

Factors Affecting Human Resource Management Practices of Foreign Subsidiaries: A Case Study of Japanese Multinational Companies in Malaysia

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Abstract

This study investigates how firm-level human resources management (HRM) practices are transformed to fit the organization's needs of developing skilled workers as core competence, in a changing environment where resources are scarce. This paper deals with the issue of factors influencing HRM practices in the development of competent workforce at two Japanese multinational companies (JMNCs) of Malaysian electronic and electrical industry. This qualitative study applied longitudinal and comparative analysis on data covering the period from 1980 to 2006. Findings show that despite unique culture and distinct characteristics of parent companies, during the process of adaptation and assimilation of technology, JMNCs subsidiaries adopted Japanese HRM system and continuously made improvement to fit the changing corporate strategy and competitive business environment. Author concluded that the fit between environment, business strategy and other firm-specific factors have reshaped and strengthened the function of well-integrated HRM practices for the development of competent workforce.

1. Introduction

The primary issue of Human Resources Management (HRM) at multinational organizations in emerging economies is whether their subsidiaries are able to develop competent workforce to meet the strategic needs of the organization. The concern is sharp and urgent in developing countries, which face complex issues such as acute shortages of skilled workers and mismatch in the labour market, as they pursue accelerated economic transition in the form of industrialization (UN, 1986; APO, 2003). Research on Japanese multinational companies (JMNCs) in the field of international HRM disproportionately focused on expatriate management (Kopp, 1994), transplantation of Japanese system (Itagaki, 1997; Taylor, 1999) and localization of top management (Barlett and Yoshihara, 1989; Rozensweig, 1991) rather than HRM issues impinging upon subsidiary employees. While some studies have attempted to identify HRM practices of JMNCs subsidiaries in the US, UK, European,

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Mexican, Chinese and Thai environments (Takamiya, 1985; Yoshihara, 1994; Suehiro, 1999; Taylor, 1999; Keely, 2001; Kono and Clegg, 2001; Gamble, 2007), the findings are mixed but distinctly similar on one point: JMNCs favor high control over their subsidiaries, regardless of location and motive of their investment. The literature asserts that lack of qualified workforce in the local labor market is alleviated by the extensive use of expatriates (Welch, 1994).

However, expatriates do not make up the competent workforce, as most of the positions are temporary in nature. Exception is given to few top managerial positions, which are deemed permanent due to legal reasons.¹ A survey on JMNCs subsidiaries in the US, UK, Germany, Singapore and Taiwan reveals that the ratio of expatriates to total employees was on average 3 per cent in three types of industries from 1990 to 1994 (Yoshihara, 1994).² The result suggests that the size of the expatriate group is too small to replace the need for competent workforce in sustaining competitive advantages, despite their strategic positions. Ultimately, as subsidiary strives to gain its own strength to remain competitive in the global network, then, the issue of developing competent workforce from locally hired employees becomes indispensable. However, there is still little research documenting HRM practices in respect of changes at subsidiary level with acute shortages of qualified resources.

My aim in this study is to examine how MNC subsidiaries may develop competent workforce in a place with limited quantity and quality of human resources. This paper poses two questions: How do HRM practices in the 2000s differ from the 1980s? What factors influence HRM practices in developing the competent resources? This research presents additional insights into the issue of change in HRM practices. With the assumption that a firm's environment influences its strategy as well as other firm-specific factors and shapes the HRM practices, this study focus on the development of locally hired workers and excludes the expatriates, who are commonly controlled by headquarters. The setting of the study is Malaysia, a country that is continuously suffering from acute shortages of manpower.³ While research on the Malaysian context is rare and foreign subsidiaries in the Malaysian environment are historically new compared to US and European environments, it is useful and timely given the significant rise of developing countries encountering similar situations.

This research uses a case study of two leading Japanese manufacturers of Colour Television (CTV) sets and components, based on four rounds of extensive fieldwork in Bangi industrial area during 2001 to 2007. These companies represent two different groups of well-established JMNCs successfully maintaining high performance in the worldwide market for electronic display industry and acquiring high market share in the US and Japan. I used pseudonyms STM and HCP for the firms (please refer to appendix).

In the context of this study, I selected JMNCs because of their significant contribution to Malaysian economic competitiveness and growth.⁴ Since JMNCs hold dominant positions in Malaysian manufacturing sectors,⁵ it is essential to investigate how they developed competent workforce in achieving competitive advantages and sustainable growth, and later became an important catalyst in

the development of the Malaysian manufacturing sector.⁶ The rationale for choosing them was that (1) they belong to the same industry, producing similar products and operating in the same industrial area; (2) they started operation in the 1980s and experienced similar environmental conditions; (3) they have both made continuous capital investment; and (4) they have made significant contribution to local employment. Moreover, their recognition by the Malaysian government as “best employer” made these companies a good choice for observation. The location of Bangi in Klang Valley periphery is strategic and very well equipped with basic infrastructure.⁷ However, rapid urbanization and agglomeration of many manufacturers in the past 26 years has changed the structure of the area and making the town an expensive place.⁸

As qualitative approach is the best way to understand firm-level HRM practices, this paper applied exploratory methodology in identifying underlying relationships that could be interpreted as linkages between HRM activities and various factors. Accordingly, I conducted semi-structured interviews with eleven staff members that represent the Japanese expatriates group, most outstanding local staff group and personnel of the human resources department. Secondary data is based on various sources from local newspapers, companies’ homepages, research papers, surveys and information recorded from the time of establishment to 2006. This study covers the period of 1980–2006 as the time frame as it reflects the cyclical fluctuations of the economy, covering the recession brought on by Asian Financial Crisis and two major eras of economic prosperity in the early 1990s and 2000s.

This study is structured as follows. The second section provides a brief review of the literature on strategic human resource management (SHRM) and the third section presents the conceptual framework. The fourth section discusses the degree of changes and adoption of HRM in response to the internal organization and external environment. The final section concludes with a discussion on the implication of the findings.

2. Competent Workforce in Strategic Human Resource Management

Competent workforce is an essential input for a successful organization. Theories in strategic management believe that through HRM, an organization can nurture and develops competent workforce, which may have positive effects on organizational competitive advantage and performance (MacDuffie, 1995; Huselid et al, 1995; Guest et al, 1997). Competent workforce is defined as a group of workers which inherent skill, knowledge and appropriate attitude, possesses ability in performing various tasks to achieve organization’s target and capabilities for continuous learning, adopting change and initiating development. In this paper, I focus on semiskilled and skilled workers such as managers, engineers, technicians and supervisors. Four theories provide theoretical foundations for the proposed contingency framework.

In the resource-based view, internal resources which are immobile, inimitable and rare (Barney,

1991), are valuable when they enable a firm to enact strategies to targeted performance (Wright and McMahan, 1992). Several authors have emphasized organizational capabilities (Lado and Wilson, 1994) and others have developed a resource competency model that relates the capabilities of HR policies and practices in deploying the human resources to core competencies (Amit and Schoemaker, 1993). Although research using the resource-based view has supported the significant relationships between resources and performance, it does not explain the underlying process of sustaining resource competency when the operation shifts to an environment where resources are scarce.

In facing uncertainty in acquisition of critical resources, Taylor, Beechler and Napier (1996) developed a model of strategic HRM based on resource dependence theory to identify situation of control exercised by parent of the multinational firm over its subsidiaries. Despite capital and managerial expertise that may be more easily obtained from great distance, skilled workers are relatively immobile and limited to a small geographic area. Thus, applying resource dependence theory in the acquisition of skilled workers have to include national boundaries as one of the important factors influencing the scope of resources available to a MNC subsidiary (Rosenzweig and Singh, 1991).

Transaction cost economics asserts that a firm can decide to make-or-buy resources that economize the transaction cost associated with establishing, monitoring, evaluating and enforcing agreed upon exchanges (Williamson, 1981). When labour market fails to supply required resources, the unstable condition may pressure firms to compete for the scarce supply and associated cost will increase respectively. In response, internalization of employment is appropriate when organization is seeking greater stability and predictability of their stock of skill and capabilities, improve coordination and control for the long-term firm performance and lower transaction cost. Lepak and Snell (1999) suggest alternative employment modes, employment relationship and HR practices that are equally important but need different approaches on account of the value and uniqueness of human capital, where the most crucial resources with inherent high value and uniqueness should be developed internally.

Human capital theory posits that limited resources can be generated to the desired form of competency when the cost associated in developing them is justifiable in terms of future productivity (Becker, 1964). An organization can use training in a variety of ways to increase the value (skill and knowledge) and uniqueness (firm-specificity) of their human resources. Knowledge and skills which are the core assets and vital to the competitive advantage (Porter, 1985) often require continual internal development and motivation to be effective, while other peripheral asset may be outsourced. Work organization such as team-based production and unique operational procedures adopted in Total Quality Management, will enhance the uniqueness of human capital (Youndt et al, 1996).

If we combine the arguments from these theories, we can gain a more complete perspective on how a subsidiary might make employment-sourcing decisions for skilled workers in the local labour

market. But, presumably, the extent to which HRM can be used as means to attract, upgrade and retain skilled workers is partly determined by the environment in which the organizations operate (Rosenzweig and Singh, 1991; Wright and Snell, 1998). The environment may also affect the cost associated with alternative approaches to increase the value of the organization's human capital and value of the anticipated returns (Russel et al, 1993). These theories lend further support from international HRM literature to unravel the relationship of factors that may influence the development of competent workforce.

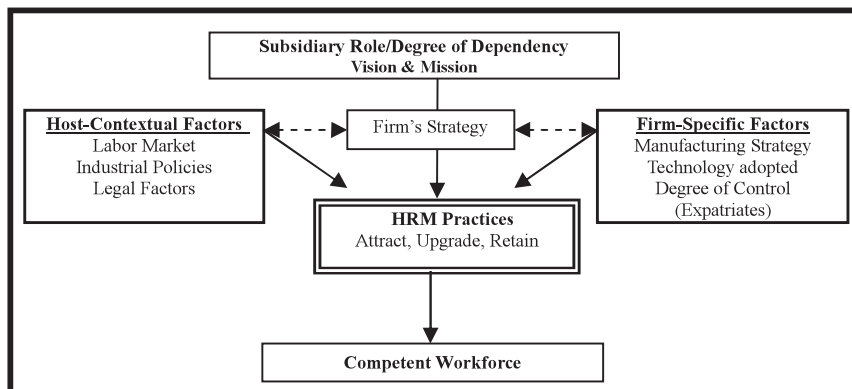
3. Conceptual Framework

The conceptual framework is built on four theoretical perspectives and prior research in conceptual model of strategic HRM. It is based on, but different from, existing strategic and international HRM models such as Schuler, De Cieri and Dowling (1992). Competitive advantage and performance are commonly noted as the ultimate needs of the organization; this study focuses on the creation of the most requisite resources to realize these targets. Despite various definitions of strategic HRM offered by researchers, this study defines strategic HRM as the process of linking people in the firm to the firm's strategic needs (Wright and McMahan, 1992).

Contingency approach focuses on vertical integration or external fit, which examines whether or not a HRM system is aligned with strategy and overall firm status in regards to internal organization and external environment. Relationship between a firm environment, firm strategy, firm-specific factors and HRM practices does exist (Schuler, Dowling & De Cieri, 1993; Guest, 1997). That is, when environment changes, a firm will eventually adapt to the situation by choosing the most appropriate strategy to survive and thus, HRM practices will be aligned to control resources. Although this relationship can be said to hold true generally for all organizations, it is nevertheless contingent on the firm's inclination to respond to the environment every time a new change occurs or an operation is to be adopted. For this reason, this paper examines the applicability of concepts such as employment modes and training effects in explaining the development of locally hired workers in the Malaysian context. This study aims to improve understanding of the relationship between selected factors and HRM practices as diagrammed in Figure 1.

Many authors postulate that firms that achieve a good organization-environment fit should be able to outperform those adopting less well-matched strategies and practices (Becker, 1993; Huselid et al, 1995). A study by Milliman et al (1991) proposes that a subsidiary must fit to corporate HRM, organizational life cycles and to cross-cultural/national environment, besides achieving internal fit between sub units in the system. Other studies also extended the concept of fit to include flexibility, as fit is not sufficient for organizational effectiveness (Lengnick-Hall and Lengnick-Hall, 1988).

This study classifies two types of factors that may affect a subsidiary's HRM practices as (a) fac-

Figure 1: Contingency Approach in Understanding HRM Practices

Source: based on Jackson and Schuler, 1995; Youndt, et al, 1996 and altered by author for this study.

tors that shaped the foundation of the system and (b) factors that may change the system over time. I selected a few factors, which may influence the creation of competent workforce at firm level with reference to the relationship depicted in many literature. Below is some literature review on the potential factors.

3.1 Factors that Shaped the Foundation of Subsidiary's HRM Practices

In the multinational context of HRM literature, the degree of control and influence of parent company on subsidiary is a major determinant that configures a subsidiary's HRM practices. Gupta and Govindarajan (1994) argue that the strategic role of the subsidiary is a key differentiating factor affecting a subsidiary's HRM system. They assert that the flows of resources to and from the subsidiary to the rest of the MNC will determine the degree of control, interdependency and similarity in a system. In relation to the argument, degree to which the parent company's HRM system is transferred to or replicated by a subsidiary is frequently studied, as it is assumed that the parent system may have greater potential for creating competitive advantage (Kim and Gray, 2005; Gamble, 2007). The degree of replication might be higher at the initial stage of transplantation and in green-field subsidiaries rather than in an acquired subsidiary or a joint venture (Schuler and Dowling, 1990). The top managers who have experienced parent company's system will tend to configure subsidiary's HRM practices with reference to the former.

Perlmutter (1969) classified four types of HRM system as (1) ethnocentric, which centralize strategic management function at headquarters and with high dependency on expatriates to control the subsidiary; (2) polycentric, which (i) treat subsidiaries as distinct national entities with some decision making autonomy and (ii) rely highly on local staff but seldom promote them to a position at headquarters; (3) regiocentric, which reflect geographical strategy and structure of MNC whereby regional managers may have autonomy in decision making with no promotion to positions at headquarters; and

(4) geocentric, which ignores nationality in favor of ability and integrate the subsidiary to worldwide business strategy. The classification is determined by the attitudes of top management at headquarters and the strategy-structure mix. These approaches are widely used to explain HRM practices such as staffing (Tung, 1981) and development in relation to the stage of internationalization (Schuler et al, 1992). In short, as HRM practices developed and internationalization advanced, MNCs tend to recruit and develop employees from host country to fill up strategic positions locally as well as internationally. However, there is yet no conclusive research into whether the degree of replication of and dependency on the parent company influence the development of locally hired workers.

3.2 Factors that Change a Subsidiary's HRM Practices over Time.

3.2.1 Host Contextual Factors

Prevailing ideas assert that government intervention is needed as a mediating factor in the development of resources for industrialization (Amsden, 1989; Jomo et al, 2003). Countries such as Singapore and Korea have developed considerable incentives for human resource development (Tan, 1997; Jong, 1997) by pursuing an integrated approach to reform their education systems and has built joint industrial training centers (Tan, 2003). Number of employees sent for training was positively increased as firms were required to make financial contribution and commitment to the skill development fund initiated by host government (MITP, 1995).

Literature in international business study argues that countries, which pursue strict legal factors such as taxation, company law, regulation and rules on labour law are inclined to have more highly skilled labour. Subsidiary that pursues higher degree of responsiveness to local demand would lower the degree of replication of parent company's HRM system. Empirical studies on MNCs in Germany and Australia infer that the imposition of strict employment regulation might support the building of more skilled workforce as the firms follow a skill-oriented strategy (Ferner et al, 2001). The successful stories of other nations posit that these factors might decisively affect HRM practices in the building of competent workforce.

Employment relationship may also have significant implications for the sub units of HRM practices. In the tight labour market conditions, organizations use more expensive and intensive recruiting methods, increase geographic scope of their recruitment activities and forego some strict pre-employment screening (Jackson and Schuler, 1995). This implies that the scarcity/abundance of required human resource in the market may intensify the strategic function of HRM practices.

3.2.2 Firm-Specific Factors

The most common contingencies studied are the relationship between strategy and HRM practices. Beechler and Bird (1993) propose a model that matches HRM policy to Porter' (1986) generic strategies as (1) utilizer for the cost leadership strategy, which maintains lean workforce for

short-term needs and matches employee skill to specific task requirement; and (2) accumulator for differentiation strategy, which maintains an excess pool of employees with latent potential that can be deployed over time and developed consistently. These arguments suggest that subsidiaries which pursue quality or product differentiation strategy is inclined to retain and upgrade their employees, whereas a cost leadership strategist will acquire rather experienced and skilled workers who can perform tasks immediately, and is less concerned with the matter of retention and retraining.

Recent studies suggest that technology has positive influences on skill development. A study on relationship between skill-biased technological change and skill demand on Malaysian manufacturing (1977 to 1996), found that adoption of five types of technologies is positively related to changes in skill mix, thus explaining the increasing need for skilled workforce (Tan, 2000).⁹ Industries experiencing rapid technological change are more likely to train workers and learning effect is found to be larger when technology adoption and usage is accompanied by training (Mincer, 1989). In contrast, rapid technological change may also affect staffing decisions to prefer expatriates, as subsidiary employs advanced technology that is not available in local market. The use of similar technology by subsidiaries of a MNC can lead to similarities in organizational structures and process (Rosenzweig and Singh, 1991), and thus enhance the need for skilled workforce with similar competency. Therefore, technology must be investigated in seeing how HRM practices are transformed, as the literature proposes a positive relationship between technology, staffing, training and compensation.

The function of expatriates is interpreted in many ways such as culture carriers (Edstrom and Galbraith, 1977) or mediators (Bird and Beechler, 1994). Arguments about the high dependency on expatriates suggest that it may decrease the incentives/rent for attracting and upgrading locally hired resources (Schuler and Dowling, 1993; Welch, 1994; Kopp, 1999), but, new technology that is rare in local market may be transferred with the incoming expatriates, and this technology requires recipients. Essentially, the recipients must be relatively as competent as the transferors. Research to date on the impact of expatriates on subsidiary HRM practices has produced contradictory findings, suggesting a need for further study. The next section discusses the findings.

4. Factors Associated with the Change in HRM Practices and their Effectiveness in Reshaping the Workforce

Do the HRM practices, adopted in the 1980s, during the initial stage of subsidiaries establishment remain appropriate? In this study, I found that the Japanese HRM practices adopted in the 1980s has changed as shown in Table 1.¹⁰ Two senior staff members at STM and HCP noted that HRM practices were very ethnocentric in the 1980s, which centralized strategic management function at headquarters and highly depended on expatriates for total control. Subsidiaries depended totally on Japanese worksheet brought from Japan by the Japanese expatriates for all types of documentation and

regulation. However, in the 1990s, employment mode has changed to adopt internalized labour market practices, while training covers many dimensions and was carried out more formally towards the 2000s. Performance appraisal system adopted performance-based evaluation method that reflects productivity. Pay and promotion practices value skill and trait more than job function and status.

Table 1: Changes in HRM Practices at JMNCs subsidiaries from 1980s to 2000s

HRM Practices	1980s (very ethnocentric)	1990s (less ethnocentric)	2000s (polycentric)
a. Recruitment	Unskilled>skilled (IV)#	Unskilled<skilled (ILM)*	Skilled (ILM+OS)**
b. Training	High informal OJT>Off-JT	Less informal OJT+Off-JT	Formal OJT+Off-JT+generalized
c. Appraisal	Administrative+Individual	+generalized=	Performance+Individual
d. Pay & Promotion	Seniority+Job Function	Seniority+Skill based	Performance+Skill+Seniority

Source: Author's firm study.

Note: Employment mode adopted IV# (Immediate Vacancy) in the 1980s, ILM* (Internalized Labour Market) in the 1990s and OS** (outsourcing) in the 2000s.

Drawing on prior writings, there is a strong suggestion that practices definitely change over time (Schuler, Dowling & De Cieri, 1993). Questions arise on what in particular has changed, what has not changed. Further, how has the change contributed to the building of competent workforce? The next sections analyze (1) factors associated with the foundation, (2) effects of host contextual factors and (3) factors associated with the similarities and differences and finally, the influences of firm's strategy on the transformed HRM practices in reshaping the competent workforce.

4.1 The Foundation of the Subsidiaries' HRM Practices

STM and HCP adopted conventional Japanese HRM practices in the 1980s. The core elements of Japanese management practices are the triad of lifetime employment, seniority wages and company unionism, which is distinctive to large Japanese corporations (Dore, 1973). In recent literature, Kawabe (1993) asserts collectivism that brings the abolishment of organizational segmentation that had distinguished generalist, specialist and operatives into blue-collar and white-collar workers. Interestingly, I found that seniority was prevalent since the beginning, while collectivism became apparent in the late 1990s with joint consultative committees.¹¹ A wide range of HRM practices such as training, appraisal, promotion and pay system buttressed seniority. Japanese perceives that this mechanism works to minimize employee mobility by enhancing firm specificity, which incorporates the non-specialized career-long training through job rotation. According to HR manager at HCP,¹² the system was very efficient and effective in managing the unskilled and semiskilled production workers in the 1980s. HCP managed to attract and retain the production workers by offering a competitive package of fringe benefits, special accommodation with very low rent, supply of free uniforms, free transportation, subsidized meals during working hours and thus, reduced the annual turnover rate

from 30 per cent in 1980s to 23 per cent in 1990s.¹³ But, HCP commented that the initial HRM practices were ineffective in attracting and retaining skilled workers because the compensation package excludes accommodation, free transportation and subsidized meals. It was no more attractive than other companies were.¹⁴ Consequently, the turn over rate stayed at average of 13 per cent per annum during the 1980s to 1990s.¹⁵ Retaining skilled workers became worse during high mobility and scarce supply. Towards the end of the 1990s, both companies improved the compensation package for skilled and semiskilled workers, by including some financial allowances, low interest loans for the purchase of house and transportation, comprehensive medical insurance coverage, monetary gifts for special occasions and additional benefits for family members.¹⁶

Lifetime employment is not a compelling issue in the Malaysian context and especially in labour-intensive assembly plants. As firms need to have some volatility in manpower planning to cater for inconstant demand by shifting outdated technology or reconfiguring the production of uncompetitive products. Convincingly, the Malaysian government has allowed a voluntary separation scheme (VSS) as an alternative way to retrench workers. Both companies have shown their lack of commitment to lifetime employment as they have chosen the scheme to layoff workers.¹⁷ STM adopted the scheme during the transfer of Camcorders production line from Bangi to Penang in 1997, while B retrenched around 1,500 employees as they closed their second plant in Ipoh in 2005.

There are several factors associated with the foundation of subsidiaries' HRM practices, which were extremely ethnocentric at the beginning stage of establishment in the 1980s to the early 1990s, where the organization and system adopted resembling that of the parent companies. First, the degrees of control and influence of parent companies on STM and HCP are great in view of the fact that they are global MNCs, which representing export-oriented industry. The subsidiary role of STM and HCP may be described as integrated player, which explained the situation of high inflows (material, capital, expatriates and technology) and outflows (products) of resources to and from the rest of the MNCs. For this reason, parent companies exert high degree of control over the subsidiaries. Second, the extensive reliance on instructions from Japan headquarters for local operation entailed the adoption of Japanese-oriented system. STM commented that the dependency on Japan headquarters and regional office in Singapore was indispensable, as the parent company possesses all dataset on design, material procurement and production methods as well as information about suppliers for tools, mould/die and high technology components.¹⁸ According to General Manager of Sales Department at HCP, although the Japanese investor contributed 70% of the total paid-up capital, HCP relied highly on the expertise and decision of headquarters in Japan because they were the only source for technical and market information.¹⁹ Third, the extensive numbers of expatriate posted to the plants for almost all of the key positions in manufacturing and administrative functions influenced the configuration of management system. The domination of Japanese expatriates in the top managerial levels explains the tendency to adopt parent company system rather than to adapt an

unfamiliar system as the Japanese system was proven advantageous at parent company.²⁰ Substantially, these inherent attributes clarify the mechanism that built the foundations for STM and HCP, which were very ethnocentric in the 1980s and still ethnocentric to a lesser degree in the 1990s.

Revisiting the studies in global industries suggest that JMNCs catering to advanced countries' market categories would have a high degree of cross-border integration and low degree of local responsiveness, which explains the tendency to implement Japanese HRM system at local level (Ghoshal and Bartlett, 1998). This literature strongly supports the findings on the general feature of STM and HCP HRM practices in 1980s. Furthermore, literature supports the finding that the attachment and nationality of top managers in the subsidiary's top managerial level is pivotal. Sharing the nationality with the parent company, their perceptions would influence the local management to replicate their parent company's system.

Even though existing literature posits that a joint venture firm (HCP) would be less ethnocentric than a wholly owned firm (STM), ownership did not result in different management practices at STM and HCP. I found that HRM practices at both companies had a similar strong tendency in emulating Japanese HRM practices. At HCP, Japanese equity of 77 per cent far outweighs the proportion of Malaysian (10.7%) and Singaporean (12.2%) equity in total paid capital. The domination gives greater influence over subsidiaries' financial control and management system. In this study, ownership is not a determinant in explaining the type of HRM practices adopted.

4.2 The Effects of Host Contextual Factors on HRM Practices

Host contextual factors affected HRM practices in several ways. First, labour market conditions influenced employment relationship for two different situations. In the 1980s, when skilled labor supply was abundant, STM and HCP used less intensive recruiting methods such as advertisement in local newspapers and poaching for better-qualified and experienced workers.²¹ However, towards the end of 1990s, as the skilled labor supply became scarce in the limited geographical area, STM took intensive recruiting methods such as conducting recruitment seminars and using internet for recruitment advertisement.²² STM and HCP implemented strict preemployment screening tests such as minimum academic achievements of CGPA of 2.5 and above, technical quizzes, presentation and writing and communication skill tests, despite the tight labour market.²³

Second, legal factors such as employment regulations and immigration laws related to high skilled expatriates, have indirectly affect HRM practices but directly affect the organization manpower planning. Malaysian authorities allow MNCs with foreign paid-up capital of at least US\$2 million to employ ten expatriates.²⁴ After 2005, expatriates may be employed for up to ten years for executive posts and five years for non-executive posts with a condition that a training program must begin for a Malaysian to fill the position within one year of the expatriate's arrival.²⁵ Compared to the 1990s, the 3-year tenure period, number of expatriates allowed in an organization and levy has been relieved with

the perceived mechanism that more expatriates will transfer more skill and knowledge to Malaysians. This mechanism explains the situation at STM and HCP, where the appointment of more locally hired skilled workers to the key positions to replace expatriates has been the norm of the organizations since the 1990s, except for the position of Managing Director and Director of the Production Department.²⁶

Third, findings are mixed regarding the human resource development policy's effect on the transformation of HRM practices. Interviews reveal that human resource development fund policy (HRDF), a training levy-reimbursement scheme, which was initiated by the Malaysian government in 1992, has effectively benefited STM rather than HCP. HR manager at STM commented that HRDF scheme has strengthened the HR department to function strategically as the company has to allocate one per cent of employee payroll for the scheme. HR department is given budget and authority in controlling the training expenditures. The training section began to design formal in-house trainings such as six-sigma leadership and safety training.²⁷ However, the HR manager at HCP noted his dissatisfaction on the unavailability of some technical courses offered by external training centers and tedious procedures of reimbursement.²⁸ He claimed that many industrial training centers lack necessary expertise covering core knowledge and skill for machine design and material application, thus, overseas training is more convenient for HCP.

These findings imply that the due response of HRM practices to legal factors and human resource development policy is mixed and not as directly linked as the impact of labour market conditions. It suggests the need for further consideration on the contingency of firm-specific factors. Below are some similarities and differences between the changes at STM and HCP.

4.3 Similarities between HRM Changes at the JMNCs Subsidiaries

Since the 1980s, HRM practices at STM and HCP have become more polycentric in response to change in firm-specific factors, albeit some elements remain ethnocentric. This time study found some similarities in the way firm-specific factors respond to external pressure and their correlation to HRM practices focus as illustrated in Table 2. Factors associated with the changes may be given as: (a) types of technologies adopted, (b) the focus of manufacturing strategy and (c) degrees of control - presence of expatriates (engineers). I found that the focus of HRM practices at STM and HCP was pulled to change in response to these influencing factors. For instance, informants at STM reported that in the 1990s, new product lines incorporated advanced production technology system and in-house information sharing system have subsequently increased the intensification of technical skills among supervisors, technicians and engineers.²⁹ Manufacturing system focuses on higher flexibility and quality apart from reducing costs. In the 1990s, STM and HCP improved their in-house systems by adopting (i) quality enhancement technology such as total quality management which includes six-sigma, just-in-time, continuous improvement or KAIZEN, (ii) process technology that utilized

statistical process control, (iii) design equipment such as 3D-Computer Aided Design, 3D-Computer Aided Manufacturing, and (iv) information sharing system which is known as knowledge management solution.³⁰

Subsequently, the HRM system started to refocus recruitment and selection by emphasizing better candidates with advanced ability in mathematics, good English literacy and computer utilization.³¹ In the 1990s, on-job-training was conducted in a more systematic and formal way, and frequently at other training centers in Singapore and Japan, compared to the informal on-job-training practiced on the shop floor in the 1980s.³² In addition to individual learning for job specific skills and knowledge, some other generalized skill, knowledge, and off-job-training emphasizing organizational learning such as safety and environmental management were also increased at the end of the 1990s. The adoption of new elements in the appraisal system, which includes performance and skill-based merit on a selective basis, indicates the divergence of focus on human capital. This appraisal reflects the increasing emphasis on skill and ability in achieving targeted performance, conforming to the concept of importance of competent workforce.

Table 2: Similarities in the Focus of HRM Practices

Internal Factors	1980s	1990s	2000s
Technology Focus Product Process	Analog Labour Intensive	Analog/Digital Technology Intensive	Analog/Digital Technology Intensive
Manufacturing Focus	Low Cost & Acceptable Quality	Low Cost, High Quality & Medium Flexibility	Low Cost, High Quality & High Flexibility
Ratio of Expatriates	High (3>%)	Medium (<3%)	Medium at STM (1.4%) Extremely Low at HCP (0.5%)

Source: Author's firm study

In the 2000s, gradually, the extensive number of Japanese engineers was reduced as locally hired workers managed to take full control of the line. The ratio of expatriates to total employees was decreased unintentionally from 3 per cent in 1991 to 1.4 percent in 2001 at STM, and 2 per cent in 1991 to 0.5 percent in 2001 at HCP. Subsequently, numbers of locally hired engineers in managerial and key positions have also increased at the ratio of 60 percent at STM and 90 percent at HCP in 2007, with remarkable achievement as 2 staff members at STM and one staff member at HCP was appointed as Directors in the year 2000.³³

However, the most salient feature that remains unchanged is seniority. Even though, the seniority-based promotion and pay system is regarded as less significant in the 2000s, STM and HCP maintain this system in practice as the basis underpinning the training, pay and promotion system.

The findings on whether seniority element is supportive in attracting, upgrading or retaining the competent workforce, are mixed. For example, the most outstanding locally hired managers at STM and HCP agree that seniority did create stable career development opportunities for them, as the company grew from the 1980s to 2000s.³⁴ In contrast, engineers at STM and HCP with less than 5 years working experience, revealed similar anxiety on the uncertainty of their career as the organizations grow bigger in size and promotion period is fixed for every two years on seniority basis with little increment.³⁵ However, HR manager at HCP commented that the tendency to leave for other jobs is less for skilled workers who have undergone extensive training and stayed more than 8 years; while skill and knowledge became more specific, it is less applicable in other companies.³⁶

Both companies pursue high firm-specificity and inclined to train core competent workforce through long-term career development based on seniority, despite differences in types of work. Evidence suggests that seniority-based training, promotion and pay system is a strong determinant for long-term career development. However, it may not match the needs of short-term career developers. Preferences for different types of career development among staff are attributed to the nature of work and job content that classify them as generalists or specialists. Specialists such as engineers, whose job contents are more specialized on a project basis, require continuous and rapid upgrading of skills and knowledge to stay up to date with technological development. In contrast to generalists (managers), potential and personal abilities of specialist such as experience, trust relationship and firm-specificity are less valued than displayed abilities in job performance. In spite of disparities found at job level, seniority underpinned the uniform career development for generalists and specialists to justify the company's total performance, conforming to the principle of collectivism rather than free competition and individualism.

4.4 Differences between HRM Changes at the JMNCs Subsidiaries

However, detailed analyses on the content of each practice have led to some disparities as shown in Table 3. The different tendencies are obvious in three functions. First, STM has been recruiting fresh graduates from local and foreign universities and those with less than two years experienced from other companies as management trainees, with an average of five engineers and technicians every year.³⁷ On the other hand, HCP employs fewer fresh graduates and prefers experienced workers with requisite skills.³⁸ Second, there are disparities in type of job specific training and generalized skill development training, where STM emphasized more training in product engineering. STM frequently sent staff involved in product engineering for OJT at Japanese plants, two to three times a year for duration of a month or more. Prominently, reinvestment of capital and diversification at STM prioritized the upgrading of testing equipment and product development/design facilities (NST, 2003). In contrast, HCP expressed their urgency for upgrading process-engineering skills. HCP claimed that they managed to produce a number of machines using 3D-CAD, 3D-CMM and CNC machines such as compo-

nents mounted machine, fully auto sub-assembly system, auto-convergence-adjustment system and many other low cost automation units (HCPM, 2005). Reinvestment and expansion at HCP stressed the efficiency and effectiveness of automated production process with utilization of new advanced technology.³⁹ Third, the compensation practices value different criteria to retain competent workers. Although STM and HCP value group performance, which constituted 70% of the total value of appraisal result, different measurement scale are adopted for individual level (30%). Individual criteria generally represent skill, ability and behavior. STM regards discipline highly.⁴⁰ This implies that STM emphasizes person-organization fit to ensure smooth control in executing daily tasks, as team-based work organization is highly important. By contrast, HCP favors high-flyers with outstanding creativity. The Japanese Director at Company HCP explained that locally hired workers who come up with excellent inventions are eligible for 'Patent Awards' from the headquarters.⁴¹ The production of in-house-designed machines for speedy and consistent manufacturing enhanced the creativeness of technicians and design engineers. This implies that HCP's HRM system emphasizes person-job/team fit.

Table 3: Preferences for Different Values in HRM Function

HRM Function	STM	HCP
Attracting	Fresh Graduates & Less Experienced Person-Organization Fit	Mature & Experienced Candidates Person-Job/Team Fit
Upgrading	Product Engineering	Process Engineering
Retaining	Skills & Traits (Discipline)	Skill & Creativity

Source: Author's firm study

4.5 Influence of Firm's Strategy on the HRM Practices in Reshaping Competent Workforce.

As noted in the previous section, the preferences for different values related to HRM function reflect the different types of workforce at the two companies. STM developed skilled workforce with requisite ability and capability on product engineering, while HCP developed competent workforce that is more skilled and knowledgeable in process engineering. This outcome is rooted to the change in corporate business strategy because of their different ways in responding to external environment. In the 1980s, STM and HCP pursued mass production of mature products with cost leadership strategy and acceptable quality. Towards the 2000s, STM and HCP restructured their business to include differentiation strategy but to a varying degree. Evidently, disparities found in pattern of product expansion and capital investment, as well as depth and width of the product lines, imply that STM is practicing more product differentiation, while HCP leans more towards cost leadership.

Table 4 shows product expansion and capital investment undertaken during the period from 1980

to 2006, where STM emphasizes total quality in process with the expansion of product design and development department to cater to the factory-based-order taking system. STM modifies products rapidly to customer specification with assured quality (NST, 2002). STM diversified its components and parts according to volume and the variety of in-house CTV sets.⁴² By contrast, HCP strengthened their production abilities with in-house-design machineries and increased investment in sales and procurement facilities. HCP, which relies highly on mother plant for product design, emphasizes capital investment on production capacity/capabilities to cater to orders at the lowest cost and standardized quality. According to the Japanese Director of Production, HCP has considerable capabilities in production technology; however, to sustain competitiveness in cost and price, cooperation from suppliers is highly needed. He noted an occasion where the technical inability of local parts suppliers to substitute some material with cheaper but equally resilient substance. Although HCP has localized 80% to 90% of its products' content to ASEAN suppliers, the mother plant in Japan controls 10% of high technology integrated circuit and product design activities. Technological incapability of HCP suppliers has impeded the development of competent workforce for product engineering in Malaysian plant.

Table 4 Product Expansion and Capital Investment

	STM		HCP	
Product Expansion	1988	Deflection Yoke (DY)	1981	Deflection Yoke (DY)
	1989	Tuner		Tuner
	1990	Fly-back Transformer (FBT)	1982	Fly-back Transformer (FBT)
	-----	-----		Circuit Board Unit
		<i>Assembly of Complete Set</i>	2005	Ignition Coil
	1988	Cathode Ray Tube (CRT) TV	2005	Stop Deflection Yoke
	2001	HD Flat Screen	2006	Stop Fly-Back Transformer
Capital Investment	2006	LCD TV		
Plant Expansion	1989	US\$6 million paid in capital	1980	US\$3.4 million paid in capital
	2002	US\$2.4 million to boost R&D	1990	Production Engineering (Tools and equipment for Machine Design)
Divestment	2002	US\$17 million for modern facilities quality assurance process and reliability testing equipment.	1992	Sales & Engineering Function
			1992	Second Factory for DY*
	2005	US\$20 million for LCD production	2000	Procurement Function
			2006	Divestment of DY and FBT

Source: Author's firm study

Note: *Second Factory of HCP was totally managed by local engineers, produces 50% of total sales and 65% of total volume for Deflection Yoke.

Both companies possess almost identical product lines that are applicable to different types of display monitors as illustrated in Table 5. STM produced a variety of new products with different models, while HCP sustains a few major products and limited models at one time. In the 1990s, rapid technological development of semiconductors has brought about the utilization of integrated chips in display monitors, where STM made the most highly consumed model, ranging from 21 to 29 inches multi-functional CRT TV for Japanese market. HCP, which produces parts and components for various types of monitors, relies highly on constant orders from its group of companies (65%) and other CRT manufacturers (35%). However, in the 2000s, the world display industry experienced a massive structural change with shrinking CRT market and emerging new flat panel display technology. As the demand for CRT display decreased, suppliers of key components and parts such as DY and FBT became uncompetitive in the Malaysian environment. Many opted for new technology. Both STM and HCP were no exception. Starting from 2006, STM diversified into two different series of LCD TV at the capacity of 2,000 to 3,000 sets per day for the Pan Asian market, localizing only 40 per cent of its content.⁴³ In contrast, HCP closed FBT and DY lines. Divestment at HCP was a corporate decision as the parent company is yet to relocate their plasma technology outside Japan (Financial Report, 2006).

Table 5: Expansion/Divestment of Product Lines

Company and Strategy	STM Product differentiation Small Volume and Variety of Products				HCP Cost Leadership High Volume & Few Products				
	CTV Set	DY	FBT	Tuner	DY *	FBT*	Tuner	CBU	ICoil#
Product Name									
Type of Monitor									
Cathode Ray Tube									
● Multi functional TV	●	✓	✓	✓	✓	✓	✓	✓	
● High Definition	●	✓	✓	✓			✓	✓	
● Computer Monitor					✓	✓	✓	✓	
Projection TV	●	✓	✓	✓		✓	✓		
LCD	●			✓			✓		
Plasma							✓		
Automobile									✓
Production Capacity - Achievement	2.5 million units of CTV per year 50 millionth set in 2005				1410 k pieces per month 200 millionth pieces in 2004				

Source: Author's firm study

Note: ● represents some models with different sizes that are below 29 inch.

* HCP has closed the production of DY and FBT in 2006, due to inefficiency of operating cost.

Ignition coil is an automotive related product used in engines started in 2006.

5. Conclusions

This study investigated how firms may develop competent workforce while operating in a place with scarce supply. In particular, it looked at the relation between firm environment, firm strategy, firm-specific factors and HRM practices. By applying a conceptual framework based on the contingency approach, this study has attempted to enhance theoretical understanding of JMNCs subsidiaries' HRM practices. It lends support to the existing literature arguing host-contextual factors such as labour market conditions, industrialization policies, legal factors, and firm-specific factors such as technology adopted at workplace, manufacturing strategy and presence of expatriates are major determinants affecting the configuration of HRM practices in developing competent workforce from local labour market. Therefore, I conclude that contingency approach framework is generally applicable in explaining the situation at JMNC subsidiaries in Malaysian context. However, the same factors have varying degree of influence and effect at different times. Importantly, HRM practices became more strategically functioning in the 2000s compared to the early 1980s. The key findings are provided below.

First, this study contributes to the resource-based view, transaction cost economics and human capital theory by confirming that in a situation where resources are scarce, firms will adopt internalization strategy to mould the potential resources according to the firm's needs, thus, reducing the pressures of inefficient supply and increasing the volatility of manpower planning for future deployment. Gradual shift to internalization of human capital was apparent after 2000, as the group of outstanding achievers at STM and HCP were appointed as members of the management board of directors. Most of the locally hired middle and top managers have been recruited, upgraded, retained and promoted through the long-term career development system. This study has provided further evidences of the applicability of the theories that scarce resources will eventually be internalized to develop dynamic capabilities.

Second, the application of the contingency approach framework to time study has shown that the stage of internationalization does not reflect the type of HRM system adopted. However, this study points out that the degrees of polycentricism might be increased as the locally hired skilled workers who are retainable increased. In the 1990s, the literature posits that the extensive number of expatriates mitigated the needs to recruit locally hired skilled workers; however, I found that the increasing knowledge and skills of the locally hired workers in the 2000s may be related to the extensive number of highly skilled expatriates in the 1990s. Eventually, the increasing number of retainable outstanding core workers may decrease the dependency on expatriates and thus, decrease the number of expatriates in certain strategic functions. At present, most outstanding core workers are in administrative functions such as sales or human resource but less in production and engineering functions.

Third, the contingency framework, which postulates the vertical integration of HRM system with other factors, shows that both STM and HCP pursued continuous strategic fit and flexibility. Although findings are mixed regarding the effect of host contextual factors such as legal factor and industrial policies, these factors did stimulate the transformation of HRM practices indirectly. The relationship explicates that among many potential factors, labour market conditions strongly influence the HRM practices. Disparity in HRM practices implemented in the 2000s elucidates the way firm-specific factors respond to the change in external environment. Among firm-specific factors, technology adopted and manufacturing strategy do matter. As the firm's subsidiary role changed from a mere factory to a strategically integrated production center, the firms changed their business strategies in response to the external environment, and the chosen business strategy defined the type of technology adapted at the workplace, subsequently determined the focus of manufacturing strategy. Consequently, these factors shaped the differences in HRM practices to focus on accumulation of more skilled workers. The findings of this study confirm the strong influence of business strategy on technology and manufacturing in transforming HRM practices to attract, upgrade and retain the required type of competent workforce, as suggested by the literature (Mincer, 1989; Capelli and Singh, 1992; Huselid, 1994, Tan, 2000). Transformation of HRM practices in the development of competent workforce is contingent to these key determinants.

Finally, this study lends support to the existing literature arguing that different strategies match with different types of HRM policies. This case study has offered some lessons. First, the type of competent workforce is associated with the type of strategy chosen and HRM practices implemented. STM internalized more product design engineers because the business strategy emphasizes product differentiation, requiring more attention to the investment in product design facilities, equipments and high technology. By contrast, HCP internalized more process engineering expertise as the creativity of in-house-design machineries is vital in simplifying and standardizing production process, so that standardized low cost production could be achieved at the most efficient cycle time. However, this study illustrates no clear evidence showing that HCP offered less training for their experienced and skilled candidates, despite the argument that cost-leadership strategists are less concerned with the matter of upgrading and retention (Bird and Beechler, 1994; Arthur, 1992). In fact, preemployment screening process at both companies was comparably strict for fresh graduates and experienced skilled workers, despite the tight labour market condition.

However, this study is not without limitations. First, the sample is limited to only two JMNCs subsidiaries in manufacturing industry. The findings obtained are, thus, likely to lack external validity because they may not be generalized to other forms of JMNCs (medium and small) or to other JMNCs in other industries or to MNCs of different nationality. Second, the method of longitudinal and in-depth case study approach has given additional insights, but, it does not provide a broad understanding. However, these findings can be built upon future research involving MNCs HRM practices. Future

research that is able to explicitly link this study to performance will mostly provides useful practical contributions.

This study offers some implications for HRM study and suggests that when formulating and implementing the HRM functions in a market with limited resources, they need to take account of host environment, their various firm-specific factors, and some factors relevant to their status in the global industry as well as their own national contexts. Replication of parent company practices may be advantageous. Essentially, subsidiaries should review and adjust their existing practices in response to external and internal environment, as 'best practices' are only applicable to a particular firm within a particular period under particular conditions, and may not be suitable for others to copy.

Notes

- 1 Malaysian Immigration Department restricted visa to selected expatriates position that is critical.
- 2 Survey on Japanese International Management and Localization of People covers manufacturing, finance and trading companies.
- 3 Malaysia faces shortage of skilled workers in specialized fields such as engineering, information and communication technology and high technologies, due to mismatch between the supply of and demand (MITI, 2006). In 2005, there were 35,480 expatriates with 40.6 per cent in the manufacturing sector (Economic Report, 2006).
- 4 Okamoto(2005) found that the industrial competitiveness of Malaysia shifts away from the production of low value added products (radio and sound recorders) to that high value added (office machines and computers) ones.
- 5 Japan is an influential foreign investor in Malaysia. The proportion of E&E Japanese manufacturers is higher in Malaysia than others operating in Southeast Asian nations. The existence of Japanese MNCs has been remarkable since 1980s during the export-oriented industrialization program. The number of operations in manufacturing industry has risen from 367 in 1991 to 755 in 1997. Investments by Japanese companies during the period from 1996 to 2000 amounted to RM10.5 billion (NST, 2002). The proportion of E&E Japanese manufacturers is higher in Malaysia than others operating in Southeast Asian nations.
- 6 Electric and electronic (E&E) products contribute 64.1 per cent of the total exports of manufactured goods, where E&E industry consisted 26.8 per cent of the total employment in the manufacturing sector (EPU, 2005).
- 7 Bangi Industrial Area was established in 1980. It allows export-oriented MNCs to operate outside free trade zone under licensed manufacturing warehouse that exempted of import duties. The area is well facilitated with advanced infrastructure due to its proximity to Kuala Lumpur; Putrajaya, center of Malaysian Administration Offices; Cyberjaya, the center of Multimedia Super Corridor and Sepang International airport. This area is surrounded by Malaysia National University and industrial training centers such as German Malaysian Institute and Mara Vocational Institute that produce many young and technically skilled workers.
- 8 Malaysian Employers Federation Compensation and Salary Survey for 1994 to 1996 (1996) reported a substantial increased in percentage of salary for top managers (50.3%), senior manager (62.3%), middle managers (26.9%) and executive (26.2%) in the Klang Valley periphery to be the second highest next to Johor Bahru. The increment in salaries are due to insufficient supply of workers and increasing cost of living to compensate workers to move and stay in the area.
- 9 The five types of skill-biased technological change are (1) IT for administration, (2) IT for communications, (3) IT for control functions, and (4) IT for production process, which represent 15 detailed types of IT as elicited in 1997 Inter-Firm Linkages and Technology Development Survey in World Bank Report.
- 10 Interviews conducted in September 2001.

- 11 Company unionism is not studied in this paper because neither STM nor HCP are unionized.
- 12 Interview conducted in September 2001.
- 13 Interview with HR Manager at HCP, September 2001.
- 14 Interviews conducted with HR managers and engineers at STM and HCP, from September 2001 to 2006.
- 15 Employee turnover rate was reported to be 15.4 per cent in 2002 and 12.4 per cent in 2005 (MEF, various issues). Ideal turnover rate should be kept under 10 per cent with references to other case studies conducted in Malaysian environment (e.g. Kuruvilla, 1994; Chew, 2005)
- 16 Information from the company handbook for employees at STM and HCP, 2006.
- 17 Interviews with Design engineer at STM, September 2003, and Director of Company HCP, February 2007.
- 18 Interview with the Deputy GM of Design in September 2001.
- 19 Interview conducted in September 2001 at HCP.
- 20 Interviews with Japanese GM of Production at HCP in September 2001 and Japanese HR Manager at STM in September 2001.
- 21 Interview with Senior HR Officer at STM and Senior HR Executive at HCP in September 2001.
- 22 Interview with Deputy GM of Design at STM in September 2003; many Malaysian fresh graduates from Japan, UK, US and Australia, were recruited in the early 1990s.
- 23 With reference to the recruitment advertising of STM in 2007 and the experiences of staff at STM and HCP during their recruitment from 1994 to 1996. CGPA refers to Cumulative Grade Point Average, which is commonly adopted by local universities. CGPA 2.5 is equivalent to grade B, while most of the well-performed companies will only employ fresh graduates with CGPA 3 and above or grade A.
- 24 Information collected from brochures distributed by MIDA for investors, 1997 and 2006.
- 25 Please refer to MIDA pamphlets on information for investor, 1995 and 2007.
- 26 The two highest positions at STM and HCP are deemed to be held by Japanese expatriates upon corporate decision. Surprisingly, interviews with local staff supported the idea. I did not seek further explanation on the matter, as it is more likely an issue of individual perception.
- 27 Interview with the HR Manager at STM in September, 2003.
- 28 Interview with HR Manager at HCP in April 2005.
- 29 Interview with the Deputy GM of Design in September 2001.
- 30 Interviews with Deputy GM and two Design engineers at STM, Japanese Director of Sales and senior officer at HCP in September 2003 and survey from Microsoft's homepage.
- 31 Information gained from recruitment advertisement and engineers at STM and HCP, February 2006.
- 32 Interview with senior staff members on career development path of outstanding staff members at STM and HCP, September 2001.
- 33 Interviews with Director of Sales at HCP and Deputy GM of Design at STM in September 2001, justify the situation of increasing ability and capability among the locally hired workers. Mohd Nazari Ismail (1995) reported that the ratio of Malaysians in middle and upper management at JMNCS in 1995 was 40%, relatively low compared to MNCs from US (90%) and Europe (60%); based on data obtained from 29 TNCs and 5 suppliers.
- 34 Referring to Director of Sales at HCP and Deputy GM at STM from interview conducted in September 2003.
- 35 Interview with a design engineer at STM in September 2001, and an engineer at HCP in September 2003, both were recruited in 1995.
- 36 Interview with HR Manager at HCP in September 2003.
- 37 Information collected from HR Department and confirmed through the interviews with local staff at STM, in September 2006.
- 38 Interviews with HR Manager and Senior HR Executive at HCP September 2001.
- 39 With reference to the company's homepage in 2002, which emphasized design technology for machineries in production line.
- 40 Interview with senior executive from MD Office at STM in September, 2001.
- 41 Interviews with Japanese Director of Production at HCP in September 2001

42 Interview with a Senior Engineer of R&D at STM in February 2007.

43 Interview with the Director of Sales at HCP in February 2007.

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Appendix: Companies' Profile

	STM	HCP
Start of operation	Oct, 1987 (TV Plant) July, 1989 (VHS Plant) - Oct, 1999 (Merged)	March, 1980 -Oct, 1992 (New plant) closed in 2005
Paid-in Capital	RM 20 Million	RM 11.2 Million
Ownership	Wholly owned Japan 100%	Joint Venture Japan 77.1% Singapore 12.2% Malaysia 10.7%
No of Employee	8,000 (1994), 6,000 (2001), 8,000 (2004)	2280 (1997), 1,917 (2001), 796(2007)
Expatriates (%)	86 + + (1.4%)	11 (0.5%)
Competitive advantages	Cost, Quality, Flexibility, Efficiency in Internal Business Process by integrating Product Development and Process Innovation	Cost, Quality and Reliability in Process Innovation
Main Products	Finished Goods: Color TV, VHS, DVD Parts: Deflection Yoke, Fly back Transformer, Tuners	Finished Goods: Color TV Parts Parts: Deflection Yoke, Fly back Transformer Tuners, Circuit Board Units
Other Functions	R&D, (Product Development & Design) Procurement Center for South East Asia	Procurement Center for South East Asia, Sales Engineering Center for worldwide market.R&D (Product Design & Process Engineering)
Main Business	Assembly of finished goods (US CTV Market Leader in 2006) Assembly of TV parts (worldwide market share 12% in 1996)	Assembly of TV parts (worldwide market share 20% in 1996)
Products Market	TV: Japan 49%, Malaysia 7%, Singapore 7%, other 37%	Area: America, Europe, Malaysia, Asia

Source: Author's Firm Study