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Manufacturing to Asia: who will win the emerging battle for talent between Dragons and Tigers?

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Abstract

Purpose – The purpose of this study is to examine the issues relating to recruiting highly skilled managerial and professional staff experienced by multinational companies (MNCs) manufacturing in six Asian countries, namely Indonesia, Malaysia, Philippines, Singapore, Taiwan and Thailand.

Design/methodology/approach – Data collected from 529 MNCs were used to examine critical human resource planning and recruitment concerns of companies operating in high growth “Dragon” and newly developed “Tiger” economies. The study examined the differences in recruitment practices between manufacturing and service companies and the issues relating to how manufacturers maintain an adequate skills basis.

Findings – There appears a considerable extent of battle for talent among Dragon and Tiger economies with the latter required to be more aggressive as they attempt to sustain growth. Manufacturing companies are experiencing a higher demand for more job-related managerial and technical capabilities whilst competing with service companies that are also in need for more talent. To succeed, manufacturing MNCs will need to adopt a strategic approach for recruitment and retention, and internal capability training to maintain their skilled employees in order to sustain competitive advantage.

Originality/value – The results shown in the paper provide manufacturing MNCs with insights into managerial and professional recruitment trend in Asia.

Introduction

As many major firms in developed economies look to off-shore their manufacturing operations into the relatively low-cost economies in Asia, a critical issue that they need to consider is if they can recruit and retain the talent they need to run manufacturing operations. Jack Welch, CEO of General Electric once urged his executives to develop and
retain the top 10-20 per cent of managerial and professional staff. His idea was that “an organisation is only as strong as its top talent” (Walker and LaRocco, 2002, p. 12). Bartlett and Ghoshal (2002) shared a similar view, they argue that organisations must take a strategic choice and make the commitment to recruit, develop and retain the best of the best managers and professionals. This talent is able to drive the organisational performance forward and help manufacturing operations to maintain a competitive edge in a turbulent business world (Michaels et al., 2001; Bartlett and Ghoshal, 2002).

However, recruiting, developing and retaining the best of the best managers and professionals are not simple tasks. In rapidly developing economies in Asia, there is a limited talent pool. Manufacturers have to compete not only with one another but also with the rapidly growing service sectors for the best people. Many multinational corporations have been able to use expatriate employees to establish manufacturing operations in Asia, but they are also faced with a very limited pool of talent that is prepared to move off-shore to advance their career. So is there an emerging battle for talent in Asia or is there just a minor short lived skirmish?

Asia has over four billion people and represents a very unique dynamic business environment with thousands of multinational companies (MNCs). Many economies in Asia have experienced continuous strong economic growth in recent years, with a growth rate over twice the world average (ILO, 2005). The Asian dynamism has not only been manifested by its rapid economic growth but also by its competitiveness in global markets for goods, services and investment (World Economic Forum, 2005; ILO, 2005). For manufacturers to survive in such competitive and growing economies, they must plan and prepare for growth and expansion. Above all, they must fight the emerging battle for talent, recruiting employees with non-imitable capabilities (Barney, 1991) as this is the only way that they can ensure the necessary innovation and growth in their manufacturing capacity (Bartlett and Ghoshal, 2002; Walker and LaRocco, 2002).

This emerging battle for talent in Asia can be intensified because of severe skilled labour shortages, especially in manufacturing and this shortage has been exacerbated by the growth in the service sector. The labour shortages across Asian countries such as China, Japan, Korea, Malaysia, Singapore and Taiwan have been repeatedly reported in the media. As a part of strategies to win the emerging talent battle, many manufacturing companies often use attractive salary packages to lure managers and professionals from overseas or poach them from competitors (McShulskis, 1997; Frazee, 1998; Racz, 2000; Fuller, 2005; Boyd, 2006).

Intra-country skilled labour mobility in Asia has been quite extensive and this is supported by various governmental bodies. For example, Singapore's Economic Development Board had once set out to attract 20,000 foreign professionals (Low, 1998). Such overseas recruitment practices have also been widely adopted by other Asian countries such as Malaysia, Philippines, Taiwan, and Thailand (Gross and Lepage, 2001). According to the World Migration Report (2005), international labour migration from and within Asia has expanded rapidly as many countries require and acquire labour from their neighbouring countries in order to maintain their economic expansion. The problem with strategies such
as these is that they only shift the skills shortage problem from one manufacturing region to another. For instance, in Taiwan in 2000, inflow contract workers were mainly from Thailand (46 per cent), and over one-third from the Philippines and the rest from Indonesia. Malaysia also relies heavily on foreign workers from neighbouring Indonesia, and Malaysia itself is the home of many foreign workers in Singapore (World Migration Report, 2005). High-skill shortages and international mobility in Asia have enabled career mobility of many high-flying operations managers and professionals. Managers and professionals in China are often looking for the best place with the best deal (Xu, 2005). This has created an on-going challenge for MNCs to fight for attracting and retaining the best of the best in the region (Bhasin and Low, 2002). It seems that the emerging battle for talent among MNCs has been waged most brutally between the manufacturers operating in more advanced economies, so-called “Dragons” and those in the newly developed “Tiger” economies. The battle would be even more escalated as the Tigers such as China with its vast resources and abundant cheap labour have rapidly grown their manufacturing sector and marketed their capacity to developed economies, and struggling manufacturers in Australia, Europe and North America have to move their manufacturing operations off-shore. There is a similar trend of some more developed Asian economies, e.g. Japan, Korea, Singapore and Taiwan to move their manufacturing operations off-shore.

Dragons and Tigers in Asia

Dragons and Tigers represent the dynamic forces of power and cultural change. Recently, the Dragon or Tiger status is ascribed to growing economies especially in East, South and Southeast Asia. The term Tiger has become synonymous with nations that achieve high growth by pursuing an export-driven trade strategy. In recent years, the Southeast Asian nations of Indonesia, Malaysia, Philippines and Thailand have been considered as Tigers. The East Asian Miracle identified eight countries that had achieved “seemingly miraculous” rates of sustained growth over 25 years from 1965 to 1990. The eight were Japan, The four Tigers (Hong Kong, South Korea, Singapore and Taiwan) and the newly industrialised economies (NIEs) or emerging Tigers (Indonesia, Malaysia, Thailand) (The World Bank, 1993). However, the Philippines was later classified as an “entigered” economy (Billington, 1997) and China as an emerging giant Tiger economy (Weightman, 2005). Out of those eight countries initially mentioned by The World Bank (1993), Japan, Singapore, South Korea and Taiwan have been described as Dragon economies (Weightman, 2005), because they have developed more rapidly than the other economies in Asia. Findlay et al. (1998), Bello and Rosenfeld (1992) have separated out Singapore and Taiwan from the other Asian countries and referred to these two countries as Dragon economies because they have the highest pace of economic growth in the world (Findlay et al., 1998). In our study, of eight Asian countries, we adopt Findlay et al.’s approach, and refer to Singapore and Taiwan as Dragon economies; and Indonesia, Malaysia, Philippines and Thailand as Tiger economies.

Winning the emerging war for talent

The concept of “war for talent” first appeared in the Hudson Institute’s Report (1986) that predicts major skill shortages in the USA. A 1999 McKinsey study found that most employers had difficulty recruiting “talent” resources as a result of the tight labour market (Jamrog,
2002). Tulgan (2001) subsequently called for dealing with this manpower problem using some non-conventional HR methods, believing that these methods could address the world of high-job mobility and flexible staffing arrangements, especially in the era of knowledge economy (Goldberg, 2002; Loane, 2004). Tulgan (2001, p. 38) advocated “having many, many ways to employ people” in order to meet the staffing needs in the world of constant change. These “many ways” were not specifically linked to recruitment methods, but largely referred to recruiting different types of employees, including core and peripheral staff with fixed or non-fixed terms, the concepts similar to those discussed by Atkinson and Meager (1986), Guest (1987) and Legge (1995) on numerical, functional and temporal flexibility in staffing.

It was Bartlett and Ghoshal (2002) who later refined the talent war within the framework of linking strategic talent resource management to a firm's business strategy. This is different to Tulgan (2001) who advocated winning the war for talent via a market-driven employer-employee relationship known as “a free agent model” Bartlett and Ghoshal (2002) built their talent management model on the earlier HRM models (e.g. Barney’s (1991) “resource-based view” of the firm; Hamel and Prahalad’s (1994) “core competences model” and Kay’s (1995) “distinctive capabilities” framework). They stressed the changing role of HR from administrators of various functions to builders of human capital within organisation as a core source of competitive advantage (Bartlett and Ghoshal, 2002, p. 37). It is noted that organisations in the knowledge economy can no longer be successful if they still focus on products and markets or compete for resources and competencies. Instead, organisations can only achieve sustainable development via continuous self-renewal while they compete for “talent and dreams” (Bartlett and Ghoshal, 2002, p. 35). This notion of competing through talent has been further reinforced recently by a number of authors who addressed the new paradigm shift from human resource management to talent management (Sears, 2003; Mucha, 2004; Frank and Taylor, 2004; Heinen and O’Neill, 2004; Boudreau and Ramstad, 2005; Gandz, 2006). These scholars emphasise talent management through strategic staffing, training, recruiting and retaining talent in order to achieve superior business outcomes.

The focus of the current research is on examining the issues relating to staffing plan and recruitment in the context of MNCs manufacturing in Asia. A number of research questions are raised. First, what sort of talent are Dragons’ and Tigers’ manufacturers fighting for? “Talent” according to Sears (2003), are the individuals with knowledge, skills abilities and other capabilities at work. Talent in manufacturing operations, however, is more than the individual capabilities, they are the combination of the abilities of all employees who are able to contribute to the achievement of organisational objectives. For a manufacturing operation to be successful, it is critical to have the most talented employees working in the most important jobs (Fleenor, 2003, p. 798). It is acknowledged that better organisational performance can only be achieved with a concerted effort made by all employees with different talents (Bartlett and Ghoshal, 2002; Sears, 2003). However, highly skilled managers and professionals tend to act as a driving force to build effective teams in the manufacturing production line and are more likely and able to get employees motivated to achieve better organisational outcomes in terms of corporate morale, productivity and profits (Walker and LaRocco, 2002). Therefore, in this paper, “talent” is specifically referred to those highly
trained and skilled managers and professionals who are the important cohorts of manufacturing performance, and are more likely to motivate all employees and assist organisations to achieve business success (Michaels et al., 2001).

“Managers” and “Professionals” in this study are defined according to the international standard classification of occupation (ISCO-1968 and 1988, ILO, 1998, 2000). Managers are persons in charge of a specific unit or function within the company, and “Professionals” classified as scientists, engineers, systems analysts; economists, accountants, aircraft and shipping officers plus any professional and technical and related workers not classified above.

Having identified the areas of talent required in MNCs to improve their performance, the next question relates to the scale of talent that are needed by MNCs in the region. What is the demand from MNCs for talent for operational advantage and future expansion? The third question is to what extent have Dragons and Tigers experienced difficulty in recruiting and retaining talent?

Existing literature tends to speculate about the impact of skilled labour shortage on recruitment. The argument is generally centered around that if there is a more severe labour shortage, the level of recruitment difficulty would increase (Perry, 2002; Gardner, 2002; Jamrog, 2004; Pollitt, 2004; Messmer, 2005; Fuller, 2005; Breitenstein, 2005). However, there has been lack of empirical evidence on the extent to which organisations, such as MNCs operating in Dragon and Tiger economies have experienced talent recruitment difficulties. The evaluation of the extent to which MNCs have experienced difficulty in recruiting managers and professionals and examination of the level of attrition rate for managers and professionals in both manufacturing and service sectors will provide us with some indication of how short talent is in the region.

Lastly, if there is an issue of recruitment difficulty, can this issue be addressed with better recruitment methods? This leads to the fourth set of questions: What methods have MNCs used in recruiting talent? Are there any significant differences in terms of the way Dragons and Tigers search for their talent?

To answer these questions, a survey was conducted in both Dragon and Tiger economies, with 529 MNCs responding to the survey. In the next section, a snapshot on labour market trends in Dragon and Tigers economies is displayed to provide a context for understanding the reasons behind the emerging battle for talent. This is followed by an outline of economic and employment structural changes in these countries that have affected labour supply and demand, with a focus on addressing specifically the skill requirements of manufacturing MNCs. Educational attainment in the Dragon and Tiger economies is also compared. We then introduced research methods used for this study and discuss the results from data analysis. Some concluding remarks are made with suggestions for adopting better methods to recruit and retain talent for MNCs manufacturing in Asia.

Labour market trends in Asia
Despite strong economic growth in Asia after the Asian financial crisis in 1997, overall labour market conditions remain largely unchanged since 1999 (ILO, 2005). The total labour force participation rate fell slightly from nearly 70 per cent in 2000 to 68 per cent in 2004 (Table I). The overall employment growth has not matched economic growth in Asia. Although total employment numbers have increased from 1.47 billion in 1999 to 1.58 billion in 2004, representing an increase of employment rate of 1.6 per cent. This is minimal compared with a double-digit economic growth rate achieved by most Asian countries for many years up to 1997, and in recent times, there has been at least an average of 6-7 per cent growth rate (ADB, 2005).

Table I shows the key indicators of labour market trends in Dragon and Tiger economies. It can be seen that the employment growth rate in both Dragons and Tigers in most cases outgrew the annual labour force growth rate. This implies that certain jobs must have been filled by foreign workers. Indonesia and Philippines have had the highest unemployment rates, indicating that these two economies may not have fully recovered from the Asian financial crisis compared to Thailand. However, both countries demonstrated a steady economic growth rate in the period of 2000-2004. The figure would imply that there is more severe structural unemployment in these two economies than in other South-east countries. Structural unemployment is largely caused by unskilled labour that cannot meet the standard of labour market demand (OECD, 1998; Zanko and Ngui, 2003).

There are two implications that can be drawn from this analysis of the labour market conditions in Dragons and Tigers. Firstly, rapid economic growth with largely unchanged labour market conditions supports media speculation that there is a very tight labour market across the Southeast Asia. Firms would feel a pinch as the market favours suppliers, i.e. labour, especially those highly skilled managers and professionals who are able to bargain and negotiate their employment conditions. Secondly, paralleled with the employment growth, high-unemployment rate continues in most of Southeast Asian countries (except Thailand). This might be due to economic restructuring without proper manpower planning which tend to result in unskilled, untrained or redundant labour moving out of the traditional agriculture sector, however, having difficulty being absorbed into emerging and growing sectors, such as manufacturing or service sectors. Therefore, in the next section, it is necessary to examine the extent of economic restructuring in Dragon and Tiger economies.

**Economic restructuring**

The process of industrialisation since the 1970s has shaped the Asian economic landscape. Feridhanusetyawan et al. (2001) assessed the impact of the industrialisation process on employment structure of the Asia Pacific Economic Cooperation (APEC) member economies. They concluded that structural changes result in skill shortages, yet this has been slightly compensated by extensive international-labour migration. Table II outlines the major shift from agricultural production to manufacturing and service sectors, and the shift from manufacturing to services sectors among Dragon and Tiger economies. The Dragon economies are dominated by manufacturing and services, with very low percentage of GDP attributable to agriculture. Both Singapore and Taiwan have moved away from
manufacturing industry and become service-dominant economies, with over 65 per cent of GDP coming from services. On the contrary, the Tiger economies are dominated by agriculture and services. However, it is evident that all Tigers have also reduced substantially in agriculture employment and moved into manufacturing for the past two decades, with over 40-45 per cent of GDP attributable to manufacturing. Philippines is an exception, developing more towards a service economy with 52.8 per cent of GDP coming from the service sector, a much lower degree of industrialisation compared with those other Tiger economies.

Economic structural changes affect the employment structure. There is a high level of employment in the service sector for Dragon economies whilst more people are still working in the agricultural sector in the Tiger economies. Malaysia with 65 per cent of workforce in the service sector has closely followed the developmental path of the Dragons and moved quickly into competing for labour in the sector. Another distinctive feature as presented in Table II is that for the past decade, a large proportion of reduction in the manufacturing sector from the Dragons, both in the percentage of GDP and employment, might have been absorbed by the Tigers, that have indicated the proportional increase in their manufacturing sector. Interestingly, the percentage of GDP and employment in the service sector has both increased in Dragon and Tiger economies. This implies that it is very likely Dragons and Tigers have to compete for the same talent in order to develop and sustain their service industry now and in the future.

Both economic and employment structural changes require labour market adjustment. Table III depicts the trends of such adjustment as the number of managers and professionals have been employed more extensively to meet the demand for structural change. The change in demand for managers and professionals is much more rapid in the Tiger economies than in the Dragon economies. This might be due to more foreign investment directed by MNCs to Tiger economies for setting up manufacturing and production lines, which would require more skilled labour to manage new ventures.

**Educational attainment**

A nation’s skilled labour force is related to its educational attainment. Educational attainment determines whether a nation can sufficiently supply skilled labour to meet the demand for growth and expansion (Mitter and Bastos, 1999; OECD, 2004). Mitter and Bastos (1999, p. 157) state that “... a well-educated and trained labour force is crucial to social and economic wellbeing” of the nation. Strategically developing education and training systems and improving the quality of labour force qualifications are required for sustaining national economic growth in the long-term (OECD, 2004). In terms of technological capability, a study covering 137 countries by Lall and Urata (2003) found that educational attainment and research and development (R&D) have a significant positive impact on economic growth in East Asian economies. Hobday (1995) attributed rapid innovation in East Asia to a high level of R&D activities. Many manufacturing firms in Asia have been sending their graduates for doctoral training in science and technology in the advanced countries such as USA, European and other Western countries. These workers trained overseas have made significant contributions to technology advancement and
capability building in manufacturing firms in China, South Korea and Taiwan (Zheng and Hu, 2006).

It seems that the higher educational attainment in terms of primary, secondary and tertiary education that a nation obtained, the more likely it would produce a higher skilled labour force. OECD (2003) shows a dramatic reduction of low-skilled labour workers as a result of a rise in educational attainment and income in Taiwan between 1987 and 2000. It is important to examine the level of educational attainment by Dragons and Tigers to assess how capable these economies are in supplying managers and professionals required to meet the demand of structural changes as discussed in the previous section.

Table IV provides some indication on the comparison of adult literacy rate for population age 15+ and the percentage of tertiary qualifications attained in the Dragons and Tigers. The adult literacy rate is both quite high among the Dragon and Tiger economies. The highest illiteracy rate appears in Indonesia (12.1 per cent), leading it to the lowest percentage in attaining tertiary qualifications. In the period of 1993-2003, the Dragons have almost doubled their achievement in attaining tertiary qualifications. However, in the Tiger economies, the change varies, with Malaysia and Thailand showing more increase of tertiary qualifications attained, a slow increase appeared in Indonesia and a decrease in tertiary qualifications attained by Philippines.

In summary, it is clear that rapid economic growth in Asia required more skilled labour. Yet the labour force growth rate is unable to catch up with the employment growth in both Dragons and Tigers. Economic structural changes associated with the industrialisation process in Asia require different kinds of skills, and a shift of labour from the agricultural sector to the manufacturing and service sectors demands corresponding managerial and professional capabilities to drive the change. However, various evidence discussed above suggest that there will be insufficient supply of needed managerial and professional skills, especially in the Tiger economies, and thus skill migration across these economies might be quite rampant. For MNCs operating in Dragon and Tiger economies, it is inevitable that they would experience difficulty obtaining skilled labour. The emerging battle among MNCs between Dragons and Tigers could be more brutal than ever before, given the analysis of labour market trends and key indicators presented so far. The empirical data presented next will provide more insights into the level of severity of this talent battle between Dragons and Tigers.

**Research methods**

To assess the level of recruitment difficulty and methods used by MNCs to mitigate the situation, data collected from a survey in two Dragon (Singapore and Taiwan) and four Tiger (Indonesia, Malaysia, Philippines and Thailand) economies during March-May 2001 were used. The survey responses are presented in Table V. The survey was completed by executives, including chief executive officers, financial controllers and human resource managers who were believed to be more competent in providing a better assessment of the extent to which their companies have experienced difficulty in recruiting talent.
The data used to assess the level of difficulty experienced by MNCs and recruitment methods adopted are generally dichotomous and the variables coded are largely categorical. Hence, non-parametric statistical analysis tools are used (Siegel and Castellan, 1988; Pallant, 2001). Gravetter and Wallnau (2000) suggest using the $\chi^2$ test for independence to determine whether two categorical variables are related. It compares the frequency of cases found in the various categories of one variable across the different categories of another variable (Pallant, 2001, p. 256). For example, are manufacturing MNCs in the Dragon economies more likely than manufacturing MNCs in the Tiger economies to experience talent recruitment difficulty? Since, we collected the perceptions of managers on their talent recruitment difficulties and methods used to recruit talent, we used $2 \times 2$ tables to describe the relationship between the variables. This will generate a correlation coefficient ($\chi^2$ value) to indicate the strength of the relationship. Yates’ correction for correlation continuity is believed to provide a better estimation of $\chi^2$ value as it helps to correct or compensate some overestimation made by the respondents (Gravetter and Wallnau, 2000; Pallant, 2001). Hence, this measurement was used. The results are presented next.

**Results and analyses**

**Specific abilities and capabilities**

Managers in the survey listed capabilities such as management, interpersonal, planning, use of new technology, self-management, multiskilling, teamwork and job-related technical skill. Table VI shows that most companies surveyed (over 80 per cent) indicated the need to improve management capabilities for managers and professionals in order to improve company performance. The analysis shows that the need to improve management skills for both managers and professionals was more prominent in MNCs in the Tiger economies than in the Dragons ($\chi^2=3.588$, $p<0.05$). Many managers and professionals in the Tiger economies would have low skill levels compared with those in the Dragon economies. This might have been related to different tertiary education and vocational training often offered more in the Dragon economies than in the Tigers. Hence, there is a stronger need for improved management skills in Tiger economies.

Within the Tiger economies, there is a significant difference of managerial skills requirement between manufacturing companies and service companies ($\chi^2=2.791$, $p<0.05$). The analysis shows that the manufacturing MNCs in the Tiger economies demanded more managerial capabilities than the service MNCs. But for Dragon economies, there is no significant difference of improving managerial capabilities between manufacturing and services. This does not mean that companies in the Dragons do not require managerial skill improvement. In fact, when we run the comparison of managerial skill improvement between manufacturing and service sectors across two economies, management skills are more sought after in the manufacturing companies than in the service companies ($\chi^2=4.178$, $p<0.01$). The data shows a similar pattern for planning skills ($\chi^2=10.691$, $p<0.01$). This implies that in the process of industrialisation and globalisation, the managers and professionals with management and planning capabilities are in high demand, but even more so in the manufacturing sector operating in the Tiger economies.
Other skills and capabilities are also required to a certain degree (Table VI). However, only moderate differences exist when comparing between Tiger and Dragon economies. In terms of interpersonal skill requirement among MNCs in manufacturing and service sectors, there is a slightly higher demand of such skill improvement among manufacturing companies than service companies ($\chi^2 = 2.375, p < 0.1$), again especially more so for those companies operating in the Tiger economies than in the Dragon economies ($\chi^2 = 3.456, p < 0.05$). The requirement for capability improvement in teamwork is also stronger in manufacturing MNCs ($\chi^2 = 2.425, p < 0.1$) operating in Tiger economies ($\chi^2 = 1.729, p < 0.1$). In terms of use of new technology and self-management, there is no significant indicator of differences among Tiger and Dragon economies. Nevertheless, among MNCs in the Tiger economies, the requirement for improving the capability to use new technology is significantly stronger in manufacturing sectors with $\chi^2$ valued at 4.871 ($p < 0.01$).

The analysis also shows a greater requirement for improving job-related technical skill for managers and professionals, especially among manufacturing companies operating in the Dragon economies ($\chi^2 = 10.420, p < 0.01$). There is a lesser degree among manufacturing companies in the Tiger economies ($\chi^2 = 4.859, p < 0.05$). This demonstrates that even with high-level tertiary graduates in the Dragons economies, job-related technical skills may not have been well taught in tertiary institutions to meet the manufacturing sector requirements. It might be entirely up to MNCs to train these specific skills. Often these firm-specific managerial and professional capabilities are harder to obtain, because they reside only in experienced employees who have been trained within the firm for a substantial period of time (Castanias and Helfat, 1991; Luo and Peng, 1999). Another speculation might be that there is a need for educational institutions to work with industry to provide sufficient job-related technical skills. It is noted that over 80 per cent of companies surveyed in the Dragon economies responded to the need to improve job-related technical skills for their managers and professionals. This figure is much higher for the Tigers economies, besides all higher indicators of the requirement for capabilities improvement for other areas in the Tigers economies (Table VI).

In summary, there appears a greater need for manufacturing MNCs operating in Dragons and Tigers to recruit more qualified managers and professionals with particular capabilities in management, planning and job-specific technical skills. These skills are in high demand by companies across all economies. Managers and professionals with other capabilities, such as interpersonal skill, use of new technology, self-management, multiskilling and teamwork are also sought after by manufacturing companies especially in the Tiger economies. Over 70 per cent of the manufacturing companies surveyed indicated the need to improve managers and professionals' capabilities in these areas in order to enhance their company performance.

**Scale of demand for managerial and professional talent**

If a large proportion of companies indicate their need to improve managerial and professional capabilities, it is likely that internal labour market of MNCs do not have sufficient supply of these capabilities. So it is highly likely that companies will have to turn to
the external labour market to seek this cohort of talent both for existing operations and future expansion in Asia.

It is shown in Table VI that the percentage of companies intending to acquire more managers and professionals is much less than those intending to improve their capabilities. It seems that the supply of managers and professionals is not the issue, as demonstrated in Table III as the appointments of managers and professionals especially in the Tiger economies have increased quite dramatically from 1995-2003 period. However, MNCs might be more concerned with the quality of managerial and professional supply.

Our data show that over 50 per cent of companies surveyed both in Tiger and Dragon economies required more managers and professionals in the past for the manufacturing sector, and 37-47 per cent of companies indicate the need to have more managers and professionals in the service sector. The demand for managers and professionals for existing operations statistically shows no difference between Tigers and Dragons. However, for future expansion, there is a moderate indication that service companies will require more managers and professionals than manufacturing companies ($\chi^2=4.401, p<0.05$). This can be related to a strong growth of service industry in both Tigers and Dragons that require more managers and professionals in the sector. Overall, there is slightly more demand for managers and professionals for both manufacturing and service companies in the Tigers than in Dragons ($\chi^2=2.523, p<0.1$).

A company’s decision to recruit externally for managers and professionals can be influenced by several factors (Russo et al., 1995). First, is there a sufficient supply of skills equal to or higher than that of internal employees? Without sufficient supply of skills externally, it might be better to train up internal employees. Secondly, is a company willing to hire externally less qualified staff and train them up? Sometimes, certain skills may not be available because they are job-related or firm specific, but the personnel recruited can be taught. Thirdly, are there many competitors out there to recruit similar skills? This can increase the problem for companies if they cannot meet the salary demand of those highly skilled managers and professionals. From a cost-benefit analysis perspective, it might be better for companies to start an internal vacancy chain to promote lower position managers and professionals or to reallocate tasks within the personnel instead of external recruitment to fill up the vacancies (Russo et al., 1995). From our earlier analysis, it is possible that a very tight labour market exists in Asia, and many MNCs are competing for talent. This has posed recruitment difficulties for MNCs. Therefore, our data shows that a relatively low percentage of companies are opting to recruit managers and professionals externally in the past and in the future. Training and development of internal staff might be a more sensible approach if this also increases retention rates. We now turn to examine the extent of recruitment difficulties experienced by MNCs and evaluate the level of attrition rate for managers and professionals to determine whether MNCs are capable of recruiting and retaining talent in Asia.

**Recruitment difficulty and retention issue**
Table VI indicates that a considerable number of companies both in the Tiger and Dragon economies experienced some difficulty in recruiting managerial and professional staff in the past and anticipate the same in the future. The values of $\chi^2$ indicate that there is no significant difference among all firms surveyed, either manufacturing or service companies. However, when comparing those companies in the Tiger and Dragon economies, the Dragons expect to have a moderately higher difficulty in recruiting managers and professionals in the future than the Tigers ($\chi^2=3.752, p<0.05$). This is possible as the Dragon economies may have shifted their manufacturing operation, together with their managers and professionals as expatriates to less developed economies, e.g. the Tiger economies, as skills and knowledge of systems and processes of manufacturing MNCs may not be readily available in the Tiger economies (Barber and Pittaway, 2000). With a limited pool of talent, it is likely that in the future, companies operating in the Dragon economies would experience more difficulty in recruiting managers and professionals both in their manufacturing and service sectors than those in the Tiger economies.

The attrition rates for managers and professionals are also compared. The attrition rate is measured by the number of employees left in the past year against the total number of employees. Table VII indicates that the attrition rate is generally much higher for professional staff than for managers. Professionals with qualifications and skills have higher employment options in the labour market. The attrition rate for professionals is especially high in Dragon economies (up to 23 per cent in Singapore for instance). The attrition rate for managers is also relatively higher in the Dragon economies than in the Tiger economies, implying a shortage of managers.

The service sector has experienced higher attrition rates for both managers and professionals. This may be explained in two dimensions. One is that the service sector has developed rapidly in both Tiger and Dragon economies. Employment growth could be stronger in this sector as discussed earlier, which led to more new jobs, allowing managers and professionals to “shuffle” moving from one job to another. Secondly, unlike tasks performed in the manufacturing sector, which could be quite demarcated, skills in service sector might be easily transferable. Hence, it is easier for managers and professionals to opt for other jobs when better working conditions were offered.

**Recruitment methods**

Recruitment activities and channels used by companies can be classified in several ways (Marsden and Campbell, 1990). One type of classification focuses on the distinction between active and passive recruitment. In the case of passive recruitment, the organisation waits until an applicant gets in touch with them, such as unsolicited applications. For example, today many organisations have web sites that contain information for people seeking jobs. In the case of active recruitment, employers actually go in search of potential candidates. They may do so by commissioning recruitment agencies to find candidates, or by searching in databases on the internet where job seekers have posted their curriculum vitae.
Another classification is based on the distinction between formal and informal recruitment. A type of formal recruitment is posting job advertisements in the media such as newspapers, magazines or TV/radio (Taylor, 1994). Informal recruitment methods may involve the use of some intermediary between the employer and the potential employee. An example of informal recruitment is using the employer’s network of contacts or “word of mouth” (Lasserre, 1991; Chen, 1995). This network could include the personal networks of the existing workforce as well as other employers, people working in the same business or employers in the vicinity (Marsden and Campbell, 1990, p. 60).

Organisations often combine various recruitment methods when they have difficulties finding suitable employees. The greater the perceived difficulties, the more likely that organisations will take a series of coordinated measures to recruit employees, and the less likely they will sit back and wait or follow lengthy, formal procedures. Consequently, it is more likely that they will apply active and informal recruitment methods. In addition, the use of recruitment methods by organisations may also be influenced by the tightness of the labour market as well as the composition of the existing workforce (Henkens et al., 2005).

Recruitment methods used might be different according to industry and firm size (Scott et al., 1989; Barber et al., 1999). For instance, in the services and traditional manufacturing sectors, informal methods are preferred, but in the high-technology sector, formal methods are used widely. Larger organisations tend to use more formal recruitment methods. According to Henkens et al. (2005) study, most organisations still mainly use traditional and formal recruitment methods, such as media advertisement.

Our data suggest, that various recruitment methods have been adopted by MNCs operating in Tiger and Dragon economies, with one method being more predominant than the others. Similar to Henkens et al. (2005) finding, most of the companies used the media as the main method to recruit managers and professionals (Table VI). There is no statistically difference among manufacturing and services companies in both types of economies in terms of their recruitment methods.

In term of using “word of mouth” both types of economies demonstrate a significant use of this informal recruitment method, suggesting that a tight labour market results in greater recruitment difficulty, which leads to a higher use of informal recruitment method (Henkens et al., 2005). This method was more commonly used in service companies than in manufacturing companies ($\chi^2=13.965, p<0.01$).

There is a large proportion of MNCs (54-78 per cent) indicating the use of private agents to recruit their talent. MNCs operating in the Dragon economies tend to use this method more frequently than those in the Tiger economies ($\chi^2=6.581, p<0.01$). Within those operating in the Dragon economies, the manufacturing companies used more private agents to recruit managers and professionals than the services companies ($\chi^2=9.148, p<0.01$). It is believed that private executive recruitment agents may be more widespread and easily accessible in Dragon economies than in the Tiger economies.
Internal managerial and professional staff transfer was more significant in the Dragon economies than in the Tiger economies ($\chi^2=11.440, p<0.01$). The service companies within Dragon economies were more likely to use internal transfer of managers and professionals than manufacturing companies ($\chi^2=13.624, p<0.01$). The rapid development of the service sector in the Dragon economies may require MNCs to transfer skills from their headquarters to compensate for the skills deficiency in the host country (Athanassiou and Nigh, 2000).

More companies in the Dragon economies use internet to recruit managers and professionals ($\chi^2=9.380, p<0.01$), indicating some more innovative recruitment methods being used by more advanced economies to attract talents all over the region. There is no statistical difference in the use of internet as a recruitment method between manufacturing and services companies.

In summary, most companies surveyed tend to use formal recruitment methods (e.g. media). However, there is apparent evidence of using informal recruitment method such as “word of mouth”. This implies a greater need to be flexible in recruitment when the labour market is tight and talent is in high demand. It is also witnessed that some innovative recruitment methods, such as www and internet have been used to attract talent.

**Discussion and conclusion**

The empirical evidence demonstrated in the above analysis suggests that there are no significant differences in terms of staffing plan and demands for more managerial and professional skills across Tiger and Dragon economies and between manufacturing and service MNCs. In addition, the set of skill requirements for improving firm performance is also not dissimilar among two groups. The implication is that more severe battle for talent and skills will occur in the foreseeable future. This is especially challenging for manufacturing companies. Because manufacturers must be able to attract and recruit both professional and managerial talent in the developing and developed economies of Asia to ensure that they can operate effectively and grow their capacity. In particular, the capabilities needed to manage a dynamic manufacturing operation in Asia require the appropriate skills to ensure that the systems and process in place are managed effectively and efficiently, and this simply requires high level of skills.

Yet most MNCs surveyed in this study are experiencing difficulties in recruiting and retaining key skilled workforce. The significant results indicate that manufacturing companies in the Tiger economies especially struggle to attract and retain managerial and professional staff. One explanation could be that manufacturing MNCs, when undergoing through the major recovery from the Asian financial crisis, might choose to consolidate their operation in Asia, hence were more reluctant to take a more innovative or proactive recruitment strategy. Therefore, the current data which were collected not long after the recovery period show the sign of more severe recruitment difficulty in procuring managerial and professional staff among manufacturing firms in the Tiger economies.

However, in the past five years, it is witnessed that a rapid and dynamic growth in the manufacturing sector occurred across many Tiger economies (from a spectacular example of
China to the least growing country such as Philippines) (ADB, 2005). There appears an emerging unmet demand for managerial and professional skills to meet the challenge of managing the growing sector. Increasingly, manufacturing firms in the Tiger economies have to compete with the manufacturers in the Dragon economies for key skills.

As the manufacturing sector grows in the Tiger economies, and more developed economies from the East and West outsource manufacturing to Tiger economies, the shortage of professionals and managers will increase and the competition for this talent will also increase. As argued in this research, the situation will be exacerbated in both Tiger and Dragon economies.

Some companies in this study have already recognised that simply recruiting talent does not build internal capacity and they need to develop managerial capabilities within their own organisations (with a relatively lower level of demand for external recruitment). The need for the improved skills will increase as manufacturers move into more complex operations in Asia. No longer is Asia a source of cheap labour for simple manufacturing processes. It is rapidly moving up the value chain into complex products. The manufacture of complex products requires highly skilled employees and engineers who are largely in short supply. In addition, it is observed that many firms, especially in the Dragon economies, have started using some more strategic and innovative recruitment methods in recruiting talents in the region. This again poses a significant challenge to manufacturers in the Tiger economies who are behind the Dragon economies in terms of resources and access. Whilst this issue seems more daunting on manufacturing at the present, it may spread to the service sector as the sector grows to support manufacturing in the Tiger economies.

Currently both the Tiger and Dragon economies are growing dynamically and much of this growth is sustained through strategies such as low-cost products and services and access to a cheap supply of labour. This growth is not sustainable if manufacturers are unable to further source the talent they require to manage complex operations. At the time of this survey, manufacturing MNCs dealt with the issue of recruitment difficulty by attracting expatriate managers and professional teams via internal transfer or “poaching” from competitors both in developed and less-developed economies. This influx of talent management is definitely not sustainable. Firms, both local and MNCs in Tiger and Dragon economies will be required to search for a strategic approach to acquire and develop talent internally to combat the skill shortage rampant in the Asian-labour market.

In general, with rapid economic development, it appears manufacturing businesses in Tiger economies will need to be more aggressive in the battle for talent in order to compete with more advanced economies, such as Dragons, to sustain growth.
### Table I
**Key indicators of labour market trends in Dragons and Tigers**

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Source: ADB, Key indicators 2005

### Table II
**Structural changes per cent of GDP at current prices and employment: Dragons and Tigers**

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<td>16</td>
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<tr>
<td><strong>Tigers</strong></td>
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Source: ADB, Key indicators 2005

### Table III
**Trends of changing employment in different occupations, 000, per cent**

Notes: Singapore and Chinese Taipei uses ISCO-1988. 2002 data for Chinese Taipei is not available.

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Source: ILO Yearbook of labour statistics, 2004

16
### Table IV: Educational attainment: Dragons and Tigers

<table>
<thead>
<tr>
<th>Economies</th>
<th>Adult literacy rate 15+ (per cent)</th>
<th>Percentage with tertiary qualifications 1993</th>
<th>2003</th>
<th>Change Percentage</th>
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<td>21</td>
<td>38</td>
<td>17.0</td>
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</table>

Source: Singapore is based on 2005 figure, the rest is 2003 figure from UNESCO 2000-2004. Educational attainment: Dragons and Tigers.

### Table V: Survey profile

<table>
<thead>
<tr>
<th>Economies</th>
<th>No.</th>
<th>Manufacture Percentage (per cent)</th>
<th>Service Percentage</th>
<th>No.</th>
<th>No of companies surveyed</th>
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<tbody>
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<td>159</td>
<td>50</td>
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<td>281</td>
<td>53.1</td>
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### Table VI: Data analysis results: comparison of Tigers and Dragons

Data analysis results: comparison of Tigers and Dragons.
Table VII
Attrition rate for managers and professional – mean percentage

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<tr>
<th>Occupation</th>
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<th>Professionals</th>
<th>Total managers + professional</th>
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(2003), in Lall, S., Urata, S. (Eds), *Competitiveness, FDI and Technological Activity in East Asia*, Edward Elgar, Cheltenham, .


Further Reading


Corresponding author

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