Control mechanisms of MNEs and absorption of foreign technology in cross-border acquisitions

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1. Introduction

Park, Glaister, and Oh (2009) describe cross-border acquisitions (CBAs) as strategic investments carried out by multinational enterprises (MNEs) in order to overcome the competitive pressure for globalization and improve their position in the world market. They consider CBAs where the MNEs make a partial equity purchase of the local firms. These CBAs are therefore a hybrid organizational form which requires a cooperative business relationship between acquiring MNEs and acquired local firms, whose headquarters are located in different countries. CBAs are currently one of the most popular forms of investment worldwide and represent a critical alternative for strategic expansion (Shimizu, Hitt, Vaidyanath, & Pisano, 2004). Based on contemporary movements, acquisitions have replaced Greenfield investments as the most common mode of foreign investments (Ivarsson & Vahlne, 2002).

There may be various reasons for their prevalence. Shimizu et al. (2004) point out that a major element playing a pivotal role in contributing to the popularity of CBAs is: ‘rapid changes in technical standards’ promoted by globalization and the consolidations of industries and regions. According to Apfelthaler, Muller, and Rehder (2002), firms are surrounded by an increasingly competitive, complex and uncertain environment. In this situation, CBAs are unique arrangements helping firms develop competitive advantage by improving organizational efficiency and effectiveness. Hitt, Harrison, Ireland, and Best (1998) shed light on the fundamental character of CBAs by illustrating their formation as a vehicle to blend...
complementary capabilities of MNEs and local firms. These explanations have a trait in common, the emphasis on the importance of organizational knowledge (as a complementary resource), in that a firm’s competence cannot be enhanced without the enlargement of the organizational knowledge reservoir. The possession of distinctive technology and information is a key competitive advantage. In this vein, Park and Ghauri (2011) suggest that the most significant strength of CBAs resides in the fact that both foreign and local firms have the opportunity to learn complementary skills and know-how through the establishment.

However, CBAs are complicated and multi-faceted events and thus they often fail to achieve their initial investment objectives. Among the more common reasons for failure, MNEs may choose an incorrect target, pay too much or inadequately integrate it (Hayward, 2002). Although these are crucial grounds for unsuccessful operations, we also should not overlook the links between organizational performance and foreign control mechanisms. To reiterate, MNEs undertake strategic investments to break into and defend their foreign markets, and subsequently maintain a better position in their international operations. MNEs possessing partial ownership in CBAs commonly attempt to exert an adequate level of control to make their achievement of organizational goals more predictable (Li, 2003) and use special methods (i.e., control mechanisms) to ensure that the subsidiaries are managed to meet their strategic interests (Hebert, 1996). They influence control to make their achievement of organizational goals more predictable (Li, 2003) and use special methods (i.e., control mechanisms) to ensure that the subsidiaries are managed to meet their strategic interests (Hebert, 1996). They influence managerial and operational decisions of the subsidiaries through the use of power, authority and a wide range of bureaucratic, cultural and informal mechanisms. These various control mechanisms eventually function as a prime mover to integrate it (Hayward, 2002). Although these are crucial grounds for unsuccessful operations, we also should not overlook the links between organizational performance and foreign control mechanisms. To reiterate, MNEs undertake strategic investments to break into and defend their foreign markets, and subsequently maintain a better position in their international operations. MNEs possessing partial ownership in CBAs commonly attempt to exert an adequate level of control to make their achievement of organizational goals more predictable (Li, 2003) and use special methods (i.e., control mechanisms) to ensure that the subsidiaries are managed to meet their strategic interests (Hebert, 1996). They influence managerial and operational decisions of the subsidiaries through the use of power, authority and a wide range of bureaucratic, cultural and informal mechanisms. These various control mechanisms eventually function as a prime mover to transfer sophisticated foreign knowledge and advanced MNE technology (Park, 2009). The appropriate exercise of control mechanisms is thus a critical prerequisite determining the efficient operation of overseas subsidiaries and guaranteeing a triumph in the competitive learning race against other local competitors and a crucial component comprising the part of absorptive capacity in learning organizations. However, this issue (i.e., the association between control mechanisms and subsidiary knowledge absorption) seems to have remained as a big gap in current academic discussions.

In addition to the lack of empirical experiments on the above, some other gaps are also noticeable. For instance, despite the recent prevalence of CBAs and the general consensus on the importance of acquisition of technological information by subsidiaries, vast scholarly concentration has been paid to ‘knowledge acquisition by international joint ventures (IJVs)’ (e.g., Anh, Baughn, Hang, & Neupert, 2006; Lane, Salk, & Lyles, 2001; Lyles & Salk, 1996; Park, 2011), but learning in CBAs has received scant attention. In fact, although in-depth examination of knowledge exchange between foreign and local firms in the same entities (i.e., CBAs) has been proceeding (e.g., Häkanson, 1995; Hayward, 2002; Ivarsson & Vahlne, 2002; Zou & Ghauri, 2008, among others), a thorough review of the literature using EBSCO, Elsevier ScienceDirect and Proquest indicates that such empirical studies are focused only from an MNE perspective. However, knowledge exchange is not a unilateral but a bidirectional phenomenon, which points out that we need to approach this issue from different angles (i.e., knowledge acquisition from investing firms by local firms). In addition, empirical examinations attempting to identify key factors affecting knowledge exchange between MNEs and subsidiaries have been primarily carried out in transitional economies such as Hungary, Vietnam and China and neglected emerging countries (e.g., Anh et al., 2006; Lane et al., 2001; Lyles & Salk, 1996; Tsang, 2002).

Korea is especially suitable to examine the topic in that it has long been regarded as an emerging economy which has attracted huge foreign investments, and thus control mechanisms exercised by foreign firms and its impacts have also been considered to be important for MNE operations. The country is often referred to as one of the East Asian tigers (i.e., Hong Kong, Taiwan, Singapore and Korea) which achieved very rapid economic growth up until 1997. These so-called Asian tigers grew twice as fast as other Asian countries, three times as fast as Central and South American countries and five times as fast as sub-Saharan countries in Africa (Ahn, 2001). Among these Asian tigers, Korea is the best example, showing interrelations between significant changes in FDI policy, the enlargement of the volume of attracted FDI, the rise of CBAs and an increased role of knowledge acquisition in recent years. In particular, the Asia crisis in 1997 triggered changes in the government attitude toward foreign investments, and subsequent enhancement of the business environment through aggressive FDI liberalization strategies enabled Korea to attract a dramatic increase in foreign investment resulting in the sharp surge in equity purchases by MNEs of local firms (Jeon & Ahn, 2004). Moreover, knowledge acquisition is a crucial issue for the Korean economy in order to leap forward and establish itself as an advanced economy. These explanations clearly propose that Korea is an important research context when a single geographical area is chosen to explore the phenomenon.

In conclusion, although acquisition of complementary knowledge is one of the central motivations for two entities to form CBAs (i.e., MNEs and local firms), it has generally received scant attention in the extant literature dealing with the research topic. Of course, there are some welcome exceptions, however, to the best of our knowledge, previous studies have focused only on the MNE perspective and neglected opposing angles in the phenomenon (as discussed, knowledge acquisition between MNEs and CBAs is bidirectional). In addition, no one has attempted to identify the impacts of foreign control mechanisms on knowledge acquisition in CBAs despite their strategic importance particularly in the emerging economy context. We will try to fill these research gaps. Based on the discussion, the aim of this research is to identify foreign control mechanisms positively influencing CBA knowledge acquisition from MNEs in the perspective of Korean local firms.

2. Research model and hypotheses development

Control mechanisms can be classified into two different types: management and operational. Management control “is the observable pattern of decision-making power. Although ownership control may lead to management control . . . through board membership, other more informal control mechanisms . . . may provide decision-making power apart from that which
is derived from ownership” (Steensma & Lyles, 2000: 833). Mechanisms used for management control bring significant effects to acquiring firms, particularly as these mechanisms help MNEs to manage the appropriate use of organizational resources to obtain common goals and interests (Makhija & Ganesh, 1997). In contrast, operational control means the specific process through which MNEs selectively target functional areas such as production, marketing, distribution and financial management in order to supervise effectual applications of parent knowledge in these strategically critical areas (Luo, Shenkar, & Nyaw, 2001; Zhang & Li, 2001). Mechanisms for this type of control are also important because operational control may support an MNE’s achievement of operational objectives, even with a minority share of the overall equity (Luo et al., 2001). The empirical study by Yan and Gray (2001) also documents that the operational control mechanisms exercised by an MNE over certain organizational functions have a positive effect on the extent to which this foreign firm’s goals are accomplished.

Meanwhile, the absorptive capacity perspective is a useful primary theoretical lens to understand knowledge acquisition from foreign parents in overseas subsidiaries, and it has also attracted huge scholarly attention as the most significant determinant of organizational learning. The concept was initially coined by Cohen and Levinthal (1990) who define it as “the ability to recognize the value of new external information, assimilate it and apply it to commercial ends” (p. 128). In other words, if we apply such a capability to knowledge acquisition in subsidiaries, it means the ability of the firm to understand the value of new parent information and may perhaps involve a sense-making process whereby the subsidiaries link the new skills to an existing organizational knowledge reservoir and embed it to eventually create new knowledge from the diffusion activity (Lane et al., 2001). In this vein, the greater the absorptive capacity of the subsidiary, the more knowledge it can learn from parent firms.

A favorable atmosphere for the enhancement of absorptive capacity leading to high knowledge acquiring subsidiaries largely includes several components. According to Makhija and Ganesh (1997), one of the most important elements which has an impact on knowledge acquisition in subsidiaries is the issue of control. They suggest (1997: 508) that “appropriate controls are essential for learning to take place”, as they facilitate knowledge sharing within the organization, encourage appropriate exploitation of primary organizational resources and redefine organizational direction in line with new information. On the other hand, unproductive control systems may build obstacles to knowledge acquisition through the distortion, suppression and interruption of feedback circulation on organizational activity. The connection between control and knowledge acquisition is logical in that control refers to the “conduit through which parents’ firm-specific advantages are transferred to the venture” (Choi & Beamish, 2004). In this vein, control mechanisms adequately exercised by parent firms enable subsidiaries to easily approach and learn their various know-how and technologies.

The more evident linkage between control mechanisms and absorptive capacity is further detected from Park’s (2011) explanations. According to him, the maximization of absorptive capacity in learning organizations is often achieved by relational capital promoting a favorable learning environment within an organizational context. In other words, it is crucial to understand that although CBAs are efficient platforms for acquisition of foreign knowledge, giving the subsidiaries access to the skills and competencies of investing firms, an increase in their ability to absorb new information is not likely to occur without the use of appropriate control mechanisms exercised by MNEs. These commentaries clearly confirm that foreign control mechanisms are not only important constructs consisting of absorptive capacity, particularly in overseas subsidiaries, but also enhance the learning organization’s ability to understand, assimilate and utilize new information.

The next area of attention is on the components comprising control mechanisms available for MNEs to increase subsidiary absorptive capacity. Figure 1 exhibits a framework explaining the potential influence of these components. To reiterate, the model built from extant literature consists of management and operational control mechanisms (Luo et al., 2001; Makhija & Ganesh, 1997; Steensma & Lyles, 2000). Management control mechanisms include (1) staffing the top management positions (Wang, Wee, & Koh, 1998), (2) participation in the policy making and planning process (Yan & Duan, 2003), and (3) interaction between the subsidiary’s top management and the MNE (Ren, Gray, & Kim, 2009). In contrast, operational control mechanisms encompass (1) participation of foreign expatriate experts in key functional areas (Chalos & O’Connor, 2004) and (2) active provision of training opportunities (Fryxell, Dooley, & Vryza, 2002; Park & Glaister, 2009).

### 2.1. Management control mechanisms

**Staffing the top management positions:** The power to appoint the board of directors is commonly considered as an efficient means to infuse the foreign investor’s strategic intention into the subsidiary (Duan & Chuanmin, 2007; Petrovic & Kakabadse, 2003). Wang et al. (1998) have compared firms with and without the right to nominate personnel to top management in their subsidiaries and found that the MNEs with the right to do so often feel that they possess greater power to exercise control over the latter. In other words, MNEs want their own staff to occupy the top management positions and wielding such an instrument in that they appoint critical positions in CBAs is regarded by investing firms as a major control mechanism. However, the power to control is not given automatically to the foreign firms. Hence, in order to be able to control the management by staffing the top positions, contributions from the MNEs, such as resources, knowledge and

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1 Although Park (2011) argues that control is a crucial vehicle to promote favorable learning environment and eventually enhance absorptive capacity in learning organizations, he does not deal with the effects of control and control mechanisms on subsidiary knowledge acquisition in his study. Unlike that study, we attempt to explore how control mechanisms facilitate foreign technology absorption by overseas subsidiaries.
technology, must be made to the CBAs (Park & Glaister, 2009). In a similar vein, Wang et al. (1998) also argue that the prerequisite for MNEs to exercise control over subsidiaries is the provision of knowledge, which is invaluable in running the business operation and precious to enhance firm performance. In addition, advanced technological knowledge is most readily available to the MNEs, and thus these contributions will logically play a pivotal role in learning foreign technological capabilities by CBAs. These explanations imply that the participation of foreign top management who have accumulated sufficient knowledge in the board of directors considerably helps overseas subsidiaries to know how to access, understand and assimilate valuable information and embed it into long-term memory, which are significantly related to organizational absorptive capacity in CBAs. 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Hypothesis 1. There is a positive relationship between ‘the MNE’s nomination in the top management of acquired local firms’ and the CBAs’ acquisition of MNE knowledge.

Participation in the policy making and planning process: Yan and Duan (2003) indicate that participation in the policy making and planning process is one of the investing firms’ main mechanisms to control overseas subsidiaries. As Mjoen and Tallman (1997) argue, the fundamental purpose of the use of a control mechanism seems to be closely associated with a direct guide for managerial functions and an appropriate establishment of subsidiary strategic direction. Specifically, Park and Glaister (2009) suggest that, in the case of CBAs in newly industrialized countries (for instance, Korea, the current research context), where local acquired firms tend to be relatively dependent on foreign firms’ expertise and knowledge, the MNEs’ influence on the subsidiaries’ planning formulation and strategy implementation is even more important. Control should also be particularly essential to foreign investors who need to execute their respective strategies and align the subsidiary with overall and long-range goals such as global market expansion into emerging economies (Luo et al., 2001). In this situation, the foreign firm’s active participation in the policy making and planning process makes the control of the strategic direction of the CBAs much more feasible. In addition, the participation in the design of the policy making and planning process by the MNEs, possessing sophisticated knowledge, makes it plausibly inevitable for the MNEs to leak information from their knowledge reservoir, which may circuitously provide an opportunity to accentuate the subsidiary’s learning experience, develop its absorptive capacity, objectify and materialize tacit foreign technology and catalyze a learning effect eventually leading to performance enhancement in the CBAs. A similar commentary can easily be found in extant literature. For instance, Park and Ghauri (2011) uncover from their empirical studies that vigorous managerial
support by MNEs owning advanced technology is a key factor to significantly strengthen CBA absorptive capacity and enlarge the subsequent extent of knowledge acquisition. Lyles and Salk (1996) also confirm the same results that control mechanisms can be a vehicle for upgrading subsidiary absorptive capacity and transferring advanced foreign technology. According to them, to help subsidiaries absorb technical know-how, it is likely to require vigorous foreign support in the policy making and planning process so that employees in subsidiaries can develop a knowledge base from being exposed to ideas, concepts and processes over time. This discussion leads to the following hypothesis:

**Hypothesis 2.** There is a positive relationship between 'the MNE’s participation in the policy making and planning process' and the CBAs’ acquisition of MNE knowledge.

**Interaction between the subsidiary’s top management and the MNE:** Interactions of MNEs with subsidiaries refer to the frequency of managerial and strategic communication between top management of foreign (acquiring) and local (acquired) firms. Frequent interactions not only enhance the transparency of partner actions, which promotes building of mutual reliance and leads to greater partner collaboration (Lane & Lubatkin, 1998), but also allows the MNE top management to ensure the capability of the CBA management and identify potential problems (Park & Glaister, 2009). These extensive management interactions between the two firms, including regular reports (monthly and quarterly), visits by the foreign firm or attendance at board meetings, are undertaken to maintain a cooperative relationship, meanwhile sharing information and encouraging transmission and learning feedback (Chalos & O’Connor, 2004). Researchers shed light on various aspects of the importance of such a managerial control mechanism. Wang et al. (1998) suggest that regular reporting arrangements (monthly and quarterly) and direct visits to the subsidiary commonly help the MNE to detect the subsidiary’s vulnerable organizational areas, which urgently need foreign knowledge support by providing the latter (i.e., MNE) with chances to look regularly over the routine business operations of the former (i.e., CBA). Interactions through board meetings between the top managements of both the foreign firm and the subsidiary should also not be overlooked in that their formal contacts often provide aid to reach mutual agreements on organizational goal setting, which ultimately improves reciprocal transparency and eases CBA knowledge acquisition in order to achieve their strategic objectives (Chalos & O’Connor, 2004). In particular, interactions between these two entities often function as a detonator for subsidiary absorbptive capacity, which is a foundation of knowledge acquisition, because absorbptive capacity is, in part, increased by altering and restoring knowledge stocks through circulating new information within learning organizations and this control mechanism becomes a potentially effectual venue for the distribution of new skills based on favorable relationships through which both knowledge transferors and acquirers share information (Ghauri & Park, 2012). Thus:

**Hypothesis 3.** There is a positive relationship between ‘interaction of the subsidiary’s top management with the MNE’ and the CBAs’ acquisition of MNE knowledge.

### 2.2. Operational control mechanisms

**Participation of foreign expatriate experts in key functional areas:** Expatriate staffing has been considered as a common mechanism in subsidiary control (Chalos & O’Connor, 2004). Expatriates are often employed in the subsidiary’s key functional positions, such as production, marketing, finance and administration. For industries where a foreign majority is not allowed, MNEs may concentrate authority in appointing expatriates to key positions (Wang et al., 1998). That is to say, foreign parents try to exercise operational control over CBAs by dispatching their own experts to manufacturing roles, installing their own staff in marketing functions and financial controller posts, and often in specialist administrative roles, where they help to upgrade business processes and ensure quality standards (Park & Glaister, 2009). Operational control is control over the selective organizational areas which an MNE perceives as critical, rather than an attempt to control the entire range of a subsidiary’s activities (Geringer & Hebert, 1989). By doing this, Schaan (1983) suggests that foreign investors with even a minority equity share are able to exert a certain degree of control over the CBAs quite above their level of share-holding and can also strengthen a minority or 50:50 position. In addition, control requires knowledge of events and circumstances. Such knowledge possessed by MNEs will most readily be available to the CBAs if key personnel running the operation, or in critical functions, are controlled by those foreign investors. Subsidiary absorbptive capacity is also more likely to be elevated as a byproduct of routine activity when knowledge connections occur through frequent contacts and conversations between expatriates and local employees. These recurrent interactive relationships in daily routines form the basis of subsidiary absorbptive capacity, help the sharing and communicating of new information and speed up the transformation of individual knowledge into organizational knowledge (Inkpen, 1998). The empirical study of Sino-US partnerships (e.g., CBAs) by Yan and Gray (1996) documents that foreign investing firms gain controlling power even in the case where they have minority ownership through the input of non-capital resources, such as technology and management expertise, which considerably enlarges the extent of knowledge absorption by subsidiaries. Lyles and Salk (1996) also conclude that the use of expatriate experts as a control mechanism frequently results in better transmission of foreign knowledge and information to local partners. In the same vein, Wang, Wee, and Koh (1999) indicate that foreign investors with superior management, technological know-how and strong financial resources are able to demand the right to appoint key functional positions, which can be a vehicle to transfer their intrinsic information to the subsidiaries. Thus,
Hypothesis 4. There is a positive relationship between 'participation of foreign expatriate experts in key functional areas' and the CBAs' acquisition of MNE knowledge.

Active provision of training opportunities: Foreign investing firms can exercise operational control by relying on their technical superiority and managerial skills to gain influence in the functional management of daily operations (Wang et al., 1998). Some researchers (e.g., Chalos & O'Connor, 2004; Fryxell et al., 2002) argue that the provision of training opportunities is an essential mechanism for operational control in that it enables MNEs to facilitate the transmission of foreign knowledge through the evolution and inculcation of norms and values. Training is a particularly practical means to promote confidence in inter-partner cooperation by affecting shared norms and values that serve to establish boundaries in the partners’ relationship (Park & Glaister, 2009). In other words, training expedites socialization as it is often designed to serve as a conduit for mutual commitments through which local managers learn to share common values and knowledge of the MNE, a catalyst playing a pivotal role in facilitating a greater flow of information between partner firms, and an essential guide for the enhancement of the local firm's absorptive capacity (Chalos & O'Connor, 2004; Park, 2009). Nonaka (1994), when discussing the development of organizational learning, points out that socialization with the knowledge possessor makes possible the conversion of tacit knowledge into explicit information. These series of arguments are supported by Lyles and Salk (1996) and Fabry and Zeghni (2003). According to Lyles and Salk (1996), MNE training for subsidiary managers often significantly promotes the latter's absorptive capacity by means of experience sharing between knowledge possessors and acquirers, and thus it is a universal vehicle not only for conveying informational content (explicit knowledge), but also for transmitting socially embedded information. While they exercise operational control, Fabry and Zeghni (2003) argue that training programs boost organizational absorptive capacity and make possible intimate socialization between the foreign and local entities, which paves the way for transforming and enhancing the subsidiary's technology and knowledge. This discussion leads to the following hypothesis:

Hypothesis 5. There is a positive relationship between ‘active provision of training opportunities’ and the CBAs’ acquisition of MNE knowledge.

3. Methodology
3.1. Sample and data collection

The list of CBAs established by MNE investments was obtained from Foreign Direct Investment (2008) published by the Korean Ministry of Knowledge Economy (MKE). The data source is government material providing official, trustworthy and precise information on all foreign operations across various industries in Korea. In order to reduce the data set into a manageable size and appropriately choose the sample, two criteria necessary to achieve our research objectives were used: (1) CBAs in which foreign partner firm(s) holds a minimum 20% and maximum 80% of the equity; (2) CBAs with European, American (US) or Japanese partner firms. CBAs may not reflect the characteristics of a cooperative relationship between MNEs and local firms in the case where foreign firms possess too much or too little ownership. In other words, if an acquiring firm has more than 80% of foreign ownership MNEs will have dominant power, and thus CBAs will be entirely governed by them. Control issues may be of little concern and not to be considered in this situation. Based on the same logic, less than 20% of foreign ownership was also discarded. In addition, MNEs in advanced economies probably possess better technology than local Korean firms, and the official government information indicates that most of the inward foreign direct investment (FDI) in Korea was by these three developed economies. Through this process, a sample of 542 CBAs was finally drawn, and then we conducted a questionnaire survey.

It was decided to present the questionnaire in both Korean and English. The Korean translation was prepared for Korean CEOs and the English language version was intended for non-Korean CEOs. The thinking behind the decision to address Korean CEOs in their native language was built upon practical considerations and courtesy. Practically, it was not possible to identify all the nationalities of CEOs in the sample of international CEOs. Nor would it have been possible to provide multiple translations for each participant. Since English is a widely spoken business language, it was decided that this would be an appropriate means of addressing international CEOs.

To this end, the questionnaire was translated into an English version. Initially, two Korean research students studying for PhDs in English Education helped in the conversion of the questionnaire into English. That is, those PhD students firstly translated the questionnaire, and then a professional translator contributed by confirming its explicitness and appropriateness, and introducing more suitable word choices. After that, the questionnaire was sent to a government officer in the Korean Ministry of Knowledge Economy, previously contacted by us, and who was interested in critical control mechanisms which may affect knowledge acquisition in CBAs. Thus, he consented to be involved in the translation stage and confirmed its fitness. Moreover, he was an appropriate person to verify its validity and reliability as an expert who has experience in dealing with inward FDI in Korea.

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2 The statistic of the % of FDI received from US, EU and Japan is as follows: (1) Investment amount – 35.8% (US), 34.5% (EU) and 13.4% (Japan) comprising 83.7% of FDI in Korea. (2) Investment number – 23.5% (US), 14% (EU) and 18% (Japan) comprising 55.5% of FDI in the country.
The survey questionnaires were sent to CEOs in those 542 CBAs between August 2008 and January 2009. When the survey was completed a total of 137 questionnaires were returned, giving a response rate of 25.3%. Out of 137 responses, 18 were not usable (some respondents repeated a certain numeral or pattern-based answers) and thus 119 were included for statistical analysis (finally representing 22.0% of response rate). We checked for any presence of non-response bias regarding three key parameters: (1) detailed industry classification, (2) ownership configuration, and (3) early versus late respondents. However, we did not uncover a significant difference between the responding and the non-responding CBAs on the first two key parameters. In addition, we also did not find a significant difference between the early and late respondents, which confirms the minimum presence of the non-response bias.

3.2. Variable measurement

**Dependent variable:** Knowledge acquisition was employed as a dependent variable and technology was used as a proxy for knowledge. Following Park and Ghauri (2011), it was assessed by a three-item, five-point scale based on Likert-type responses to the question “To what extent has a CBA acquired … from your foreign partner(s) (a) product development skills, (b) production technology, and (c) manufacturing process?”, with 1 = very little, up to 5 = to a great extent (alpha = 0.977).

**Independent variables:** Predictors consist of both management and operational control mechanisms, which may influence the acquisition of foreign technological capabilities in CBAs. The variables included in the research framework are ‘staffing the top management positions’, ‘participation in the policy making and planning process’, ‘interaction between the subsidiary’s top management and the MNE’, ‘participation of foreign expatriate experts in key functional areas’ and ‘active provision of training opportunities’. All of these variables were measured using a five-point Likert scale. Internal validity was confirmed by using Cronbach’s alpha (alphas were consistently high for all items, between 0.784 and 0.960). A detailed explanation on the measurement of each independent variable is given in Appendix A. We also provide model-fit statistics from a confirmatory factor analysis of all the constructs in our model. The details are as follows: $\chi^2 = 73.183$, df = 71, $p < 0.001$, GFI = 0.928, AGFI = 0.879, NFI = 0.959, CFI = 0.993, RMSEA = 0.016 (also refer to Appendix B).

**Control variables:** Five variables were also included to control the potential influences of other factors on the phenomenon: (1) Origin of foreign acquiring firms. Parkhe (1993) suggests that compared with Western firms, Japanese MNEs often show different patterns of knowledge transfers to subsidiaries and are reluctant to be transparent in exchanging firm-specific information. Following his judgment, a dummy variable was created (1 for Japanese partners and 0 otherwise). (2) Ownership structure. MNEs with majority ownership are likely to be better motivated to transfer knowledge than others (Park & Ghauri, 2011). Thus, another dummy variable was used (1 for majority foreign-owned, 0 otherwise). (3) Compatible organizational culture. Cultural differences between firms exchanging knowledge is increasingly pointed out as a component which requires attention in order to reduce potential problems and conflicts, and in this vein, the similarity of organizational culture might be important to facilitate information flow between knowledge transferors and acquirers (Lane et al., 2001). It was calculated by the average of two questions asking whether (1) the corporate culture between acquiring and acquired firms is similar and (2) this company understands the corporate culture of the acquiring firm (1 = very little; 5 = very much). (4) Size. Simonin (1999) argues that subsidiary size is a critical element significantly influencing collaborative sharing of experience with MNEs, and it was measured by the number of employees. (5) Age. Older subsidiaries, given the greater time that there has been interaction between the MNEs and themselves, are likely to have a better knowledge base and thereby superior absorptive capacity relative to younger subsidiaries. Age was calculated by the number of years since creation of the CBA.

3.3. Common method bias

This research asked respondents to assess perceptually both dependent and independent variables, which presents the possible presence of common method bias. This study employed a number of procedures to help overcome the potential bias. First, careful attention was given to the wording of items. This might reduce item ambiguity by avoiding complexity, vague concepts and double-barreled questions, but also by keeping questions straightforward and simple. Second, the dependent and independent variables were measured using several individual items. Third, prior to conducting the main questionnaire survey, a pretest was undertaken to examine appropriateness of questions and refine them so that respondents would not have problems in answering, as well as in understanding questions. Fourth, this research repeatedly guaranteed confidentiality and anonymity (the cover letter assured respondents by promising complete anonymity).

According to previous studies, such as Podsakoff and Organ (1986) and Podsakoff, MacKenzie, Lee, and Podsakoff (2003), Harman's single-factor test (i.e., one-factor analysis) is one of the most commonly used statistical techniques to inspect whether an empirical examination suffers from bias in this situation. Following their suggestions, we have input all variables subjectively measured by the respondents into a factor analysis. A substantial amount of common method bias is not expected in the case when multiple factors emerge from the analysis. The proportion of variance criterion shows three

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3 Although we tested for changes in the results by using variations in the category of foreign origins as a control variable, the findings did not show dissimilar statistical outcomes. We performed this operation as part of a robustness test.
independent dimensions. 'Participation in the policy making and planning process', 'interaction between the subsidiary’s top
management and the MNE', 'participation of foreign expatriate experts in key functional areas' and 'knowledge acquisition'
have high loadings on the first factor (29.5%); 'compatible organizational culture' and 'active provision of training
opportunities' have high loadings on the second factor (17.4%); and 'staffing the top management positions' has high
loadings on the third factor (15.3%). Based on the explanations given by previous studies, the results confirm that the
presence of common method bias is not considerable in this research.

As a second statistical approach, we have used a marker variable method (Lindell & Whitney, 2001) in line with earlier
research in international business (e.g., Gabrielson, Gabrielson, & Seppälä, 2012; Noorderhaven & Harzing, 2009).
According to Gabrielson et al. (2012: 36), a marker variable needs to be theoretically unrelated to the constructs included in
the research model and measured with the same Likert scale. We chose ‘the extent of trust between MNEs and local firms’ as
a marker variable, because (1) we did not use it in our study, (2) although we checked its correlations with other variables, it
has not only a non-significant correlation with the criterion (i.e., technology acquisition) but also associations with
predictors were very low, and (3) it was assessed the same way as the other variables (Noorderhaven & Harzing, 2009). We
controlled for the influence of the marker variable by gauging the partial correlation matrix of our constructs and found that
the correlation and partial correlation matrices were almost the same. Moreover, all the significant zero-order correlations
also remained as significant in the latter. This means that by using the technique, we confirmed that the common method
problem in our study is negligible.

Finally, following Luo (2006), we re-sent the same questionnaire to general managers of 45 sample firms, whose
executives (CEOs) had responded to our survey earlier. From the 18 returned responses, we did not find a significant
inconsistency between the two informants from each firm. We believe that all these results verify the minimum presence of
common method bias.

3.4. Analysis methods

The research objective of this study is to investigate key control mechanisms affecting knowledge absorption from foreign
acquiring firms by local acquired firms. In order to achieve the goal, OLS regression analyses, widely used in most empirical
examinations exploring the cause-effect relationship between a dependent variable and several independent variables, were
used (e.g., Lane & Lubatkin, 1998; Li, 2003; Park & Ghauri, 2011). A dependent variable in each regression model was different
(the dependent variables are product development skills, production technology, manufacturing process and the
combination of these technological skills in models 1–4, respectively. The dependent variable employed in Model 5 is the
same as that in Model 4, but an interaction term was additionally added in Model 5). Five control variables and predictors
associated with two dimensions of control mechanisms were tested.

4. Results

Table 1 shows the descriptive statistics and correlations between the variables included in the research framework. The
table also presents whether there is the risk of presence of multicollinearity. We perceive multicollinearity exists when the
variables have a strong relationship with each other. Meanwhile, the strong relationship has been differently defined by
researchers. Some (e.g., Tabachnick & Fidell, 1996) consider a cut-off point should be a correlation of .70, whereas others (e.g.,
Kim, 2005; Pallant, 2001) suggest a more generous criterion for the issue. Although the researcher adopts a conservative

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>VIF</th>
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<tbody>
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<td>0.39</td>
<td>0.49</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td>1.141</td>
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<td>2. Ownership structure</td>
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<td>0.44</td>
<td>–0.07</td>
<td>1.00</td>
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<td></td>
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<td></td>
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<td>0.84</td>
<td>0.22</td>
<td>–0.13</td>
<td>1.00</td>
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<td></td>
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<td></td>
<td></td>
<td>1.316</td>
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<td>1704.22</td>
<td>–0.11</td>
<td>0.23</td>
<td>–0.01</td>
<td>1.00</td>
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<td></td>
<td>1.116</td>
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<td>5. Age</td>
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<td>0.15</td>
<td>0.09</td>
<td>1.00</td>
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<td>6. Staffing top management positions</td>
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<td>–0.28</td>
<td>–0.04</td>
<td>0.07</td>
<td>–0.14</td>
<td>1.00</td>
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<td></td>
<td></td>
<td>1.153</td>
<td></td>
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<td>7. Participation in policy making and planning process</td>
<td>2.29</td>
<td>1.15</td>
<td>0.06</td>
<td>0.42</td>
<td>0.10</td>
<td>0.17</td>
<td>0.29</td>
<td>–0.13</td>
<td>1.00</td>
<td></td>
<td></td>
<td>1.635</td>
<td></td>
</tr>
<tr>
<td>8. Interaction between subsidiary’s top management and MNE</td>
<td>3.28</td>
<td>0.93</td>
<td>0.04</td>
<td>0.20</td>
<td>0.11</td>
<td>0.14</td>
<td>0.26</td>
<td>0.03</td>
<td>0.40</td>
<td>0.00</td>
<td>1.00</td>
<td>1.337</td>
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<tr>
<td>9. Participation of foreign expatriate experts in key functional areas</td>
<td>1.29</td>
<td>0.59</td>
<td>–0.02</td>
<td>0.07</td>
<td>0.13</td>
<td>–0.03</td>
<td>0.13</td>
<td>–0.04</td>
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<td>0.08</td>
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<tr>
<td>10. Active provision of training opportunities</td>
<td>2.87</td>
<td>1.01</td>
<td>–0.15</td>
<td>0.17</td>
<td>0.26</td>
<td>0.15</td>
<td>0.10</td>
<td>0.02</td>
<td>0.09</td>
<td>0.09</td>
<td>–0.01</td>
<td>1.00</td>
<td>1.232</td>
</tr>
<tr>
<td>11. Technology acquisition</td>
<td>1.98</td>
<td>1.20</td>
<td>0.13</td>
<td>0.09</td>
<td>0.08</td>
<td>0.05</td>
<td>0.21</td>
<td>0.15</td>
<td>0.51</td>
<td>0.37</td>
<td>0.35</td>
<td>0.04</td>
<td></td>
</tr>
</tbody>
</table>

N = 119.
* p < 0.05.
** p < 0.01.
stance, the problem of multicollinearity is not detected as most of the correlations are moderately low and all are below .60. This clearly confirms that the presence of multicollinearity between variables is minimal. Despite the result, we also ran the variance inflation factor (VIF) to measure precisely the level of multicollinearity. According to Hair et al. (2003: 305), multicollinearity is a problem in the regression analysis if a value of VIF is above 5. However, the highest value was 1.635, which corroborates the possibility that multicollinearity does not exist and thus it will not disturb the outcomes stemming from the use of multiple regression analyses.

Table 2 shows the results of our regression analyses with knowledge acquisition from the foreign acquiring firms as dependent variables.

### 4.1. Management control mechanisms

This study primarily anticipated that three management control mechanisms exercised by foreign acquiring firms possessing sophisticated and advanced knowledge will impact positively on the extent of technology absorption in CBAs (i.e., local acquired firms). As expected, all three factors are positively and significantly associated with subsidiary knowledge acquisition. First, the close relationship between ‘staffing the top management positions’ and learning is confirmed in all models (*p < 0.05*). Second, ‘the MNE’s contribution to the policy making and planning process’ is verified as a critical component functioning as a facilitator by efficiently enlarging the extent of absorptive capacity in learning organizations (*p < 0.001 in all models*). Third, ‘interaction of the subsidiary’s top management with the MNE’ also turns out to be an important mechanism affecting absorption of technological capabilities from foreign acquiring firms (*p < 0.1 in Model 1,* *p < 0.05 in Models 2, 4 and 5, and *p < 0.01 in Model 3, respectively*).

### 4.2. Operational control mechanisms

The second dimension posited to be positively associated with technology absorption by CBAs is ‘participation of foreign expatriate experts in key functional areas’ and ‘active provision of training opportunities’. Our result finds that working with foreign expatriates in daily routines is positively significant in all models (*p < 0.01 in Models 1, 2 and 4, and *p < 0.001 in Model 3, respectively*). However, ‘active provision of training opportunities’ does not emerge as a significant factor in any model, which appears to be different from common wisdom (the possible reasons for the result are discussed in the next section).

It may be noted that none of the main control variables emerge as critical components influencing the phenomenon. We will also discuss the non-significance of any of the control variables in the following section.

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**Table 2**

Regression analyses for knowledge acquisition.

<table>
<thead>
<tr>
<th>Control variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Origin of foreign acquiring firms</td>
<td>.114</td>
<td>.095</td>
<td>.113</td>
<td>.110</td>
<td>.103</td>
</tr>
<tr>
<td>2. Ownership structure</td>
<td>-.087</td>
<td>-.147</td>
<td>-.123</td>
<td>-.122</td>
<td>-.114</td>
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<tr>
<td>3. Compatible organizational culture</td>
<td>-.032</td>
<td>-.104</td>
<td>-.073</td>
<td>-.071</td>
<td>-.060</td>
</tr>
<tr>
<td>4. Size</td>
<td>-.022</td>
<td>-.027</td>
<td>-.034</td>
<td>-.028</td>
<td>-.025</td>
</tr>
<tr>
<td>5. Age</td>
<td>.058</td>
<td>.054</td>
<td>.030</td>
<td>.040</td>
<td>.053</td>
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<td>Management control</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6. Staffing top management positions</td>
<td>.199*</td>
<td>.204*</td>
<td>.169*</td>
<td>.195*</td>
<td>.191*</td>
</tr>
<tr>
<td>7. Participation in policy making and planning process</td>
<td>.424***</td>
<td>.474***</td>
<td>.418***</td>
<td>.449***</td>
<td>.446***</td>
</tr>
<tr>
<td>8. Interaction between subsidiary top management and MNE</td>
<td>.152</td>
<td>.166</td>
<td>.220*</td>
<td>.183*</td>
<td>.177*</td>
</tr>
<tr>
<td>9. Participation of foreign expatriate experts in key functional areas</td>
<td>.224**</td>
<td>.257**</td>
<td>.275***</td>
<td>.258**</td>
<td></td>
</tr>
<tr>
<td>10. Active provision of training opportunities</td>
<td>.075</td>
<td>.024</td>
<td>.015</td>
<td>.039</td>
<td>-.136</td>
</tr>
<tr>
<td>Interaction term</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Foreign expatriates × training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.300***</td>
</tr>
</tbody>
</table>

**Adjusted R²**

<table>
<thead>
<tr>
<th>F</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.631***</td>
<td>.325</td>
<td>.380</td>
<td>.366</td>
<td>.373</td>
<td>.369</td>
</tr>
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<td>8.176***</td>
<td>.753***</td>
<td>7.961***</td>
<td>7.856***</td>
<td></td>
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</tr>
</tbody>
</table>

**Notes.** N = 119.

* p < 0.05.

** p < 0.01.

*** p < 0.001.

† p < 0.1

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4 We re-ran a regression analysis by including a multinomial control variable for origin of foreign acquiring country, distinguishing between US, EU and Japan. However, we did not find considerable differences between the results.
4.3. Further analysis

We presume that ‘innate capabilities of local firms’, ‘the relationship between MNEs and local firms’, and ‘reciprocal support by MNEs for knowledge acquiring organizations’ are all important for learning to take place in foreign subsidiaries (e.g., CBAs). According to previous studies (e.g., Park, 2011; Park & Ghauri, 2011), human capital, international experience and the accumulation of prior-related knowledge belong to the ‘innate capabilities of local firms’, whereas trust, compatible organizational culture and similar goals probably promote ‘relational capital between knowledge transferring and acquiring firms’. In addition, ‘staffing top management positions’, ‘participation in policy making and planning process’, ‘interaction between subsidiary’s top management and MNE’, ‘participation of foreign expatriate experts in key functional areas’ and ‘active provision of training opportunities’ (i.e., our independent variables) will not be provided by MNEs in the case where they do not have ‘intent to share technology and support subsidiaries’. Unlike these dimensions, we suggest that the impacts of the ‘innate capabilities of local firms’ and ‘trust and similar goals’ need to be considered, and thus we further place these variables in an additional examination. Although we add the variables in the model, the results are not very different.

The results table in Appendix C shows that both ‘human capital’ and ‘international experience’ of local firms do not play pivotal roles in absorbing new information from MNEs. Compared with general viewpoints, many researchers perhaps think this is a controversial finding. However, it is not, in fact, a surprising outcome if we look at explanations given by Park and Ghauri (2011). They (2011: 121) clearly point out, “both high stock of human capital and international experience are necessary but not sufficient conditions for technology acquisition. In other words, it will be difficult for organizations which merely have high quality personnel and various experience to acquire knowledge if they do not have a high intensity in learning effort”.

Unlike accumulation of human capital and international experience, our result indicates that prior relevant knowledge owned by local firms is one of the key determinants to learn advanced technology from foreign investors. Cohen and Levinthal (1990) in their seminal work argue that in the case where learning organizations possess prior relevant knowledge, they do not need to apply experimental ways to acquire new information, and thus it facilitates skill absorption. In addition, Kim (1998) sheds light on the role of this factor by stating that the possession of prior related knowledge is one of two primary components comprising absorptive capacity.

With respect to elements associated with relational capital, trust seems not to affect knowledge acquisition in subsidiaries. Lane et al. (2001) find similar results through empirical investigation undertaken in Hungarian IJVs and propose that trust is a factor positively enhancing organizational performance, not knowledge acquisition. Moreover, partner trust in CBAs is commonly more limited than IJVs, and thus a non-significant relationship between trust and learning is probably acceptable. Likewise, the result from similar goals is also not significant. Hamel (1991) suggests that in the case where both partner firms seek to achieve similar goals, such as inter-partner knowledge acquisition or short-term economic benefits their relationship tends to be contentious and managers are likely to find themselves frequently involved in argumentative discussions over value-sharing. The relationships where managers are least likely to be troubled by recurrent contention over value appropriation are those, for instance, where one firm desires opportunities to learn new information and the other aims for the maximization of short-term profits. However, it remains conjecture and without specific investigation, we do not know the precise rationale behind the results.

5. Discussion

The paper started with a research question, namely what critical (1) management and (2) operational control mechanisms positively affect knowledge acquisition from MNEs in CBAs. Our results indicate that the subsidiary’s knowledge acquisition depends on factors associated with management control mechanisms, such as ‘staffing the top management positions’, ‘the MNE’s contribution to the policy making and planning process’, and ‘interaction of the subsidiary’s top management with the MNE’. One of the most effective instruments to infuse a foreign investing firm’s strategic intention into the subsidiary is obtained through the participation of the acquiring organizations in the board of directors of the counterparts (Duan & Chuanmin, 2007). It can be assumed that MNEs will endeavor to enhance the local acquired firms’ competitiveness to make profits from the initial investment capital by transferring invaluable information, particularly when the former occupy managerial positions, which have the power to determine the strategic direction of the latter. In this vein, the result showing their significant relationship is logical.

The second factor (i.e., the MNE’s contribution to the policy making and planning process) is different from ‘staffing the top management positions’ in that the direct involvement in the board of directors refers to the MNE’s immediate decision-making on the use of internal resources in order to meet organizational interests. Thus, it has a somewhat coercive attribute. In contrast, participation in the policy making and planning process has a more indirect and reciprocal feature though both to some extent influence strategic avenues for subsidiary operations. In other words, there are various ways for MNEs to help

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5 This analysis is added as an additional consideration for this paper, and thus, the results are not discussed in the next section.
6 Human capital was assessed by the question, ‘what is the highest level of education attained by managerial employees (including engineers)? (1 = middle school graduate; 5 = more than postgraduate). In contrast, international experience was measured by two items summarizing the extent to which CBA employees had previous experience of working with (1) foreign firms and (2) foreign staff.
7 In order to calculate the possession of prior relevant knowledge, we have asked for the level of similarities of the CBA products or services compared to the acquiring firm.
contribute to the design of organizational structure and tactical architecture of CBAs. While investing firms allow managerial autonomy and organizational flexibility within the MNE network, they can exert adequate control over the subsidiaries and guide strategic direction, for instance by sending a management consultant who specializes in corporate management under specific circumstances. Although both of the above factors are highly significant, the fact that the analysis shows ‘participation in the policy making and planning process’ is the most important element for CBA knowledge acquisition among variables may imply that the foreign firm’s indirect and reciprocal support brings a better positive outcome than its direct and active supervision.

The positive association between ‘interaction of the subsidiary’s top management with the MNE’ and ‘CBA knowledge acquisition’ is a plausible result when we consider commentaries in previous studies. For instance, Park (2011) advises that learning is an organizationally embedded process and needs close relationships through which both knowledge transferees and recipients share information. Therefore local acquired firms (i.e., CBAs) which share information through frequent communication with foreign acquiring firms may become a potentially effectual venue for knowledge absorption. That is, the most obvious knowledge transfer approach is through open communication between foreign and local firms, and thus the MNEs’ open communication with the top management in the CBA considerably helps the latter to win in a learning race against others.

In addition to those management control mechanisms, operational controls are also expected to positively affect knowledge sharing through collaborative settings, and we have found that ‘dispatch of foreign experts to subsidiaries’ functions exactly in this manner. This factor is often referred to as one of the most common means for the knowledge possessor to support the knowledge recipient and promote knowledge acquisition in learning organizations. This is because expatriates sent by foreign acquiring firms often shape a collaborative relationship with employees in local acquired firms. While they carry out routine organizational activities the relationship formed between the foreign and local employees can play a pivotal role in sharing and distributing foreign knowledge and technology in various functional areas. In other words, personnel transfers by acquiring firms to the subsidiaries commonly promote the mobilizing of individual knowledge through exercising operational control and providing foreign support in daily operations (Inkpen & Dinur, 1998). Consequently, the more opportunity there is for CBA personnel to contact and discuss issues with foreign experts with relatively advanced knowledge on key functional posts, the more likely this will lead to a positive effect on new knowledge acquisition.

Unlike ‘dispatch of foreign experts to subsidiaries,’ we have failed to uncover a close relationship between subsidiary learning and provision of MNE training. Although this is a surprising result, the finding may reveal that training is a necessary but not a sufficient condition for substantial learning to occur. The reason for this unexpected result can be found in Park (2011). He argues that residence of foreign expatriates is a long-term factor facilitating technology assimilation in the daily routine, whereas a training program is a short-term support and fixed-period teaching for the purpose of educating local employees. To examine minutely the role of training in knowledge acquisition, this research uses an interaction term (participation of foreign expatriates x provision of training) in Model 5 and detects a strong statistical relationship between them ($p < 0.001$). In addition, the large variance explained by the interaction term may mean that the effect of a training program can be enlarged, especially in the case when MNEs provide an official education opportunity, together with informal long-term instruction in routine activities.

As a theoretical consideration, these findings may offer an answer for a critical question on the links between control mechanisms and subsidiary absorptive capacity. Since Cohen and Levinthal (1990) coined the theoretical concept, absorptive capacity, a number of researchers have tried to identify components comprising knowledge acquisition capability in learning organizations. For instance, Kim (1998) points out both ‘intent to learn’ and ‘possession of prior relevant knowledge’ as primary elements influencing absorptive capacity. Lyles and Salk (1996) propose that the innate characteristics of knowledge acquirers function as a key player determining the extent of knowledge acquisition, whereas Park, Whitelock, and Giroud (2009) emphasize that compatible organizational attributes between knowledge transferees and acquirers often enlarge their relational capital and create favorable learning environments. In contrast, Park (2011) reports that collaborative support by MNEs is a precondition for learning to take place in overseas subsidiaries. Although these discussions are important and their findings have empirical value, we contribute to the overarching theoretical base by arguing that control mechanisms appropriately exercised by MNEs (i.e., knowledge possessors) also play a pivotal role in enhancing subsidiary absorptive capacity.8

With respect to the effects of control variables, a reason for the minimal influence of foreign origin can be found in Pak, Chang, and Park (2009). Some researchers (e.g., Lam, 2003) suggest that Japanese firms usually show different patterns of coordinating globally dispersed information sources and managing opportunities in exchanging technology with local firms, compared with Western firms. However, according to Pak et al. (2009), Korean firms have a propensity to learn more from Japanese partners than from Westerners. Based on their explanations, this is probably because both countries are geographically close and share historical and social connections leading to similar cognitive norms, attitudes and other systems and minimization of cultural severances. These various similarities may ease knowledge flow between acquirers

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8 The discussions hitherto are the impacts of foreign control mechanisms on subsidiary learning. However, one may argue that there are more factors leading to a greater learning effectiveness in the CBA. In this vein, additional analysis drawing a broader picture of knowledge acquisition is undertaken in Appendix C.
and transfrors in the two countries despite the traditional ethnocentric behavior of Japanese firms. As for ownership, Lyles and Salk (1996) suggest that shared ownership requires more interaction among the MNEs and the subsidiary to discuss and negotiate decisions, which rapidly reduces conflict and error than foreign majority ownership. Their explanation argues that learning is promoted through shared ownership because it affords the subsidiary with an opportunity to access foreign parent's knowledge facilitated by interaction and cooperation.

Park and Ghauri (2011) point out that people commonly perceive cultural compatibility as a critical channel for knowledge exchange, but cultural impact depends on the types of knowledge. That is, investment in human practices considerably contributes to several dimensions of managerial know-how through the evident development of a firm's absorptive capacity (also see Minbaeva, Pedersen, Bjorkman, Fey, & Park, 2003), and thus, cultural aspects logically play a pivotal role in transferring knowledge. In contrast, as technological capabilities can also be learned through codified tools, such as manuals, guides and instructions, the negative effect derived from cultural incongruency on technology acquisition is probably less critical. Additionally, the influence of organizational size on learning is still not conclusive. For instance, Minbaeva et al. (2003) shed light on subsidiary size as a token of strategic position and argue that a stronger strategic position allows better access to knowledge and other resources possessed by the foreign parents, whereas Lane et al. (2001) advise that smaller subsidiaries are able to respond quickly to changes and generally show less hierarchical behavior, which promotes the organizational ability to acquire new information. Finally, young organizations perhaps have more intent to learn than old ones that accumulate sufficient relevant data and such a behavioral pattern of the juvenile subsidiary (e.g., learning intent) may often heavily motivate the parents' knowledge transfer. However, without minute investigation, this remains as conjecture.

6. Conclusions

This research investigates the impacts of both management and operational control mechanisms on foreign knowledge acquisition in CBAs (to reiterate, technology was used as a proxy for knowledge). To attain the research objective, a series of multiple regression analyses were used to identify primary components that contribute to the overseas subsidiaries' becoming a high knowledge acquirer. These experiments basically confirm the importance of control mechanisms exercised by MNEs for CBA learning and suggest several conditions which guide MNEs to paths that positively influence technology absorption in acquired local firms. According to the results, these fundamental qualifications are 'staffing the top management positions', 'participation in the policy making and planning process', 'interaction between subsidiary's top management and the MNE' and 'involvement of expatriate experts in key functional activities'. Although 'active provision of training opportunities' was not revealed as a crucial component, all these findings provide the following useful implications for MNEs (particularly top management) intending to enter foreign markets by partially purchasing the equity shares of local firms.

First, the use of adequate control mechanisms should be essential to enhance CBA competitiveness, as they help to increase knowledge sharing between foreign acquiring and local acquired firms, ease appropriate allocation of key organizational resources and form a correct strategic direction in line with new information. On the other hand, control mechanisms ineffectively exercised by foreign investing firms may conversely function as barriers inhibiting knowledge flow through giving a bad impression, such as organizational distortion, unilateral suppression and delay of feedback on subsidiary activities. MNEs need to remember that control refers to the conduit through which their firm-specific advantages are transmitted to the subsidiaries and thus control, CBA knowledge acquisition and investment success are inter-connected with each other. Second, although control mechanisms appropriately exerted by MNEs generally enable CBAs to easily access and efficiently learn foreign technological capabilities, indirect and reciprocal means bring better outcomes more than direct and coercive methods. Third, a constructive learning atmosphere for subsidiary knowledge acquisition is promoted by reciprocal MNE support, but such assistance needs to be on a long-term basis rather than on the spot or temporary support. In addition, short-term education and instruction, such as training for a fixed period creates more synergy when it is combined with constant and continuous engagement in daily activities. We believe these implications are useful for top management in multinationals by helping to make good decisions and thereby they improve the probability of operational success in foreign markets.

Although this study contributes to current knowledge and provides productive implications, we should acknowledge that it suffers from various research limitations. First, an empirical examination was made merely in a single geographical area. In this vein, we suggest that other researchers use our model and experiment with it in different research contexts. Second, knowledge cannot be defined by one specific type of information, in that it consists of a variety of practical and scientific wisdom. Despite that, we used only technology as a proxy for knowledge. This indicates that future research needs to test the impacts of control mechanisms on absorption of different types of knowledge to extend our understanding. Third, although CBA is a popular mode of entry often used by MNEs, it is not the only option and there are other expansion strategies such as wholly owned subsidiaries and IJVs. Based on that idea, an investigation attempting to identify the influence of control mechanisms on knowledge acquisition in different entry strategies can be another future research avenue. Fourth, one of the key research limitations in our study is not to explore the possible relationships and interactions between variables. Thus we recommend that future studies should attempt to identify such a relationship, for example by using structural equation modeling. Fifth, we did not ask respondents to provide sufficient information on MNE attributes (e.g., size, age, previous acquisition experience etc.). Due to this, our model does not seem to reflect all
characteristics of acquiring firms. Finally, the moderately low response rate and somewhat small size need to be admitted as additional drawbacks in this paper. Despite the weakness, we hope that our study will be used as a fundamental basis for relevant theory building in the future.

Appendix A. Measurement of independent variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement</th>
<th>Cronbach's alpha</th>
</tr>
</thead>
</table>
| Staffing the top management positions         | • What is the extent of acquiring firm's power to nominate top management positions?  
  (developed for this study)  
• What is the extent of acquiring firm's substantial participation in top management?  
  (ranges from 'very small extent' to 'very large extent') | 0.893            |
| Participation in policy making and planning process | • To what extent does the acquiring firm participate in corporate strategy formulation under uncertain business environment?  
  (adapted from Lyles & Salk, 1996)  
• To what extent does the acquiring firm participate in the efficient allocation of internal resources?  
  (ranges from 'very little' to 'very much') | 0.915            |
| Interaction between subsidiary's top management and the MNE | • There are effective channels for internal communication flows between this company's top management and acquiring firm.  
  (adapted from Park & Glaister, 2009)  
• There are frequent visits and meetings between this company's top management and acquiring firm.  
  (ranges from 'very strongly disagree' to 'very strongly agree') | 0.784            |
| Participation of foreign expatriate experts in key functional areas | • To what extent do foreign expatriates participate in new product development activities in this firm?  
  (adapted from Minbaeva et al., 2003)  
• To what extent do foreign expatriates participate in production technology activities in this firm?  
• To what extent do foreign expatriates participate in manufacturing process activities in this firm?  
  (ranging from 'very little' to 'very much') | 0.960            |
| Active provision of training opportunities     | • To what extent does the acquiring firm provide relevant training to managerial employees?  
  (adapted from Lane et al., 2001)  
• To what extent does the acquiring firm provide relevant training to non-managerial employees?  
  (ranging from 'very little' to 'very much') | 0.906            |

Appendix B. Confirmatory factor analysis

We report key additional information generated by confirmatory factor analysis below.

Confirmatory factor analysis and reliability on measurement items.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Standardized estimate</th>
<th>t value</th>
<th>p value</th>
<th>Cronbach's α</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOPMGT</td>
<td>T1 0.885</td>
<td>8.503</td>
<td>***</td>
<td>0.893</td>
<td>0.798</td>
</tr>
<tr>
<td></td>
<td>T2 0.902</td>
<td>8.607</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLAN</td>
<td>P1 0.905</td>
<td>12.540</td>
<td>***</td>
<td>0.915</td>
<td>0.784</td>
</tr>
<tr>
<td></td>
<td>P2 0.895</td>
<td>12.175</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P3 0.855</td>
<td>11.494</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COM</td>
<td>C3 0.838</td>
<td>9.903</td>
<td>***</td>
<td>0.784</td>
<td>0.651</td>
</tr>
<tr>
<td></td>
<td>C4 0.775</td>
<td>9.045</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXPAT</td>
<td>E1 0.909</td>
<td>12.804</td>
<td>***</td>
<td>0.960</td>
<td>0.891</td>
</tr>
<tr>
<td></td>
<td>E2 0.994</td>
<td>15.045</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E3 0.928</td>
<td>13.269</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRAIN</td>
<td>R1 0.957</td>
<td>12.215</td>
<td>***</td>
<td>0.906</td>
<td>0.822</td>
</tr>
<tr>
<td></td>
<td>R2 0.853</td>
<td>10.627</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TECACT</td>
<td>A1 0.933</td>
<td>13.458</td>
<td>***</td>
<td>0.977</td>
<td>0.780</td>
</tr>
<tr>
<td></td>
<td>A2 0.999</td>
<td>15.285</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A3 0.971</td>
<td>14.473</td>
<td>***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: TOPMGT: staffing top management positions; PLAN: participation in policy making and planning process; COM: interaction between subsidiary's top management and MNE; EXPAT: participation of foreign expatriate experts in key functional areas; TRAIN: active provision of training opportunities; TECACT: technology acquisition.

To confirm the overall adequacy of our measures, we performed a confirmatory factor analysis with AMOS 18 statistical package, using a maximum likelihood estimation. We assessed their reliability and validity with an overall confirmatory measurement model, in which each questionnaire item loads only on its respective latent construct and all latent constructs correlate.
Our results indicated that the measurement model fit was acceptable. The Bentler-Bonnet normed fit index (NFI) and the comparative fit index (CFI) indicate good fit of the confirmatory measurement model (NFI = 0.959; CFI: 0.993; chi-square = 73.18; df = 71) and all factor loadings were statistically significant \((p < .001)\). Reliability estimates range from 0.76 to 0.97, while average variance extracted exceeded 65% for each construct. According to Fornell and Larker (1981), any pair of constructs exhibits discriminant validity if the average item variance extracted through both constructs is higher than their contribution to explaining the other construct which is assessed with squared correlations. All constructs meet this criterion. Overall, these results indicate that the measures possessed adequate reliability and construct validity.

Appendix C. Additional regression examination

<table>
<thead>
<tr>
<th></th>
<th>Model 1 (current analysis)</th>
<th>Model 2 (additional analysis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Origin of foreign acquiring firms</td>
<td>.110</td>
<td>.062</td>
</tr>
<tr>
<td>2. Ownership structure</td>
<td>-.122</td>
<td>-.112</td>
</tr>
<tr>
<td>3. Compatible organizational culture</td>
<td>-.071</td>
<td>-.098</td>
</tr>
<tr>
<td>4. Size</td>
<td>-.028</td>
<td>.033</td>
</tr>
<tr>
<td>5. Age</td>
<td>.049</td>
<td>.050</td>
</tr>
<tr>
<td>6. Human capital of local firms</td>
<td>.020</td>
<td></td>
</tr>
<tr>
<td>7. International experience of local firms</td>
<td></td>
<td>-.034</td>
</tr>
<tr>
<td>8. Prior relevant knowledge possessed by local firms</td>
<td></td>
<td>.185</td>
</tr>
<tr>
<td>9. Trust between partners</td>
<td></td>
<td>-.088</td>
</tr>
<tr>
<td>10. Similar goals</td>
<td></td>
<td>.109</td>
</tr>
<tr>
<td>Management control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Staffing top management positions</td>
<td>.195</td>
<td>.228*</td>
</tr>
<tr>
<td>12. Participation in policy making and planning process</td>
<td>.449**</td>
<td>.396***</td>
</tr>
<tr>
<td>13. Interaction between subsidiary’s top management and MNE</td>
<td>.183</td>
<td>.161†</td>
</tr>
<tr>
<td>Operational control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Participation of foreign expatriate experts in key functional areas</td>
<td>.258*</td>
<td>.249**</td>
</tr>
<tr>
<td>15. Active provision of training opportunities</td>
<td>.039</td>
<td>.056</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.373</td>
<td>.406</td>
</tr>
<tr>
<td>F</td>
<td>7.961**</td>
<td>6.329***</td>
</tr>
</tbody>
</table>

Notes: \(N = 119\).  
* \(p < 0.05\).  
** \(p < 0.01\).  
*** \(p < 0.001\).  
† \(p < 0.1\).

References


