

Towards a cross-cultural framework of strategic international human resource control: the case of Taiwanese high-tech subsidiaries in the USA

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Due to the growing expansion of newly emerging multinational companies (MNCs) in the USA market, it seems pertinent to explore how to manage their Western industrialized subsidiaries in terms of human resource management. This study combines the institutionalism, resource dependence perspective, and control theory to provide an integrative framework in an attempt to investigate the cross-cultural determinants of strategic international human resource control over MNCs' subsidiaries. By a qualitative analysis of 10 Taiwanese top high-tech manufacturing companies operating in the USA, our findings are as follow: In order to perform subsidiary's value-added activities, multinationals need to identify the value and capabilities need for these activities. At the same time, subsidiaries also need to compare the cultural advantage of the home country in terms of these activities. In addition, from the perspective of cross-cultural influence, input control is designed to respond to high integration and high adaptation; output control is executed in the case of low integration and high cultural adaptation; while behavioural control is used to respond to high integration and low adaptation, simultaneously in the case of low value of subsidiary's activities.

Keywords: cultural adaptation; cultural integration; international human resource control; subsidiary's role

Introduction

With the growing trend of globalization, international business is facing intensive cross-cultural phenomena, particularly evident when multinational companies (MNCs) originating from Western society enter into "new" territory in China or India (Prahalad and Lieberthal 1998), or vice versa, i.e. when newly emerging economic entities from the east such as MNCs of Taiwan and India enter into industrialized Western markets (Bartlett and Ghoshal 2000). The obvious cultural differences between Western industrialized countries and comparatively less industrialized eastern countries (Redding and Baldwin 1991) raise the question of "how to execute human resource control for MNCs originated from the less industrialized countries over their Western industrialized subsidiaries from the cross-cultural perspective".

Increasingly, control theory has recognized International Human Resource Management (IHRM) in MNCs as an essential element of operations across borders (Edstrom and Galbraith 1977; Egelhoff 1984; Doz and Prahalad 1984; Baliga and Jaeger 1984; Pucik and Katz 1986; Martinez and Jarillo 1991; Harzing 1996; Hennart 2005), which also has been used to develop dualistic capabilities (Evans, Doz and Laurent 1992) or to build a matrix structure (Ghoshal and Bartlett 1990) to make equilibrium between the dual forces (corporate interest versus local need) in MNCs (Doz and Prahalad 1986; Jaw and Liu 2004). Since IHRM control modes can be classified into various types (Pucik and Katz 1986; Jaw and Liu 2004; Hennart 2005), it is necessary to explore what the relationships are between the various patterns of IHRM

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control and the dual forces (corporate integration versus local responsiveness in subsidiaries) in MNCs.

Alternatively, from the perspective of institutional theory (Scott and Meyer 1989; Westney 2005), it has been noted that many aspects of HRM are also affected by differences in national culture (Hofstede 1993). The success of HRM activities across cultures is largely dependent on managers' abilities to understand and balance the dichotomy of various cultural values and practices (Tung 1991; Evans and Doz 1989). While some research has focused on adaptation to the norms and behaviours of a foreign culture as much as possible (Tung 1984; Kale and Barnes 1992; Wright and McMahan 1992; Rosenzweig and Nohria 1994; Jun, Gentry and Hyun 2001; Maanen 2005), normative integration is seen to be a useful means of exposing a subsidiary's employees to the corporate culture and to help them develop a corporate perspective (Bartlett and Ghoshal 1987; Dowling and Schuler 1990; Bartlett and Ghoshal 2000; Martin 2002). However, at the level of the subsidiary, MNCs headquartered in small countries are apt to be less ethnocentric than those from large countries, and hence the flow of culture may be more symmetric or reciprocal (Hedlund 1986). Therefore, from the perspective of emerging MNCs, it is worth investigating how cultural adaptation and normative integration act as dual cross-cultural factors on various patterns of IHR control at the subsidiary level to achieve a balance between home country and host country cultures (Evans and Doz 1989).

Additionally, a subsidiary is defined as a value-adding entity in a host country that can perform a single activity (such as marketing) or an entire value chain of activities (Dunning 1994). The various approaches of IHR controls over a multinational subsidiary should depend on the different activities undertaken by the subsidiaries (Doz and Prahalad 1986; Pucik and Katz 1986; Birkinshaw and Morrison 1995; Jaw and Wang 2004). Various country cultures with different values may lead to different strengths and capabilities (Trompenaars 1993). Thus, from the resource dependence perspective, a multinational subsidiary should use cultural differences in problem solving styles to perform value-added activities and hence create sustainable competitive advantage (Hoecklin 1994). Therefore, combining the above three schools of theory, MNCs at the level of the subsidiary should know how to compare the cultural advantages of the home country with those of the host country in terms of various value-added activities for determining the level of dependence of the subsidiary on its parents' resources or local cultural resources; and thereby, adopt various IHR controls to respond to the needs for cultural adaptation and normative integration.

Recently, the majority of Taiwanese high-tech firms have entered into a series of private-label contracts with US importers; and subsequently created foreign subsidiaries to serve the US market. One of the most critical challenges they were faced was the cultural differences between Anglo-American and Chinese-based society (Harrison, McKinnon, Wu and Chon 2000). It's worthy to investigate how Taiwanese high-tech subsidiaries in the US use cultural differences among people from different countries of origin to perform their various value-added activities and execute their IHR control. Consequently, in this study, we adopted an integrative framework by applying the cybernetic system model to categorize IHR control at the subsidiary level (Jaw and Liu 2004) and to investigate the following cross-cultural issues with regard to the determinants of the IHR control of Taiwanese subsidiaries in the USA.

1. From a cross-cultural perspective, what is the relationship between cross-cultural management (cultural adaptation and normative integration) and the execution of various IHR controls over the subsidiaries?
2. On the basis of the resource dependence framework, what is the relation between the subsidiary's value-added activities and comparative of cultural advantages (parent's HR dependence or local HR dependence)? How do they interact to affect the cross-cultural

management (cultural adaptation and normative integration) and HR controls over the subsidiaries?

3. How do MNCs execute various IHR controls over a subsidiary, to sustain the subsidiary's capability in terms of value-added activities?

Literature review

Control theory and international human resource management

The control process has been characterized by Ouchi (1981) as "people treatment" which consists of screening, selecting, training people, monitoring behaviours, and monitoring outputs. Snell (1992) extended this notion, and identified three types of HR control: (1) input control (by rigorous selection and training/socialization practices); (2) behaviour control (through centralization, articulated procedures, close supervision and behaviour appraisal); and (3) output control (results criteria, and performance-rewards link) on the individual-level supervisor/subordinate relationship. In view of their relative strengths and weaknesses, it may be that a combination of the three can resolve what Khandwalla (1973) called the "antagonistic requirements" of efficiency and creativity which are similar to the dual forces (global integration and local responsiveness) of MNCs.

Given this backdrop, some research emerges from behaviour and output control used by the parent company to influence affiliates in the MNCs context (Doz and Prahalad 1984; Baliga and Jaeger 1984; Jaeger and Baliga 1985). Jaw and Liu (2004) further broaden Snell's conceptualization of control and raise it to the firm level in MNCs context. They propose that these three types of control are used for responding to the dual pressures of the subsidiary in its overall strategic context. These three types of IHR control are described in detail below.

IHR input control

By influencing a subsidiary's employee selection and training/socialization practices, MNCs can execute IHR input control over their subsidiaries. In an MNC context, expatriates are generally used as an IHR control mechanism (Edstrom and Galbraith 1977). Even when host-country nationals move into managerial positions at the subsidiary, a corporate culture value assessment may be used to ensure that the candidates' personalities and the firm's value are compatible and that local managers are committed to worldwide, rather than just local objectives (Kobrin 1988; Evans and Lorange 1989). Additionally, MNCs that rely heavily on this type of control tend to emphasize a longitudinal process of socialization as the primary vehicle for subsidiary's managerial training (Pucik and Katz 1986).

IHR behaviour control

Behaviour control in an MNC/subsidiary context is primarily manifested when headquarters influence the operations of subsidiaries through clearly defined rules and procedures (Doz and Prahalad 1984). By way of example, Doz and Prahalad (1986) noted that there are 13 general measures of subsidiary performance analyzed monthly by IBM's corporate staff. In addition, even more detailed analyses are conducted within each of these general categories. Thus, centralization, formalization and standardization (such as written policies, rules, job descriptions and standard procedures – through manuals and charts) are key coordination mechanisms used by MNCs to integrate similar activities that are, dispersed across subsidiaries (Martinez and Jarillo 1991).

The advantage of IHR behaviour control is that it can ensure stability and predictability. Cray (1984) proposed that when subsidiaries have the temptation to deviate from overall organizational policy or when the need for predictability is high, MNCs are more likely to use behaviour control.

IHR output control

Fundamentally, output control is the process of monitoring a performance measure, comparing it with a standard, and then providing selective rewards accordingly (Ouchi 1979). In MNCs, it seems particularly important to align the goals, competencies and motivations of key managers with the corporation's strategic pursuits (Edstrom and Lorange 1984). In fact, reward systems in most MNCs are based on an association between measurable organizational outputs and personal financial incentives (Pucik and Katz 1986). Furthermore, Pucik (1984) noted that effective reward systems must take into account equity issues within the organization as well as in external labour markets – whether they are national or international in scope. He further noted that, output control in MNCs may be fostered by the use of results-driven appraisals, performance-driven rewards, and localized monetary incentives.

In sum, these three types of IHR control and their related HR practice are described in Table 1.

Institutional theory and cross-cultural management

Westney (2005) stated that the extent to which MNCs adopt local organizational patterns in their subsidiaries is the issue of culture (and highly normative): Organizational structures and processes must allow for the distance between local national cultures and the cultural underpinnings of the parent organization (Hofstede 1993). Work in this tradition tends to focus on the need for adapting the parent company's organizational patterns to the national culture of the local environment. This approach, in the language of institutional theory, focuses on “coercive isomorphism” or the imposition of parent company patterns on subsidiary organization, and on local resistance to such imposition.

Cultural adaptation

Cultural adaptation is a social cognitive process that reduces uncertainty and an affective process that reduces anxiety (Jun et al. 2001). From the perspective of similarity – attraction theory in terms of activity preference (Lydon, Jamieson and Zanna 1988), the majority of research postulates that the greater degree of similarity between two parties, the greater the attraction will be. To minimize difficulties in cross-cultural interactions, it has been commonly recommended that one adapt to the norms and behaviour of the foreign culture as much as possible (Tung 1984; Pornpitakpan 1999). Thus, globalism requires recognition of cultural differences while being flexible enough to adapt to local needs (Laurent 1989).

Table 1. Subsidiaries IHR control and IHR practices.

<i>IHR control type</i>	<i>IHR practices</i>
Input	<ol style="list-style-type: none"> 1. Same selection procedures or expatriates 2. Approval of staffing managers by headquarters 3. Headquarter provides training and socialization
Behaviour	<ol style="list-style-type: none"> 1. Use of explicit monitoring 2. Frequent feedback to headquarters 3. Centralization by headquarters
Output	<ol style="list-style-type: none"> 1. Use of results-based criteria of appraisal 2. Presence of performance-rewards link 3. Use of monetary incentives

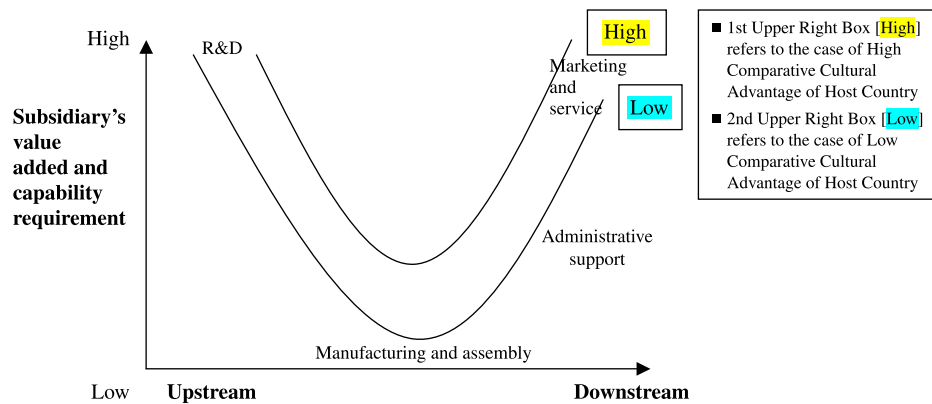


Figure 1. Subsidiary's value-added activities and capability requirement.

Pucik and Katz (1986) indicate that due to the different characters of information processing and transfer, a subsidiary's various activities would be influenced to a different extent by local culture. Among these activities, marketing and labour relations with social orientation will be more influenced by local culture than production and R&D which are more technically oriented. Figure 1 shows the importance of cultural adaptation of management practices to coincide with a subsidiary's value-added activities. Marketing is perhaps the functional area most accustomed to consideration of culture in international business (Hoecklin 1994; Jun et al. 2001); however, since the production and operations tend to be more standardized than those of other activities (Porter 1986), they therefore needing less cultural adaptation. As for activities such as R&D, more adaptation will be required than for example production technologies (Teigland, Fey and Birkinshaw 2000).

However, the relationship between a subsidiary's activities and its cultural adaptation may be moderated by the comparative cultural advantages of the home country with the host country. Festinger's (1954) social comparison theory asserts that individuals will be attracted to persons or groups seen as similar. In the case of higher host advantage in terms of certain activity (R&D, marketing, etc.), the subsidiary can add more value by localizing this activity; thus the subsidiary should adapt their activities more in order to increase perceived similarity and attract local talent and customers. In contrast, where there is a competitive advantage in the home country, cultural adaptation of subsidiary's activities will be decreased. Figure 1 depicts the interacting effects of the competitive cultural advantage and value added activities on the need for local cultural adaptation.

Normative integration

Normative integration has been used to develop and embed the corporate values that provide the context for integration in MNCs. The first task in normative integration is to create a cohesive force to hold the different parts together and align their initiatives. A set of clear and motivating organizational values provide the basis for such normative integration (Bartlett and Ghoshal 1987; Dowling and Schuler 1990; Bartlett and Ghoshal 2000). In the context of MNCs, IHR input controls are usually used for the mechanism of normative integration. One approach is for the parent company to use the same criteria for selecting host country nationals (HCNs) as it uses for selecting expatriates. For instance, a corporate culture value assessment may be used to ensure that the candidates' personalities and the firm's values are compatible (Evans and Lorange 1989). Its purpose is to ensure that future managers thoroughly internalize the corporate

culture and related information-processing rules and norms before assuming managerial responsibilities in a subsidiary (Pucik and Katz 1986).

In addition, many MNCs recognize that management development programmes need to emphasize worldwide information sharing on economic, social, political, technological and market trends. Accordingly, while some companies export home-country training and development programmes to host-countries for use by local employees, some may bring HCNs to corporate headquarters in order to expose them to the corporate culture and to help them develop a corporate perspective (Dowling and Schuler 1990).

Comparative cultural advantage of subsidiaries' value-added activity

Culture can provide tangible benefits and can be used competitively. As with individuals, nations have developed particular competencies, skills and ways of working, in areas that they value and that make sense in their environment (Hoecklin 1994).

Hofstede and Bond (1988) suggest that the shared culture of "The Five Dragons" (Singapore, Taiwan, South Korea, Hong Kong and Japan) such as greater collectivism and Confucian roots have provided the Dragons with particular advantages in increasingly complex and dynamic markets. Alternatively, Trompenaars (1993) explores the stereotypes and concludes that Germans are particularly good at building infrastructure whereas Americans excel at invention. The extraordinary economic success of the US can be attributed to the high value it places on both universalism and analysis. By recognizing the complexity and diversity of human cultures, it is possible to cultivate the best from each.

For the vast majority of global organizations, an emerging managerial challenge becomes identification of how particular cultures offer advantages in terms of functional specialization, orientation of time, and technical capabilities (Porter 1990). Organizations can no longer be constrained by the advantages or limitations of a single cultural orientation nor should they desire to be. By identifying specific competencies of different cultures and applying their functional or procedural expertise, an enormous source of competitive advantage can accrue to the MNC (Hoecklin 1994).

Subsidiary's value-added activity and capabilities

A subsidiary can perform a single activity (e.g. manufacturing) or an entire value chain of activities including R&D and production (Jarillo and Martinez 1990; Birkinshaw and Hood 1998). In the context of MNCs, Koopman and Montias (1971) proposed a paradigm that is composed of the environment, system and political stability, to aid the selection of a location for foreign investment and the competitive advantages of these companies. MNC researchers propose that each subsidiary of an MNC operates in its own unique environment that either constrains or determines the activities of that subsidiary (Ghoshal and Nohria 1989; Rosenzweig and Singh 1991; Westney 1995). The relationship between the subsidiary and its local environment has demonstrated that local environmental characteristics have been factored into the decision to invest in or upgrade a subsidiary (Ghoshal and Nohria 1989; Anderson and Johanson 1996; Rosenzweig and Nohria 1995).

Vernon's product life cycle (PLC) model (Vernon 1966) offers a good illustration of the development process as subsidiaries' roles evolve toward high value-added activities – from serving the local market to adapting the technology to local specifications, then exporting them back to the home country to eventually contributing to product development (Harrigan 1984; Dunning 1994). It is believed that among these activities marketing and R&D create more value than assembling and production and require higher HR capabilities of a subsidiary (Bartlett and Ghoshal 2000; Jaw and Wang 2004). Figure 2 demonstrates the relationship between value-added activities and a subsidiary's capabilities requirement.

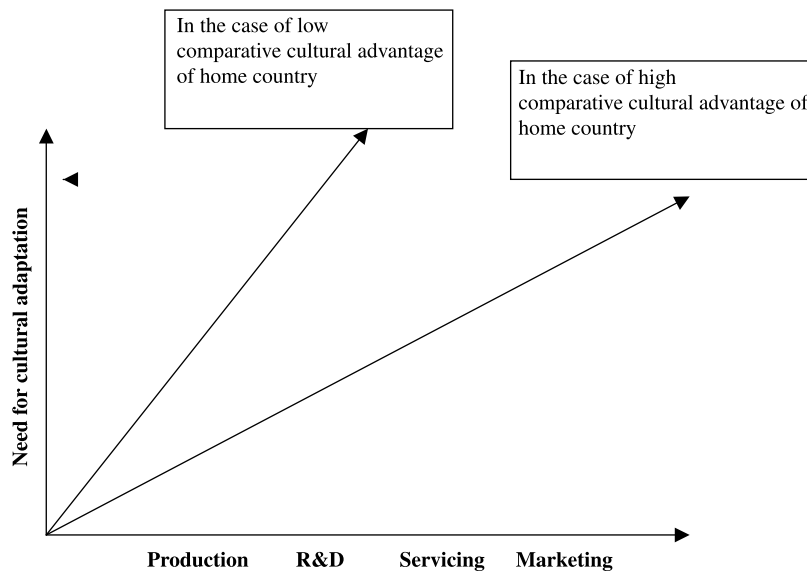


Figure 2. Subsidiary's value-added activities.

Porter (1985) has suggested that human resource management is seen as one of four important support activities that assist all the primary value activities of a company to sustain its competitive advantages. Dunning (1994) indicates that, in contrast with less value-added activities, subsidiaries with higher value-added activities usually require more HR investment. Jaw and Wang (2004) found that MNCs in Taiwan invested more human capital to support higher valued-added activities in subsidiaries. As a consequence, Asian MNCs need to build capabilities in the US which will require additional and specifically tailored strategic investment in human capital, for the development of local managerial elite, as well as in the US subsidiary. In this way, a subsidiary will develop higher capabilities as it assumes more complex roles and higher value-added activities.

In terms of comparative cultural advantage, the subsidiary's value-added is to a certain extent, distinct from the value-added of HQ operations and its other sister subsidiaries. In another words, the particular geographical setting, local environment and development history of the subsidiary are responsible for accumulating and displaying new skills and capabilities (Teece, Pisano and Shuen 1997), and hence contributing higher value to its activity among the rest of subsidiaries within the MNCs.

This example of a cultural advantage of a host country illustrates how the value-added activities stemming from the culture of the subsidiary can create more value. Figure 2 depicts how the interactions between culture advantage and value-added activities create a subsidiary's value and requirements of its HR capabilities.

The influence on IHR control

Doz and Prahalad (1986) propose that IHRM, as strategic control, must be differentiated to match the variety of conditions faced in the various operations. As individual countries with different size, resource endowment, economic development and industrial policies differ, the opportunities offered and the activities executed by the subsidiary thus differ. Consequently, the managerial competence demand from subsidiary management may differ considerably from

subsidiary to subsidiary. The assumption is often made that the more value the subsidiary adds locally and the more dominant local managers are in the organization, the more likely the subsidiary is to adopt local rather than parent company patterns (Rosenzweig and Singh 1991). Thereby, HRM can be used to meet the various requirements of different subsidiaries.

Pucik and Katz (1986) also have noted that the practices of various HRM functions that act as control mechanisms, must consider the different characters of information processing and transfer of various value activities in MNC subsidiaries. Bureaucratic controls are suggested for use in production, finance and accounting, and R&D which are characterized with technical information; while cultural controls are proposed for use in labour relations and management development which have the characters of social information.

Taiwanese high-tech subsidiaries in the USA

Taiwan is one of the 15 largest trading partners in the world. Its strongest economic sectors include semiconductor, electronic components, and the PC industry that collectively account for 50% of its total exports. The value of computer-related products manufactured in Taiwan amounts to over US\$30 billion annually. Taiwanese manufacturers build two-third of the mother boards and keyboards sold on the world market. In addition, approximately 60% of monitors and up to 40% of notebook computers are made by Taiwanese companies.

Taiwan has a long history of Confucianism coupled with a culture that values hard work and dedication. Western cultural influence is also deeply rooted dating back to the 1970s when the US used Taiwan as a manufacturing base. This history has enabled Taiwan to develop the exceptional manufacturing capability it enjoys today. A number of Taiwanese engineers have either been educated in the US or have working experience with local US manufacturers thus have given Taiwanese companies more familiarity with the US work value of competing in a global arena (Hempel and Chang 2002).

The major competitiveness of the locally based Taiwanese manufacturers is contributed to the lower cost-higher quality workforce of Taiwan. It is believed that the strength and capability of Taiwan engineers enabled the manufactured wonders in PC and peripheral related industries. This allows local manufacturers to produce the state-of-the-art competitive products sold in world markets. Consequently, most of the Taiwanese high-tech firms have entered into a series of private-label contracts with US importers, and subsequently have established foreign subsidiaries to serve the US market (www.asiapages.com).

As a newly industrialized country, when Taiwanese subsidiaries were being established in the US, they were faced with several challenges. One of the most critical challenges was the cultural issue. The US has a long history as a strong industrial civilization with the largest demand for electronic consumption. As the most culturally diverse population in the world, the US presented a major challenge for Taiwanese subsidiaries: How to manage cultural differences successfully? The obvious cultural differences between western industrialized countries and comparatively less industrialized eastern culture (Redding and Baldwin 1991) begs the question “are the cultural assumptions about the impacts of cultural diversity on the subsidiaries’ performance in Eastern cultures different from those in Western and more industrialized multinational companies (MNCs)” (Adler 1986). Cultural differences influence the firm’s human resource management (HRM) practices (Belbin 1991), thus, HRM is an important mechanism for cross-cultural management (Evans and Doz 1989).

Research framework and method

The conceptual framework of this research is depicted as Figure 3.

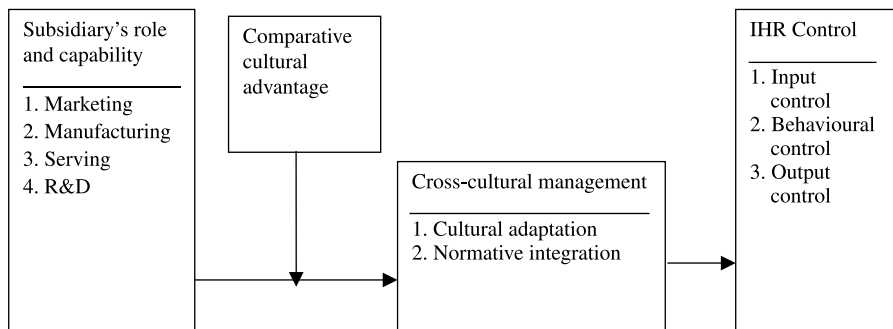


Figure 3. Conceptual framework of research.

Sample

As Taiwan is reputed to have a strong strategic partnership with US counterpart in PC manufacturing, TFT-LCD optoelectronics and electronic products industries, for this study we choose 10 companies that were representatives of other high-tech companies in these industries as our sample. We interviewed the CEOs of these 10 Taiwanese high-tech subsidiaries in the US; most of these firms' subsidiaries are located in Silicon Valley and Los Angeles. Among these subsidiaries, there are the Taiwanese Top PC (third largest), TFT-LCD optoelectronics (the second largest), TV monitor (largest) companies which are also the world-class electronics OEM and ODM companies that have contract-alliances with the US. One of the sample companies is owned by the Taiwan government. Its main task is providing technological information and service to Taiwanese subsidiaries in the USA.

Interview questions

The research focused on the following structural questions:

1. What is the ethnic composition of your workforce (examples of: Chinese, Japanese, Korean, Singaporean, Vietnamese, Lao, Thai, Malay, Hispanic, Caucasian, African American, etc.).
2. Please compare the competencies of Asia/Chinese and US/other ethnic groups of people hired in your US establishment.
3. How do Taiwanese companies use cultural differences to perform various value-added activities and to create the subsidiary's competitive advantage capabilities by the employment of people from different country origins?
4. What is your major consideration for your staffing/selection criteria for a position in each functional area in this operation: market force/manager/line worker/assembly workers?
5. In your opinion, what kind of different value-added activities are being performed by HQ in the home country that give you a competitive advantage over your rivals in the industry that allow this US establishment to compete in the local market? (e.g., marketing, logistic-fast delivery of goods, low cost, supreme quality products, etc.).
6. To what extent does the cultural adaptation vary by the different value-added activities performed in the subsidiary?
7. How are the HR functions used to facilitate cultural adaptation of different value-added activities of subsidiaries?
8. How are the HR functions used to facilitate normative integration with corporate values?

Field work

The 10 in-depth semi-structured interviews were conducted between February and May 2004. Individuals interviewed were subsidiary CEOs. All interviews were conducted in Chinese and scribed for later translation into English. Interviewees were first asked to introduce their businesses and organization structures (see Table 2). They were then asked to answer the questions listed above. Since the interviews were exploratory in nature, special attention was made to avoid steering the conversation towards the author's personal viewpoints. Questions were asked that not only prompted the managers to explain their HRM practices but also to solicit their cultural value comparison of different ethnic employees and reasons behind HRM practices.

The use of personal connections to obtain interviews increased the candour of the interview process, since the personal relationship-oriented nature of Chinese society is a critical constraint when carrying out research in a group. Further, since the authors come from academic backgrounds, it was easier to gain frank and candid responses.

Data analysis

Based on a number of works analysing qualitative data (Bryman and Burgess 1994; Kvale 1996; Mason 1996), analysis proceeded with the authors reading and rereading the interviews to identify recurring themes. Table 3 shows cross-cultural related factors of all the subsidiaries, which includes comparative cultural advantages of home, subsidiary's cultural characters, employee composition, normative integration and cultural adaptation. Table 4 reveals the details of HRM practices in all the subsidiaries which include staffing, training, appraisal and compensation and are categorized into three dimensions of IHR control. After the data analysis, we proceed to form some propositions which will demonstrate the relationships between the variables mentioned above and could be used as hypotheses in other future quantitative study.

Result and discussion

The related variables shown in Tables 2 to 4 represent the contents depicted in Figure 3 which is formed by the researchers based on existing literature. To discover the potential relationships between the variables shown in Figure 3, we first combine the data in Tables 2 and 3.

The influence of a subsidiary's capability and home advantage

A comparison of value activities and capabilities between companies A and B show that they perform either single or low-value activity (maintenance or initial sale), and these subsidiaries are referred as carrying simple capabilities. Their parents are characterized with low-cost advantages in production and the subsidiaries' activities are derived from the parent only to operate in the US market. Most of their employees are hired from Asian immigrants who hold similar values as their native countries and are paid less in wages, so that the parent companies' advantages can extend to the foreign subsidiaries. In these cases, subsidiaries' cultures are somehow like their parents, and the CEOs are expatriated from parent countries.

In the MNC context, a number of studies have noted a relationship between the resource dependence of a subsidiary on its multinational parent, and the resultant influence that the parent has over the subsidiary's HRM activities (Baliga and Jaeger 1984; Martinez and Ricks 1989). However, since the value of subsidiary's activities is not high enough to cover the high cost of normative integration (Kobrin 1988), MNCs will somehow use a medium level of normative integration, such as using more explicit regulations in place of lots of expatriates. Thus, these subsidiaries are characterized with medium normative integration and lower cultural adaptation. Therefore we can propose that:

Table 2. Company information.

<i>Variables/Co</i>	<i>Company A</i>	<i>Company B</i>	<i>Company C</i>	<i>Company D</i>	<i>Company E</i>	<i>Company F</i>	<i>Company G</i>	<i>Company H</i>	<i>Company I</i>	<i>Company J</i>
Subsidiary's role	1. Computer sales, ware-housing, distribution and R/D	1. Computer sales and repair	Design of tele-switching board	1. Sales of TFT-LCD	1. Sales and marketing of TFT-LCD (Driver IC) and monitors	1. Computer sales, ware-housing, distribution and R/D	1. Computer sales & repair	Design of tele-switching board	1. sales of TFT-LCD	1. Sales and marketing of TFT-LCD (Driver IC) and monitors
Subsidiary's capability	1. focus on product R/D and after-sale services	1. 95% completion on annual corporate marketing goals 2. Successful in cost reduction and downsizing without sacrificing performance	1. HQ CEO moved to US 2. COO (operation) is Chinese 3. Technical centre is US located	1. Taking big company's customized order (Dale) and 2. Customer service	1. Taking big company's customized order (Dale, HP, Apple, IBM) 2. Customer service	1. Focus on product R/D and after-sale services	1. 95% completion on annual corporate marketing goals 2. Successful in cost reduction and downsizing without sacrificing performance	1. HQ CEO moved to US 2. COO (operation) is Chinese American 3. Technical centre is US located	1. Taking big company's customized order (Dale) and 2. customer service	1. Taking big company's customized order (Dale, HP, Apple, IBM) 2. Customer service
Number of employees	100	8	27	65	10	800	170 (from 500 before re-organization)	15	8	17

Table 3. Taiwanese subsidiaries' cross-cultural management.

<i>Variables/Co.</i>	<i>Company A</i>	<i>Company B</i>	<i>Company C</i>	<i>Company D</i>	<i>Company E</i>	<i>Company F</i>	<i>Company G</i>	<i>Company H</i>	<i>Company I</i>	<i>Company J</i>
Comparative cultural advantage (home)	Low-cost OEM	Governmental-owned R&D aid	Low-cost assembly and OEM	Low-cost OEM	Low-cost assembly	Low-cost OEM applied R&D	Branded products Low-cost OEM, ODM	Low-cost ODM	Low-cost ODM	Low-Cost ODM & Advance R& D (Driver IC)
Employee composite	1. Vietnamese workers – 80% 2. CEO is Taiwan expatriate from HQ	1. Taiwanese (4) (including CEO) 2. 2 local hired Chinese Americans 3. 2 with technical and expertise in field knowledge	1. White predominate sales/marketing are 2. Asian predominate repair service 3. Five tech support (including network management) are Chinese or white 4. Administrative support 3 Chinese	1. Marketing function is white predominate administrative support function and general management functions are Chinese predominate	1. Management level are mostly Taiwanese (Chinese American from Taiwan) 2. Administrative support workers are Chinese descendents from other Asian cultures (Asian American)	1. Non-Chinese 80% (White predominate in sales function, Hispanic in the assembly) 2. Chinese staffing on the technical & management functions – 20% R/D consists of 50 individuals in total	1. Taiwanese expatriates – 4 (including 8 years Australia experience CEO) 2. White predominate on sales, product, and customer services functions	1. Software engineers – 6 (all Chinese Asian American). 2. Sales – 83. Engineers – 10 in India	1. 5 from Taiwan(including CEO) 2. 3 White predominate on sales and customer service	1. 5 from Taiwan(including CEO) 2. 12 predominate on sales and customer service
Subsidiary's cultural characters	Technical/skilled workers are stable, willing to cooperate with corp. needs (OT) and hard working	Taiwanese governmental style	1. High in entrepreneurship 2. Top management initiates communication and constant update corporate visions and objectives to employees	1. task-oriented in nature – being 2nd largest monitor supplier world-wide	1. American management style but emphasis on a good interactions/ balance with Taiwanese management mentality	1. American management style	1. American management style 2. High entrepreneurial skills among employees	American engineer style of corp. culture (respect professional expertise & integrity)		1. Stock-owner's relatives are expatriated to THE THE USA (education experience in THE THE USA) 2. Localization of management

Normative integration	Medium-high in operation administration	High in leadership	High in leadership	Medium in administration	Medium-high in leadership	High in leadership Medium in assembly	Medium-high in leadership	High in leadership	High in leadership	High in leadership
Cultural adaptation	Low in operation	Medium in R&D	High in marketing	High in marketing	Low in administration	High in R&D and marketing	High in marketing	Medium- high in R&D and marketing	High in marketing	High in marketing

Table 4. Taiwanese's subsidiaries' IHR control.

<i>Variables/ Co.</i>	<i>Company A</i>	<i>Company B</i>	<i>Company C</i>	<i>Company D</i>	<i>Company E</i>	<i>Company F</i>	<i>Company G</i>	<i>Company H</i>	<i>Company I</i>	<i>Company J</i>
Input control	1. Emphasis on expertise and team-work 2. Management are highly identified with corporate goals and being open-minded 3. Strong in-house training on professional development 4. Management in strict practice to involve in line of work and daily working life of subordinates	1. Similar to government official post off-shore 2. Management are mostly expatriates from Taiwan	1. Take advantage of white people locally for its sales and marketing activities 2. Warehousing & repair work are mostly 3. Asian cultures technical support and engineers are mostly Chinese descendants (hard working culture); with some whites. 4. Encouraged to participate in technical conferences and seminars/ workshops among technical staff	1. Job offers are given to individuals that have good working attitude with high competence of professional capability (local value) 2. Placed little emphasis on in-house trainings. If business needs call for, corp. is willing to hire from else where for strong callibres on sales (obtain talents from rivalry)	1. Require good team work to coordinate rush orders; hard work comes second. 2. Management level are Taiwanese concentrated plus some Asian American 3. No in-house training for its own staff 4. Host training camps on product for clients 5. Send out engineers to outside conferences, seminars, workshops for technical updates	1. Emphasis on performance, work & product quality; strong orientation on team work & proactive working attitude and value hard-working spirit 2. Training is not as easily accessible as in Taiwan.- generally go through outsourcing for talent needed in order to obtain real time performance (instead of training in-house – too slow)	1. Secondary mgmt (at WOS level) are decided by HQ 2. White population is employed at all functional areas. 3. Placed no emphasis on trainings. Corporation is incline to recruit needed talents from else where rather than in-house training.	1. Open-minded and respect integrity 2. Required approx. 18 months of in-house training on its engineers 3. Technical core-competence rely on from Chinese with US education. 4. Adapt “mentor” system to guide the young and the new 5. Using “beer burst” to escalate channel of communication among management and employees	1. Staffing local salesman 2. US educated CEO and sales engineers are expatriated from HQ	1. Staffing local salesman 2. US educated managers are expatriated from HQ

Input
control

5. In-house job
orientation
(1–2 days) to
train with in-
house techni-
cal personals.

Behaviour
control

1. Individual appraisal (peer competition)
2. Appraised on efficiency, quality and time-piece (in numerical scale of measuring)

1. Not an issue – insignificant.

1. White culture are traditionally placed heavy focus on personal and family leisure needs and so the corp. will take strong initiative to communicate individually to retain individual focus on job performance.

1. No formal appraisal done – due to small scale in number of employees
2. Do conduct annual face-to-face interview with employee for his/her annual performance.

1. Well- documented in corporate recruiting and relevant HRM practices.
2. Conduct interview for performance appraisal, open for communication.
3. Placed equal emphasis on individual and group/team performance.

1. An on- going of once every 2 month the corporation will call for a “Development” interview to talk with employees.

Table 4 – *continued*

<i>Variables/ Co.</i>	<i>Company A</i>	<i>Company B</i>	<i>Company C</i>	<i>Company D</i>	<i>Company E</i>	<i>Company F</i>	<i>Company G</i>	<i>Company H</i>	<i>Company I</i>	<i>Company J</i>
Output control	1. Lower than industry standard but very stable 2. Employees need not worry about being layoff 3. Bonus paid out to the management 30–40% 4. Bonus paid out to employees: 10–15%	1. Go by the same government paid standards/policy – same as government official (Taiwan) based abroad	1. White counterpart requires strong motivation scheme includes handsome financial compensation to retain talents. 2. Asian descendants are traditionally resembled better loyalty to the company and much more willing to cooperate with corp. goals	1. Compensate by sales commission 2. Handsome pay scheme to attract white sales-force 3. Result-appraisal	1. Holding industry standard in compensation 2. Give out annual pay raise and bonuses	1. Holding industry standard 2. Offering American style welfare package 3. Bonus paid-out is tied with sales revenue of the year	1. Corporation has a systematic “Key Performance Index” in place to evaluate business operation (consists of monthly gross figures, accounts receivable, expenditure and operation costs) 2. Quarterly appraisal. Manage by objectives 3. Layoff lack of performance. Tie performance with goals reached for handsome bonuses (paid monthly)	1. Performance concentrated on evaluating the sales-forces 2. Holding industry standard in compensating employees 3. Adapt “fixed” paid on financial compensation	1. Compensate by sales commission 2. Handsome pay scheme to attract white sales-force. 3. Result-appraisal	1. Compensate by sales commission. 2. Handsome pay scheme to attract white sales-force. 3. Result-appraisal

Proposition 1a: The lower capability and lower host advantages of the subsidiary, the greater need for its normative integration and lower need for its cultural adaptation.

The subsidiaries (companies D, G, H, I and J) whose role is creating more local value (examples of R&D, customer service, customized marketing and distribution) will need more capabilities injection from the host country. However, in this situation, a lot of their employees, especially marketing and R&D, are expatriated from headquarters (US educated) or hired from local community (Caucasian or American-born Chinese), because cultural advantages of home country are low in these areas. Wright and McMahan (1992) have noted that when a subsidiary is embedded in a local external network (consisting of joint-venture partners, suppliers, regulators and competitors), its human resource activities will be influenced by such institutions because of the interaction between the subsidiaries and these players in product, labour, and financial markets. Thus, the subsidiary's activities in the case of high capability and lower home advantages will direct the need for higher cultural adaptation and lower normative integration. Therefore, we can propose that:

Proposition 1b: The higher capability and the higher host advantages of the subsidiary, the lower need for its normative integration and the greater need for cultural adaptation.

There are also cases where more activities are executed by the subsidiaries (companies C, E and F), whose roles not only comprise activities derived from the parent (assembly, maintenance and design) but also involve creating more local value (marketing and R&D). Strong leadership is needed to coordinate various activities either in the host country or across countries. As empirically testified by Jaw and Wang (2004), MNCs' subsidiaries with more and higher value-added activities, will execute global integration of HR strategy to a higher level and invest more in local HR capital. Therefore, subsidiary's activities in the case of high capability and higher home advantages will direct the need for higher normative integration and higher cultural adaptation.

From the results found above, we can propose that:

Proposition 1c: The higher capability and lower host advantages of the subsidiary, the greater need for normative integration and greater need for cultural adaptation.

The influence of home advantages and normative integration

Furthermore, we combine Tables 3 and 4 in order to identify the relationship between the cross-cultural influence factor and IHR control. The results show that when a subsidiary's activities depend more on parent's resources (technology and HR), such as adaptive R&D and production, and promote normative integration, they will emphasize IHR input control. Companies A, C and F emphasize teamwork, team spirit and organizational commitment in staffing, companies C and E stress corporate-value staffing (emphasis on the value of hard work). In company B, half of the employees are expatriated from Headquarters.

As indicated by researchers, if a subsidiary depends on a flow of valuable resources (for example of money, equipment, information and skills) from inter-country organizations (including headquarters, and sister subsidiaries within the network of the MNC), its human resource practices will be influenced by these entities (Pfeffer and Cohen 1984; Pfeffer and Langton 1988; Martinez and Ricks 1989). When this is the case, the hierarchically derived power of the parent is more effective than the counteracting strength of the subsidiary. Likewise, when a subsidiary has a high level of dependence on its parent's technology or management systems, formal training programmes will enable subsidiary managers and other valuable personnel to become more qualified (Pucik and Katz 1986). Thus, the subsidiary's dependence on parent's resources is also believed to be positively related

to the quantity and quality of training and socialization offered. Therefore, subsidiaries' dependence on parent's resources seems to be positively related to the level of input control exercised by the parent.

Proposition 2a: The greater the dependence of the subsidiary on home advantages and the greater need for its normative integration, the greater use of IHR input control by the parent.

On the other hand, companies A, C and F carry some activities derived from their parents – assembly, repair and maintenance activities – locally. These activities are setup mainly for the purpose of reducing operation costs, no further value is being created by carrying out the given activities. Company A conducts strict behavioural control and executes production efficiency; company F has its HRM practices well-documented and emphasizes informal group-and-team performance (the Chinese-style appraisal); whereas company C pushes the employees to focus on job performance.

Since there are high costs associated with training expatriates and conducting the training programme to enhance corporate value of the subsidiary, American MNCs tend to use explicit rules and bureaucratic control system to transfer technology and information (Kobrin 1988). Martinez and Jarillo (1991) suggest that a subsidiary's dependence on its parent's technology or tight integration of the purchasing function will lead to more formalization, standardization, and centralization for global coordination. Edstrom and Lorange (1984) also argued that in a global business, conglomerates are characterized by operational interdependencies that are evident in uniform products and marketing strategies. As a result, a manager's activities will be more restricted, increasing the likelihood of a strict set of operating procedures.

Therefore, in the case of a subsidiary with a high level of parent' resource dependence, MNCs will use more IHR behavioural control over the subsidiary. Our data support the following proposition:

Proposition 2b: The greater the dependence of the subsidiary on home advantages and medium need for its normative integration, the greater use of IHR behaviour control by the parent.

The influence of subsidiary capabilities and cultural adaptation

Alternatively, subsidiaries who cater for local customer requirements (in the example of company C, D, E, F, G, H, I and J), the activities of marketing or R&D carried out by the local subsidiary can create more value and execute output control. According to our interview data, Companies D and G offer a more competitive compensation package to attract and maintain local salesman. Of the interviewed companies, six to eight company CEOs emphasize the importance of the link between reward and appraisal.

As indicated by research, if a subsidiary interacts with customers, suppliers, regulators and competitors within a host country or if the subsidiary is not a wholly-owned subsidiary; it is likely to have a high level of capabilities as well as a high need for cultural adaptation. When this is the case, its success may depend more on how well it fits into the local environment than on how much support it receives from its parent (Doz and Prahalad 1986). Such influences may necessitate that managerial rewards be tied directly to organizational performance outcomes. Indeed, Hambrick and Snow (1989) have proposed that if managers are considered to be independent contributors, their rewards should be directly linked to the performance of their units.

Proposition 3: The greater need for capabilities of the subsidiary activity and the greater need for its cultural adaptation, the greater use of IHR output control by the parent.

The influence of subsidiary capabilities and normative integration

Alternatively, a subsidiary with more local resources and capabilities may tend to be more easily caught up in the local environment (Cray 1984), and become more autonomous (Prahalad and Doz 1981). When this is the case, the major IHR control should be more concerned with states of mind and mindsets than with behaviours (Laurent 1986). Thus MNCs will increasingly use staffing policies and training programmes, rather than behavioural control, to assist in the coordination of activities in the subsidiary (Dowling, Welch and Schuler 1999). As shown by the evidence in this study, companies C, F and H, not only emphasize corporate-value staffing (the corporate-value of hard work, teamwork and a proactive work attitude) among the employment including the expatriation of US educated managers and technical talents, but stress the in-house training of employees.

Given the research literature addressing the relationships between local institution dependence and IHR input control and the evidence in this study, we conclude:

Proposition 4: The greater need for capabilities of the subsidiary activity and the greater need for its normative integration, the greater use of IHR input control by the parent.

The influence of subsidiary capabilities and normative integration

When the focus of the subsidiary's activities are on productivity and cost effectiveness, it frequently needs to develop integrated approaches and enforce uniformity to pursue economies of scale (Adler and Ghadar 1989). Gomez-Mejia, Balkin and Cardy (1995) propose that explicit job descriptions and the use of performance appraisals as behavioural controls which are in line with Porter's concept of low cost. Bird and Beechler (1995) proposed that there would be a robust relationship between an efficiency orientation, the use of centralized control systems and standardized operating procedures. Lindholm, Tahvanainen and Bjorkman (1999) argue that, from an economic point of view, MNCs would like to standardize certain management practices of the subsidiary for the reason of efficiency and lower transaction costs. Given the evidence in company A of this study, we can propose that low value-added activities performed by a subsidiary (low subsidiary capability) and medium normative integration will direct to IHR behavioural control.

Proposition 5: The less need for capabilities of the subsidiary activity and the medium need for its normative integration, the greater use of IHR behavioural control over the subsidiary.

All the findings above can be illustrated by the cases of Taiwanese MNC in the US and are depicted in Table 5.

Two illustrative cases

To illustrate our findings further, we would like to supplement our findings with two real cases of world famous MNCs originating in Taiwan – Trend Technology and Acer Computers.

In 1996, when Acer planned to launch in the US market with its own brand name, Acer hired a Caucasian CEO to head this project from marketing to sales and to design the prototype Aspire for its US Subsidiary. The engineering team in the Taiwan headquarters soon discovered an incompatibility of internal motherboard modules from the design layout of the prototype presented by the Caucasian CEO of the US subsidiary, and brought up these incompatibility issues with management. Instead of relying on the product design competitive advantage possessed by the headquarters' engineering team to modify and take care of the incompatibility

Table 5. Relationships of Taiwanese MNCs subsidiary's capability and cross-cultural management with IHR control.

<i>Subsidiary's activities</i>	<i>Value-added and capabilities requirement</i>	<i>Comparative cultural advantages of home</i>	<i>Cross-cultural management</i>	<i>Ethnical background of employment</i>	<i>IHR control</i>
Management development and leadership adaptive R&D	High	High	High integration High adaptation	Expatriate US educated Taiwanese Socialized Caucasian	Input control Output control
Marketing/leading R&D	High	Low	Low integration High adaptation	Caucasian American born Chinese	Output control
Production and maintenance service	Low	High	Medium integration Low adaptation	Asian or Mexican immigrants	Behavioural control
Administrative support	Medium	Medium	Medium integration Medium adaptation	Taiwanese immigrants	Behavioural control

problems, the top management of Acer headquarters went ahead with production of the original prototype presented by the US subsidiary, because of the US subsidiary's resistance to modify the design for the US market. Consequently, when the Aspire was launched in the US market, after a one-year delay, the internal defects brought about losses within the first two years of more than US\$100 million. These were a result of countless customer complaints and product defects. It would seem reasonable for Acer to insist on the use of the product design competitive advantage held by the engineering team in the home country and to modify the original prototype to resolve the incompatibility problems. At the same time, Acer should have asked for collaboration from the US subsidiary to accept the normative integration in the production function by marketing the modified Aspire in the US.

In contrast, Trend Technology provides a successful example by executing appropriate IHR controls in the cross-cultural context. Trend utilizes the competitive cultural advantage of different countries to set up its global control over various value-added activities and employs host nationals as global functional leaders. For example, Trend Technology set up its global financial centre in Japan and hired an Indian-Japanese as its CFO, taking full competitive cultural advantage of its Indian born CFO for his arithmetic and analytical background along with his long training in corporate finance with a Japanese. Trend, in addition, sets up its global administrative operation centre in the US and hired a German-born American to be the COO, taking full competitive cultural advantage from the German-born COO for his strong management background from IBM and the German culture in respecting professional norms and building good organizational infrastructure. Furthermore, the centre for detecting viruses has been established in the Philippines to take full competitive cultural advantage of the hard-working people and inexpensive labour costs; the leading R&D centre is the US to utilize the leading technology in the field, while the process R&D centre is located in Taiwan to take the cultural advantage of its quality engineers. Other than these, host nationals are hired as the regional marketing CEOs for market penetration in different geographical regions. To achieve full cultural integration, the top management of regional and global heads meets four times a year for a week-long brainstorming workshop to facilitate cross-cultural communication. For five consecutive years, since 1998, Trend enjoyed a handsome growth of sales and net profit. In the year of 2004, Trend obtained total global software sales second to Microsoft.

Conclusion and limitations

The extent to which MNCs adopt strategic control over their subsidiaries is a continuing theme in the literature on managing a MNC. One long-standing framing of the issue is the combination of the institutional theory and control theory which focuses on executing IHR control as a response to the dual pressure for local cultural adaptation and parent's normative integration. However, as a subsidiary is defined as a value-adding entity which performs its activities in a host country endowed with specific HR strengths and capabilities from the perspective of resource dependence, it is valuable to find out the cross-culture determinants of the IHR control in terms of subsidiary's value-activities and comparative culture advantages.

Combining the resource dependence perspective, institutional theory, and control theory, this study on the SIHR control of Taiwanese companies operating in the USA provides a new integrative cross-cultural framework of SIHR control and its cross-cultural determinants. Our findings show that in order for a subsidiary to perform its value-added activities, MNCs need to identify the value and capabilities need for this activity. At the same time, subsidiaries also need to compare the cultural advantage of home country in terms of these activities.

In general, general management leadership and adaptive R&D require higher capabilities of the subsidiary and to have higher home advantage, which will lead to both high integration

and adaptation. Alternatively, marketing and leading R&D require high capabilities of the subsidiary and need lower comparative advantages from the home company which will lead to low integration and high adaptation. Apparently production and repairing maintenance require low capabilities and have higher home advantage, which leads to high integration and low adaptation. Finally, administrative support requires low capabilities and medium comparative advantage of the home company, which leads to medium integration and adaptation.

Also, from the perspective of cross-cultural influence input control is designed to respond to high integration and high adaptation; output control is executed in the case of low integration and high cultural adaptation; while behavioural control is used to respond to high integration and low adaptation, simultaneously in the case where subsidiary's activities are of low value.

It is expected that the FDI from emerging economy entities toward the USA will continue to grow due to the attractiveness of the market. This research offers a new perspective for managing subsidiaries' human resources to emerging Asia MNCs who have already invested in the USA or are planning similar investment in other leading world markets. Finally, new emerging MNCs, though based in less industrialized countries, still have their comparative home culture advantages, which can be developed as ownership advantages (Dunning 1994) to manage subsidiaries' human resources and compete in developed countries.

This research still has its limitations. Due to the samples used in this study, the boundary conditions for the framework are limited to the cases of emerging MNCs' subsidiaries located in industrialized markets. Whether the research can be applied to emerging MNCs' subsidiaries located in developing countries should be left to future studies, which can be conducted by analysing cases of subsidiaries in developing countries (e.g. Taiwanese subsidiaries in Mainland China). In addition, as this framework is derived from the cases of MNCs in high-tech manufacturing industries, its application to professional or brand-service industries (e.g. Starbucks Coffee) is also left to the work of future studies.

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