on the Harman's single factor and CLF tests, we conclude that common-method variance does not play an important role in my findings.

4.5. Aggregation

In this study, 52 MNC subsidiary departments had two or more respondents. Because we had multiple respondents, we calculated interrater agreement scores [$r_{wg(j)}$] for all multi-item measures (James, Demaree, & Wolf, 1984) to see how responses varied within each department. The average $r_{wg(j)}$ values for absorptive capacity (0.81), interunit knowledge transfer (0.79), language-sensitive recruitment (0.74), language training (0.72), social integration (0.78), and interunit communication frequency (0.80) were above the recommended cutoff value of 0.70 (Bliese, 2000). Also, we

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calculated intra-class correlation coefficients, or ICC (1) and ICC (2) (McGraw & Wong, 1996) for all multi-item measures. The values for absorptive capacity [ICC (1) 0.25, ICC (2) 0.77], interunit knowledge transfer [ICC (1) 0.42, ICC (2) 0.93], language-sensitive recruitment [ICC (1) 0.31, ICC (2) 0.72], language training [ICC (1) 0.27, ICC (2) 0,61], social integration [ICC (1) 0.25, ICC (2) 0.77], and interunit communication frequency [ICC (1) 0.31, ICC (2) 0.86] were higher than the recommended cutoff values of 0.12 for ICC (1) (James, 1982) and 0.60 for ICC (2) (Glick, 1985). Taken together, the above $r_{wg(j)}$, ICC(1), and ICC(2) values justify the aggregation of individual responses to the departmental level.

5. Results

Table 1 shows the mean (M) values, standard deviations (*SD*), and correlation coefficients between all study variables.

The positive correlation between department top manager and language-sensitive recruitment ($r = 0.17$, $p < 0.01$) suggests in line with a previous study that expatriate managers tend to place more emphasis on HCN language proficiency than HCN managers (Peltokorpi & Clausen, 2011). The positive correlation between language-sensitive recruitment and language training ($r = 0.17$, $p < 0.01$), in turn, suggests that both of these language-oriented HRM practices are used in MNC subsidiaries. Correlations between all study variables are lower than 0.43, suggesting that statistical results are not likely to suffer from multicollinearity (Nunnally, 1978).

We tested Hypotheses 1 and 2 through hierarchical regression analyses (see Table 2). Based on Baron and Kenny (1986, p.1177): "to establish mediation, the following conditions must hold: First, the independent variable must affect the mediator in the first equation; second, the independent variable must be shown to affect the dependent variable in the second equation; and third, the mediator must affect the dependent variable in the third equation. If these conditions all hold in the predicted direction, then the effect of the independent variable on the dependent variable must be less in the third equation than in the second".

In Equation 1, language-sensitive recruitment ($\beta = 0.29$, $p < 0.001$) and language training ($\beta = 0.09$, $p < 0.05$) had a statistically significant positive relation to interunit knowledge transfer. Thus, the first condition was supported. In Equation 2, language-sensitive recruitment ($\beta = 0.25$, $p < 0.001$) and language training ($\beta = 0.18$, $p < 0.001$) had a statistically significant positive relation to absorptive capacity. Thus, the second condition was supported. In Equation 3, interunit knowledge transfer had a statistically significant positive relation to absorptive capacity ($\beta = 0.28$, $p < 0.001$). Thus, the third condition was supported. In Equation 3, results also showed that after interunit knowledge transfer was taken into account, the effects of language-sensitive recruitment ($\beta = 0.17$, $p < 0.001$) and language training ($\beta = 0.16$, $p < 0.001$) on absorptive capacity became weaker, albeit still

Table 1
Means (M), standard deviations (SD), and correlations.

	M	SD	1	2	3	4	5	6	7	8	9	10
1. Subsidiary age	29.11	25.15										
2. Subsidiary size (log.)	2.80	0.85	.25**									
3. Cultural distance	3.54	1.05	−.13**	−.14**								
4. Department top manager	1.17	0.37	.02	.04	.03							
5. Accounting	0.04	0.20	−.06	−.04	−.01	.06						
6. General affairs	0.03	0.16	−.05	−.05	−.02	.01	−.03					
7. Customer service	0.08	0.28	.02	.03	−.02	−.02	−.06	−.05				
8. Logistics	0.02	0.15	−.03	.01	.01	−.07	−.03	−.03	−.05			
9. Finance	0.01	0.12	.01	−.01	−.04	.02	−.03	−.02	−.04	−.02		
10. HR	0.03	0.17	.01	.02	.04	.03	−.04	−.03	−.05	−.03	−.02	
11. IT	0.09	0.28	.03	.03	−.07	.01	−.07	−.05	−.09	−.05	−.04	−.06
12. Law	0.02	0.14	−.02	.02	−.02	.04	−.03	−.02	−.04	−.02	−.02	−.02
13. Manufacturing	0.02	0.15	−.03	−.01	−.03	−.04	−.03	−.03	−.05	−.03	−.02	−.03
14. Marketing	0.08	0.27	−.01	−.05	.04	.12**	−.06	−.05	−.09	−.05	−.04	−.05
15. R&D	0.11	0.31	.02	.03	.03	−.04	−.07	−.06	−.11	−.05	−.04	−.06
16. Sales	0.29	0.45	.01	.05	.03	−.08	−.14**	−.11**	−.20**	−.10**	−.08	−.12**
17. Social integration	0.56	0.46	.13**	.09**	−.02	.06	−.13**	−.09*	.10*	−.09*	−.08	−.05
18. Interunit communication	4.27	1.90	.05	−.06	.12**	.14**	−.01	−.02	.00	−.08	−.02	.02
19. Language-sensitive recruiting	4.32	1.31	.01	−.02	.03	.17**	.04	−.00	−.05	.04	.06	.08
20. Language training	4.77	1.52	.03	.04	−.06	.04	−.05	.03	.04	−.06	.08*	.02
21. Interunit knowledge transfer	4.46	1.46	.01	.01	.01	.03*	.02	−.05	−.06	−.05	.02	.02
22. Absorptive capacity	4.76	1.30	.06	.07	.09	.02	−.01	.00	−.02	−.04	.02	−.02

11	12	13	14	15	16	17	18	19	20	21
−.04										
−.05	−.02									
−.09*	−.04	−.05								
−.11**	−.05	−.05	−.10*							
−.20**	−.09*	−.10*	−.19**	−.22**						
−.02	−.06	.02	.06	.22**	.01					
−.04	−.01	−.01	.10*	.12**	−.07	.38**				
.00	.06	−.08	.06	.04	−.09*	.16**	.35**			
.02	.06	.03	.01	.06	−.10*	.16**	.10*	.17**		
.04	.06	.01	.02	.11**	−.08	.19**	.35**	.38**	.17**	
−.03	.01	−.01	−.06	.11**	−.03	.22**	.35**	.35**	.25**	.43**

Note: n = 574, Department top manager "HCN", = "expatriate" = 1.
* $p < 0.05$.
** $p < 0.01$.

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Table 2
Regression table.

	Equation 1			Equation 2			Equation 3		
	Interunit Knowledge transfer			Absorptive capacity			Absorptive capacity		
	β	SE	Sig.	β	SE	Sig.	β	SE	Sig.
Subsidiary age	−0.01	0.00		0.05	0.00		0.05	0.00	
Subsidiary size (log.)	−0.03	0.08		−0.03	0.07		−0.02	0.06	
Cultural distance	−0.02	0.05		0.08	0.05	*	0.08	0.04	*
Department top manager	−0.06	0.15		−0.05	0.13		−0.04	0.13	
Accounting	−0.01	0.30		−0.03	0.26		−0.02	0.25	
General affairs	−0.07	0.36	†	−0.01	0.32		0.01	0.31	
Customer service	−0.10	0.23	*	−0.06	0.21		−0.03	0.20	
Logistics	−0.07	0.38	†	−0.04	0.33		−0.02	0.32	
Finance	−0.02	0.46		−0.02	0.40		−0.01	0.39	
HR	−0.03	0.34		−0.08	0.30	†	−0.07	0.28	†
IT	0.08	0.23	†	0.06	0.20		0.03	0.19	
Law	0.02	0.42		−0.03	0.37		−0.03	0.35	
Manufacturing	−0.00	0.38		−0.01	0.33		−0.01	0.32	
Marketing	−0.07	0.24		−0.13	0.21	**	−0.12	0.20	**
R&D	0.00	0.22		0.00	0.19		0.00	0.19	
Sales	−0.11	0.17	*	−0.06	0.15		−0.03	0.15	
Social integration (log.)	0.05	0.14		0.08	0.13	†	0.06	0.12	
Interunit communication freq.	0.22	0.03	***	0.21	0.03	***	0.15	0.03	**
Language-sensitive recruitment	0.29	0.05	***	0.25	0.04	***	0.17	0.04	***
Language training	0.09	0.04	*	0.18	0.03	***	0.16	0.03	***
Interunit knowledge transfer							0.28	0.04	***
F		8.52	***		9.29	***		11.90	***
ΔF								8.25	***
R^2		0.24			0.25			0.31	
ΔR^2								0.06	
Adjusted R^2		0.21			0.22			0.29	

Note: n = 574, SE = Standard Error, Department top manager: "HCN" = 0, "expatriate" = 1.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.
† $p < 0.10$.

significant, which suggests partial mediation. Providing evidence that multicollinearity did not distort these results, the highest variance inflation factor (VIF) value of 1.54 for the variables was below the recommend ceiling of 10 for those metrics (Hair et al., 1998). Durbin-Watson tests with values ranging between 2.07 and 2.09 also suggested satisfactory results regarding the independence of error terms (Cohen, West, Aiken, & Cohen, 2003).

To access the significance of the mediation, we started by Sobel's (1982) test for indirect effects (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Results of the Sobel's test suggested that the mediating effects of interunit knowledge transfer between language-sensitive recruitment and absorptive capacity ($t = 6.62$, $p < 0.001$), and between language training and absorptive capacity ($t = 3.22$, $p < 0.01$) were significant. In addition, we used the indirect effect analyses with bootstrapping procedures (Hayes, 2013) to access the significance of the mediation. We used a bootstrap sample size of 5000 in our analysis. The bootstrapping analyses suggest that the 95% confidence intervals around the indirect effect did not contain 0 [language-sensitive recruitment (0.10, 0.19), language training (0.07, 0.15)], which suggest that the mediation effect is significant (Hayes, 2013). Taken together, the above analyses provide support for Hypotheses 1 and 2.

6. Discussion

This study examined whether MNCs are able to use language-sensitive recruitment and language training to enhance the development of absorptive capacity in foreign subsidiaries. The findings indicate that interunit knowledge transfer partially mediates the relationship between two language-oriented HRM practices – language-sensitive recruitment and language training – and absorptive capacity. By doing so, the findings suggest that language-sensitive recruitment and language training enhance HCN employee ability to transfer knowledge through language boundaries. This ability to transfer knowledge provides HCN employees a greater exposure to external new knowledge, which in turn contributes to MNC subsidiary absorptive capacity. These findings contribute to theory, research, and practice on absorptive capacity, knowledge transfer, and language in MNCs.

6.1. Theoretical contributions

First, this paper contributes to theory and research on absorptive capacity by linking language-sensitive recruitment and language training to absorptive capacity in foreign subsidiaries. Contributing to research on general HRM practices in absorptive capacity development (Cohen & Levinthal, 1990; Minbaeva et al., 2003), our conceptual framework and findings suggest that by recruiting HCN employees with the needed foreign language proficiency and investing in foreign language training, individual and collective absorptive capacities can be developed in MNC subsidiaries. By taking into account language-sensitive recruitment and language training, this paper also adds to previous research by examining how language absorptive capacity can be developed in MNCs (Piekkari et al., 2013; Welch & Welch, 2008). In addition, the conceptual framework and findings suggest that language-sensitive recruitment, language training, and interunit knowledge transfer are not merely facilitative of MNC subsidiary absorptive capacity but rather prerequisite to it. That is, language-sensitive recruitment and language training increase the likelihood that employees in subsidiaries have the needed linguistic ability to transfer knowledge and absorb knowledge transferred from HQ and other MNC overseas units. Indeed, previous research suggests that a lack of shared language inhibits HCN employees' ability to

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absorb transferred knowledge in MNC subsidiaries (Monks, 1996; Peltokorpi & Clausen, 2011).

Second, this paper contributes to the theory and research on knowledge transfer in MNCs by its language-based perspective of knowledge transfer. In line with relatively scarce IB research on language (Marschan-Piekkari et al., 1999a; Mäkelä et al., 2007) and language-oriented HRM practices (Buckley et al., 2004; Peltokorpi & Vaara, 2014) in MNCs, this paper emphasizes the importance of language and more specifically a shared language in interunit knowledge transfer. The conceptual framework and findings in this paper also suggest that language and language-oriented HRM practices can have different effects on interunit knowledge transfer and absorptive capacity in MNCs. That is, language-sensitive recruitment and language training was argued to enhance HCN employee ability to transfer knowledge across language boundaries, and that this ability to transfer knowledge provides HCN employees a greater exposure to external new knowledge, which in turn contributes to absorptive capacity in MNC subsidiaries. This suggests that interunit knowledge transfer precedes absorptive capacity. In support, the findings suggest that language-sensitive recruitment and language training had stronger direct effects on interunit knowledge transfer than absorptive capacity. In addition, the findings support the mediating role of interunit knowledge transfer between language-sensitive recruitment and language training, and absorptive capacity. Although previous research on absorptive capacity, knowledge transfer, language, and language-oriented HRM practices has suggested these underlying relations, to the best of our knowledge, this is the first study to conceptually integrate and empirically test these relations.

Third, this paper integrated previous research on absorptive capacity, knowledge transfer, and language to examine the effects of language-sensitive recruitment and language training on interunit knowledge transfer and absorptive capacity in MNCs. Although taking account these constructs, their effects and relationships have not been specified in previous research (Buckley et al., 2004; Peltokorpi & Vaara, 2014; Wang et al., 2004). Interestingly, the present findings suggest considerable language-sensitive recruitment and language training effect size differences on knowledge transfer, but less so on absorptive capacity. Language-sensitive recruitment may thus staff MNC subsidiaries with HCN employees who are more effective in relatively simplistic knowledge/idea exchange than absorbing transferred new knowledge. Indeed, a case study in a German MNC suggests that recruiting HCN employees on the basis of their English rather than their technical competence has ended with the MNC "getting a bloody nose" (Ehrenreich, 2010, p. 417). The case study findings suggests that while certain language proficiency is a prerequisite for knowledge transfer across language boundaries, little knowledge can be absorbed in MNC subsidiaries if the recruited HCNs do not have sufficient functional skill.

6.2. Practical implications

The findings have practical implications. First, the findings suggest that MNCs are able to enhance the development of absorptive capacity in foreign subsidiaries by paying more attention to language-sensitive recruitment and language training. Although these practices are particularly important in countries with formable language barriers, HCN employees might need technical language training in countries where language barriers are not such a serious issue. Despite the importance of a shared language in MNCs, research suggests that language skills are seldom taken account, especially in expatriate selection. For example, a study of foreign language needs in US-based MNCs suggests that foreign language proficiency per se was seldom considered in staff selection and career advancement (Fixman, 1990). Instead, they were viewed as a mechanical skill to be acquired, if necessary, and secondary to the candidates' technical skills. In addition, a study on language policies and practices suggests wide differences in language-sensitive recruitment and language training given to HCNs in subsidiaries (Peltokorpi & Vaara, 2012).

Second, related research suggests that MNCs can conduct language audits in order to gain information about average language proficiency and language development needs in subsidiaries (Reeves & Wright, 1996). Language audits can also be used to identify how effective offered language training is and to check whether language-sensitive recruitment practices are used in subsidiaries. In addition to offering access to language training, research suggests that employees also need to be motivated to develop their foreign language skills (Peltokorpi & Clausen, 2011). One way to motivate employees is to link their improvements in language tests to performance appraisals.

Third, the findings and related research suggest that language-sensitive recruiting is a fast and effective way to remove language barriers (Lester, 1994) and enhance knowledge transfer (Buckley et al., 2004) in MNCs. Language-sensitive recruiting is also a partial solution to costly, time-consuming language training (Marschan-Piekkari et al., 1999b). However, research also suggests that language-sensitive recruitment can be accompanied with counter-productive effects due to misalignment between employees' functional and language competencies (Ehrenreich, 2010). To ensure that the recruited HCN employees have the needed skills and competencies, subsidiaries can use various methods, such as by using established interview techniques and selection committees composed of HCN and expatriate employees (Björkman & Lu, 1999). Recruiters may also need to accept some limitations on language proficiency and be prepared to provide training to meet language needs.

6.3. Limitations and future research

This study has limitations that provide interesting possibilities for future research. First, since this study was conducted in Japan, the findings can be context-specific. For example, the Japanese have low average English proficiency (TOEFL, 2013; TOEIC, 2012), and on the average prefer to work for domestic rather than foreign companies (Ono, 2007; Peltokorpi, 2013). Despite these country-specific factors, we believe that similar effects can be found in other national and international contexts – and hope that the framework presented is used in future research to enrich our understanding of language-oriented HRM practices and interunit knowledge transfer on absorptive capacity in MNC subsidiaries.

Second, in line with the bulk of absorptive capacity research (Volberda et al., 2010), this study lacks a longitudinal research method that captures changes in absorptive capacity over time. For example, the development of MNC subsidiary absorptive capacity in part follows changes in language-oriented HRM practices (Wang et al., 2004) and interunit knowledge transfer (Miao et al., 2008). In addition, absorptive capacity and knowledge transfer are dynamic constructs that change over time (Song, 2014). A longitudinal research design would help better to capture language-oriented HRM practices and knowledge transfer related changes in absorptive capacity.

Third, while the absorptive capacity scale used in this study was specifically designed to access HCN employee ability to absorb and apply new external knowledge (Chang et al., 2012), it did not allow a more fine-grained examination of the independent and mediating variables on HCN employee ability to recognize the value of new external information, assimilate it, and apply it to commercial ends (Cohen & Levinthal, 1990). For example, HCN language proficiency is likely to have a stronger effect on processing and understanding new (subsidiary external, MNC internal) knowledge than applying it to commercial ends. Future research can thus

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benefit by using a more fine-grained conceptualization and operationalization of absorptive capacity.

Fourth, the independent, mediating, and dependent variables in this study are based on the subsidiary managers' perceptions. Future studies are able to provide a more objective account of knowledge transfer and absorptive capacity, for example, by examining the perception of people in HQ and subsidiaries. Finally, absorptive capacity in subsidiaries can be influenced by various additional factors (Volberda et al., 2010). For example, Minbaeva et al. (2003) built on previous research by arguing that in addition to employees' ability, their motivation is also an important determinant of absorptive capacity in subsidiaries. Future research thus benefits by integrating more antecedents that explain absorptive capacity in MNC subsidiaries.

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