The Impact of Localisation and R&D Intensity on the Firm Performance of MNE Subsidiaries Investing in Emerging Markets: An Empirical Analysis of Taiwanese Investment in China

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Declaration

This thesis is composed by me and the work is my own. No part of it has been submitted to any other institution for another qualification.

Signature:

Date:

Abstract of Thesis

In this thesis, using Taiwanese companies investing in China as the sample, the impact of localisation and R&D intensity on the firm performance of MNE subsidiaries investing in an emerging market are examined. There has been limited previous research for this important topic. In order to strengthen the statistical results, the thesis includes two major models to compare: OLS regression model and binomial logit model.

In the empirical part, five explanatory variables: local employment ratio (local worker linkage), local content ratio (local supplier linkage), local capital ratio (local financial linkage), local sales ratio (local sales linkage), and firm's age will be employed to measure the scope and extent of localisation. The strategic goal and operation type of local-market-seeking FDI are significantly different from that of export-oriented FDI. Thus, I categorise Taiwanese manufacturing industries investing in China into two groups: the local-market-seeking group and the export-oriented group.

It is noteworthy that for these two groups, each localisation variable and R&D intensity exert a different impact on subsidiary performance. Besides, the aggregate influence of these five localisation variables on the subsidiary-level performance of local-market-seeking group is larger than that on the subsidiary-level performance of export-oriented group. Therefore, it is suggested that local-market-seeking FDI is more affected by host country local business environment than is export-oriented FDI.

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Studying for a PhD is a long journey. 'You crown the year with your bounty, and your carts overflow with abundance' (Psalm, 65:11). First, I am so grateful for the grace from my Heavenly Father. Without His light and help, I would have wandered lonely in the valley of darkness.

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Chapter 1: Introduction

1.1. Research Background

1.1.1. The FDI Flowing into Asian Emerging Markets

According to the World Investment Report (United Nations, 2008), global FDI inflows rose by 30% in 2007. The global financial crisis had a limited effect on FDI flows in 2007. In 2007, FDI flowing into emerging markets reached the highest level ever ($500 billion) – a 21% increase over 2006. The increase in FDI inflows mainly reflected relatively high economic growth in emerging markets.

The Asia and Pacific region remained the largest destination of FDI inflows among all emerging markets in 2007, accounting for two fifths of such flows. China and Hong Kong (China) were the two top FDI recipients in this region as well as among all emerging markets. The top four recipients, in order, of FDI inflowing into Asia and the Pacific are: China, Hong Kong (China), Singapore, and India. Strong economic development, demographic changes, advantageous business perceptions, and new business opportunities were among the major factors contributing to the Asia and Pacific region's good FDI performance in 2007.

The Asia and Pacific region remained attractive to both market-seeking and efficiency-seeking FDI in 2007. FDI inflows to Hong Kong (China) benefited from its increasingly integration with China's economy and a leading position as a top location for regional headquarters. FDI inflows to Mongolia increased because of robust economic growth and an improved business environment. Nevertheless, FDI inflows to the Republic of Korea decreased due to the slower economic growth, appreciation of the Won, and a drop in cross-border M&A sales. Moreover, FDI inflows to South Asia rose by 19% because of a remarkable increase in flows to India and Pakistan. Factors contributing to a 17% increase in FDI inflows to India included the strong economic development, a favourable business environment and further opening up of the telecommunications, retail and other industries.

In terms of policy development, a variety of national policy changes were taken by countries in the Asia and Pacific region to attract FDI inflows in 2007. Several governments in the region further relaxed ownership restrictions on foreign

companies. For instance, India lifted the foreign equity ownership limit in telecommunications to 74% in 2007. In order to facilitate FDI inflow, the India government also lifted the limit of foreign equity ownership permitted in other industries including civil aviation, refineries, construction, industrial parks and commodity exchanges in January 2008. Some governments are also providing different types of incentives. For instance, Malaysia decided to attract FDI inflows in the Iskandar Development Region, a special economic zone (SEZ) in the State of Johor, by providing fiscal incentives and investment facilities. Indonesia, the Republic of Korea and Thailand also offered new favourable policies to promote FDI inflows (World Investment Report, United Nations, 2008).

1.1.2. FDI Flowing into China

In recent years, undoubtedly China has attracted enormous attention all over the world, as global foreign direct investment (FDI) continues to flow into China. From the 1990s to the present, China's amazing average economic growth rate has reached 9%. Since 1979, the accumulated amount of FDI invested in China has been over $700 billion (Ministry of Commerce, PRC). In 2006, China was one of the top two destinations (the US is the other) of global FDI. The reason is not just that China is so huge or that its economy is one of those able to sustain continuous rapid growth. China is now profoundly affecting the international business environment. MNEs are affected by the impact of China's low-cost manufacturing on global pricing, whether or not they have investments there or engage in direct trade.

However, beneath the surface of China's amazing economic accomplishments is an extremely complex story: the nation's breathtaking growth and exploding local market provide huge opportunities. But that growth also masks systemic weakness. China's comparative manufacturing advantage makes it a very attractive platform for MNEs to build export bases. But that platform sits on a fast-changing operating circumstance (Lieberthal and Lieberthal, 2004).

Foreign investors need to overcome a liability of foreignness, which is the inherent disadvantage they confront in host nations because of their non-native status (Peng, 2004). Although China's local market is tremendously attractive (the largest population of 1.3 billion), China is still ruled by a communist-party government. It is

crucial for foreign investors to explore the advantages and disadvantages they will face while investing in such an unfamiliar, complex emerging market.

The Chinese government's statistics show that most FDI going into China does not come from the US, European Union, and Japan but from Hong Kong and Taiwan. It is worthwhile to explore why Hong Kong and Taiwan make up such a significant share (more than 45%) of FDI flowing into China. Du (2005) suggests that China's export-promotion FDI strategy and abundant lower-cost input factors are likely to remarkably stimulate the development of export-oriented FDI in China. Hong Kong and Taiwan traditionally have strength in export-oriented FDI (e.g. an extensive global marketing network for exports) and unique close relationships with China.

In recent years, China's impressive performance attracting inflow FDI results from progress on structural reforms, its entrance into the WTO, and its endeavours to bring regulations in line with global standards. However, in the decades since China opened the door to international investors, much of the FDI has been concentrated on low-technology, labour-intensive manufacturing enterprises. In fact, a relatively low percentage of China's inward FDI has come from the world's most affluent investors, particularly OECD member countries. Therefore, China's present challenge is to establish a more transparent business environment with a clear legal and regulatory system. This could help attract higher-quality FDI that is concentrated on long-term, advanced-technology, capital-intensive enterprises (OECD, 2003).

In terms of FDI investing in China, it is a fact that China has become one of the world's largest recipients of total global FDI, attracting $747.1 billion (up to Nov. 2007) (Ministry of Commerce, PRC, 2007). This vast flow of inward FDI has remarkably facilitated the integration of China's economy into the global economy (Julan Du, 2005). It has also increased the close relationship between China and other major Asian economies, that is, the close connection between China, Japan, Taiwan, South Korea, Hong Kong, and Singapore.

As regards the FDI flowing to China from other major Asian developing economies (South Korea, Hong Kong, and Singapore), in recent years South Korea's economy has been remarkably impacted by the emergence of China. It is a fact that China is the largest market for Korean exports and an important supplier of its low-cost imports; however, China also has become a strong competitor to South Korea in

the international market for manufacturing exports. Kim et al. (2006) explore the motivations for Korean FDI in China and its influence on bilateral trade and cross-border manufacturing systems.

South Korea's investment in China has produced a significant effect on enlarging trade and manufacturing networks between the two countries. While China has taken away some of its share of the international market; on the other hand, Korea has benefited indirectly from China's export development by expanding its exports of parts and components to China. Korean FDI in China has boosted the extension of the manufacturing systems and thus the strengthening of economic ties between these two emerging economies. This study suggests that rapid changes in China's economy since the 1990s have had both a positive and a negative impact on South Korea's economy.

By utilising the aggregate firm-level dataset of the South Korean MNE subsidiaries investing in China, Kang and Lee (2007) examine the determinants of location choice for the South Korean MNE subsidiaries. It can be seen that the South Korean MNE subsidiaries are unevenly distributed in China as a whole and even in specific areas of China. Based on the empirical evidence, this report suggests that market size, government policies (the number of economic zones), quality of labour, and transport infrastructure have significant and positive effects in deciding location. However, labour costs, inner waterways, and distance play a negative and significant role. It can be seen that South Korean MNEs intend to choose investment locations that could give the greatest profits.

Since Hong Kong returned to Chinese sovereignty, Hong Kong and China's economies have become increasingly interconnected, resulting in remarkable changes in the structure of Hong Kong's economy. As manufacturing has moved to China over the last two decades, the percentage of the manufacturing sector in Hong Kong's GDP decreased from about 24 % in 1980 to about 4 % in 2005 (IMF Country Report, 2005). Most of the manufacturing sector that has transferred to China is labour intensive. This structural transition of Hong Kong's economy towards knowledge-intensive and high-value-added business activities has brought about the decline of the demand for low-skilled employees. In recent years, it can be seen that

the growing integration of Hong Kong and China has been reflected by the significant increasing investment and trade volume between these two economies.

In terms of Hong Kong's direct investment in China, according to the Chinese government's statistics, Hong Kong is the largest source of China's inward FDI. By the end of January 2008, Hong Kong's investment projects approved by China reached 287,164, with US$312.7 billion investment in actual use. It is noticeable that Hong Kong's direct investment accounted for 40.4% of the accumulative FDI absorbed by China. Moreover, Hong Kong is the fifth largest trade partner of China. In 2007, the trade volume between China and Hong Kong amounted to US$197.25 billion, with an increase of 18.8% from the previous year. (Ministry of Commerce, PRC, March 2008).

Nevertheless, the dominance of Hong Kong's direct investment in China is relatively illusory in that much FDI nominally from Hong Kong is really from other areas. Some of what is listed as Hong Kong-source direct investment in China is, in reality, investment by domestic Chinese that is "round-tripped" through Hong Kong and back to China to take advantage of the favourable tax treatment for foreign companies (IMF Country Report, 2005). In addition, a significant share of FDI in China listed as originating in Hong Kong is, in fact, from different western countries and Taiwan, that is flowing into China via intermediaries in Hong Kong. It is noted that no published figures exist to demonstrate accurately how much FDI in China that is nominally from Hong Kong is attributable to other areas (Graham and Wada, 2002).

Park & Lee (2003) explore, from a comparative perspective, the behaviour and strategies of MNEs in China from South Korea, the United States, and Hong Kong. This report aims to compare three aspects: (1) motivations for MNEs, (2) sectoral distribution of foreign investment and ownership advantages, and (3) subsidiary-ownership preference. The empirical results show that first, in terms of motivations for foreign companies, the Korean MNEs in China intend to utilise

China as an export-processing base, while the American MNEs tend to exploit China's domestic market. Hong Kong companies tend to be somewhere between the Korean and the American MNEs, aiming at both export and local markets. Secondly, as regards the sectoral distribution of foreign investment and related ownership advantages, the Korean MNEs concentrate on labour-intensive sectors over which they have ownership advantages, utilising low-cost local workers and raw materials, whereas ownership advantages of the American and Hong Kong MNEs mainly lie in capital-intensive sectors. Thirdly, in terms of subsidiary-ownership preference, the Korean MNEs demonstrate a strong preference for WOS (wholly owned subsidiaries), while Hong Kong and American MNEs show less preference for this type of ownership. Hong Kong MNEs display some preference for the contractual JV (joint ventures) that provide more flexible engagements between ally partner firms.

Since the early 1990s, China has become one of the major destinations of Singapore's FDI due to China's abundant labour resources, vast land, and the enormous market potential. Based on the Chinese government's statistics, in 2007 Singapore was the fifth largest source of China's inward FDI (after Hong Kong, the Virgin Islands, Japan and South Korea), with US$3.18 billion investment in actual use. Besides, Singapore is the eighth largest trade partner of China. In 2007, the trade volume between China and Singapore reached US$47.1 billion, with an increase of 18% from the previous year (Ministry of Commerce, PRC, 2008).

Singapore's FDI in China mainly focuses on the manufacturing sector and real estate. More specifically, major areas of Singapore's FDI include machinery manufacturing, industrial and agricultural production, food processing, rubber production, textiles, electronics, steel, and real estate, etc. For the case of Singapore's FDI in China, Liu (2007) undertakes an empirical study by adding Singapore's FDI in the export model. The result shows that Singapore's FDI is significantly positively associated with the exports to China.

More, as regards Singapore's FDI in China, the Suzhou Industrial Park project was a huge collaborative venture between the Chinese and Singaporean governments from 1992 to 2002 (Pereira, 2004). This project aimed to jointly benefit from FDI by attracting industrial transnational companies to invest in the industrial park. To accomplish this goal, the Chinese government promised strong political support for the project, whereas the Singaporean government provided capital and administrative expertise. Nevertheless, between 1997 and 1999, the project encountered several difficulties including the Asian Financial Crisis and competitions from other special industrial zones in China. The Singaporean government eventually decided to announce its disengagement from this project in June 1999.

The most important implication is that Singapore is not able to deal with China as it initially thought. After this event, in order to establish effective policy in China, Singapore not only sent government experts to China, but also sent young officials to gain knowledge in China.

The foreign investments flowing into China include both local-market-seeking and export-oriented FDI. Pan (2003) explores the impact of country-specific factors on the inflow of FDI to China and finds that some of the FDI patterns observed in developed nations cannot be applied to transitional economies. The empirical results suggest that a considerable percentage of the FDI in China has been targeted at penetrating China's local market. Exchange rates are not important factors because MNEs are not planning to take profits out of China in the short term. In China, MNEs may be for a longer duration, reducing the importance of exchange rates as a consideration. Besides, it is noticeable that proximity to the host country may be more important for foreign investors engaging in sourcing activities, instead of local-market-seeking activities. When targeting to exploit China's domestic market,

investors from more distant source nations are more likely to establish investment in China, decreasing transportation costs.

1.1.3. Taiwanese MNEs Investing in China

The experience of Taiwan's economic development and policy formation had been the pioneer of "market-friendly" government (Rains, 1992) or the "East Asia Miracle" (Meier and Rauch, 2000). However, since the early 90's, based on cost and profit comparisons, Taiwanese investors have been rapidly placing huge investments in China. Therefore, the result has attracted increasing Taiwanese investors who then co-work with the local Chinese companies to launch global co-operation. FDI plays an important role in the economic interaction across the Taiwan-strait. Since Taiwan has been one of the main contributors to China's astonishingly high economic development in recent years, my thesis focuses on the analysis of Taiwanese investment in China.

Foreign investors have to overcome a liability of foreignness while investing in foreign countries. It is well known that not only the geographical proximity, but also the cultural distance between Taiwan and China is the shortest. Not surprisingly, the investment flowing from Taiwan to China has continuously soared. There are now over one million Taiwanese businesspeople conducting business activities in China. According to Taiwanese government statistics, the accumulated Taiwan outward FDI in China reaches $63.35 billion (1991— Nov. 2007) (Investment Commission, Taiwan Executive Yuan, ROC).

Hsu and Liu (2004) point out that Taiwan is one of the main contributors to FDI flowing into China. Since both Taiwan and China became World Trade Organisation (WTO) members in 2002, the trade integration between Taiwan and China has been inspired and accelerated.

Moreover, Hsu and Liu (2004) study the economic and political interaction across the Taiwan Strait. In the conclusion, from 1995 to 2003, the average Taiwanese investment scale in China increased steadily from $2.23 millions to $2.59 millions except for two years: 1996 and 2000. Besides, Taiwanese investment location in China is gradually moving from southern coastal areas to the middle and northern provinces. Hsu (2006) analyses the dynamic firm-territory nexus of

Taiwanese informatics industry investments in China. In the conclusion, the emergence of localisation strategies of Taiwanese investors in China was an impressive new phenomenon. Taiwanese firms have built up new networks to tap into local resources to support their future development in China.

In practical terms, lower production costs, geographical proximity, and the cultural and language similarities have shortened the cross-Strait psychic distance and accelerated Taiwanese outward investment flowing into China (Chen, 1996). Moreover, China's large potential local market also provides Taiwanese enterprises promising opportunities for future growth.

In the initial period (late 80s and early 90s), most Taiwanese companies investing in China were of traditional manufacturing industries such as textiles, or electronic product assembly, which contribute to the international trade of China. In 1994, due to the end of the dual-track foreign exchange system and deflation of the Chinese Yen (RMB), MNEs increasingly conducted business activities in China. In that period, some Taiwanese high-tech and capital-intensive industries began to invest in China. They remarkably boosted the workforce employment and economic growth of the four Special Economic Zones and the neighbourhood areas in China.

In general, due to the sensitive, complicated cross-Strait political situation and a lack of confidence in China's protection of property rights, Taiwanese enterprises conduct business activities in China with great caution. Comparing Taiwanese FDI flowing to China and to ASEAN until 1992, the accumulated approved FDI (US$ 1.86 billion) flowing to ASEAN is much larger than that to China (US$ 1.07 billion). In addition, the average Taiwanese investment size in China was US$ 0.84 million in 1991, much smaller than the comparable figure for that in ASEAN which increased from US$ 2.33 million in 1986 to US$ 4.44 million in 1991. The shifting of Taiwanese FDI from Southeast Asia to China began from 1992 (Investment Commission, Taiwan Executive Yuan).

However, since 1990, facing the continuous request to permit outward direct investment into China, the Taiwanese government decided to guide this investment boom rather than to reverse it. The Taiwanese Executive Yuan announced "The Regulations on Indirect Investment and Technology Cooperation with the Mainland Area" in October 1990. At about the same time, 3,319 products were authorised for

indirect investment (this was later increased to 3,679 items). The increase in approved cases to 9,392 in 1993 showed that the legalisation of outward FDI into China had encouraged Taiwanese companies to report to the government. Moreover, the average investment amount increased remarkably from $1.03 million in 1994 to $2.23 million in 1995, reflecting the new stage of larger scale Taiwanese investment in China.

From 1991-1996, based on the Taiwanese government's official statistics, the accumulated Taiwanese outward direct investment into China is $6,873 million. However, since then, the Taiwanese outward FDI into China has soared sharply. In 2007, the annual amount reached to $9,961 million. Moreover, in 2006 and 2007, the annual growth rate reached 27.3％and 30.4％ respectively (Investment Commission, Taiwan Executive Yuan).

Moreover, in the period from 1994-97, Taiwanese investment in China illustrated a gradual concentration of industrial distribution. The majority of Taiwanese investments shifted from traditional sectors, such as the textile and food industries, to electronic industries, particularly personal computer (PC) components and peripherals. The investment ratio of this leading industry, the electronic industry, from 1994 to 1997 reached 20%; as time went by, this percentage increased to 43.08% from 1998-2002.
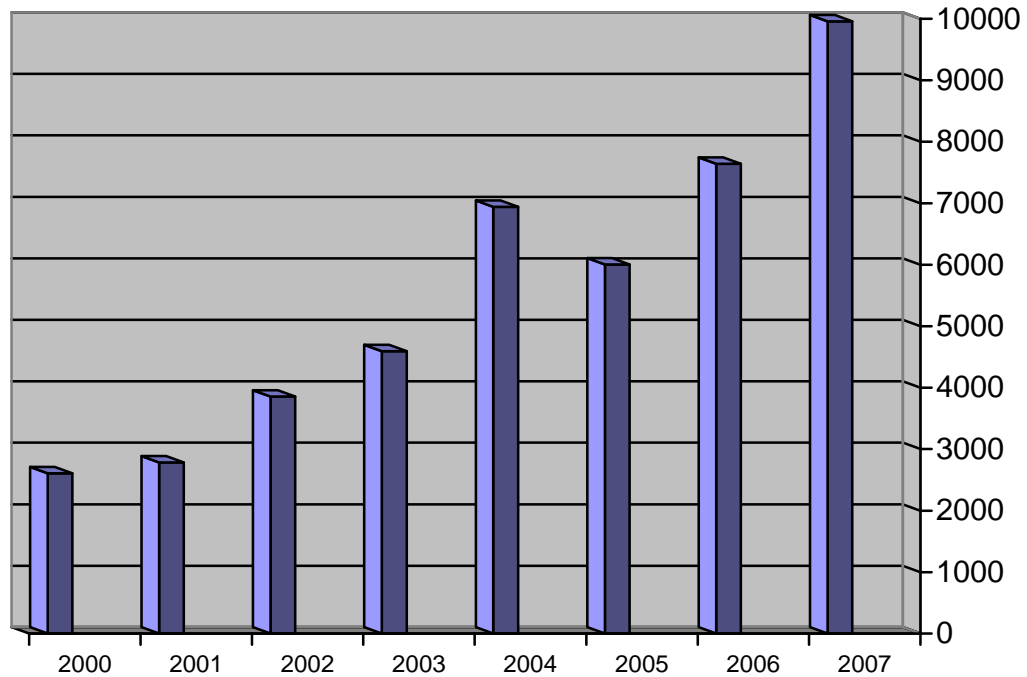
Figure 1.1 Taiwanese outward FDI in China (unit: million $US)
Data Source: Investment Commission (MOEIC), Taiwan Executive Yuan

In exploring Taiwanese outward FDI in China, many governance and coordination issues need to be examined. One of the most important issues is related to the location of the local subsidiary. Before 1993, Guangdong and Fujian were the two most favoured locations to Taiwanese investors. These two provinces attracted over half of the total cross-Strait investment in China. In the period from 1994 to 1997, Jiangsu exceeded Fujian and became the second largest Taiwanese investment province. From 1998 to 2002, Jiangsu replaced Guangdong and became the most favoured Taiwanese FDI cluster. In 2005, Jiangsu and Zhejiang (Yangtze River Delta) added together have accounted for 64.2% of total annual Taiwanese FDI. However, Fujian and Guangdong have dropped below 30%. The dramatic regional distribution changes show the rising up of the investment environment in the middle coastal areas of China (The Year 2005 Annual Report, CIER, 2006).

Taiwanese enterprises have provided China's local firms many valuable lessons and significantly reduced their learning costs. In summary, the role Taiwanese FDI plays in the economic growth of China can be concluded on four perspectives: (1) Taiwanese enterprises employing a vast number of local Chinese workers,

remarkably reducing China's seriously high unemployment; (2) creating local business linkages, contributing to China's economic development; (3) introducing technology transfer and upgrading China's industrial competitiveness; and (4) inducing more international FDI flowing into China and promoting China's international trade (Chiu Chen and Kuo, 2003).

In addition, the transformation of Taiwanese FDI strategic goals in China has been fully explained in some studies (Hsu, 2006; Chen Chiu, 2004). Until the middle 90s, most Taiwanese labour-intensive firms had established investments in China. After 1994, some Taiwanese high-tech and capital-intensive industries began to invest in China, and it is difficult to distinguish the difference between the contribution of Taiwanese FDI and other international MNEs. However, some scholars (esp. Japanese scholars) suggested that international MNEs preferred accessing the locations that had been well developed and had advantages of industry clusters established by Taiwanese MNEs.

Investing in China enables Taiwanese MNEs to gain economies of scale and scope, to upgrade their operation efficiency, to reduce vulnerability to market fluctuations, and most of all, to enlarge their international market share and produce more profits.

In the beginning period, to utilise the cheap human resources and land, many Taiwanese companies transferred their manufacturing facilities into China (export-oriented FDI strategy). However, after the mid-1990s, China's large domestic market grew strongly and opened gradually to foreign companies. Therefore, many Taiwanese companies in China increasingly noticed the huge potential market opportunities and gradually enlarged their local sales in China (Chiu Chen, 2004; Hsu, 2006; Lieberthal and Lieberthal, 2004).

'Localisation strategies' are the strategies utilised by MNEs, through local linkages, to exploit the location-specific factors (such as local labour resources, local procurement, local sales, and local capital etc.) and support the foreign operations in the host countries. From this dimension, localisation strategies used by Taiwanese MNEs may be considered as an increasingly important policy to increase their competitiveness through the evolution of a company's business goals in China.

1.2. The Rationale and Specific Goals of This Thesis

1.2.1. The Rationale

I provide the rationale for the subject of this thesis: the impact of localisation and R&D intensity on the firm performance of Taiwanese manufacturing MNE subsidiaries in China. In recent years, emerging markets enjoy the highest economic growth in the world. Emerging markets also have taken additional steps to liberalise and improve their national policy frameworks to attract more foreign investors, and this also boosts prospects for increased FDI inflows. Emerging markets play an important role and attract more attention in the global FDI map (World Investment Report 2008, United Nations). Economic growth and liberalisation provide remarkable new business opportunities for international investors; however, on the other hand, markets or politics in transition and transformation are accompanied by structural uncertainties and risks (Luo, 2003).

Dunning's "OLI" framework (1988) specifies the significant importance of location-specific factors. According to Dunning, for MNEs, several major types of location-specific factors are particularly important in the context of FDI: (1) markets, (2) resources, (3) production costs, (4) political conditions, and (5) cultural/linguistic affinities. It is well known that China is the largest emerging market and its economy has been able to sustain rapid growth. For international companies, China's huge domestic market creates many new business opportunities. In addition, it is well known that a distinctive feature of China is the cheaper local labour resources and local procurement. Although in recent years the wage costs in China (especially in the coastal areas) are going up, they are still significantly lower than the wage costs in developed countries. However, it is a nation with inadequate legal protections, massive government interference, and severe price competition from local Chinese companies (Lieberthal and Lieberthal, 2004). Therefore, for MNEs investing in China, it is crucial to explore the impact of the location-specific factors on subsidiary performance.

According to Taiwan government regulations, the Taiwanese banking industry and insurance companies are not yet allowed to invest in China. Moreover, in 2004, in terms of accumulated investment, the percentage of Taiwanese manufacturing

sector investment in China accounting for the total Taiwanese investment in China is more than 90 percent (Investment Commission, the Ministry of Economic Affairs, Taiwanese Executive Yuan). Therefore, this thesis will focus on the analysis of the manufacturing sector. I have selected Taiwan's five major manufacturing industries: the electronic, machinery, chemical, textile, and food industries to analyse in this thesis.

This thesis is based on the premise that MNEs respond to a host country's location-specific factors and then adapt their local investment activities accordingly. Location-specific factors such as host country's local employment, local capital resources, local procurements, and local market size are all likely to influence MNEs' business behaviours and firm performance.

Moreover, for MNE subsidiaries, competitive advantage is clearly very important (Kerin et al., 1990) and one of the most effective ways of achieving this is through R&D (Belderbos, 2003). In essence, emerging markets (including China) usually feature relatively weak intellectual property right (IPR) protections; therefore, for MNE subsidiaries, it is extremely important to identify both the benefits and risks undertaking R&D in China.

I also provide a case (the Taiwanese electronic industry) for exploring this specific subject. The choice of the Taiwanese electronic industry is based on the observation that the electronic industry is the most strategically important component in the Taiwanese manufacturing sector. It is well known that the Taiwanese electronic industry is very competitive in the global market. In the initial period, Taiwanese electronic firms invest in China merely for the appeal of viewing China as the platform of lower local manufacturing costs for export to other countries. However, as China's domestic market emerged after the mid-1990s, Taiwanese electronic industry firms began to establish local sales networks and increased the percentage of their product-local-content (Hsu, 2006). In other words, many Taiwanese electronic industry firms in China transformed from being merely export subcontractors to manufacturing their own brand-name products sold in China.

However, transforming into OBM (Original Brand Manufacturing) makers was a completely new and complicated process for most Taiwanese electronic industry firms, who were long known as hidden OEM (Original Equipment Manufacturing)

producers in global manufacturing systems (Lin., 2000). In addition, some Taiwanese electronic industry subsidiaries hired more and more local Chinese workers in order to penetrate China's domestic market. It can be seen that for Taiwanese electronic industry MNE subsidiaries in China, the effect of location-specific factors on investment activities is important.

In terms of R&D, Taiwanese electronic firms now are increasingly proficient at original design, and dominate manufacturing in key categories in the global market. Overall, the Taiwanese electronic industry, especially the semiconductor, TFT-LCD, and the IT-related products, is characterised by continuous rapid growth and high potential. The investment made by the Taiwanese electronic firms in China began from the most labour-intensive and price-sensitive keyboards and mice to power supply units, and then to the technology-intensive motherboards and monitors (Hsu, 2006). Therefore, it is also important to explore the R&D activities undertaken by the Taiwanese electronic industry MNE subsidiaries investing in China.

In summary, this thesis will focus on the case of Taiwanese MNE subsidiaries investing in China. Although this thesis cannot represent all foreign companies investing in China, its dynamism offers a rich context in which to explore a deeper understanding of China's domestic business circumstances.

1.2.2. The Goals of this Thesis

This thesis, using Taiwanese manufacturing companies investing in China as the sample, focuses on the local business operations and R&D undertaken by MNE subsidiaries investing in emerging markets. Using Dunning's (1988) "OLI" framework and local linkage theories as a theoretical basis to build our arguments, I show how MNE subsidiaries in an emerging market context can utilise location-specific factors (including local sales, local workers, local procurements, and local capital) to establish local linkages for business operations. What happens after the initial entry stage of investment may be critical to the success of a MNE subsidiary. The process of localisation and adaptation to the host economy in the long run is likely to be an influential factor in firm performance. The goals of this thesis are to:

(1) Examine, for each location-specific factor, the relationship between the degree of localisation (the intensity of the local linkage) and the subsidiary performance of MNEs investing in emerging markets.

(2) Explore the effect of the subsidiary-level R&D intensity on the subsidiary performance of MNEs investing in emerging markets.

(3) Contribute to the body of literature in location-specific factors by analysing the influence of local linkages on the subsidiary performance of MNEs investing in emerging markets.

1.3. Thesis Framework

This thesis, including 9 chapters, proceeds as follows. Moreover, the thesis framework is shown as figure 1.2.

Chapter 1: **Introduction**

Chapter 2: **The Importance of Localisation in Foreign Direct Investment**

Chapter 3: **The Role of R&D in the Subsidiaries of MNEs**

Chapter 4: **Theoretical Bases and Hypotheses Development**

Chapter 5: **Sample and Measures**

Chapter 6: The Empirical Analysis (Sub-chapter 1: Descriptive Findings)

Chapter 6: The Empirical Analysis (Sub-chapter 2: Hypotheses Tests)

Chapter 7: **Discussion**

Chapter 8: Qualitative Research: Exploring the Individual In-depth Interviews with the Senior Managers of Taiwanese MNEs Investing in China

Chapter 9: Conclusion and Suggestions.

1.4. Methodology Approaches

This thesis contains both exploratory and explanatory methods. Exploratory methodology intends to investigate some problem or area of research in a preliminary way. In general, exploratory research depends on direct observation of examples of what is to be explored. However, explanatory methodology intends to examine the causes of particular phenomena ('how' and 'why'), not merely to describe them (D'cruz and Jones, 2004). I utilise explanatory methodology in these

parts (the empirical analysis of Taiwanese export-oriented MNE subsidiaries investing in China, the empirical analysis of Taiwanese local-market-seeking MNE subsidiaries investing in China, and the comparative analysis between the Taiwanese electronic industry and chemical industry firms investing in China). In these parts, I use empirical methods to test hypotheses of interests (the impact of localisation and R&D intensity on the firm performance of Taiwanese MNE subsidiaries investing in China).

On the other hand, this chapter (qualitative research: exploring the individual in-depth interviews with the senior managers of Taiwanese MNEs investing in China) is of exploratory methodology. This live-interview situation created opportunities for respondent Taiwanese managers to express further verbal insights on their operations in China.

Figure 1.2 Thesis Structure

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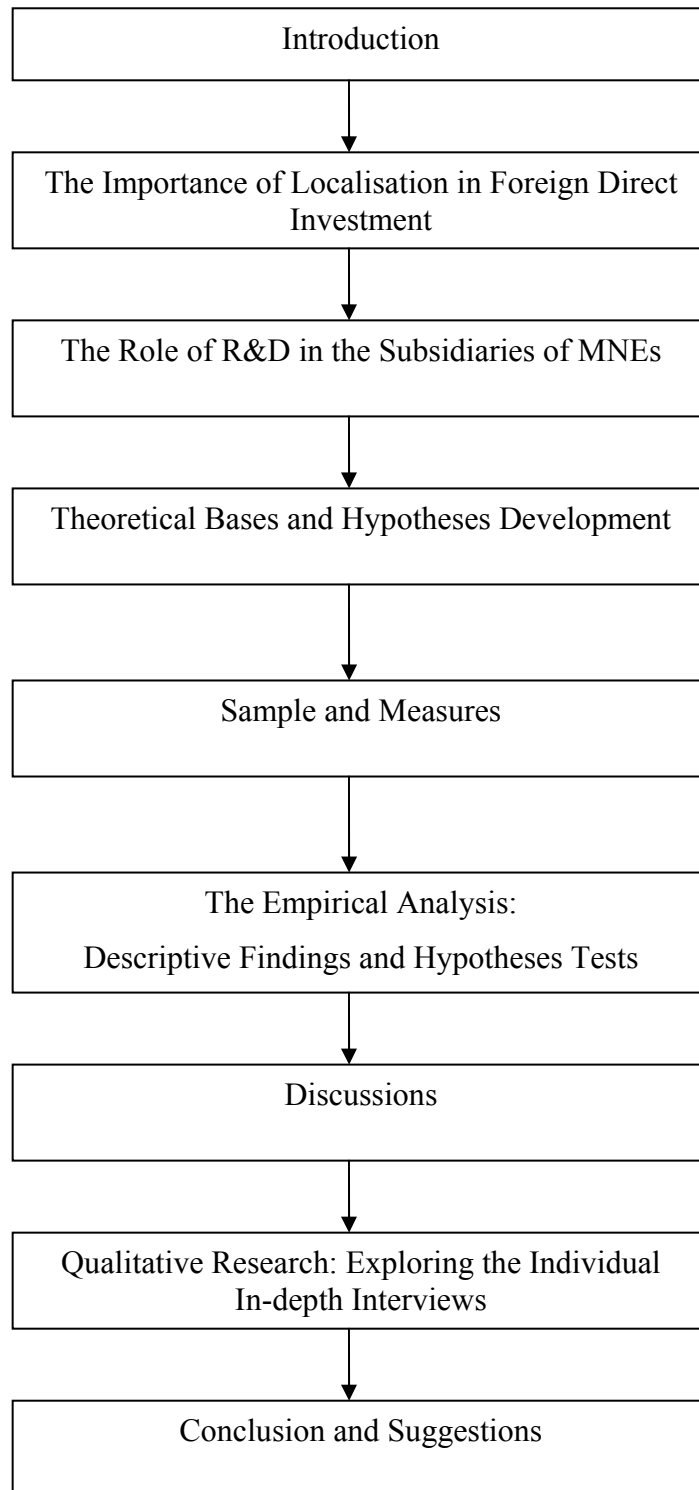
Chapter 2: The Importance of Localisation in Foreign Direct Investment

2.1. Theories of Localisation

This thesis focuses on the local business operations and R&D activities conducted by Taiwanese MNE subsidiaries investing in China. In this chapter, I review the theories and literature about the OLI triad variables, localisation vs. globalisation, local linkages, and the degree of localisation. Moreover, I provide a review of the literatures (Sakakibara and Yamawaki, 2008; Lam and Yeung, 2008) that have analysed the relationship between localisation and subsidiary performance.

According to Dunning's (1988) "eclectic" theory, a MNE whose FDI is operating in a specific foreign area enjoys a combination of ownership (O), location (L), and internalisation (I) advantages. In a global era, MNEs are likely to gain competitive advantages from localising in areas where close cooperative relationships exist among firms, suppliers, and distributors (Dyer and Chu, 2000). Therefore, MMEs are being forced to take the 'local' more seriously. MNEs establish local linkages to utilise location-specific factors (such as local labour resources, local procurement, local sales, and local capital etc.) and support their foreign business activities in the host country (Dicken, 2003; Chen et al., 1998 and 2004).

Location-specific factors represent the special advantages accruing to MNEs investing in a particular host country. For MNEs, 'the locational configuration of a firm's activities may itself be an ownership-specific advantage as well as affect the modality by which it augments, or exploits, its existing ownership advantages' (Dunning, 1998: 60). Therefore, location-specific factors are likely to substantially affect the subsidiaries' performance. The literature reviewed in this chapter is related to the explanations about, for each location-specific factor, the impact of the degree of localisation (the intensity of the local linkage) on the subsidiary performance of MNEs.

2.1.1. The OLI Triad Variables

To MNEs, the importance of location is significant in the reports of some IB scholars, who have analysed the growth in geographically distant locations, particularly foreign markets. Since the 1960s, when many IB theories began to attempt to interpret the rise of MNEs, the direction of the beginning surge of FDI gave rise to what became known as the American challenge (Schreiber, 1968). Therefore, explanations concentrated on American enterprises. Moreover, the pioneering study on endogenous aspects of the I.O. (internalisation and ownership) of MNEs' business activities has been attributed to Hymer (1960). Hymer regarded FDI as a way of transferring knowledge, skills, and other company assets, both tangible and tacit, in order to organise operations in foreign nations. While Caves (1971) saw FDI as a means of exploiting ownership advantages, it was explained as risk diversification by Rugman (1979), and as organisational assets and knowledge transfer by Kogut (1983). Besides, among the most influential theories of FDI was Vernon's product life cycle model (Vernon, 1966). Vernon used the product life cycle model to explain that companies established production facilities in foreign countries for products that had already been standardised and matured in the home markets.

Dunning (1988) incorporated the earlier FDI theories to develop an "eclectic" framework to explain the investment activities of MNEs. The 'eclectic' paradigm (Dunning, 1988) provides an ownership, location, and internalisation (OLI) advantages-based framework to explain the proliferation and location of subsidiaries of MNEs.

Desirable locations in certain nations usually give MNEs investing there location-specific advantages. On the perspective of location-specific advantages, Dunning explains that for FDI, the advantages arise from exploiting local resource endowments or factors that are tied to a certain foreign location and that a MNE finds valuable to combine with its own advantages (such as technological competitiveness, management capabilities, and marketing knowledge). Certain locations usually possess specific advantages that are difficult for others to match. Dunning suggests that to utilise such foreign resources a MNE needs to undertake FDI there.

In terms of location-specific advantages, Dunning explains that for international investments, the advantages originate from utilising local resource

Table 2.1 Some Illustrations of How OLI Characteristics May Vary According to Country, Industry and Firm's Special Considerations

	Country (home-host)	Industry	Firm
Ownership	Resource endowments, input factors and market size. Government policy towards innovation, protection of proprietary rights, competition and industrial structure, government controls on inward direct investment.	Degree of product or process technological intensity; nature of innovation; extent of product differentiation, production economies, importance of favoured access to inputs and/or markets	Size, extent of production, process or market diversification; extent to which enterprise is innovative, or marketing- oriented, or values security and/or stability, e.g. in sources of inputs, markets etc., extent to which there are economies of joint production
Internalisation	Government intervention and extent to which policies encourage MNEs to internalise transactions, e.g. transfer pricing; government policy towards mergers; differences in market structures between countries; e.g. with respect to transaction costs, enforcement of contracts, buyer uncertainty etc.; adequacy of technological, educational, communications etc., infrastructure in host countries and ability to absorb contractual resource transfers.	Extent to which vertical or horizontal integration is possible/desirable, e.g., need to control sourcing of inputs or markets; extent to which internalising advantages can be captured in contractual agreements; use made of ownership advantages; extent to which local firms have complementary advantages to those of foreign firms; extent to which opportunities for output specialization and international division of labour exist.	Organisational and control procedures of enterprise; attitudes to growth and diversification, attitudes toward subcontracting ventures, e.g., licensing, franchising, technical assistance agreements etc.; extent to which control procedures can be built into contractual agreements.
Location	Physical and psychic distance between countries. Local resource endowments or input factors. Host country's local market and government policy (tariffs, quotas, taxes, assistance to foreign investors or to own MNEs)	Origin and distribution of immobile resources; transport costs of intermediate and final products; industry specific tariff and non-tariff barriers; nature of competition between firms in industry; can functions of activities of industry be split? Significance of 'sensitive' locational variables, e.g., tax incentives, energy and labour costs.	Management strategy towards foreign involvement; age and experience of foreign involvement; (position of enterprise in product cycle etc.); psychic distance variables (culture, language, legal and commercial framework); attitudes towards centralization of certain functions, e.g., R&D; regional office and market allocation etc; geographical structure of asset portfolio and attitude to risk diversification.

Source: Adapted from J. Dunning (1988), *Explaining International Production*, p. 54, London Unwin Hyman

endowments or factors that a certain foreign area provides and that a MNE considers beneficial to combine with its own advantages. The choice of location for FDI is based on the location-specific advantages that maximise the value of firm-specific assets net of set up costs (Dunning, 1981; Caves, 1971). Dunning (1988) suggests that some main types of location-specific factors are particularly important in the context of FDI, even though their significance will differ according to the type of business activity engaged: markets, resources, production costs, political conditions, and cultural /linguistic affinities.

In developed countries, the wage costs usually account for a significant proportion of total corporation operation costs. Therefore, on the perspective of global production, many scholars now agree that the single most important location-specific factor is labour, particularly in terms of the wage costs and the skills and knowledge embodied in local workers. The locational significance of labour in different countries, as an important production factor in global production system, is reflected in these ways: 1) different wages costs, 2) difference in labour skill and knowledge, 3) different labour productivity, 4) different extent of labour controllability, 5) it is not globally mobile, particularly over far geographical distance (Dicken, 2003).

In 1986, the scholar Ethier, in seeking to explain the business activities of MNEs, argues that "internalisation appears to be emerging as the Caesar of the OLI triumvirate." In other words, "internalisation should be the focus of theories of direct investment" (Either, 1986). However, Dunning (1998) concludes that the OLI triad of advantages (Ownership, Location, and Internalisation advantages) determining MNEs global investment activities may "be linked to a three-legged stool; each leg supportive of the other, and the stool is only functional if the three legs are evenly balanced." Thus it is not reasonable to suggest that one leg performs this function better than another.

Besides, Sethi et al. (2003) examined US FDI in Western European and Asian countries over the 20-year period 1981-2000. Results confirm that location-specific factors (including cultural proximity, political systems, wage costs, and domestic market demands) in these countries significantly impact the US FDI activities in the

period. This study empirically verifies the importance of location-specific factors in the host countries.

The motivations for MNEs to conduct FDI include: natural resources seeking, market seeking (import-substituting), efficiency seeking, and strategic asset seeking (Dunning, 2001). The location-specific advantage for natural-resources-seeking FDI is possession of natural resources, related transport and communication infrastructure. The location-specific advantage for market-seeking FDI is the existence of fast-growing market demand and customers willing to pay. The location specific advantage for efficiency-seeking FDI is the availability of economies of scale and abundance of low-cost factors. The location specific advantage for strategic-asset-seeking FDI is the availability of innovative individuals, companies, and R&D institutes (Dunning, 1993).

According to Dunning's (1988) "eclectic" theory, for MNEs, location-specific factors (L) are very important. The continuous expansion of FDI can be viewed as an unending saga of searching for location-specific factors (L) in the host countries (Peng, 2004). Therefore, it would be worth exploring, for location-specific factors, the impact of the degree of localisation on the subsidiary performance of MNEs.

Table 2.2 Matching Investment Motivations with Locations

Investment Motivations	Location-Specific Advantages	Examples
Natural Resource Seeking	Possession of natural resources, related transport and communication infrastructure	Oil in the Middle East Oil and gas in Russia
Market Seeking	Abundance of strong market demand and customers willing to pay	Automobiles in the US
Efficiency Seeking	Economies of scale and abundance of low-cost factors	Manufacturing in China, Computer software design in India
Strategic Asset-Seeking	Abundance of innovative individuals, firms, and universities	IT industry in Silicon Valley and Taiwan; Fashion industry in France and Italy

Source: First two columns adapted from J. Dunning (1993), *Multinational Enterprises and the Global Economy*, 82-83, Reading, MA: Addison-Wesley

Based on Dunning's theory, several major types of location-specific factors are very important in the explanation of MNEs' global business activities, although their precise importance is different according to the type of investment activity involved:

* Local markets
* Local natural resource endowments
* Local strategic and knowledge resources
* Local linkages
* Production costs
* Geographical distance
* Host country government policy
* Cultural similarities

2.1.2. Localisation versus Globalisation

However, recently, the increasing significance of MNEs has received considerable attention for the analysis of both globalisation and localisation. If localisation is the tendency for MNEs to agglomerate in certain locations, then globalisation can be explained as the process whereby the different nations and regions of the world are homogenized by rapidly advancing business, social, and technological forces (Jacobson and Andreosso-O'Callaghan, 1996). While the concept that MNEs increase competitiveness by simultaneously implementing both globalisation and localisation strategies may appear somewhat contradictory, the two trends are closely related. Regional specialization has long been linked with globalisation (DeMartino, Reid, and Zygliodopoulos, 2006). Localisation and globalisation can and do co-exist. There are considerable potential benefits for a MNE pursuing a globally integrated strategy, but there are also considerable disadvantages. Thus, MNEs' managers have to balance pressures for global integration with those for responding locally to different national environments. Figure 2.1 describes the "global integration-local responsiveness" framework.

Figure 2.1 The MNEs' "Global integration –Local responsiveness" Framework

High

Pressures for global integration:
• Universal needs of multinational customers
• Global marketing strategy
• Presence of international competitors
• Pressures for cost reduction

Global Integrated

Product Emphasis

Multifocally Oriented

Area Emphasis

Locally Responsive

Low

Low   Pressures for local responsiveness   High
• Unique needs of local customers
• Different local market structure
• Local Linkages
• Different local distribution channels
• Host government support

Source: Based on material in Prahalad and Doz,1987: Figure 2.2; pp. 18-21

In the last two decades, the rapid advancement of globalisation has nevertheless renewed the research and argument concerning the influence of both globalisation and localisation. Some scholars, on the one hand, have argued that the advancements of telecommunication and computer-internet technologies have made localisation insignificant and signal the reduced importance of regional distances (Cairncross, 1997; Gray, 1998). However, on the other hand, more international business literatures agree that these advancements increase the unique importance of industry locations (Audretsch, 2000; Krugman and Venables, 2001). This is particularly the case in MNE subsidiaries conducting business activities in certain host nations.

MNEs should not be presumed just as bounded units and owners of resources, but also as institutions with permeable and very blurred boundaries. In the business operating process, MNEs always open up their boundaries, tap into surrounding

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networks, and establish certain realms of company–territory interaction in the host countries (Dicken and Malmberg, 2001). MNEs could gain competitive advantages from localising in regions where close cooperative relationships exist among companies, suppliers, and distributors (Dyer and Chu, 2000).

Moreover, in today's global business, there is increasing evidence showing that MNEs' managers are being forced to take the 'local' strategy more seriously (Dicken, 2003). In the words of Coca-Cola's chairman, Daft (2000) 'many new forces that are making the world more connected and homogeneous are also simultaneously triggering a powerful desire for local autonomy and preservation of unique local features in different countries. [1]' In fact, in order to expand in foreign markets, some archetypal 'global' MNEs have been forced to renew their strategies. For instance, in the late 1990s, Coca-Cola experienced many difficulties in its worldwide operations, leading it to learn that the next big evolutionary step of 'going global' now has to be 'going local.' The Coca-Cola company then changed its direction, conducted a new 'think local, act local' strategy, and decreased the immoderate degree of centralization that had been the hallmark of the Coca-Cola management for decades. Moreover, many MNEs rediscover their own multi-local heritage. For example, the US financial services TNC, J.P. Morgan, claims that 'the key to global performance is to understand local markets.' The Anglo-Dutch corporation Unilever asserts itself as a 'multi-local multinational'. The Hong Kong Bank (HSBC) promotes its 'local insight, global outlook' strategy (HSBC Investments, HSBC 2007). The Japanese electronics giant Sony uses the term 'glocalisation' to portray its international business strategy (Dicken, 2003).

2.1.3. Localisation

The nature of local linkages must be understood from the concept of a business network. Ghoshal and Bartlett (1990) develop an inter-organisational network theory of the MNEs. In Ghoshal and Bartlett's (1990) study, a MNE is regarded as an inter-organisational system rather than as an organisation. 'A MNE can be conceptualised as an inter-organisational network that is embedded in an external network consisting of all other organisations such as customers, suppliers, regulators, and so on, with

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[1] Douglas Daft, chairman of Coca-Cola, in the Financial Times (27 March 2000)

which the different units of the multinational must interact.' Ghoshal and Bartlett's (1990) study provides the possibility of using an exchange theory and network methodologies to analyse the business activities of MNEs.

Holm et al. (1999) explore the interdependence in ongoing business relationships. In Holm et al.'s (1999) study, an empirical model of business relationship development in a business network context is designed and tested on data from the European International Marketing and Purchasing (IMP) project. The results show that companies can establish and share an unbounded structure of interdependent activities through their interactions in business network relationships. Business networks are likely to help companies engaged in such business relationships to achieve greater value.

Hakansson (1992) suggests that a business network is shaped through interactions which occur in accordance with the perceptions of the network held by individual firms. Firms recombine resources and rearrange activities through such a network in order to support their business operations. These scholars (Ghoshal and Bartlett, 1990; Holm et al., 1999; Hakansson, 1992) discuss the importance and benefits of a business network; however, they do not analyse the critical role of location-specific factors in the context of a local business network.

Kale et al. (2000) have developed the notion of relational capital, 'which refers to the level of mutual trust, respect, and friendship that arises out of close interaction at the individual level between alliance partners'. Relational capital can help companies to utilise various kinds of resources and protect existing proprietary assets in alliance situations (Kale et al., 2000; Dunning, 2002). Corporations are seeking to access and deploy the relevant resources and create competitive advantages by relational capital. MNEs in the host country make use of relational capital to establish local linkages with local partners, suppliers, distributors, customers, government agencies, research institutes and so on, to exploit the local resources (Chen et al., 2004).

Chen et al. (2004) study the pattern of local linkages in FDI, treating such local linkages as networking business activities in local relationships. Based on the sample of Taiwanese manufacturing companies investing abroad, this study concludes that the local linkages' intensity of a MNE subsidiary differs by strategic goals, FDI

location, entry mode, firm's size and the nature of the production network in which the MNE subsidiary is embedded. Chen et al. (2004) suggest that Taiwanese MNEs in the US are keener to establish local linkages than their counterparts in Southeast Asia and China. This is because, as compared with the other two areas, the US can provide much more strategic and knowledge resources. Moreover, large-sized subsidiaries are more enthusiastic than small-sized subsidiaries about pursuing local linkages, because they usually have a larger ability to absorb the risks entailed in network integration and are more capable of applying relational capital on a larger volume of exchanges. Entry mode also makes a difference to local linkage. A subsidiary taking the type of JV leads to more local linkages than a subsidiary taking the type of WOS.

In this thesis, a local network is defined as a web of interconnected relationships upon which business exchanges between actors are undertaken. Some scholars suggest that exchange relationships in a network may be measured on the basis either of activities or of actors (Hakansson and Johanson, 1993). This thesis examines the local networking behaviour based on activity exchange relationships that tend to reflect the MNEs' strategies in the host country. In the empirical model, the local linkages that underline particular business activities are analysed without considering how many actors are involved in the local networks. Chen et al. (2004) include six business activities in their study of local linkages: sourcing of local components and parts; local marketing of final products; product design and innovation; hiring of local workers; sourcing of local production capacities; and obtaining local financial resources. These six local linkages will be employed in our empirical analysis.

Sakakibara and Yamawaki (2008) analyse the relationship between localisation and subsidiary performance. Regarding the impact of localisation on firm performance, Sakakibara and Yamawaki (2008) explore the factors which determine the profitability of foreign direct investment by analysing the overseas subsidiary-level firm performance of Japanese MMEs investing in the US, EU, East Asia, and ASEAN (which includes China, Taiwan, Hong Kong and South Korea) over the 1990-1996 period. This report suggests that the determinants of subsidiary profits (ROS: returns on sales and ROA: returns on assets) differ across host areas,

indicating that the economic and institutional factors specific to host areas impact remarkably upon the profits of overseas subsidiaries. The size effect on the subsidiary-level profitability is present in all the host areas, whereas other effects, such as firm's age, local supplier linkage, local sales and macroeconomic conditions influence the subsidiary performance in a different manner according to area. In the statistical results, the estimated coefficients are found different jointly among subsidiaries located in the US, EU, and Asia.

Sakakibara and Yamawaki (2008) suggest that Japanese subsidiaries make higher profits in the US when they own technological competence, and the favourable macroeconomic conditions in the US positively influence the subsidiaries' performance (profits). Japanese subsidiaries in East Asia are profitable when this area is exploited as a sourcing base. In Sakakibara and Yamawaki's (2008) study, the number of foreign subsidiaries of a parent company is regarded as a proxy for its foreign experience. The experience of a parent company operating foreign subsidiaries is positively associated with the subsidiaries' performance (profits) in East Asia. ASEAN is desirable as a market only if they demonstrate favourable macroeconomic conditions. In EU and ASEAN, the local procurement increases the profitability of subsidiaries with local experience.

However, since the accounting regulations are significantly different across countries (eg. US and China), this study might need to use multiple indicators for firm's performance to strengthen the statistical estimates (Tallman and Li, 1996). Moreover, the strategic goal for Japanese MNEs to invest in various regions is also likely to be remarkably different (eg. in US versus in East Asia). The effect of localisation on subsidiary performance may depend on the strategic goal of the Japanese MNE subsidiary. Without classifying and discussing these Japanese overseas subsidiaries based on their strategic purposes in different locations, the empirical analysis of this study would not be complete (the drawbacks of this study).

Using the survey results of 111 MNE subsidiaries investing in China, Lam and Yeung (2008) analyse the impact of staff localisation on the subsidiary performance. Lam and Yeung (2008) suggest that a curvilinear relationship exists between the degree of staff localisation and subsidiary performance. This curvilinear relationship is moderated by the extent of environmental uncertainty. At a low level of staff

localisation, an increase in staff localisation produces a positive effect on subsidiary performance. Beyond a certain point, the costs of a high degree of staff localisation outweigh the benefits. The negative impact of an increase in staff localisation beyond an optimal point will be stronger under the condition of high environmental uncertainty. Lam and Yeung (2008) do not address the impact of strategic goals on the relationship between localisation and subsidiary performance either (the drawback of this study).

Lam and Yeung's (2008) study uses the manager's subjective self-assessment as an indicator of firm performance. The subjective self-assessment of firm performance is measured on a 10-point Likert-type including the five items of after tax return on total assets, after-tax return on total sales, total sales growth, overall performance and success, and competitive positions. In Lam and Yeung's (2008) study, the factors that have been related to subsidiary performance include the degree of staff localization (measured as the percentage of local staff out of all workers on or above the functional head level in the subsidiary), environmental uncertainty, previous China experience of the expatriates, strategic managers of the expatriates, and ability to recruit local managers.

In this thesis, I explore the relationship between the degree of localisation and subsidiary performance. The factors that relate to Taiwanese subsidiary performance include local procurement (local supplier linkage), local sales (local sales linkage), local employment (local worker linkage), local capital (local financial linkage) and firm's age. In our empirical model, local employment ratio is defined as the proportion of the workforce accounted for by local workers. I do not analyse these factors: environmental uncertainty, previous China experience of the expatriates, strategic managers of the expatriates, and ability to recruit local managers.

The theories used by Chen et al.'s studies (1998 and 2004) are Hymer's theory, Dunning's "eclectic" theory, and local linkage theories. The pioneering study on endogenous aspects of the I.O. (internalisation and ownership) of MNEs' business activities has been attributed to Hymer (1960). Hymer viewed FDI as a way of transferring knowledge, skills, and other company assets, both tangible and tacit, in order to organise operations in foreign countries. There are no serious problems with the theories used by Chen's two studies. The major drawback of Chen et al.'s two

studies (1998 and 2004) is the lack of analysis of the relationship between local linkages and MNE subsidiaries' performance.

Lam and Yeung (2008) use a resource-based view to explain how the degree of staff localisation affects firm performance. The resource-based view mainly focuses on the internal strengths and weaknesses of the firm. This view posits that the firm-specific resources and capabilities significantly affect the firm performance (Peng, 2004). Lam and Yeung (2008) suggest that to MNE subsidiaries, local staffs are a valuable local resource because, compared with expatriate staffs, they are able to provide more local knowledge. Because Lam and Yeung (2008) concentrate on the analysis of the relationship between staff localisation and subsidiary performance, it is reasonable for them to use a resource-based view as the theoretical base.

Moreover, in Sakakibara and Yamawaki's (2008) study, I do not see any theoretical explanations about FDI, location-specific factors, local linkages, and localisation. It is a very serious problem with this study.

In terms of the theories used in prior research, Lam and Yeung (2008) employ a resource-based view. The localisation variables explored in this thesis include local sales ratio, local employment ratio, local capital ratio, local content ratio, and firm's age. This thesis is based on the premise that location-specific factors could affect MNEs' subsidiary performance. In other words, compared with Lam and Yeung's (2008) study, the research scope of this thesis is broader.

Moreover, the theories employed by Chen et al.'s studies (1998 and 2004) are Dunning's "eclectic" theory and local linkage theory. According to Dunning's (1988) "eclectic" theory, some major types of location-specific factors are especially important in the context of international production: (1) markets, (2) resources, (3) production costs, (4) political conditions, and (5) cultural/linguistic affinities. As mentioned before, Chen et al. (2004) analysed six local linkages. The purpose of local linkages through FDI is to tap into location-specific factors in the host country. These six local linkages represent the areas and importance of location-specific factors in the context of FDI. Therefore, I choose to employ Dunning's (1988) "eclectic" theory and local linkage theory rather than a resource-based view.

This thesis, using Taiwanese companies investing in China as the sample, focuses on the local business operations and R&D conducted by MNE subsidiaries

investing in emerging markets. Based on different strategic goals, I categorise Taiwanese manufacturing MNE subsidiaries investing in China into two groups: the local-market-seeking group and the export-oriented group. The objectives and operation types of these two FDI strategies are substantially different (Hanson et al., 2001; Helpman, 1984; Markusen, 1984). For these two groups, the impact of the degree of localisation (the intensity of local linkages) on subsidiary performance will be analysed respectively. Moreover, in this thesis, I employ multiple indicators (sales-based measures and accounting-based measures) for subsidiary performance to strengthen the empirical results.

The ultimate purpose for MNE subsidiaries to invest abroad is to enhance firm performance. Therefore, the contribution of Chen et al.'s studies (1998 and 2004) is limited. The goal, hypotheses, statistical models, results, and theoretical contributions of this thesis are significantly different from that of Chen et al.'s studies. Chen et al. (1998 and 2004) solely concentrate on the analysis of determinants and characteristics of local linkages. In addition to Chen et al.'s (1998 and 2004) studies, I also refer to the literatures which explain local-market-seeking FDI, export-oriented FDI, R&D, the R&D intensity-firm performance relationship, and the internationalisation-firm performance relationship. In this thesis, extended models of analysis have been used, which Chen et al. (1998 and 2004) did not employ, to tackle the issues surrounding different behaviours dependent on strategies employed by the subsidiaries.

The performance of MNE subsidiaries is significantly affected by the host country's local business environment and subsidiary-specific conditions. Chen et al. (1998 and 2004) have explored the determinants, features, and importance of local linkages. However, they do not provide the empirical analysis about the relationship between local linkages and subsidiary performance. Moreover, some scholars examine the impact of localisation on subsidiary performance (Sakakibara and Yamawaki, 2008; Lam and Yeung, 2008). They do not address the effect of strategic goals on the relationship between localisation and subsidiary performance.

This thesis seeks to add to and complement prior research. The first goal of this thesis is to fill this vacuum by providing empirical evidence to analyse, for each location-specific factor, the effect of the degree of localisation (the intensity of the

local linkage) on the subsidiary performance. In addition, by classifying Taiwanese MNE subsidiaries investing in China into two groups, this thesis intends to address the effect of strategic purposes on the relationship between localisation and subsidiary performance.

Table 2.3 Comments on the Studies Exploring Localisation

Author	Year	Topic	Methodology	Variables	Findings
Chen et al.	1998, 2004	These two studies analyse the pattern of local linkages in FDI, treating such local linkages as networking business activities in local relationships.	These two studies do not analyse the relationship between the local linkages and the subsidiary performance of MNEs. The contribution of these two studies is limited.	In these two studies, 'the intensity of local linkages' is assessed under a six-point Likert scale ranging from 'very substantially' (scale 6) to 'none' (scale 1) to measure the frequency and extent of transactions in different business activity categories. In fact, this represents a composite indicator of the exchange relationship between the subsidiary and local companies, institutes and individuals in each activity.	Based on the sample of Taiwanese manufacturing companies investing abroad, this study (2004) concludes that the local linkages of a MNE subsidiary differ by strategic goal, FDI location, entry mode, firm's size and the nature of the production network in which the MNE subsidiary is embedded.

Sakakibara and Yamawaki	2008	This study analyses and compares the overseas subsidiary-level profits (ROS and ROA) of Japanese MMEs investing in the US, EU, East Asia, and ASEAN (which includes China, Taiwan, Hong Kong and South Korea).	Without classifying and discussing these Japanese overseas subsidiaries based on their strategic purposes investing in different locations, the empirical analysis of this study would not be complete.	Since the accounting regulations are significantly different across countries (eg. US and China), this study might need to use multiple indicators for firm's performance to strengthen the statistical estimates.	This study suggests that the determinants of subsidiary profits (ROS and ROA) differ across host areas, indicating that the economic and institutional factors specific to host areas impact remarkably the profit performances of overseas subsidiaries. The size effect on the subsidiary-level profitability is present in all the host areas, whereas other effects, such as firm's age, local supplier linkage, local sales and macroeconomic conditions influence the subsidiary-level performance in a different manner according to area.

Lam and Yeung	2008	Using the survey results of 111 MNE subsidiaries investing in China, this study analyses the impact of staff localisation on the subsidiary performance.	Without classifying and discussing these 111 MNE subsidiaries based on their strategic purposes investing in China, the empirical analysis of this study would not be complete.	This study uses the manager's subjective self-assessment as an indicator of firm performance. The subjective self-assessment of firm performance is measured on a 10-point Likert-type including the five items of after tax return on total assets, after-tax return on total sales, total sales growth, overall performance and success, and competitive positions. The degree of staff localization is defined as the percentage of local staff out of all workers on or above the functional head level in the subsidiary.	This study suggests that a curvilinear relationship exists between the degree of staff localisation and subsidiary performance. This curvilinear relationship is moderated by the extent of environmental uncertainty. At a low level of staff localisation, an increase in staff localisation produces a positive effect on subsidiary performance. Beyond a certain point, the costs of a high degree of staff localisation outweigh the benefits. The negative impact of an increase in staff localisation beyond an optimal point will be stronger under the condition of high environmental uncertainty.

Chapter 3: The Role of R&D in the Subsidiaries of MNEs

3.1. Theories of R&D in FDI

This thesis also aims to explore the impact of the subsidiary-level R&D intensity on the subsidiary performance of MNEs investing in emerging markets. In this section, I first review the literature analysing R&D and product innovations. R&D activities are usually likely to lead to product innovations and improve the firm's competitiveness (Kerin et al., 1990; Belderbos, 2003). The efficiency and effectiveness of R&D spending have been examined by Larsen and Srinivasan (2003). However, in general, R&D will not yield immediate returns (Eberhart et al., 2004), and so financial pressures are likely to be exerted on MNE managers to minimise R&D to maintain short-term profits (Drucker, 1986; Jacobs, 1991; Porter, 1992). Understanding of the potential for R&D activities to stimulate product innovation, as well as company sustained development, ensures that this aspect of resource allocation within companies will continue to receive considerable scrutiny by managers and researchers. In particular, to MNE managers in this contemporary global era of high competition, it is very important to explore the effect of R&D intensity on MNEs' firm performance. Therefore, in this section I also review the literature analysing the relationship between R&D intensity and firm performance.

3.1.1. R&D Activities and Product Innovations

The product cycle theory views R&D that MNEs are likely to transfer overseas in the later stage of internationalisation (Vernon, 1979). According to Vernon's product cycle theory, foreign R&D is motivated by the need to adjust products and manufacturing processes to the host country's local environment. In general, overseas R&D follows the extension of foreign marketing and production processes and concentrates on local improvements of relatively mature technologies developed by the home country. Foreign subsidiaries' R&D activities are undertaken to allow

efficient utilisation of the MNE's technologies and consequently likely to lead to better firm performance (Belderbos, 2003; Florida, 1997)

Moreover, the 'eclectic' paradigm (Dunning, 1988) provides an ownership, location, and internalisation (OLI) advantages-based framework to explain the proliferation and location of subsidiaries of MNEs. According to Dunning, a MNE must possess certain ownership-specific advantages (O) not possessed by competing companies. Markets are imperfect. In order to reduce the degree of uncertainty and improve efficiencies, MNEs will internalise (I) the use of their ownership-specific advantages (Peng, 2004). Internalisation (I) is likely to occur in the case of R&D. In order to obtain a satisfactory return on R&D expenditures, MNEs usually need to retain the core technologies for use within their own organisational boundaries. MNEs establish their own manufacturing systems and utilise their own technological advantages directly (Dicken, 2003).

R&D is crucial for the sustained development of MNEs (Belderbos, 2003; Kerin et al., 1990). To compete successfully in the global market and to deliver superior value to customers, MNEs' managers always seek to upgrade the enterprises' competitive advantages. Product innovation is among the most important strategic activities available to the future profitability of enterprises. While it is critical to the success of MNEs, managers always optimally utilise their inputs and benchmark their key inputs and outputs against other competitors.

Market-based assets (which are resources that are marketing specific) are usually difficult to imitate and may be relational or knowledge-based (Srivastave, Fahey and Christensen, 2001). Two such market-based investments that may increase the enterprises' competitive advantages are advertising and R&D investments. In essence, R&D activities may lead to product innovation and upgrade the enterprises' competitive edge. However, the expenditure on R&D activities needs to be justified in terms of economic gains or shareholder benefits, and the resultant return on this expenditure also needs to be better examined.

Recent empirical studies, investigating the relationship between R&D and the current or expected firm performance, have aimed on three perspectives: first, the impact of R&D intensity (i.e., the percentage of R&D expenditures to total sales) on the firm performance (profitability; sales; sales growth); second, the impact of R&D

expenditures on the firm's market value; and third, the feedback impact of R&D expenditures on various measures of firm performance (Eberhart et al., 2004; Holak et al., 1991; Andras and Srinivasan, 2003). Since many scholars have brought considerable attention to the R&D activity-firm performance issue, therefore, besides localisation, this thesis also plans to analyse the impact of R&D intensity on the firm performance of MNE subsidiaries investing in emerging markets.

Based on the concept of appropriability hazards, Zhang et al. (2007) explore the relationship between R&D intensity and the firm performance of international joint ventures (IJVs) (i.e., MNE subsidiaries in which they have ownership with local ally partner firms) in an emerging market. In this report, R&D intensity is defined by an IJV's R&D expenditure divided by sales, adjusted for industry. However, individual IJVs' R&D intensity is adjusted for industry by deducting the industry median R&D intensity from the focal IJV's R&D intensity. This report employs industry-adjusted R&D intensity for subtracting any industry-specific effects from the IJVs' R&D investments. Because the effects of industry are not controlled in the empirical model, it is proper to use industry-adjusted R&D intensity in this report.

For instance, Japanese MNEs' overseas subsidiaries (particularly those investing in emerging markets) might be likely to sacrifice R&D activities in order to retain the core technologies of their headquarters in Japan. This is because strategic and knowledge assets are relatively scarce in emerging markets. Moreover, IPR protections are usually relatively weak in emerging markets. Therefore, in terms of R&D, it is reasonable to measure Japanese parent company R&D intensity and overseas subsidiary R&D intensity separately.

Kotabe et al. (2002) explore the relationship between multinationality and firm performance by incorporating firm heterogeneity. This report explores multinationality–performance linkages by incorporating the individual company resources and capabilities that are needed to maximise the advantages of international expansion. The empirical results, based on a time series cross-sectional analysis of companies from 12 different industries over a seven-year period, demonstrate that the effect of multinationality on both financial and operational performance is moderated by company's R&D and marketing intensity. It is necessary that MNEs' managers focus not just on international expansion, but also

focus on their R&D and marketing activities in order for their international expansion to be profitable. Nevertheless, the R&D intensity and advertising intensity measures in this report are only limited proxies for the rent yielding capabilities of the companies. One possibility for further research would be to explore how the R&D expenditures and marketing expenditures enhance the rent yielding capabilities of MNEs.

3.1.2. R&D Intensity and Firm Performance

To MNEs, the analysis of the impact of R&D intensity on firm performance is critical. MNEs need to selectively choose their markets and manage their limited resources to achieve an edge and to improve competitive advantages (Mahajan and Varadarajan, 1990). In general, MNEs should effectively exploit their resources, neutralise threats, and avoid weakness, based on the value their products provide and the relative cost of production (Barney, 1991). Thus, to be successful in the international market as global competition is increasingly heating up, MNEs are strongly pressured to manufacture better-quality products.

The efficiency and effectiveness of R&D spending is of considerable interest to both academics and practitioners (Andras and Srinivasan, 2003). MNEs continually seek to develop distinctive capabilities in order to maximise their profit margins. However, there are various types of assets vying for the funds allocated by MNEs' managers. The internal competition for these funds can be quite fierce under the best of conditions, let alone during times of external environmental stress.

To attain superior product innovation, managers need to increase expenditures on R&D activities. Based on current accounting rules, those expenditures spent on R&D activities will cause an immediate negative effect on the quarterly financial report which prompts many managers to decrease R&D expenditures during difficult economic conditions. In addition, the required expenditures spent on R&D activities relative to the firm's total sales is likely to differ across the industries under various external circumstances.

Many reports recently have examined the relationship between R&D intensity and MNEs' firm performance. Andras and Srinivasan (2003) concluded that manufacturing product companies usually report higher R&D intensity than

consumer product companies. In addition, the result of the empirical model shows that the impact of R&D intensity, for both manufacturing product companies and consumer product companies, on firm performance (ROS) is significant and positive. Eberhart et al. (2004) analyse a sample of 8,313 cases between 1951 and 2001, where firms increase the R&D expenditures by a significant amount. It is noted that the sample firms demonstrate significantly positive long-term operating performance following their R&D increases. This result suggests that R&D increases are beneficial investments, and that the R&D investments are positively related to firm performance. A firm's strategy plays an important role on the firm's capability to innovate, but the impact of specific strategy significantly depends on the technological environment of the industry.

Holak, Parry, and Song (1991) use regression models to contrast growth-stage and mature-stage firms and suggest that firm and industry characteristics have an important effect on the R&D intensity–firm performance relationship. In other words, managers can influence the incremental effects of R&D expenditures on the firm performance by manipulating certain firm-contingent variables. Increased R&D expenditures may have either a positive or negative impact on firm performance under various external environments.

The existing studies do not examine the effect of strategic goals on the relationship between R&D intensity and MNE subsidiaries' performance. In this thesis, based on different strategic goals, we classify Taiwanese manufacturing MNE subsidiaries investing in China into two groups: the local-market-seeking group and the export-oriented group. Then I analyse the impact of subsidiary-level R&D intensity on the subsidiary performance of Taiwanese export-oriented MNEs and local-market-seeking MNEs investing in China respectively.

Table 3.1 Comments on the studies exploring the R&D intensity-performance relationship

Author	Year	Topic	Methodology	Findings
Zhang et al.	2007	This report explores the relationship between R&D intensity and the firm performance of international joint ventures (IJVs) in emerging markets.	This report undertakes hierarchical regression models to explore the R&D intensity-performance relationship. This methodology is well-established.	Based on the sample of 264 IJVs, this report suggests that MNEs' overseas subsidiaries may not necessarily be able to benefit from their R&D. MNEs need to carefully ponder the appropriability hazards of their overseas subsidiaries' R&D. Only if the appropriability hazards can be effectively mitigated can the subsidiaries benefit from their R&D investments.
Kotabe et al	2002	This report explores multinationality–performance relationship by incorporating the individual company resources and capabilities that are needed to effectively maximize the advantages of international expansion.	This report uses a Time Series Cross-Sectional (TSCS) model to test hypotheses. However, the R&D intensity and advertising intensity measures in this report are only limited proxies for the rent yielding capabilities of the companies. One possibility for further research would be to explore how the R&D expenditures and marketing expenditures enhance the rent yielding capabilities.	The empirical results, based on a time series cross-sectional analysis of companies from 12 different industries over a seven-year period, demonstrate that the effect of multinationality on both financial and operational performance is moderated by company's R&D and marketing intensity.

Andras and Srinivasan	2003	This report examines the relationship between R&D intensity and MNEs' firm performance.	This report conducts regression models to examine hypotheses. The methodology is simple, nevertheless is correct.	The empirical model shows that the impact of R&D intensity, for both manufacturing product companies and consumer product companies, on firm performance (ROS), is significant and positive.
Eberhart et al.	2004	This report explores the long-term relationship between R&D expenditures and firm performance (long-term stock returns).	This report undertakes two models (Fama and French three-factor model and Carhart four-factor mode) to examine hypotheses. The methodology is thoroughly considered and correct.	This report analyses a sample of 8,313 cases between 1951 and 2001, where firms increase the R&D expenditures by a significant amount. It is noted that the sample firms demonstrate significantly positive long-term operating performance following their R&D increases.
Holak et al.	1991	This study uses regression models to contrast growth-stage and mature-stage firms about the R&D intensity – firm performance relationship.	The methodology is well-established.	This report suggests that firm and industry characteristics have an important effect on the R&D intensity – firm performance relationship. Increased R&D expenditures may have either a positive or negative impact on firm performance under various external environments.

Chapter 4: Theoretical Bases and Hypotheses Development

4.1. Local-market-seeking and Export-oriented FDI

This chapter explains the theoretical bases and hypotheses development of this thesis. According to Dunning's (1988) "OLI" framework, for MNEs, several major types of location-specific factors are particularly important in the context of FDI: markets, resources, production costs, political conditions, and cultural/linguistic affinities. In practical terms, FDI patterns are a complicated, multi-dimensional context. Factors prompting FDI into a country will change over time, motivating firms to undertake new investment activities in different locations (Sethi et al., 2003).

The strategic goal of local-market-seeking FDI is significantly different from that of export-oriented FDI. Local market expansion is a major goal for local-market-seeking MNEs (Dunning, 1995; Luo and Peng, 1999). Therefore, for local-market-seeking MNEs, the subsidiary performance is defined by their local sales and profitability in the host country. In other words, local-market-seeking MNEs depend not only on a host country's physical and infrastructure resources for local production, but also on its marketing and information resources for local operation, adaptation and expansion (Luo, 2003). Local-market-seeking MNEs in host countries have to put forth more effort to promote local marketing, establish local distribution networks and local sales linkages. On the other hand, the ultimate purpose for export-oriented MNEs is to utilise the host subsidiary as a low-cost production platform and export final products to other countries. From Dunning's (1998) viewpoint, export-oriented FDI is likely to be less affected by the host nation's local market than is local-market-seeking FDI. Thus the effect of the intensity of local linkages (the degree of localisation) may depend on the type of the MNE subsidiary.

4.1.1. Local-market-seeking FDI

Hanson et al. (2001), Helpman (1984), and Markusen (1984) suggest that the main objective of local-market-seeking MNEs (horizontal FDI strategy) is basically trade

substitute and to access foreign (host nations') markets by replicating abroad the production of final goods.

The strategic objective for local-market-seeking MNE subsidiaries is to gain larger economies of scale by selling more products to more customers in the host country's local market and increase their profitability. The objective is different from the objective set for subsidiaries investing in developed countries (e.g., strategic resources, knowledge learning, and the upgrade of company image) or in other emerging markets (e.g., natural resources and cheap labour). Thus, for local-market-seeking MNEs, the firm performance, at the level of the subsidiary, is defined by the degree of sales expansion in the host country's local market. Therefore local-market-seeking MNE subsidiaries sell a high percentage of their final products in the host nation's local market (Luo, 2003).

The local-market-seeking view is that MNE subsidiaries undertake investment activities in the host country because trade barriers make exporting costly. In general, if the host country is a less-protected and lower-tariff economy, a MNE is usually prone to manufacture all products in the home country and to serve foreign consumers through exports. However, when the trade costs are high, a MNE usually establishes production firms both at home and in the host country, each serving the consumers of each country. This type of FDI is called local-market-seeking (horizontal-FDI) strategy because the MNE conducts the same (or similar) activities (e.g., manufacturing and selling products) in each country (Hanson et al, 2001).

Many MNEs consider China as a potentially promising market because of the large population and continuous high-economic-growth prospect (JBIC, 2000). Not surprisingly, after China entered the WTO, more and more MNEs have intended to profit from China's huge market (Lieberthal and Lieberthal, 2004); local market sales strategy in China is likely to become an increasingly important element in global business contexts. The FDI of local-market-seeking MNE subsidiaries in China is aiming at "substituting" the export activity.

In general, the operations of local-market-seeking MNE subsidiaries in the host countries are more embedded in local linkages than those of export-oriented MNE subsidiaries. Not surprisingly, local-market-seeking strategy entails higher exposure to regulatory risk than does an export-oriented strategy. These risks are associated

with unfavourable host-government policies. Some host governments might reverse their policies towards MNEs with the intention of pressurising the MNEs to renegotiate rents. For example, they may threaten production disruptions or remove incentives, or even confiscate foreign assets (Peng, 2004).

The extent of exposure to the host country's local business environment between these two types of MNE subsidiaries is quite different (Aizenman and Marion, 2004). Therefore, it is crucial to investigate the impact of localisation on the subsidiary performance of local-market-seeking versus export-oriented MNEs investing in emerging markets, since emerging markets are usually characterised by greater uncertainty than developed countries (Luo, 2003).

Some scholars conclude that most MNEs are pursuing local-market-seeking strategy, not export-oriented strategy (Aizenman and Marion, 2004). For decades, local-market-seeking strategy has been most prevalent among countries that are similar in size as well as in relative endowments. Markusen and Maskus (2001) suggest that "it is similarities between countries rather than differences that generate the most multinational business activities."

However, previous studies reporting the dominance of local-market-seeking FDI may understate the potential scope for export-oriented FDI. Some scholars challenge the prevailing academic views about the relative importance of local-market-seeking and export-oriented FDI strategy. Hanson et al (2001) conclude that the relative importance of the motivations of MNEs in undertaking FDI should, in theory, depend on cross-industry variation in manufacturing technology and factor intensity, as well as on cross-country variation in government policies, host country market size, and input costs.

4.1.2. Export-oriented FDI

As pointed out by Helpman (1984), MNEs establish firms in different nations according to the comparative advantages. In other words, the motive to manufacture abroad arises from the price differences on input factors across the nations. Export-oriented MNEs' vertical FDI strategy, in which the production process is fragmented into several stages, is to utilise cross-nation absolute and comparative advantages by locating firms in different nations that specialise in different stages of production (Woodward and Rolfe, 1993). In order to seek a production cost edge in host

countries, export-oriented MNE subsidiaries mainly focus on producing locally and then exporting to other countries.

Due to the lower-cost input factors in China, many export-oriented MNEs (vertical-FDI strategy) exploit their Chinese subsidiaries as assembly and export bases. In other words, these subsidiaries only serve as firms which take on one or more stages of production as part of the parent company's global division of labour. The FDI of export-oriented MNE subsidiaries in China is aiming at "complementing" export activities.

Export-oriented (efficiency-seeking) MNE subsidiaries are likely to move to new cheap-cost production locations in order to reduce manufacturing costs (Sethi et al., 2003). Hence, predatory behaviour by the host government is likely to be less influential to the MNE subsidiaries engaged in export-oriented FDI strategy.

Export-oriented FDI generally reflects a trend toward global sourcing in intermediate production (Woodward and Rolfe, 1993). Many of Taiwanese export-oriented MNEs receive orders in Taiwan, export components or semi-finished goods to their Chinese subsidiaries and then re-export to the major markets. Since they target most of their sales at the international market, the resources owned by the parent companies are very important (Hsu, 2006).

To MNEs, exporting or local-market-seeking are two substitute activities. Nevertheless, according to recent research (Markusen, 2002), the interdependence of FDI activities and trade derives from the fact that the strategy to export or produce abroad for local markets is increasingly conducted by the same MNE subsidiary. MNEs are likely to undertake one or the other strategy, or even both strategies simultaneously, on the basis of their relative profits, which depend on the set-up costs, trade costs, and marketing advantages they can enjoy by establishing subsidiaries in the host nations.

Markusen and Maskus (2001) examine recent reports of FDI and provide an overview of a model where MNEs choose endogenously between export-oriented and local-market-seeking production structures when investing in foreign locations. They suggest that the choice between vertical-FDI and horizontal-FDI strategy also depends on host country features, such as domestic market size and local resources differences, as well as trade and investment costs.

Sethi et al (2003) argue that although some reports have identified several determinants that are likely to affect MNEs' FDI strategy decisions, those factors are generally applicable only to the specific context considered, or else influence just the initial market entry. Since FDI activities are a tremendously complicated, dynamic phenomenon, such FDI strategy decisions need to be analysed over time, because factors favouring a MNE's initial investment in a country could change.

In this thesis, I categorise the Taiwanese manufacturing MNEs investing in China into two groups: the local-market-seeking group and the export-oriented group. The local-market-seeking group includes the food industry, chemical industry, and machinery industry. The export-oriented group includes the electronic industry and textile industry. The ultimate purposes and operation types of these two FDI strategies are significantly different (Hanson et al., 2001; Helpman, 1984; Markusen, 1984). For these two groups, the impact of localisation and R&D intensity will be analysed respectively. The hypotheses will also be developed respectively.

4.2. The Conceptual Models

4.2.1. The Mechanism of Localisation and its Impact on Subsidiary Performance

Dunning (1988) developed his "eclectic" theory to explain the investment activities of MNEs. MNEs that possess ownership-specific advantages (O) internalise (I) these advantages to invest overseas to seek location-specific factors (L).

Local linkages drive FDI because MNEs can gain access to location-specific factors in the host country via network connections (Holm et al., 1999; Chen et al., 1998 and 2004). MNEs create local linkages to exploit location-specific factors that further contribute to subsidiary performance (Dicken, 2003). The location-specific factors may include local sales, local labour, local capital, and local procurement. Therefore, in Figure 4.1, arrows 1 and 2 could be explained. The relevant theories of arrows 1 and 2 are Dunning's "eclectic" theory and local linkage theory.

FDI in local linkages creates the platform for foreign business operations. For MNEs embedded in the local linkages, there are some business exchange relationships that are considered primary. The primary exchange relationships are crucial to the subsidiary performance of MNEs, and hence carry large relation-specific value for the local business operations in the host country (Asanuma, 1989; Dyer, 1996). Local linkages enable MNEs to offset weakness, increase competitiveness, upgrade operation efficiencies, and reduce the vulnerability to market fluctuations (Chen and Chen, 1998).

Local linkage formation by MNEs is usually very variable (Dicken, 2003). Therefore, the nature of local networks and the intensity of local linkages (the degree of localisation) are likely to affect the utilisation efficiency of location-specific factors and consequently impact the subsidiary performance. This thesis focuses mainly on local business networks, especially on the analysis of the relationship between intensity of local linkages (the degree of localisation) and MNEs' subsidiary performance. Besides, in this thesis, subsidiary age is also included as one of the indicators capturing the extent of localisation

Based on Dunning's "eclectic" theory, local linkage theory, and literatures given above, a conceptual model of the mechanism of localisation and its impact on

subsidiary performance of MNEs is provided (Figure 4.1). Strategic goals are able to affect the formation and development of local linkages (and then impact the intensity of local linkages) (Dicken, 2003). Therefore, arrow 3 could be explained. The relevant theory of arrow 3 is local linkage theory.

Figure 4.1 The Conceptual Model of the Mechanism of Localisation and its Impact on Subsidiary Performance

Location-specific Factors

- Local labour resources,
- Local procurement,
- Local sales,
- Local capital

Strategic goals

- Local-market-seeking FDI strategy
- Export-oriented FDI strategy

1

3

Local linkages

MNE subsidiaries

2

Subsidiary-level firm performance
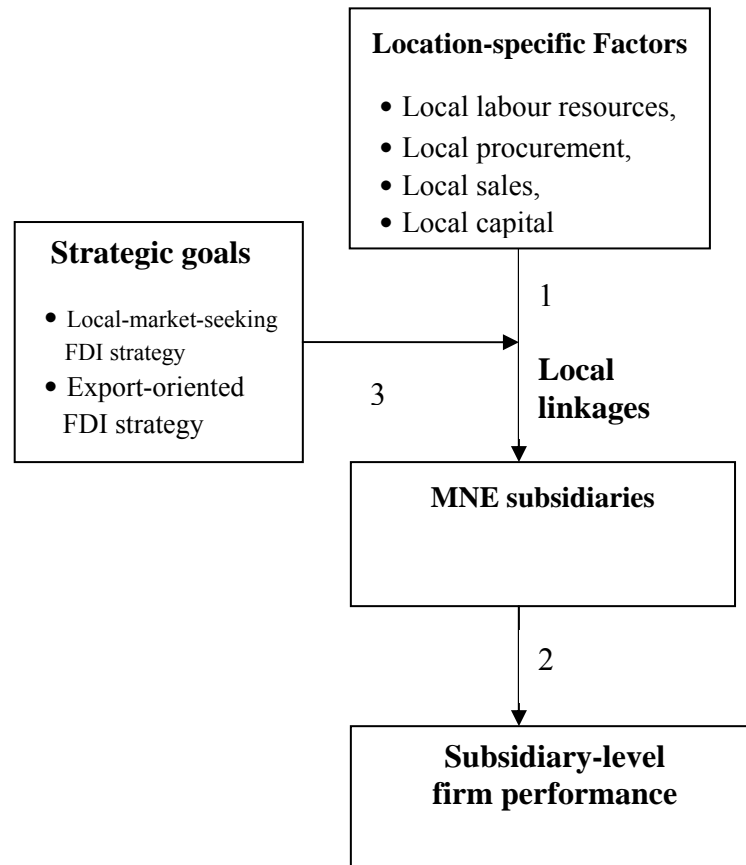
(In this conceptual model, subsidiary age is included as one of the indicators capturing the degree of localisation.)

4.2.2. R&D Intensity and its Impact on Subsidiary Performance

Based on Crepon, Duguet, and Mairesses' (1998) model (CDM model), the mechanism of R&D intensity and its impact on firm performance is also established. Griliches (1979) developed a framework for analysing innovation and productivity

growth in the form of a flow chart that shows the path by which expenditures in R&D create knowledge and the outputs. The Crepon, Duguet, and Mairesses' (1998) paper (CDM) achieved the goal with respect to understanding the channels linking investment in R&D to productivity growth. The CDM paper pulled together the important but mostly separate findings of empirical studies that had appeared since Griliches' original conception into a model that had a similar structure. The strands include research into the determinants of R&D investment, knowledge capital, innovation (patents), and production function estimation using R&D as an input.

In Figure 4.2, a general diagram consisting of the main elements in the CDM model to demonstrate the mechanism of R&D intensity to impact firm performance is developed. The 'eclectic' theory (Dunning, 1988) provides an ownership, location, and internalisation (OLI) advantages-based framework to explain the foreign investment activities of MNEs. According to Dunning, a MNE will internalise (I) the use of its own ownership-specific advantages (O). Internalisation is especially likely to occur in the case of knowledge. MNEs usually have to invest in R&D activities in ways that maximise innovation and improve their global competitiveness (Belderbos, 2003). R&D is able to produce an impact on knowledge capital, innovations, and firm performance. Arrows 1 and 2 could be explained. However, the existing literatures have yet to offer consistent evidence on the relationship between R&D intensity and firm performance. Holak, Parry, and Song (1991) suggest that increased R&D expenditures may have either a positive or negative effect on firm performance under various external environments. Note the central role in this thesis is the MNE subsidiaries investing in emerging markets; therefore the patent rights' protections are expected to affect the relationship between R&D and subsidiary performance significantly. Therefore, arrows 3 and 4 could be explained.

As discussed in chapter 3, immediate returns usually will not be produced in R&D investment because it is a long-term financial commitment (Eberhart et al. 2004). Monetary pressures may be placed upon managers to minimise R&D investment (Drucker, 1986; Jacobs, 1991; Porter, 1992). Thus, based on firm's characteristics, managers could determine the R&D expenditures. In other words, a firm's R&D intensity may depend on the firm's characteristics. Moreover, the R&D intensity is likely to differ across the industries (Zhang et al., 2007). Arrow 5 can be

explained. As discussed above, R&D is able to produce an effect on knowledge capital, innovations/patents, and firm performance. Since arrow 5 has been explained, arrows 6, 7, and 8 can also be explained.

The impacts of subsidiary characteristics and industry effects are likely to be important. In China, because the intellectual property rights' (IPRs') protections are very weak, the innovations (patents) created by R&D usually are easily pirated. Besides, I also develop one conceptual model (Figure 4.3) that contains my hypotheses.

Figure 4.2 The General Conceptual Model of the Mechanism of R&D intensity and its Impact on Subsidiary-level Firm Performance
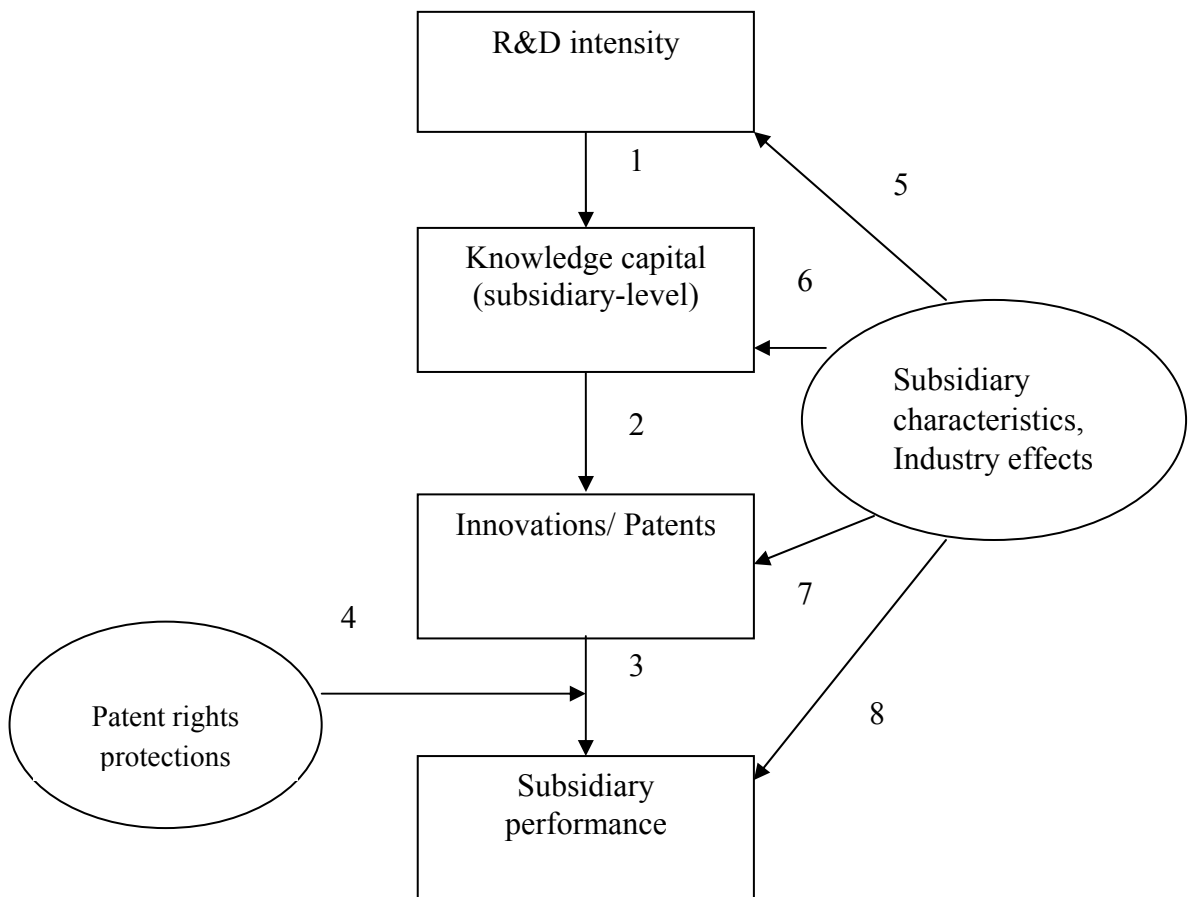
Based on Crepon, Duguet, and Mairesse model
(CDM model)

Figure 4.3 The Conceptual Model
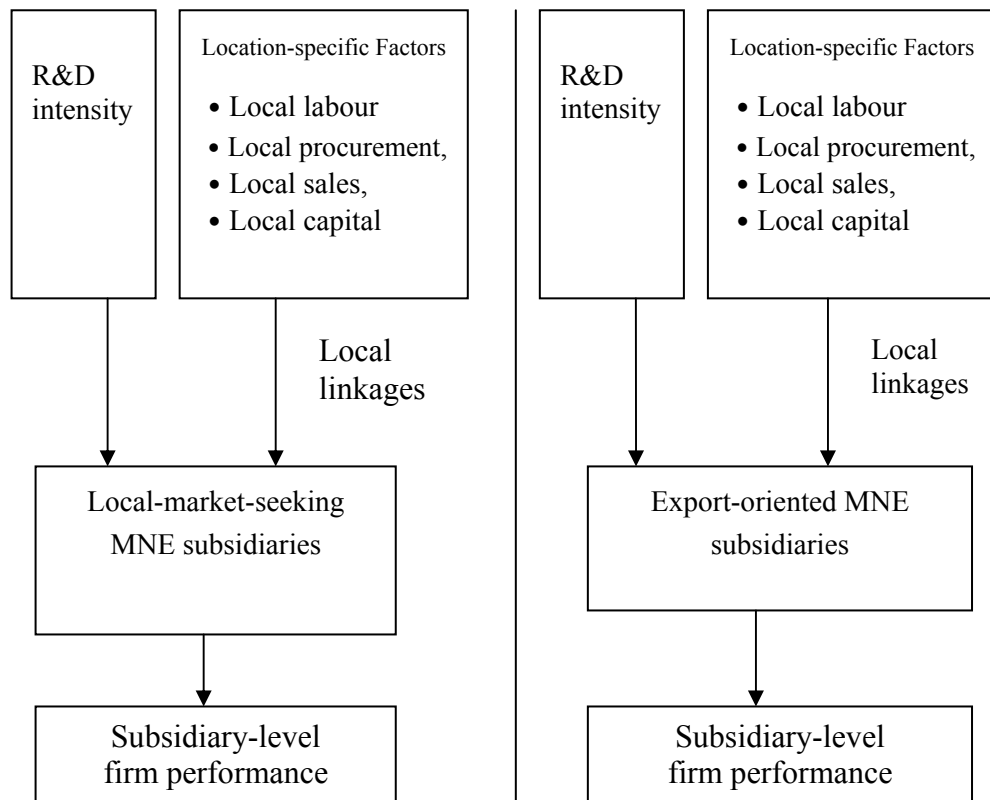
In this thesis, subsidiary age is included as one of the indicators
capturing the degree of localisation

4.3. Hypotheses

4.3.1. Local-market-seeking vs. Export-oriented FDI

This thesis is based on the premise that the degree of localisation and subsidiary-level R&D intensity affect the firm performance of MNE subsidiaries investing in emerging markets. In our empirical models, various subsidiary-specific variables are included to test several hypotheses. In our models, I control the effects of company size (share capital), industry, and ownership type on firm performance. In terms of firm performance, both labour productivity (sales per worker) and profit are employed as dependent variables, and the impact of localisation and R&D intensity on these two firm performance indicators are analysed in different statistical models.

Several studies have used control variables such as firm size, industry effect, and ownership types related to firm performance to test hypotheses. These include

the works of Contractor et al. (2003), Kim et al. (2003), and Lou (2003). To the extent that a firm's size reflects a firm's possession of benefit-yielding assets, large-sized firms are likely to achieve better performance. I use the control variable firm size to examine the hypotheses. Beyond this, in industrial organisation economics, industry type is a very important determinant for firm performance (Porter, 1980); in this thesis, industry dummy variables are used to control the effects of different industries on firm performance. China's WTO accession brings forth many business opportunities to MNEs. Because of changes in the business environment and the removal of investment restrictions, selecting the proper type of ownership for MNE subsidiaries investing in China is of great importance (Lieberthal and Lieberthal, 2004). Zeitun and Tian (2007) suggest that ownership type has significant effects on firm performance. In this thesis, ownership type is also defined as a dummy variable, with 1 if a joint venture (JV) and 0 otherwise, a wholly owned subsidary (WOS) (Lou, 2003). The hypotheses are followed as below:

Firm's age: Hymer (1960) suggested that MNE subsidiaries use ownership-specific advantages (O) as a lever to enter and compete in foreign markets. The theory on the internalisation (I) of MNEs is able to serve as a framework for evaluating MNE subsidiaries' performances in the host country. Uncertainty is the major incentive for a MNE to internalise factor or product markets (Dicken, 2003). Because markets are imperfect, a MNE will internalise (I) the use of its ownership-specific advantages to reduce the degree of uncertainty and improve efficiencies (Peng, 2004). The greater the extent of uncertainty, the greater is the benefit for the MNE to internalise its ownership-specific advantages. In general, a MNE entering a new market will face uncertainty and desire to acquire knowledge about the new market to reduce this uncertainty. The desired knowledge usually includes information about the host country's local business environment and cultures (Carlson et al., 2005, Johanson and Vahlne, 1977). In other words, market knowledge is information about how the local networks operate. That is, how relationships to different actors on the foreign market are created and developed, how coordination of local business activities functions, and how the work is divided within the local networks.

Therefore, newly established MNE subsidiaries usually confront a liability of newness, defined as the inherent disadvantage that firms experience as new entrants in the host country. They usually are unable to inspire confidence and lack brand reputation in the eyes of local customers, suppliers, and financial institutions due to the absence of a track record (Peng, 2004).

Dollar et al. (2003) undertake firm-level surveys in four developing countries (China, India, Bangladesh, and Pakistan) to investigate the relationship between investment climate and firm performance. Dollar's work focused on the garment industry because garments are tradable products, firms face common prices and the technology is very standard. Also, garment firms are well represented across these four countries. This study covers 775 garment firms in the empirical analysis and suggests that the firm performance measured in terms of return on assets is positively related to the firm's age. In addition, Carlson et al. (2005) conducted a survey of Scandinavian MNEs with subsidiaries in China to explore their subsidiary-level firm performance. Their findings are, in general, foreign investors operating in China confront a business environment that differs from their home country. The differences increase uncertainties and have an adverse effect on firm performance. This study concludes that the duration of a subsidiary's operations in China positively influences the subsidiary performance. Li (1995) points out that experienced foreign investors in the U.S. computer and pharmaceutical industries are more likely to make profits than the first-time investors. MNE subsidiaries with more experience usually have more information about the local circumstances and are more likely to improve their firm performances. Therefore, for local-market-seeking MNE subsidiaries, the impact of a firm's age on firm performance (both profits and labour productivity) is likely to be positive.

The strategic goal of export-oriented FDI is to exploit the host subsidiary as a low-cost production platform and export final products to other countries (Helpman, 1984). Some scholars suggest that FDI plays an important role in contributing to the local economic development of host countries (Alfaro et al., 2004; Pike and Tomaney, 1998). In the case of Hebei Province in China (Beijing, China's capital, is in Hebei Province), He (2004) suggests that FDI in Hebei Province has expanded the scale and stimulated the growth of the local economy. In order to

decrease worker turnover and minimise the risk of their technology advantages spilling over to competing companies, MNEs investing in emerging markets usually provide higher pay than their local counterparts (OECD, 2008).

The organisation for economic cooperation and development (OECD) expects that 'China's export competitiveness will continue to erode over 2008 and 2009, reflecting wage and price inflation' (OECD economic outlook, 2008). Cost-cutting requirements often prompt export-oriented (efficiency-seeking) MNE subsidiaries to move to new low-cost production areas (Sethi et al., 2003). The production costs rise faster than the benefits that arise from the learning curve effects on the operations of export-oriented MNE subsidiaries investing in a particular location. For the export-oriented group, the firm's age (the firm's experience) in China is likely not to produce a positive effect on subsidiary performance. In light of the above, I hypothesise:

Hypothesis 1-a. All else being equal, for a local-market-seeking Taiwanese subsidiary investing in China, the firm's age is positively associated with the firm performance (both profit and labour productivity) of the subsidiary.

Hypothesis 1-b. All else being equal, for an export-oriented Taiwanese subsidiary investing in China, the firm's age is not associated with the firm performance (both profit and labour productivity) of the subsidiary.

Local content ratio: In Dunning's (1988) 'eclectic' theory, local resource endowments and local production costs in the host country are two major types of location-specific factors (L) in the explanation of MNEs' global investment activities. For Taiwanese MNEs in China, China's lower-cost local procurement is very important.

Moreover, Porter (1985) suggested three generic competitive strategies, (1) cost leadership, (2) differentiation, and (3) focus. A cost leadership strategy indicates that a company's theory of how to compete successfully centers on low costs and prices. A cost leader can charge lower prices and make larger profits than higher cost rivals. For Taiwanese MNEs in China, utilising China's lower-cost local procurement is of a cost leadership strategy.

The study of Dyer (1996) suggests that the establishment of local supplier linkages requires relation-specific investments. In general, for export-oriented MNE

subsidiaries investing in emerging markets, in order to access low-cost input factors and serve as part of the parent company's global production system, a high local content ratio is likely to help to save input factor costs and increase profits. Nevertheless, local-market-seeking MNE subsidiaries will also be able to improve their profitability if they can successfully develop local supplier linkages (Sakakibara & Yamawaki, 2008). Therefore, a high local content ratio may also contribute to the subsidiaries' profitability.

Lower-cost local procurement could reduce the input factor costs per unit product. A cost leadership strategy suggests that providing the same product value at a lower price is likely to attract more customers (Porter, 1985). However, all MNEs in China enjoy the advantage of lower-cost local procurement. Therefore, for both export-oriented and local-market-seeking MNE subsidiaries in China, firm performance level (sales per worker) does not significantly vary with the local content ratio. Such logic suggests the following hypotheses:

Hypothesis 2-a. All else being equal, for a local-market-seeking Taiwanese subsidiary investing in China, the local content ratio is positively associated with the firm performance (profits) of the subsidiary.

Hypothesis 2-b. All else being equal, for an export-oriented Taiwanese subsidiary investing in China, the local content ratio is positively associated with the firm performance (profits) of the subsidiary.

Local employment ratio: In Dunning's (1988) 'eclectic' theory, for MNEs, local labour costs and cultural similarities in the host country are two major types of location-specific factors (L). The cultural distance between Taiwan and China is the shortest (with similar culture and identical language). Because of cultural similarities, for Taiwanese MNEs, China's lower-cost local employment is a critical location-specific factor.

According to Porter (1985), for Taiwanese MNEs in China, utilising China's lower-cost local labour resources is also of a cost leadership strategy. China's cheaper local labour resources can reduce manufacturing costs. MNEs conducting FDI activities usually hire very large numbers of local employees in both developed and developing countries. In this thesis, the employment effect created by a MNE

subsidiary in a host country is defined as the total number of workers employed within the MNE subsidiary (Chen et al. 2004).

Moreover, in developed countries, wage costs usually account for a significant proportion of the variable costs. The Japan Labour Bulletin (July, 2003) points out that it is difficult for Japanese corporations to raise wage levels further in Japan if corporate competitiveness is to be maintained and strengthened. In contrast, China has much more abundant labour resources than other developing countries. MNEs, both export-oriented and local-market-seeking, in order to lower wage costs and increase their profitability in the global market, need to take advantage of the lower-cost local labour forces in China.

Although in recent years the wage costs in China (especially in the coastal areas) are gradually going up, they are still significantly lower than the wage costs in Taiwan. Therefore, Taiwanese MNE subsidiaries investing in China, due to the lower wage costs, are inclined to employ a very high percentage of local Chinese workers (on average higher than 95%). The production function suggests that local-market-seeking Taiwanese MNE subsidiaries investing in China tend to adopt labour-intensive production technologies. For them, the high local employment ratio is likely to be associated with low capital intensity; therefore the price per unit of output is lower. The value of sales per worker is depressed.

On the other hand, for the export-oriented group, their Chinese subsidiaries usually serve as companies which take on one or more stages of production as part of the parent companies' global production system. Therefore, the cost of finished goods is substantially determined by the transfer prices of components and raw materials supplied by the parent companies, not solely controlled by the subsidiaries. Thus I hypothesise:

Hypothesis 3-a. All else being equal, for a local-market-seeking Taiwanese subsidiary investing in China, the local employment ratio is positively associated with the firm performance (profits) of the subsidiary. On the other hand, in terms of labour productivity, the local employment ratio is negatively associated with the firm performance (sales per worker) of the subsidiary.

Hypothesis 3-b. All else being equal, for an export-oriented Taiwanese subsidiary investing in China, the local employment ratio is positively associated

with the firm performance (profits) of the subsidiary. On the other hand, as regards labour productivity, the local employment ratio is not associated with the firm performance (sales per worker) of the subsidiary.

Local sales ratio: In Dunning's (1988) 'eclectic' theory, for MNEs, the host country's local market is one of the most important location-specific factors (L) in the context of FDI. In essence, for local-market-seeking FDI, the location-specific advantage is the existence of fast-growing market demand and customers willing to pay (Peng, 2005).

Therefore, market size is one of the most important considerations in making investment location decisions. Van Hoesel (1999) suggests that companies from newly industrialised economies (NIEs), exploring new market opportunities abroad, tend to invest in countries with huge market potential more than in countries where market potential is small. Makino et al. (2002) suggest that NIE companies are likely to invest in large less developed countries (LDCs) for both resource and market-seeking purposes. In addition, the economic development of the host country could be an important factor in attracting local-market-seeking FDI.

For local-market-seeking MNE subsidiaries, which are established for pursuing the host nation's local sales, the local sales ratio is an indicator of the degree of expansion in the local market (Luo, 2003; Luo and Peng, 1999). Greater local sales expansion may help to result in higher firm performance (both profits and labour productivity).

In contrast, export-oriented Taiwanese subsidiaries investing in China are established to utilise low-cost input factors and serve as export bases to other countries. Since China entered WTO in 2001, most restrictions on China's domestic market access have been eliminated. As the purchasing power of local Chinese customers increases, for all MNEs, China's domestic market is becoming 'a golden opportunity' (Lieberthal and Lieberthal, 2004). China is a potentially huge market (higher economic growth rate than the US, Japan, and Europe). Therefore, for export-oriented MNEs, Chinese local sales are also likely to add to the subsidiary performance (both profits and labour productivity). Hence I have the following hypotheses:

Hypothesis 4-a. All else being equal, for a local-market-seeking Taiwanese subsidiary investing in China, the Chinese local sales ratio is positively associated with the firm performance (both profits and labour productivity) of the subsidiary.

Hypothesis 4-b. All else being equal, for an export-oriented Taiwanese subsidiary investing in China, the Chinese local sales ratio is positively associated with the firm performance (both profits and labour productivity) of the subsidiary.

Local capital ratio: International financial capital flows fall into four categories: foreign direct investment, foreign portfolio investment, bank loans, and official development flows (Ingham, International Economics, page 204). By Dunning's (1988) 'OLI' paradigm, Lee and Houde (2000) suggest that physical, financial, and technological infrastructure is one of the six main location advantages (L) of host countries. However, China's local financial (banking) system is not well-established.

On the perspective of working capital, MNEs can source capital from their parent companies or from the host countries. However, in China, as top managers are appointed by government, and China's banks are required to conduct government policy, they have never been fully market-oriented institutions (Economic Survey of China 2005, OECD). China's four state-owned banks (Industrial & Commercial Bank of China, Bank of China, China Construction Bank, and Agricultural Bank of China) function in the role of governmental policy banks. By 'policy bank' it means their operations are more politically than business-oriented. For example, if the Chinese government decides to support the textile industry, banks will be required to lend to textile companies without proper commercial risk management. It is noted that the ratio of non-performing loans (NPLs) to the total loans of China's state-owned banks reached 17.9% in 2004, that ratio being among the highest in the world (Global Financial Stability Report 2005, IMF).

Significant reforms have been introduced to China's banking sector. Banks have begun to establish sound lending and risk management systems. Improved risk regulation practices have been conducted by the banking regulator, and the classification system for non-performing loans (NPLs) has been made more modernized. Nevertheless, further reforms are still required in China's banking sector. A move to private ownership and changes in management are not likely to

take place in the near future (OECD, 2005). Therefore, the local capital ratio of MNE subsidiaries investing in China could be regarded as a proxy of the degree of political support from the Chinese government.

In recent years in China, the fastest way for a political official at the local level to be promoted to a higher position has been to oversee booming business activities in the locality under his control. Many Chinese local governments usually conduct protectionist measures to reduce competition from other areas of the country and abroad (Lieberthal and Lieberthal, 2004). To local-market-seeking Taiwanese subsidiaries investing in China, it is expected that the high extent of capital localisation (the high degree of political support from the Chinese government) will cause a positive impact on firm performance (both profits and labour productivity). However, as discussed, for export-oriented Taiwanese subsidiaries investing in China, cost-cutting requirements often pressure them to move to new low-cost production areas. Therefore, it is much more difficult for Taiwanese export-oriented MNE subsidiaries to establish local financial linkages with local Chinese banks and local ally partner firms. They mainly depend on the investment capital provided by Taiwanese parent companies to support their operations in China. Thus, according to the above, I expect that:

Hypothesis 5-a. All else being equal, for a local-market-seeking Taiwanese subsidiary investing in China, the local capital ratio is positively associated with the firm performance (both profit and labour productivity) of the subsidiary.

Hypothesis 5-b. All else being equal, for an export-oriented Taiwanese subsidiary investing in China, the local capital ratio is not associated with the firm performance (both profit and labour productivity) of the subsidiary.

R&D intensity: According to Vernon's (1979) product cycle theory, foreign subsidiaries' R&D usually focuses on local improvements of relatively mature technologies developed by the parent company. The aim of overseas R&D is to utilise efficiently the MNE's technologies and to improve subsidiary performance (Belderbos, 2003; Florida, 1997).

In addition, according to Dunning's (1988) 'eclectic' paradigm, because markets are imperfect, MNEs will internalise (I) the use of their ownership-specific advantages. An important example of internalisation (I) is the case of knowledge.

MNEs usually spend expenditure on R&D. In order to protect against IPR piracies and achieve a satisfactory return on R&D spending, MNEs usually seek to preserve critical technologies for exclusive use within their own organisational boundaries. In other words, MNEs create their own production systems and utilise their own technological advantages directly.

Nevertheless, from the perspective of MNEs, IPR infringement in China is rampant. For export-oriented Taiwanese MNE subsidiaries investing in China, R&D activities usually are minimised in order to protect the core technologies and competences of their headquarters. Besides, for export-oriented Taiwanese MNE subsidiaries, the target market is the international market, not China's domestic market. Thus for them, the relationship between subsidiary-level R&D intensity and subsidiary performance (both profits and labour productivity) is likely to be insignificant.

Local-market-seeking Taiwanese MNE subsidiaries investing in China are not likely to be enthusiastic about R&D either. The main goal for local-market-seeking MNE subsidiaries is to seek business opportunities and promote local sales in China. Because China is a large and very complicated market, once local-market-seeking MNE subsidiaries gain a foothold in China, the local marketing and distribution channels become increasingly critical (Strange et al., 1998). In order to enlarge local sales, local-market-seeking MNE subsidiaries need to invest heavily to establish widely spread distribution and marketing networks in China (Jiang and Prater, 2002). However, MNEs have to manage their limited resources to achieve an edge and to improve competitive advantages (Mahajan and Varadarajan 1990). There are various types of assets vying for the funds allocated by MNEs' managers. The more expenditure spent in R&D, the less expenditure they can utilise to create local marketing and distribution channels for local sales.

The other possibility is that the local-market-seeking MNE subsidiaries choose to maintain the expenditure on local marketing and distribution networks. However, they have to increase the price per unit of product due to the higher R&D spending. According to Porter's (1985) cost leadership strategy, their lower cost rivals can provide products at lower prices to attract many more customers. The competition for China's domestic market share is very fierce (Lieberthal and Lieberthal, 2004); and

to many local Chinese consumers, 'brand loyalty is not that important, and price is very much the deciding factor' (China-Britain Business Council, 2005). Therefore, their firm performance is likely to decline. For the local-market-seeking group, higher R&D intensity is likely to cause a negative effect on the subsidiary performance because of less local marketing expenditure or the higher price per unit of product. Moreover, high-performance MNE subsidiaries are likely not to increase their R&D expenditure because of China's rampant IPR violations. Such logic suggests the following hypotheses:

Hypothesis 6-a. All else being equal, for a local-market-seeking Taiwanese subsidiary investing in China, the R&D intensity is negatively associated with the firm performance (both profits and labour productivity) of the subsidiary.

Hypothesis 6-b. All else being equal, for an export-oriented Taiwanese subsidiary investing in China, the R&D intensity is not associated with the firm performance (both profits and labour productivity) of the subsidiary.

4.3.2. Chemical industry vs. Electronic industry

In this part, I choose the Taiwanese chemical industry from the local-market-seeking group and the Taiwanese electronic industry from the export-oriented group, and then conduct a comparative analysis between these two industries investing in China. The choice of the electronic industry and the chemical industry is based on the observation that, in recent decades, these two industries have become the two most strategically important components in the Taiwanese manufacturing sector. The comparative study could provide us with a deeper understanding of factors affecting these two industries investing in China.

It is well known that the Taiwanese manufacturing sector is very competitive in the global market and expanding rapidly. In 2004, Taiwan's national manufacturing sector output reached US$ 298.52 billion. The productivity of the electronic industry in Taiwan reached US$ 101.54 billion and accounted for 33.9% of national manufacturing sector output in 2004. Similarly, in the same year the productivity of the chemical industry reached US$ 80.34 billion and accounted for 26.9% of national manufacturing sector output (Industrial Development Bureau, Ministry of Economic Affairs, Taiwan Executive Yuan, 2007).

For these two industries investing in China, this thesis incorporates several subsidiary-specific indicators which measure the extent and scope of localisation and R&D intensity. I control the effects of subsidiary size (share capital) and ownership type on the subsidiary performance. In this section, I will focus on the OLS regression analysis (firm performance: labour productivity).

Firm's age: For local-market-seeking MNE subsidiaries (horizontal-FDI strategy) investing in emerging markets, some studies (Dollar et al., 2003; Carlson et al., 2005) suggest that the length of subsidiaries' operation in the host country positively impacts the subsidiaries' performance. Newly created subsidiaries need to be adjusted and directed before they can be integrated into the host country's domestic market. Thus for Taiwanese chemical industry MNE subsidiaries (local-market-seeking FDI) investing in China, a relatively old age is likely to have a positive effect on firm performance.

However, for Taiwanese electronic industry MNE subsidiaries (export-oriented FDI) investing in China, these manufacturing bases serve mainly as a part of the parent company's global division of labour. The Taiwanese electronic industry MNE subsidiaries are likely to relocate to new low-cost production areas (even to move to Southeast Asian countries) in order to reduce manufacturing costs. The production costs rise faster than the benefits that arise from the learning curve effects on the operations of Taiwanese electronic industry MNE subsidiaries investing in a particular area. The firm's age (the firm's experience) in China is likely not to produce a positive effect on subsidiary performance. Therefore, I hypothesise:

Hypothesis 1-a. For a Taiwanese chemical industry MNE subsidiary investing in China, the firm's age is positively associated with the firm performance (labour productivity) of the subsidiary.

Hypothesis 1-b. For a Taiwanese electronic industry MNE subsidiary investing in China, the firm's age is not associated with the firm performance (labour productivity) of the subsidiary.

Local employment ratio: In terms of local labour linkage to MNEs, China is characterised by its abundant, lower-cost labour force. The Taiwanese chemical industry MNE subsidiaries (local-market-seeking FDI) investing in China, in order to reduce the wage costs, are usually inclined to hire a very high percentage of local

Chinese workers (96.20%). Based on the production function in Microeconomics theory, local-market-seeking Taiwanese MNE subsidiaries investing in China tend to adopt labour-intensive production technologies. For them, the high local employment ratio is likely to be associated with low capital intensity; therefore the price per unit of output is lower. The value of sales per worker is depressed.

On the other hand, the Taiwanese electronic industry MNEs (export-oriented FDI) divide manufacturing tasks into highly routine operations and establish subsidiaries in China to seek lower-cost input factors. The cost of finished products is substantially determined by the transfer prices of components and raw materials provided by the headquarters, not solely controlled by the Chinese subsidiaries. Thus I hypothesise:

Hypothesis 2-a. For a Taiwanese chemical industry MNE subsidiary investing in China, the local employment ratio is negatively associated with the firm performance (labour productivity) of the subsidiary.

Hypothesis 2-b. For a Taiwanese electronic industry MNE subsidiary investing in China, the local employment ratio is not associated with the firm performance (labour productivity) of the subsidiary.

Local sales ratio: For Taiwanese chemical industry MNE subsidiaries investing in China, which are created to compete successfully in China's domestic market, the local sales ratio is an indicator of the degree of expansion in China's local market (Luo, 2003; Luo and Peng, 1999). Greater local sales are likely to yield higher firm performance (labour productivity).

On the other hand, Taiwanese electronic industry MNE subsidiaries investing in China are built up to exploit China's lower-cost input factors and mainly serve as export bases to other countries. Since China is a potentially huge market and the electronic product use is spreading more rapidly than in any other countries (Lieberthal and Lieberthal, 2004); the high Chinese local sales ratio is also likely to improve their firm performance (labour productivity). Thus I hypothesise:

Hypothesis 3-a. For a Taiwanese chemical industry MNE subsidiary investing in China, the Chinese local sales ratio is positively associated with the firm performance (labour productivity) of the subsidiary.

Hypothesis 3-b. For a Taiwanese electronic industry MNE subsidiary investing in China, the Chinese local sales ratio is positively associated with the firm performance (labour productivity) of the subsidiary.

Local capital ratio: In terms of working capital, MNE subsidiaries can source capital from their headquarters or from the host countries. The local capital ratio of MNE subsidiaries investing in China could be viewed as a proxy of the degree of political support from the Chinese government.

Therefore, for Taiwanese chemical industry MNE subsidiaries (local-market-seeking FDI), the high extent of capital localisation (the high degree of political support from the Chinese government) is likely to have a positive effect on firm performance (labour productivity). However, for Taiwanese electronic industry MNE subsidiaries (export-oriented FDI), they may relocate to new low-cost production areas in order to cut costs. Therefore, overall, it is much more difficult for them to source capital from local Chinese banks. Thus I hypothesise:

Hypothesis 4-a. For a Taiwanese chemical industry MNE subsidiary investing in China, the local capital ratio is positively associated with the firm performance (labour productivity) of the subsidiary.

Hypothesis 4-b. For a Taiwanese electronic industry MNE subsidiary investing in China, the local capital ratio is not associated with the firm performance (labour productivity) of the subsidiary.

R&D intensity: In terms of the impact of R&D intensity on firm performance, some studies suggest that increased R&D expenditures may cause either a positive or negative impact on the firm performance in different industries and external business environments (Holak, Parry, and Song, 1991).

Both Taiwanese chemical industry and electronic industry MNE subsidiaries investing in China are not very enthusiastic about R&D activities (R&D intensity is 0.83% and 0.75% respectively). However, the ultimate purpose of Taiwanese chemical industry MNE subsidiaries investing in China is to expand their market share and make profits in China's domestic market. The more expenditure spent on R&D activities, the less expenditure they can utilise to establish local marketing and distribution networks. The other possibility is that they maintain the expenditure on local marketing and distribution channels. They have to increase the price per unit of

product due to the higher R&D spending. Because China is a very price sensitive market (China-Britain Business Council, 2005), their firm performance is likely to decline.

On the other hand, for Taiwanese electronic industry MNE subsidiaries investing in China, R&D is usually sacrificed in order to protect the core technologies and competencies of their headquarters. Therefore, the effect of R&D intensity on the subsidiary performance is likely to be insignificant. Thus, I hypothesise:

Hypothesis 5-a. For a Taiwanese chemical industry MNE subsidiary investing in China, the R&D intensity is negatively associated with the firm performance (labour productivity) of the subsidiary.

Hypothesis 5-b. For a Taiwanese electronic industry MNE subsidiary investing in China, the R&D intensity is not associated with the firm performance (labour productivity) of the subsidiary.

Chapter 5: Sample and Measures

5.1. The Sample and Data Profile

5.1.1. The Background of Data Profile

The data for this empirical study is selected from the project "The Year 2004 Annual Report: Analysis of the Operations of Taiwanese Subsidiaries Investing in China." The annual project has been initiated and sponsored since 1996 by the Investment Commission (MOEAIC), the Ministry of Economic Affairs (MOEA), and Taiwanese Executive Yuan. Moreover, this project is conducted by a prestigious Taiwanese academic institute, the Chun-Hua Institute for Economic Research (CIER), in Taipei. The director of this annual project is Dr. Liu Meng-Chun. In addition, MOEAIC and Dr. Liu work together to design the questionnaire of this annual survey and review the questionnaire contents every year.

The background of this annual report is: facing the increasing cost of labour, land, and other production inputs in Taiwan, Taiwanese enterprises have to pursue overseas expansion as an important global strategy. China has risen up rapidly and become the main destination of global FDI. Moreover, China also has attracted huge Taiwanese investment capital, technology, and talents, and has become the largest recipient of Taiwan's outward FDI. As noted before, the expansionary outward FDI to China may cause negative effects on Taiwan's economy. In the long run, local Chinese companies may become strong competitors and even replace Taiwanese enterprises in the global market.

Not surprisingly, the Taiwanese government worries about having such a close business relationship with its powerful political rival, particularly because the island fears that the flood of investment capital and technology out of Taiwan will make the island economically dependent on China. Even worse, the PRC government might exploit economic leverage through the use of economic sanctions (exploiting the businesspeople to manipulate the Taiwanese government) to undermine Taiwan's de-facto political independence. In order to take on the responsibility to manage the cross- strait economic interactions, reduce the negative impacts, and make effective Chinese economic policies, the Taiwanese government feels it is desperately

necessary to explore the operation conditions and trends of Taiwanese enterprise investing in China.

Therefore, the objective of this annual project "The Annual Report: Analysis of the Operations of Taiwanese Subsidiaries Investing in China" is to probe the motives of investing in China and the actual operation statuses of Taiwanese subsidiaries, through questions including the company profile, investment patterns, investment scales, production, R&D, capital sources, technology sources, profits and other investment conditions in China (the questionnaire contents are shown as Appendix 2).

In addition, by examining the firm's age, sales percentages to worldwide areas, capital source, local content ratio, and local employment ratio of Taiwanese subsidiaries investing in China, the Taiwanese government could explore the speed and degree of localisation of Taiwanese subsidiaries in China and the possible impacts on the Taiwanese parent companies. As a result, the findings of this annual report can be adopted as an effectual reference for the Taiwanese government's economic-policy-making toward China.

5.1.2. Sample

The sample list of this project was drawn from the "Directory of Enterprises Investing in Mainland China", compiled by MOEAIC, Taiwanese Executive Yuan. Based on the Taiwanese government's regulations: "Regulations governing the Approval of Investment or Technical Cooperation in Mainland China", Art 9, "Those who are approved to invest in China, shall submit the requested documentation to the Investment Commission (or competent authority) for its record within six months of the commencement of their projects."

The sample of "The Year 2004 Annual Report: Analysis of the Operations of Taiwanese Subsidiaries Investing in China" undertaken by the CIER, consists of 3,050 enterprises (investment capital in China over $1 million US dollars) officially registered to MOEAIC. The CIER mailed questionnaires directly to the top managers of these enterprises (headquarters) in Taiwan. After several telephone follow-ups, 981 samples filled out by these top managers were successfully collected (response rate about 32.16%) with satisfactory data quality and validity. Enterprises are in both manufacturing and services sectors. On the location consideration, some might argue that I should go to China to undertake the fieldwork survey. Nevertheless, the top managers of Taiwanese subsidiaries are less likely to respond truthfully when they answer the questionnaires in China. Some questions of the questionnaires might be so sensitive that these managers are fearful of answering.

It is noted that, according to Taiwanese government regulations, Taiwanese banks and insurance companies are not allowed to invest in China; therefore this thesis is focusing on the analysis of the manufacturing sector. Moreover, in this survey, the areas where Taiwanese MNEs invest include Beijing, Shanghai, Guangdong, Fujian, Jiangsu, Zhejiang, Hubei, Hunan, Sichuan, Hebei, Henan, Shandong, the Northeast provinces, and other areas. In our research, these areas will be classified into five major parts: Beijing, Shanghai, Southeast Area (including Guangdong, Fujian, Jiangsu, Zhejiang), Inner Area (including Hubei, Hunan, Sichuan, Henan), and Northeast Area (including Northeast provinces, Hebei, Shandong).

5.1.3. Survey Process

The survey period of "The Year 2004 Annual Report" includes: (1) static data: based on the operation of the respondent Taiwanese MNE subsidiaries investing in China on 31 December 2004, (2) dynamic data: based on the operation of the respondent Taiwanese MNE subsidiaries investing in China from 1 January to 31 December 2004.

The CIER mailed the survey questionnaires directly to the top managers of these sample companies on 6 September 2005 and began the telephone follow-ups on 16 September 2005. In November, Dr. Liu started to build up the computer data

profile based on the collected questionnaires and conduct the statistical computing analysis. The statistical data-analysis methods employed in this annual project include the "Sample characters classification" method and the "Percentage analysis" method. Then the annual project was finished in June 2006.

5.1.4. Data

The data used comes from the 'The Year 2004 Annual Report' collected by CIER and sponsored by the Taiwanese government. This is secondary data of reputable quality, well resourced and accepted by leading academics for publication in major international journals (Chen et al., 1998 and 2004). It is based on a large scale survey. The survey questionnaire contains some highly sensitive questions. Given the status of CIER in Taiwan, it is not surprising that the top managers are likely to respond correctly because of the trust in CIER. It has a high response rate, 32.16%.

In the quantitative analysis, the data collection of this annual project is a large scale survey (the sample consists of 3,050 companies whose investment capital in China over $1 million US dollars, officially registered to the Taiwanese government). Besides the annual survey quantitative data, I also carried out 20 in-depth interviews with senior Taiwanese managers arranged through relevant industry associations, academic institutes, and government departments.

In summary, in the quantitative analysis, all the data required in this thesis is included in the annual report. Moreover, the original dataset of this annual project is not widely used in Taiwan. In general, regular researchers cannot access this dataset without permission from the Taiwanese government. However, since I worked in the Taiwanese government (Mainland Affairs Council: MAC, Taiwan Executive Yuan) for nearly seven years, some Taiwanese government officials offered me the original dataset of this annual project.

5.1.5. Data Source (for the Descriptive Analysis of Determinants of the Extent of Localisation and R&D Intensity)

The dataset for this part is derived from the surveys of the annual reports: "Analysis of the Operations of Taiwanese Subsidiaries Investing in China" from 2002 to 2005. The sample list of this annual project is drawn from the "Directory of Enterprises

Investing in Mainland China", compiled by Taiwan Executive Yuan. The sample of the year 2002, 2003, 2004, and 2005 annual reports respectively consists of 2874, 2963, 3050, and 2986 enterprises (investment capital in China over $1 million US dollars) officially reported to Taiwan Executive Yuan. In the years 2002, 2003, 2004, and 2005, after several follow-ups, there were 879, 816, 981, and 946 samples, respectively, filled out by these top managers and successfully collected with satisfactory data quality and validity. After I check the CIER's dataset and delete all the sampled companies in the services sector or with missing values, there are 180, 162, 190, and 162 valid samples obtained respectively from the 2002, 2003, 2004, and 2005 annual surveys.

Based on the Taiwanese government definition, SMEs are companies with less than 300 workers. The local-market-seeking group includes the food industry, chemical industry, and machinery industry. The export-oriented group includes the electronic industry and textile industry. In the 2002 survey, of the 180 valid sample firms, 102 are of the local-market-seeking group and 78 are of the export-oriented group; 63 are large-sized firms and 117 are SMEs; 124 are wholly owned subsidiaries (WOS) and 56 are joint ventures (JVs). Second, in the 2003 survey, of the 162 valid sample firms, 70 are of the local-market-seeking group and 92 are of the export-oriented group; 71 are large-sized firms and 91 are SMEs; 118 are wholly owned subsidiaries (WOS) and 44 are joint ventures (JVs). Third, in the 2004 survey, of the 190 valid sample firms, 108 are of the local-market-seeking group and 82 are of the export-oriented group; 79 are large-sized firms and 111 are SMEs; 138 are wholly owned subsidiaries (WOS) and 52 are joint ventures (JVs). Finally, in the 2005 survey, of the 162 valid sample firms, 85 are of the local-market-seeking group and 77 are of the export-oriented group; 70 are large-sized firms and 92 are SMEs; 111 are wholly owned subsidiaries (WOS) and 51 are joint ventures)

5.2. Methodological Triangulation

This thesis uses a combination of methodologies, utilising both quantitative method and qualitative method in the analysis of the same phenomenon—a methodological triangulation. In this chapter, the research methodologies, survey process, and data profile will be identified.

Denzin (1978) suggests four types of triangulation: (a) Methodological triangulation---using different research methods, i.e. qualitative and quantitative. (b) Investigator triangulation --- two heads are better than one, depending on the heads. (c) Data triangulation---different sets of information from different people, different places or different times, i.e. replication by revisiting a research site at a later stage, by visiting a different area or by studying different groups (e.g. doctors and nurses). (d) Theoretical triangulation---where the research has different theoretical perspectives and tries them out on the data.

Methodological triangulation offers researchers several important potential benefits (Jick, December, 1979). First, researchers can be more confident of the results. This is the overall strength of the methodological triangulation. Triangulation may help to produce more reliable/valid answers on different aspects of a topic. Secondly, divergent results from multi-methods can lead to a more meaningful explanation of the phenomenon. Thirdly, the use of multi-methods can also produce a synthesis or integration of relevant theories. In this sense, methodological triangulation closely parallels theoretical triangulation. Finally, methodological triangulation may also function as the critical test, by virtue of its comprehensiveness, for competing theories.

Methodological triangulation is very useful to this thesis. First, methodological triangulation may help us to produce a much wider and deeper understanding from different angles on the topic. Secondly, divergent results from methodological triangulation can lead to a deeper understanding of the Taiwanese FDI in China. Third, methodological triangulation could also serve as the critical test for competing arguments in this thesis.

5.2.1. Quantitative Analysis, Variables, and Models

In terms of quantitative method, on the basis of Dunning's "OLI" framework and local linkage theories, some hypotheses about the relationships between the explanatory variables and firm performance will be established. Then two statistical models will be employed--OLS (Ordinary Least Squares) regression model and Binomial Logit model to test these hypotheses.

In the empirical analysis, this research will use multiple indicators for the firm's performance, as any single measure may generate criticism (Weiner and Mahoney, 1981). In the past many measures have been used, and the use of multiple alternative concepts of firm performance strengthens the statistic estimates (Tallman and Li, 1996). As regards firm performance, generally speaking, ROS (returns on sales) or ROA (returns on assets) is widely used by managers and financial analysts to measure the corporate management effectiveness (Robins and Wiersema, 1995). However, it is a fact that accounting-based measures have some shortcomings that restrict their usefulness in performance evaluation. Greater comprehensibility often implies greater "gaming" opportunities in the budgeting process to accomplish performance targets, as well as a variety of earnings management activities. Besides, in international business study, because of various accounting systems and practices, it is likely that accounting-based measures could not precisely reflect all the economic consequences of business actions (Indjejikian, 1999). This is particularly relevant to companies that face lax, ambiguous accounting regulations such as those investing in China.

Besides, many Taiwanese businesspeople are likely not to reveal honestly whether they make profits or lose money in China due to fear of negative impact on their bank credit records in Taiwan. Thus, the empirical models in this thesis will complementarily use both sales-based and accounting-based measures to represent firm performance.

In the survey of this study, sales and ROS are both reported in our questionnaire and reflect current operations. First, a sales-based measure (labour productivity: sales/# of employees) will be adopted to reflect firm performance in the OLS regression model (Hitt, 2002). Moreover, as regards of accounting-based measure (profit), I choose to use binomial logit model. A crude measure of firm performance is whether a firm makes a profit or a loss. The profit or loss can be decided by a simple variable which is 1 if this is a profit and 0 if this is a loss. Clearly other descriptions would be used to indicate the actual amount of profit or loss. However, as noted above, because of the sensitivity of ROS (returns on sales) item, in the questionnaire of this survey, in order to increase the response rate, the ROS item is measured on 6 ranges, profit ratio (0 to 10%), profit ratio (11 to 20%),

profit ratio (over 21%), loss ratio (0 to 10%), loss ratio (11 to 20%), and loss ratio (over 21%). In other words, the actual amount of profit or loss is not available in this thesis. This binary (0, 1) on firm performance can be determined with data obtained from the survey (Reuer et al., 2004).

I explain the explanatory variables employed in this thesis. The main theme of this thesis is focusing on the business exchanges between MNE subsidiaries and local organisations, which are referred to as local linkages. In this thesis, as regards the definition of 'localisation', it is the definition of 'internationalisation' that is referred to. In the analysis of 'internationalisation', some IB scholars define it as 'the size of internalised international operations relative to overall operations.' (Tallman and Li, 1996; Ramaswamy, 1993; Geringer et al., 1989) Similarly, in this thesis, 'the extent of localisation'- or the 'intensity of local linkages'- is measured as 'the ratio of local operations relative to the total operations'. Moreover, referring to the explanation of 'internationalisation' (Tallman and Li, 1996), it is suggested that to MNE subsidiaries, 'the extent of localisation' indicates the strategic importance of local operations and also implies the existence of local strategic resources through FDI. In the empirical model, the extent of localisation (intensity of local linkages) is measured in five categories. They are, respectively, defined as:

(1) local content ratio: the proportion of components and parts procured from local firms (local supplier linkage);

(2) local sales ratio: the proportion of final products sold in the host country's local market (local sales linkage);

(3) local employment ratio: the proportion of the workforce accounted for by local workers (local worker linkage);

(4) local capital ratio: the proportion of financial resources obtained from local institutions (local financial linkage).

(5) firm's age: the age of the MNE subsidiary investing in the host country (firm's experience)

Note that the intensity index measures the share which local-based resources contribute to the overall operations of the MNE subsidiary in the host country. It is not 'a strict measure of the frequency of exchanges, but rather of the proportion of activities that draw upon external resources' (Chen et al., 2004).

Exchange relationships contained in each local linkage encompass trading and cooperation. For instance, in our thesis, sales linkage includes direct sales to local customers and indirect sales through local sellers and trading companies. Besides, it is noticeable that in supplier linkage, the local suppliers include indigenous and international companies operating in the host country. Financial linkage includes linkages to local financial institutions and local ally partner firms.

Firm's age, in this empirical study, is also included as one of the indicators capturing the extent of localisation. Some scholars suggest that, empirically, the operations of MNE subsidiaries in the host countries become increasingly embedded in the local networks over time (Johanson and Mattson, 1988). In other words, newly established relationships must be adapted before they can be integrated into local linkages. Therefore, besides the intensity of the local linkages, the firm's age also plays an important role in capturing the extent of localisation.

In essence, the extent of localisation illustrates a composite indicator of the degree of exchange business relationships between the MNE subsidiary and local organisations, in different activity categories.

Regarding the impacts of localisation, some other elements such as local workers' wages may also affect the subsidiary-level firm performance of MNEs. However, according to Microeconomics theory, 'in the general form the production function is a purely technological relationship between quantities of inputs and quantities of outputs. Prices of factors or of the products do not enter into the production function.' (Koutsoyiannis, 1979, page 70) Therefore, in the statistical models of this thesis, I also focus on the technological relationship between quantities of inputs (the intensity of local linkages) and quantities of outputs (firm performance). With regard to local employment ratio, instead of the measure of human capital percentage, this thesis employs the measure of head-count ratio. In other words, this thesis is focusing on the analysis of first-level impact.

In this empirical model, 'R&D intensity' is defined as 'the ratio of R&D expenditures accounting for total sales.' The R&D expenditures to sales ratio is a commonly used measure in studies of R&D intensity (Zhang et al., 2007; Belderbos, 2003; Kotabe et al., 2002). In addition, it is very difficult to precisely measure the R&D expenditures of a company. However, in our thesis, since the dataset

originates from annual government surveys, I might expect the definition of R&D intensity to be consistent over years.

Table 5.1: The Definition of Explanatory Variables

Variable	Definition
■ Local employment ratio	(the percentage of the local Chinese workers as a proportion of the total workers employed by the Taiwanese subsidiary in China)
■ Local content ratio	(the percentage of raw materials, components, and intermediate products, for the Taiwanese subsidiary in China procured from local firms)
■ Local capital ratio	(the percentage of the working capital (except share capital) of the Taiwanese subsidiary in China, borrowed from local Chinese banks or provided by local joint-venture allied partner firms)
■ Local sales ratio	(the percentage of the products of the Taiwanese subsidiary in China, sold in the local Chinese market)
■ Firm's age	(the length of time the Taiwanese subsidiary has been in China)
■ R&D intensity	(the percentage of the R&D expenditure as a proportion of total annual sales of the Taiwanese subsidiary in China)

Control variables
■ Company size   Ln (the total share capital of the Taiwanese
                                subsidiary in China)
■ Industry dummy variables:
■ Ownership dummy variables:
  Wholly owned subsidiary   reference group
  Joint venture=1   if the Taiwanese subsidiary is a joint-venture (JV),
             =0   otherwise (wholly owned subsidiary, WOS)

The OLS (Ordinary Least Squares) regression model:

Ln (Y) = B_0 + B_1* (Zn) + B_2Z+ e

The dependent variable Y is a firm performance measure (labour productivity: sales per worker). Zn is a vector of independent variables (subsidiary-level indicators). Z is a vector of control variables likely to influence firm performance.

OLS (Ordinary Least Squares) regression models have been employed to calculate the firm performance in terms of labour productivity-sales per worker. In the empirical studies of social sciences, I often encounter regression equations where the dependent variable appears in logarithmic form (Wooldridge, 2003). In the equation above, the natural logarithmic form of Y instead of Y is employed due to modelling applicability. The probability distribution of Ln (Y) is a normal distribution and has a narrower range.

The Binomial Logit Model: Profit (1) v Loss (0):

As noted before, in this model, the dependent variable is binary and denotes whether or not the Taiwanese subsidiary makes profits in China, and has taken the values of either one or zero, respectively. The predicted values of the dependent variable may be interpreted as the probability that the Taiwanese subsidiary makes profits in China; that is, the probability of obtaining a particular value of the dependent variable is written as a logistic function of the independent (explanatory) variables. It is not possible to use a linear probability model since probability cannot be outside range (0, 1) and so it is usual to consider the logit model (Aldrich and Nelson, 1984). The logit transformation is the log of the adds and so the regressed is:

$\log\{\Pr(y{=}1|x)/ \Pr(y{=}0|x)\}$ or $\log\{\Pr(y{=}1|x)/ (1{-} \Pr(y{=}1|x))\}$

This can be regressed on the explanatory variables x to obtain estimates of parameters, $\log\{\Pr(y{=}1|x)/ \Pr(y{=}0|x)\} = B^T x$, this maybe rewritten as:

$$\Pr(y{=}1|x) = \{ \frac{\exp(B^T x)}{1 + \exp(B^T x)} \}$$

Some scholars employ the binomial logit model in their empirical studies. For instance, Reuer, Shenkar, and Ragozzino (2004) explore the antecedents of contingent payouts in the form of earnouts and stock payments. The results of the binomial logit model suggest that companies lacking international and domestic acquisition experience are more likely to use contingent payouts when purchasing

targets in high-tech and service industries. Moreover, companies tend to avoid contingent payouts in host countries affording investors the weak protection and enforcement of property rights. Lien, Piesse, Strange and Filatotchev (2005) examine the impacts of corporate governance factors on the decision to undertake FDI. Based on a sample of 228 publicly listed companies in Taiwan, the results of statistical models (including binomial logit, Poisson count data, and Tobit regression models) conclude that family control and share ownership by domestic financial institutions in Taiwanese companies are associated with the decision to conduct FDI. This study also suggests that corporate governance has different effects on Taiwanese investment in China than on Taiwanese investment in other areas of the world.

5.2.2. Qualitative Analysis

On the perspective of qualitative method, there is fairly wide consensus that qualitative research is a naturalistic, interpretative approach concerned with understanding the meanings which people attach to phenomena (actions, decisions, beliefs, values etc.) with their social worlds (Lewis and Ritchie, 2003). Qualitative research uses non-probability samples; units are deliberately selected to reflect particular features of, or groups within, the sampled population.

In the qualitative research of this thesis, I report on in-depth interviews used to investigate the operations of Taiwanese MNE subsidiaries investing in China. Traditionally qualitative methods have received less than a fair appreciation and have been criticized for lack of technical precision, small samples, subjective and non-replicable efforts (Goodyear, 1990). In fact, previous reports have discussed the methodological challenges involved in undertaking international business (IB) studies (e.g. Wright et al., 1996; Yeung, 1995). The main interest in methodological techniques for IB studies has tended to be confined to quantitative methods using statistical model analysis. Many IB scholars focus their considerations on methodological problems confronting the research design, implementation and examination of quantitative data: selecting samples, ensuring equivalence of instrumentation, engaging local researchers to undertake surveys, increasing response rates and utilising statistical methods of analysis (Cavusgil & Das 1997). In addition, Cavusgil & Das (1997: page:87) also conclude that although the difficulties

of undertaking cross-culture studies have led to a proliferation of theoretical and qualitative studies, "there is hope that this situation may be remedied by the development of more sophisticated scaling and multivariate techniques".

Nevertheless, despite this strong recognition of quantitative rigour, more and more IB scholars have recommended qualitative methods, particularly case studies, based on data collected from in-depth interviews. Their advantage lies is in the ability to explore dynamic, context-dependent and interactive phenomena (e.g. Parkhe 1993; Boyacigiller & Adler 1991). In fact, from the perspective of IB research, the use of quantitative techniques is prevalent in the US. By contrast, the qualitative, case-study method is more popular in European countries, especially in the Nordic countries (Bjorkman & Forsgren 1997).

In spite of increasing endorsement (e.g. Parkhe 1993; Boyacigiller & Adler 1991) of the advantages associated with the qualitative approach today, scholars still commonly view qualitative method as merely the collection of datasets based on group discussions or in-depth interviews. What has merited less recognition in management research literature is the critical role which qualitative research plays in discussion with key policy makers in enterprises and with industry experts. Qualitative research holds significant advantages over quantitative research in obtaining in depth responses and data from leading companies and in overcoming individual interviewees' reservations about confidentiality. Qualitative research, particularly in-depth interviews, in management studies, is an important source of information which can assist in understanding the context of business development, or clarify some crucial issues or problems. Nevertheless, it is the fact that, in a highly competitive business environment, enterprises are often reluctant to share information which is regarded as important, sensitive and pertaining directly to their operations (Crimp and Wright, 1995). Therefore the key to successful qualitative research lies in its adaptability as well as disciplined approach.

In chapter 8, I will explore the operations of Taiwanese MNEs investing in China. It should be noted that the main purpose of chapter 8 is not to confirm the quantitative results obtained in the previous chapters, but is to provide a wider and deeper understanding of different perspectives at the corporate headquarters level. FDI is predicted to bring technologies, experience and market access, leading to

advances in the efficiency of the use of resources and increases in productivity. Through capital accumulation, FDI is also expected to stimulate economic growth by incorporating new inputs and skills into production in the host country. China has attracted a huge amount of Taiwanese investment capital, technology, and talents, and has become the largest recipient of Taiwan's outward FDI. In Taiwan, some people worry this expansion of outward FDI to China may cause negative impacts or even a hollowing-out of Taiwan's domestic economy. There are also fears that, in the long run, Chinese companies will become strong competitors and even displace Taiwanese companies in the global market.

In chapter 8, 20 Taiwanese manufacturing sector enterprises (four enterprises for each industry) investing in China will be selected and the in-depth interviews with senior managers in Taiwan will be conducted. The four enterprises, in each industry, represent four types of subsidiaries investing in China: a large-sized firm (more than 300 workers in Chinese subsidiary), a small-sized firm (less than 300 workers in Chinese subsidiary), and established firm (firm's age more than 5 years in China), and a new entrant firm (firm's age between 2 to 5 years in China).

As regards qualitative research, the company interview is primarily based on the survey questionnaire of the report: "FDI Survey 2005, Foreign Direct Investors' Perceptions in Sub-Saharan Africa." undertaken by the United Nations Industrial Development Organisation (UNIDO). I translate this UNIDO questionnaire into a Chinese version and revise the contents to fit Taiwanese investment conditions in China. The final contents of the survey questionnaire of this chapter include 9 profiles: (a) a profile of the subsidiary and its operations in China, (b) a section for exporters, (c) a work force profile, (d) a profile of the parent companies in Taiwan, (e) a profile of the local partner (if joint venture), (f) the impact on China's local economy, (g) investment and operating experience in China, (h) respondent's suggestions and closing questions, and (i) a contact and reference section. The results were collated and analysed on a comparative basis in each industry.

Chapter 6: The Empirical Analysis (Sub-chapter 1: Descriptive Findings)

6.1. Firm Categorisation and Descriptive Information

6.1.1. The Average Values of the Subsidiary-level Variables of Taiwanese Manufacturing Industries Investing in China

Based on Taiwan government regulations, the Taiwanese banking industry and insurance companies are not yet allowed to invest in China; therefore this thesis will focus on the analysis of the manufacturing sector. Taiwan's five major manufacturing industries: the electronic, machinery, chemical, textile, and food industries will be explored in this thesis. The sample of 'The Year 2004 Annual Report: Analysis of the Operations of Taiwanese Subsidiaries investing in China', undertaken by the Chun-Hua Institute for Economic Research (CIER), includes 3,050 companies (investment capital in China over $1 million US dollars) officially registered to the Taiwanese government. The CIER mailed questionnaires directly to the top managers of these companies (headquarters) in Taiwan. After several telephone follow-ups, 981 samples filled out by these top managers were successfully collected with satisfactory data quality and validity. Represented enterprises include both manufacturing and services sector firms.

However, after I check the CIER's dataset and delete all the sampled companies in the services sector (including accommodation and food services, information and communication, real estate, education, professional scientific, and support services industries) or with missing values, 201 valid samples from the survey were obtained, which constitute the basis of the following empirical analysis. Out of the 201 sampled companies, 73 are of the electronic industry (36.3%), 56 are of the machinery industry (27.9%), 52 are of the chemical industry (25.9%), 11 are of the textile industry (5.5%), and 9 are of the food industry (4.4%). The subsidiary-level variables' profiles consist of 8 variables: firm performance (sales per worker), firm's size (share capital), firm's age, local employment ratio, local content ratio,

local capital ratio, Chinese local sales ratio, and R&D intensity. The average values of all variables for every industry are listed on Table 6.1.

From Table 6.1, it can be seen that the average subsidiary age of these five industries investing in China is 6.51 years. The Taiwanese textile industry (subsidiary age: 10.18 years) is the oldest industry in China. In addition, the average local employment ratio of these five industries investing in China is very high: 96.498%. Taiwanese MNEs in China are prone to exploit the abundant, lower-cost local Chinese labour to reduce input costs and increase competitiveness. Although in recent years the wage costs in China (especially in the coastal areas) has gradually been going up, it is still significantly lower than the wage costs in Taiwan. Moreover, as regards local supplier linkage, the average local content ratio of Taiwanese MNE subsidiaries investing in China is 48.79%. The Taiwanese food industry subsidiaries investing in China are shown to have the highest local content ratio, 76.89%.

In the area of local financial linkage, the average local capital ratio of Taiwanese MNE subsidiaries investing in China is 39.57%. This statistical result implies that Taiwanese subsidiaries mainly depend on the capital from Taiwan to support their operations in China. The food industry has the highest local capital ratio (66.67%), followed by the chemical industry (51.73%).

Besides, as regards Chinese local sales ratio, the average value of Chinese local sales ratio is 51.72%. The food industry has the highest Chinese local sales ratio (66.78%), followed by the chemical industry (63.14%). In terms of R&D intensity, the average percentage of R&D expenditure out of the total annual sales (average R&D intensity) of these five Taiwanese manufacturing industry subsidiaries in China is very low: 0.73%, less than 1%. The statistical tests indicate that Taiwanese subsidiaries in China are not enthusiastic about R&D.

Table 6.1 : The Average Values of All Subsidiary-Level Variables (Five Taiwanese Manufacturing Industries Investing in China)

	Sales per worker (Unit: $)	Share capital (Unit: $)	Firm's age (Year)	Local employment ratio (%)	Local content ratio (%)	Local capital ratio (%)	Chinese local sales ratio (%)	R&D intensity (%)	Valid sample
1. Electronic	81,715.7	$4.0745*10^7$	5.51	97.522	36.12	27.16	43.42	0.75	73 (36.3%)
2. Machinery	114,301.1	$2.7351*10^7$	6.75	94.8852	59.00	38.37	51.98	0.66	56 (27.9%)
3. Chemical	148,987.8	$2.0585*10^7$	6.73	96.2007	51.17	51.73	63.14	0.83	52 (25.9%)
4. Textile	26,712.9	$4.1276*10^7$	10.18	98.9097	46.55	48.36	39.18	0.36	11 (5.5%)
5. Food	37,256.4	$2.5998*10^7$	7.44	96.9942	76.89	66.67	66.78	0.89	9 (4.4%)
Mean	103,197.1	$3.1166*10^7$	6.51	96.4980	48.79	39.57	51.72	0.73	201

6.1.2. Firm Categorisation (Local-market-seeking vs. Export-oriented FDI)

Based on the definitions of local-market-seeking MNEs (horizontal FDI strategy) and export-oriented MNEs (vertical FDI strategy), in this thesis, an indicator to categorise two groups of Taiwanese MNE subsidiaries investing in China is developed. The reports by Helpman (1984), Markusen (1984) and Hanson et al. (2001) suggest that the local-market-seeking MNEs (horizontal FDI strategy) are basically trade substitute and their main goal is to expand their market share in the host country's local market.

It is plausible to assume the local-market-seeking MNEs sell their products in the host country's local market with high percentages. In this case, the ratio of local sales in the host country to the subsidiary's total sales is high. On the contrary, the target market for export-oriented MNE subsidiaries (vertical FDI strategy) is not the host country's local market. In other words, they mainly are exporting products to other areas in the world. Consequently, the percentage of local sales in the host country compared to the subsidiary's total sales is low. Let L and S be the local sales in the host country and the subsidiary's total sales, respectively. As L/S increases, a MNE subsidiary contains a greater local-market-seeking (horizontal FDI strategy) nature, while as L/S decreases, a MNE subsidiary becomes more export-oriented (vertical FDI strategy).

Therefore, the next step is to categorise the Taiwanese MNE subsidiary sample data by the measure L/S, in descending order. Industries with relatively higher L/S may contain more local-market-seeking (horizontal FDI strategy) features and industries with relatively lower L/S are expected to show export-oriented (vertical FDI strategy) characteristics. From Table 6.1, in this dataset, the Chinese local sales ratio (L/S) of the food industry, chemical industry, machinery industry, electronic industry, and textile industry is 66.78%, 63.14%, 51.98%, 43.42%, and 39.18% respectively. Thus, in this thesis, I can categorise Taiwanese manufacturing industries investing in China into two groups. The local-market-seeking group includes the food industry, chemical industry, and machinery industry. The valid sample of the local-market-seeking group is 117 firms. On the other hand, the export-

oriented group includes the electronic industry and textile industry. The valid sample of export-oriented group is 84 firms.

Then, in terms of every variable, I conduct a T-test to examine if any statistically significant differences exist between the export-oriented group and the local-market-seeking group. The T-test results are summarised in Table 6.2. From Table 6.2, it can be seen that, from the perspectives of firm performance (sales per worker), firm's size (share capital), firm's age, and R&D intensity, there are no significant differences between the export-oriented group and local-market-seeking group.

However, as regards Chinese local sales ratio, there is a statistically significant difference between the export-oriented group and local-market-seeking group ($p<0.05$). In other words, this T-test result justifies the firm categorisation.

In addition, it can seen that, in terms of local capital ratio, the difference between the export-oriented group and local-market-seeking group is significant ($p<0.01$). This result confirms our assumption that export-oriented Taiwanese subsidiaries investing in China are less likely to create local financial linkages with local Chinese banks and local ally partner firms. This is because cost-reducing requirements often prompt export-oriented MNE subsidiaries to move to new cheap-cost production locations. Moreover, from the perspective of local content ratio, there is also a significant difference between the export-oriented group and local-market-seeking group ($p<0.01$). Taiwanese export-oriented MNE subsidiaries, investing in China, mainly serve international buyers rather than local Chinese customers. In this case, the benefits of input-cost-saving by using local materials/products may be sacrificed in favour of the preservation of excellent product quality for global market sales. In addition, in Table 6.2, the T-test results also show that, in terms of local employment ratio, there is statistically modest difference between the export-oriented group and local-market-seeking group ($p<0.1$).

Examining the differences between local-market-seeking and export-oriented FDI is very important because these two FDI strategies usually have very different implications for the distribution of investment capital abroad. In addition, the strategic goal of local-market-seeking MNE subsidiaries is significantly different

from that of export-oriented MNE subsidiaries. Thus, the extent of exposure to a host country's local business settings between these two types of MNE subsidiaries is also quite different.

Basically, in firm categorisation, it is reasonable to either rank the industries or rank the firms by their percentage of local sales. In this thesis, I rank the industries rather than rank the firms. The approach taken in Taiwan is to look at industries rather than firms. In "The Year 2004 Annual Report: Analysis of the Operations of Taiwanese Subsidiaries Investing in China," the food industry, chemical industry, and machinery industry are classified as the local-market-seeking group. By contrast, the electronic industry and textile industry are classified as the export-oriented group. This government annual report is open to the public (posted on the Taiwanese government's website); the audiences for this annual report include politicians, civil servants, lobbyists, and regular people. In other words, the Taiwanese government classifies the Taiwanese manufacturing companies investing in China by industries, not by firms (because there is no widely accepted criterion). Therefore, the firm categorisation in this thesis reflects the reality.

There is no formal criterion to define export-oriented firms. Foreign companies investing in Africa and exporting more than 10 percent of their sales are categorised as export-oriented firms. (African Foreign Investor Survey 2005, UNIDO). In Canada, 'small and medium-sized enterprise (SME) exporters are defined as businesses...that sold goods or services outside Canada' (Small Business Financing Profiles, 2006, Government of Canada). In Pakistan, an 'export-oriented unit' is defined as a manufacture that 'exports at least 80 percent of its production if established before 1st July, 2007; or 100 percent of its production if established on or after 1st July 2007.' There is no standard level of sales which determine export-oriented or local-market-seeking and so I choose 50% as the level.

In my interviews with the Taiwanese senior managers, some companies which I categorised as of export-oriented FDI strategy are in reality of local-market-seeking FDI strategy in China. However, in this case, the sample size is very small, with only 4 companies for each industry. It is noticeable that in the quantitative analysis, the data collection of this annual report is a large scale survey (the sample consists of

3,050 companies). Therefore, in the quantitative analysis, the firm categorisation is reasonable.

Table 6.2 T-test of Subsidiary-level Variables
(Export-oriented vs. Local-market-seeking Group)

	Export-oriented group	Local-market-seeking group	T-test
Valid sample	84	117	
Sales per worker (Unit: $)	74512.96 (135280.06)	123790.9 (362298.35)	-1.188
Share capital (Unit: $)	$4.0814*10^7$ $(1344*10^8)$	$2.4240*10^7$ $(7.191*10^7)$	1.128
Firm's age (year)	6.12 (3.80)	6.79 (3.26)	-1.352
Local employment ratio (%)	97.70 (3.26)	95.63 (9.87)	1.851^*
Local content ratio (%)	37.49 (33.45)	56.90 (35.37)	-3.925^{***}
Local capital ratio (%)	29.94 (41.28)	46.48 (43.73)	-2.708^{***}
Chinese local sales ratio (%)	42.86 (41.14)	58.08 (43.19)	-2.513^{**}
R&D intensity (%)	0.70 (1.22)	0.75 (1.12)	-0.299

Note (1) Export-oriented group: electronic and textile industry
    (2) Local-market-seeking group: machinery, chemical, and food industry
    (3) Significant levels: * $p<0.1$, ** $p<0.05$, *** $p<0.01$
    (4) Figures in parentheses represent the value of standard deviation

6.1.3. Electronic Industry vs. Chemical Industry

Out of the 201 valid sample companies in the survey of "The Year 2004 Annual Report: Analysis of the Operations of Taiwanese Subsidiaries Investing in China", 73 are from the electronic industry and 52 are from the chemical industry. The variable profile consists of 8 variables: firm performance (sales per worker), firm's size (share capital), firm's age, local employment ratio, local content ratio, local capital ratio, Chinese local sales ratio, and R&D intensity. On this variable profile, I conduct a T-test to examine if there is any statistically significant difference between the electronic and the chemical industry. The T-test results are summarised in Table 6.3. From Table 6.3, it can be seen that, regarding firm performance (sales per worker), firm's size (share capital), and R&D intensity, there are no significant differences between the electronic and the chemical industry.

Nevertheless, in terms of Chinese local sales ratio, the percentages of the electronic industry and the chemical industry are 43.42% and 63.14% respectively. Table 6.3 shows that there is a statistically significant difference between the electronic industry and the chemical industry ($p<0.05$). For Taiwanese investment in China, in essence, the chemical industry is a local-market-seeking industry (higher Chinese local sales ratio), whereas the electronic industry is of export-oriented FDI strategy (lower Chinese local sales ratio).

Moreover, it can be seen that, as regards local capital ratio, the difference between the chemical industry and the electronic industry is statistically significant ($p<0.01$). This result confirms our assumption that the Taiwanese electronic industry (export-oriented FDI) investing in China is less likely to establish local financial linkages with local Chinese financial institutes and local JV ally partner firms. Due to cost-saving requirements, Taiwanese electronic industry MNE subsidiaries investing in China are often likely to move to new cheap-cost production areas (even to Vietnam or other Southeast Asian countries). Moreover, in terms of local content ratio, there is a significant difference between the chemical industry and the electronic industry ($p<0.05$). Taiwanese electronic industry MNE subsidiaries mainly serve international buyers rather than China's domestic customers. Therefore, product-local-content for the benefits of input-cost-saving may be sacrificed in order

to preserve the excellent product quality for international market sales. In China, at present many international chemical industry giants (upstream companies) are remarkably expanding their investment scale. Therefore, for Taiwanese chemical industry MNE subsidiaries (downstream companies) investing in China, the local procurement ratio is likely to be higher. Table 6.3 also shows that, as regards firm's age and local employment ratio, there is a statistically weak difference between the chemical industry and the electronic industry ($p<0.1$).

In summary, as demonstrated in the results of T-test, for Taiwanese investment in China, the chemical industry is local-market-seeking FDI (horizontal-FDI strategy), whereas the electronic industry is export-oriented FDI (vertical-FDI strategy). As discussed before, the strategic motives of local-market-seeking FDI are significantly different from that of export-oriented FDI. Thus, the impact of localisation and R&D intensity on the subsidiary performance of the Taiwanese electronic industry MNEs and chemical industry MNEs investing in China is also likely to be quite different.

Table 6.3: T-Test of Variables (Between the Electronic Industry and the Chemical industry)

	Electronic industry	Chemical industry	T-Test
Valid sample	73	52	
Sales per worker (unit: $)	81715.70 ($1.4348*10^5$)	148987.78 ($4.2659*10^5$)	-1.253
Share capital (unit: $)	$4.0744*10^7$ ($1.4318*10^8$)	$2.0585*10^7$ ($2.7339*10^7$)	1.001
Firm's age (year)	5.51 (3.40)	6.73 (3.52)	-1.956[*]
Local employment ratio (%)	97.52 (3.43)	96.20 (4.57)	1.847[*]
Local content ratio (%)	36.12 (31.87)	51.17 (34.57)	-2.512[**]
Local capital ratio (%)	27.16 (39.81)	51.73 (44.47)	-3.239[***]
Chinese local sales ratio (%)	43.42 (41.72)	63.14 (42.50)	-2.585[**]
R&D intensity (%)	0.75 (1.278)	0.83 (1.279)	-0.317

Note: (1) Significant levels: [*] $p<0.1$, [**] $p<0.05$, [***] $p<0.01$
(2) Figures in parentheses represent the value of standard deviation

6.2. The Descriptive Analysis for Determinants of the Extent of Localisation and R&D Intensity (2002-2005)

Table 6.4 presents the statistics of the five localisation variables (from 2002 to 2005) included in this thesis. It can be seen that, from the perspective of the trend of localisation, from 2002-2005 only the local procurement becomes increasingly embedded in the local business networks in China (the local content ratio appears to be on an increasing trend, though it is based solely on 4 figures). Nevertheless, the other four localisation variables (local employment ratio, Chinese local sales ratio, local capital ratio, and firm's age) from 2002 to 2005 demonstrate a very stable trend.

In these five localisation variables, I do not know the quality of local employment and local content. However, according to the theory of 'production function', this part will also focus on the analysis of the quantities of inputs (the intensity of local linkages). Moreover, in the period from 2002 to 2005, as China's economy grew, it might be expected that the average age of firms would decrease (as more and more new Taiwanese MNE subsidiaries invested in China). However, some long–term Taiwanese MNE subsidiaries moved out of China and invested in other countries (due to the change of their strategic goals or the transformation of company organisation, etc.). Therefore, in Table 6.4, the average firm age manifests a very stable trend.

Table 6.4 The Means of Localisation Variables (from year 2002-2005)

	Local employment ratio (%)	Chinese local sales ratio (%)	Local content ratio (%)	Local capital ratio (%)	Firm's age (year)
2002	96.0011 (0.81)	54.9158 (3.07)	42.6772 (2.50)	33.5444 (2.87)	6.2056 (0.33)
2003	96.7894 (0.34)	53.5762 (3.31)	50.7369 (2.66)	35.6895 (3.44)	6.3642 (0.26)
2004	95.5913 (0.69)	50.74 (3.10)	49.2789 (2.62)	32.9973 (2.94)	6.27 (0.26)
2005	96.6033 (0.34)	54.2183 (3.23)	55.0936 (2.60)	31.0988 (3.24)	6.28 (0.30)

Note: figures in parentheses represent S.E. (Standard Error) values

I compress the above five localisation variables into one single measure of the degree of localisation by the principal component method (PCM), and then estimate the population marginal means of the degree of localisation according to subsidiary type, ownership type and firm's size. These results, shown in Table 6.5, suggest that subsidiary type makes a significant difference to the degree of localisation. It can be seen that the extent of localisation of local-market-seeking Taiwanese MNE subsidiaries is significantly higher than that of export-oriented Taiwanese MNE subsidiaries investing in China. This is true for each year (2002-2005). Moreover, the results of Table 6.5 also demonstrate the effect of ownership type on the extent of localisation, where joint ventures (JV) are shown to be more enthusiastic than wholly owned subsidiaries (WOS) about pursuing local linkages. For MNEs, the choice of ownership type is related to the investment plan for local networks. The more a MNE aims at local business connections, the more likely the MNE will be to select a joint-venture mode of ownership. Thus the degree of localisation of joint-venture (JV) type MNE subsidiaries is greater than that of wholly owned subsidiaries (WOS).

As regards the effect of firm's size on the degree of localisation, in Table 6.5, small-sized firms are shown to create stronger local ties than large-sized firms. Significant differences in local linkages between large-sized and small-sized subsidiaries manifest themselves mainly in local sourcing of materials and components, subcontracting, and joint R&D activities with local institutes. However, due to the lack of resources to overcome the liability of foreignness, small-sized subsidiaries are usually expected to have less autonomy in local networking and rely more heavily on their alliance partner firms in the host county. On the other hand, large-sized MNE subsidiaries, possessing more benefit-producing resources, are usually better able to absorb the risks involved in establishing new relationships and go it alone in the host country. Therefore, I conclude that the degree of localisation of small-sized Taiwanese MNE subsidiaries investing in China is higher than that of large-sized Taiwanese MNE subsidiaries investing in China.

Table 6.5: Estimated Population Marginal Means of Localisation Index (2002-2005)

Localisation index	Subsidiary type		Ownership		Firm's size	
	Export-oriented	Local- market-seeking	JV	WOS	Large	Small
2002	-0.3867	0.2957 [a]	0.2298	-0.1038 [b]	-0.2550	0.1373 [c]
2003	-0.1547	0.2034 [a]	0.0668	-0.0249	-0.1751	0.1367 [c]
2004	-0.3271	0.2483 [a]	0.3272	-0.1233 [b]	-0.1878	0.1174 [c]
2005	-0.3742	0.3389 [a]	0.3983	-0.1830 [b]	-0.1253	0.0953

[a] Export-oriented firms compared with local-market-seeking firms are significant at 5% level

[b] JV firms compared with WOS firms are significant at 5% level

[c] Large-sized firms compared with small-sized firms are significant at 5% level

In the area of R&D activities, as discussed before, China's current intellectual property right (IPR) environment is not yet well-established. Although MNEs are finding business opportunities in China, there are many potential pitfalls foreign investors should notice, including issues relevant to IPRs' infringement.

In general, it is very difficult to precisely measure the R&D expenditures of a company. However, in this thesis, since the dataset originates from government annual surveys, I might expect the definition of R&D intensity to be consistent over years. Table 6.6 lists the estimated population marginal means of R&D intensity. The statistical results show that, for Taiwanese MNE subsidiaries investing in China, from 2002 to 2005 the R&D intensity is very low. After all, despite China's astonishingly high economic growth and exploding domestic market in recent years, Taiwanese MNEs have made risk assessments and do not intend to put many resources for R&D activities in China. Since entering the World Trade Organisation (WTO), China has improved its legal system and changed its IPR related laws to conform to the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs). Nevertheless, 'there are several factors that undermine enforcement measures, including China's reliance on administrative instead of criminal measures to combat IPR infringements, corruption and local protectionism at the provincial levels, limited resources and training available to enforcement officials, and lack of

public education regarding the economic and social impact of counterfeiting and piracy.' 'The best protection is prevention.' (US Department of Commerce, 2003) Consequently, in order to prevent IPRs' piracies, Taiwanese MNEs always keep core production processes out of China and conduct R&D activities in Taiwan.

In addition, the results shown in Table 6.6 indicate that, from 2002 to 2005, subsidiary type, ownership type, and the firm's size respectively do not make a statistically significant difference to R&D intensity. This is true for almost each year (except the effect of firm's size in 2004). Thus I suggest that overall, Taiwanese MNEs investing in China are keen to seek basic resources, but much less enthusiastic about R&D activities. More importantly, this is applicable to nearly all types of Taiwanese firms, including local-market-seeking, export-oriented, WOS, JV, large-sized, and small-sized subsidiaries. In summary, Taiwanese subsidiaries are extremely cautious about knowledge resource exchanges with local Chinese institutes. Besides, I also use the R&D intensity box-plot (from 2002 to 2005) to demonstrate the feature and trends (Figure 6.1).

Table 6.6: Estimated Population Marginal Means of R&D Intensity (year 2002-2005)

unit : %

R&D intensity	Grand mean	MNE type		Ownership		Firm's size	
		Export-oriented	Local- market-seeking	JV	WOS	Large	Small
2002	1.6833	1.6154	1.7353	1.5893	1.7258	1.9048	1.5641
2003	1.1975	1.1739	1.2286	1.5682	1.0593	0.8732	1.4505
2004	0.66	0.66	0.67	0.62	0.68	0.87	0.52[a]
2005	0.9444	0.9091	0.9765	1.0784	0.8829	0.8714	1.000

[a] Large-sized firms compared with small-sized firms are significant at 5% level

Figure: 6.1 R&D Intensity Box-plot (from 2002 to 2005)
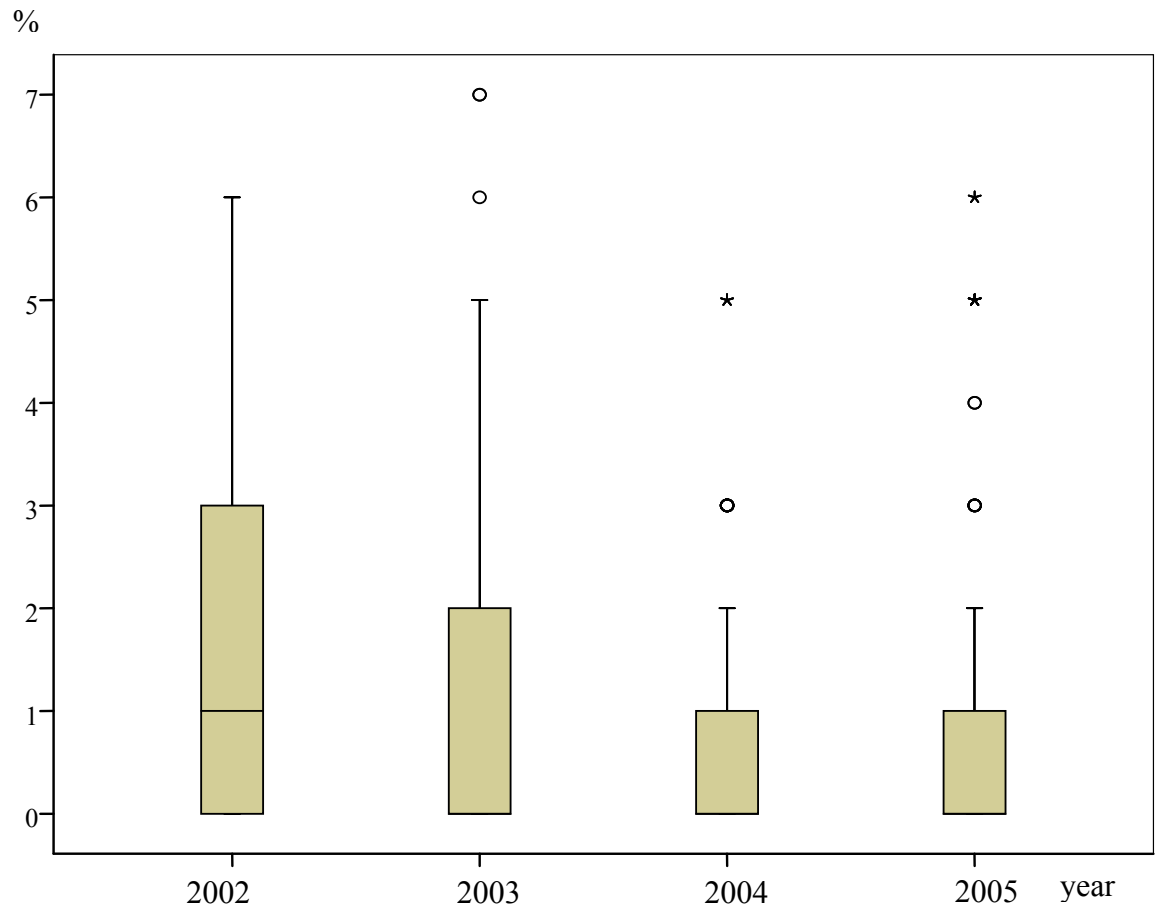
Chapter 6: The Empirical Analysis (Sub-chapter 2: Hypotheses Tests)

6.3. Hypotheses Tests for the Local-market-seeking Group

6.3.1. Empirical results (OLS regression model)

For Taiwanese local-market-seeking MNE subsidiaries investing in China, local business networks such as local supplier linkages, local sales linkages, local worker linkages, local financial linkages, and the Chinese governmental policy are all likely to affect the behaviour of MNE subsidiaries, the configuration of their business activities, and their profit level. One of the key attributes in this empirical model is that I incorporate several subsidiary-specific indicators which measure the degree and scope of localisation and R&D intensity. Table 6.7 provides the definitions of variables and the predicted signs (firm performance: sales per worker). All hypotheses are developed in chapter 4.

The local-market-seeking group consists of the machinery industry, chemical industry, and food industry. The valid sample of local-market-seeking group is 117 firms. Table 6.8 presents the variable means, standard deviations, and correlation coefficients between the dependent, independent, and control variables. None of the variables included in the same model has a correlation coefficient that exceeds 0.401. The correlation matrix suggests a low degree of correlation between these variables, and I could employ them all in the statistical model.

I carry out a hierarchical OLS regression analysis in order to assess the impact of localisation and R&D intensity on the firm performance (labour productivity) of local-market-seeking Taiwanese MNE subsidiaries investing in China. The multicollinearity is checked by testing the VIF values of all independent and control variables in the regression model. Table 6.9 reports our empirical results. The VIF values, in Model 3, are all less than 10, indicating the absence of multicollinearity (Belsely et al., 1980).

Table 6.7: Measures and Predicted Signs (Local-market-seeking Industries)

Variables	Measures	Predicted signs
Dependent variable		
Firm performance (labour productivity)	Ln(Sales per worker)	
Independent variables		
Firm's age	Years of the subsidiary investing in China	+
Local employment ratio	Local Chinese workers/total workers	-
Local content ratio	Procurement in China/total procurement of raw materials, components, and intermediate products	*
Local capital ratio	Local Chinese capital/total working capital (except share capital)	+
Chinese local sales ratio	Local Chinese market sales/total sales	+
R&D intensity	R&D exp./total annual sales	-
Control variables		
Firm's size	Ln(Share capital)	*
Machinery	Machinery industry=1, Others =0	*
Chemical	Chemical industry=1, Others =0	*
Ownership	Joint Venture (JV) =1, Wholly Owned Subsidiary (WOS) =0	*

Note: (1) In the questionnaire, sales are reported in Chinese yen or new Taiwanese dollars. They are converted to US dollars.

(2) Local capital ratio is regarded as a proxy for the degree of political support from the Chinese government.

In Table 6.9, Model 1 examines the relationship between the control variables (firm's size, industry dummy variable, and ownership type dummy variable) and firm performance (labour productivity). The variance explained by this model is 0.039, suggesting 3.9 percent of the variance of firm performance could be explained by these three control variables. In Model 1, only firm's size is modestly positively related to the firm performance ($p < 0.1$). However, the statistical results from other

regression models (Model 2 and Model 3) show that the relationship between firm's size and firm performance (labour productivity) is not significant. In addition, the impact of the industry dummy variable and the impact of the ownership type dummy variable respectively on the firm performance is not significant.

Moreover, in Model 2, I employ five localisation variables (firm's age, local employment ratio, local content ratio, local capital ratio, and Chinese local sales ratio) in addition to the control variables. Model 2 reaches statistical significance (F=4.013, p<0.01) and accounts for 25.2 percent of the variance of firm performance. Compared to those of Model 1, the localisation variables explain an extra 21.3 percent of the variance for firm performance (the increase in R^2 is 0.213).

Furthermore, I first estimate the complete effect model, which includes the impacts of control variables, localisation variables, and R&D intensity on firm performance (Model 3). Model 3 is also statistically significant (F=5.696, p<0.01) and accounts for a high percentage of the variance for firm performance (35%). The high R^2 value (0.35) indicates that our complete effect model (Model 3), including control variables, localisation variables, and R&D intensity, is able to explain an important part of firm performance.

The empirical result of the complete effect model (Model 3) demonstrates that, for these five localisation variables, a firm's age is significantly positively associated with its firm performance (p<0.05). This result supports hypothesis 1-a. Besides, firm performance varies significantly positively with the local capital ratio (p<0.01). This result also supports hypothesis 5-a. However, the relationship between the local employment ratio and firm performance (labour productivity) is significantly negative (p<0.01). Hypothesis 3-a is supported. For the other two localisation variables (local content ratio and Chinese local sales ratio), I see no significant direct impacts from the regression of firm performance (sales per worker) on them. In other words, the statistical results do not support hypothesis 4-a. Overall, the Model 3 regression results support all the hypotheses (hypothesis 1-a to hypothesis 5-a) about the impact of the localisation variable on the subsidiary-level firm performance except hypothesis 4-a.

Table 6.8 : Descriptive Statistics and Correlation Coefficients (Local-market-seeking Industries)

Variables	Mean	S.D.	1	2	3	4	5	6	7
1. Labour productivity	10.43	1.77							
2. Size	15.66	1.59	0.164**						
3. Firm's Age	6.79	3.26	0.226***	0.353***					
4. Local employment ratio	95.63	9.87	-0.225***	0.087	0.072				
5. Local content ratio	56.90	35.37	0.028	-0.179**	0.118	-0.006			
6. Local capital ratio	46.48	43.73	0.340***	0.221***	0.329***	0.150*	0.282***		
7. Chinese local sales ratio	58.08	43.19	0.233***	-0.073	0.152**	-0.140*	0.204**	0.401***	
8. R& D intensity	0.75	1.12	-0.295***	0.039	0.062	-0.165**	-0.039	-0.106	-0.176**

Notes: (1) Significant levels: *p<0.1, **p<0.05, ***p<0.01
    (2) Local-market-seeking industries: the machinery, chemical, and food industry
    (3) Labour productivity: Ln(Sales per worker), Size: Ln(Share capital)
    (4) Valid sample=117

Table 6.9 Hierarchical Regression Analysis of the Impact of Localisation and R&D
Intensity on Firm Performance (Local-market-seeking Industries)

Variables	Model 1		Model 2		Model 3	
	Dependent variable: Labour productivity =Ln(Sales per worker)					
	Estimated coefficient	t-value	Estimated coefficient	t-value	Estimated coefficient	t-value
Constant	6.960	3.919***	11.532	4.821***	13.418	5.856***
Size	0.166	1.721*	0.089	0.919	0.082 (1.346)	0.898
Chemical	0.206	1.139	0.229	1.380	0.220 (3.946)	1.415
Machinery	0.159	0.873	0.218	1.309	0.166 (3.992)	1.061
JV	-0.018	-0.188	-0.127	-1.345	-0.104 (1.275)	-1.179
Firm's age			0.145	1.494	0.182 (1.355)	1.993**
Local employment ratio			-0.260	-2.966***	-0.331 (1.154)	-3.936***
Local content ratio			-0.056	-0.605	-0.054 (1.228)	-0.627
Local capital ratio			0.347	3.330***	0.327 (1.556)	3.350***
Chinese local sales ratio			0.085	0.875	0.008 (1.413)	0.083
R& D intensity					-0.329 (1.112)	-3.979***
F	1.140		4.013***		5.696***	
R²	0.039		0.252		0.350	
Δ R²			0.213		0.098	

Notes: (1) Significant levels: *p<0.1, **p<0.05, ***p<0.01
(2) Local-market-seeking Industries: the machinery, chemical, and food industry,
Valid sample=117
(3) Figures in parentheses represent VIF values
(4) The food industry and WOS (Wholly Owned Subsidiary) are the reference
groups

In addition, compared to that of Model 2, the R&D intensity variable accounts for an extra 9.8 percent of the variance for firm performance (the increase in R^2 is 0.098). The statistical results of Model 3 suggest that the impact of R&D intensity on firm performance is significantly negative (Hypothesis 6-a is supported).

6.3.2. Empirical results (binominal logit regression model)

I conduct a binomial logit regression model to explore the effect of localisation and R&D intensity on the firm performance (profits) of local-market-seeking Taiwanese MNE subsidiaries investing in China. In the binominal logit model, the dependent variable (firm performance: profits) is a 0-1 variable. Table 6.10 reports the definitions of variables and the predicted signs. The statistical results, in Table 6.11, of the binomial logit analysis identify the conditions under which Taiwanese local-market-seeking MNE subsidiaries make profits in China (i.e., making profits=1, losing money=0). Model 1 presents a baseline specification consisting of the control variables (firm's size, industry dummy variable, and ownership type dummy variable). Model 2 augments this baseline specification with localisation variables and R&D intensity, and reaches high statistical significance ($p<0.01$). The table also shows a log-likelihood value for each model k ($L(\beta_k)$), where $k=1,2$) as well as a likelihood ratio test statistic (i.e., $\chi^2{}_{d.f.1-d.f.2} = -2 [L(\beta_1)-L(\beta_2)]$), which suggests that Model 2 provides greater explanatory power than the model consisting only of the control variables ($p<0.01$).

Table 6.10: Measures and Predicted Signs (The Local-market-seeking Group)

Variables	Measures	Predicted signs
Dependent variable		
Firm performance (Profit)	Profit: 1 means making profits, 0 means losing money	
Independent variables		
Firm's age	Years of the subsidiary investing in China	+
Local employment ratio	Local Chinese workers/total workers	+
Local content ratio	Procurement in China/total procurement of raw materials, components, and intermediate products	+
Local capital ratio	Local Chinese capital/total working capital (except share capital)	+
Chinese local sales ratio	Local Chinese market sales/total sales	+
R&D intensity	R&D exp./total sales	-
Control variables		
Firm's size	Ln(Share capital)	*
Machinery	Machinery industry=1, others =0	*
Chemical	Chemical industry=1, others =0	*
Ownership	Joint Venture (JV) =1, Wholly Owned Subsidiary (WOS) =0	*

Note: (1) In the questionnaire, sales are reported in Chinese yen or new Taiwanese dollars.
They are converted to US dollars.
(2) Local capital ratio is regarded as a proxy for the degree of political support
from local Chinese government.
(3) Positive coefficients indicate that increases in the variable tend to increase
the likelihood that the Taiwanese firm makes profits in China

Table 6.11: Binomial Logit Regression Analysis of the Impact of Localisation and R&D Intensity on Firm Performance (The Local-market-seeking Group)

	Model 1		Model 2	
	dependent variable: profit= 1 means making profits, profit= 0 means losing money		dependent variable: profit= 1 means making profits, profit= 0 means losing money	
	Estimated coefficient	Standard Error	Estimated coefficient	Standard Error
Constant	-3.598	2.212	-10.806	5.685
Size	0.233	0.135	0.048	0.166
Chemical	0.568	0.755	0.562	0.825
Machinery	0.551	0.752	0.768	0.832
JV	0.211	0.439	-0.393	0.523
Firm's age			0.080	0.079
Local employment ratio			0.100	0.054
Local content ratio			-0.015^{**}	0.007
Local capital ratio			0.017^{**}	0.007
Chinese local sales ratio			0.000	0.006
R& D intensity			0.341	0.205
x^2	4.429		24.006^{***}	
Log likelihood, $L(\beta_k)$	-73.568		-63.779	
$-2[L(\beta_1)-L(\beta_2)]$			19.578^{***}	

Notes: (1) Significant levels: * p<0.1, ** p<0.05, *** p<0.01
    (2) The local-market-seeking group: the machinery, chemical, and food industry, valid sample=117
    (3) Positive coefficients indicate that increases in the variable tend to increase the likelihood that the Taiwanese firm makes profits in China
    (4) The food industry and WOS (Wholly Owned Subsidiary) are the reference groups

It can be seen from Table 6.11 that, for Taiwanese local-market-seeking MNE subsidiaries investing in China, the impact of the firm's age and the impact of the local employment ratio respectively on the firm performance (profits) are not significant. Therefore, hypothesis 1-a and hypothesis 3-a are not supported. Moreover, the empirical results in Table 6.11 show that the higher local content ratio will have a negative effect on the firm performance (profits). Therefore, hypothesis 2-a does not receive empirical support either. On the perspective of local sales linkage, the fact that the parameter estimate for the Chinese local sales ratio variable is insignificant indicates that the Chinese local sales do not contribute to the subsidiary-level firm performance (profits) of Taiwanese local-market-seeking MNEs investing in China. The statistical result does not support hypothesis 4-a.

In addition, as regards the R&D activities, the statistical results show that the impact of R&D intensity on firm performance is not significant. This is also inconsistent with the previous propositions. Therefore, Hypothesis 6-a does not receive empirical support either.

6.4. Hypotheses Tests for the Export-oriented Group

In this empirical analysis, several subsidiary-specific variables are included to test several hypotheses of the impact of localisation and R&D intensity on the firm performance of Taiwanese export-oriented MNE subsidiaries investing in China. Table 6.12 provides the definitions of variables and the predicted signs (firm performance: sales per worker). All hypotheses are developed in chapter 4.

6.4.1. Empirical results (OLS regression model)

The export-oriented group includes the electronic industry and textile industry. The valid sample of the export-oriented group is 84 firms. Table 6.13 reports the variable means, standard deviations, and correlation coefficients between the dependent, independent, and control variables. None of the variables used in these models has a correlation coefficient that exceeds 0.3. The correlation matrix suggests a low degree of correlation between these variables, and I include them all in the regression analysis.

In order to assess the impact of localisation and R&D intensity on the firm performance (labour productivity) of export-oriented Taiwanese MNE subsidiaries investing in China, a hierarchical OLS regression analysis is conducted. The multicollinearity is checked by testing the VIF (Variance Inflation Factor) values of all independent and control variables in the regression model. Table 6.14 presents the empirical results. The VIF values, in Model 3, are all less than 10, suggesting that multicollinearity is absent (Belsely et al., 1980).

Table 6.12: Measures and Predicted Signs (Export-oriented Industries)

Variables	Measures	Predicted signs
Dependent variable		
Firm performance (labour productivity)	Ln(Sales per worker)	
Independent variables		
Firm's age	Years of the subsidiary investing in China	*
Local employment ratio	Local Chinese workers/total workers	*
Local content ratio	Procurement in China/total procurement of raw materials, components, and intermediate products	*
Local capital ratio	Local Chinese capital/total working capital (except share capital)	*
Chinese local sales ratio	China's local market sales/total sales	+
R&D intensity	R&D exp./total sales	*
Control variables		
Firm's size	Ln(Share capital)	+
Industry	Electronic industry=1, Textile industry =0	*
Ownership	Joint venture (JV) =1, Wholly owned subsidiary (WOS) =0	*

Note: (1) In the questionnaire, sales are reported in Chinese RMB or new Taiwanese dollars. They are converted to US dollars.
(2) All variables are subsidiary-level variables
(3) Local capital ratio is regarded as a proxy for the degree of political support from the Chinese government.

Originally I include both firm's age and (firm's age)² variables in the empirical models in order to check if a curvilinear relationship exists between firm performance and firm's age. However, in the statistical results, VIF value is larger than 10. Therefore, only firm's age is employed in the empirical models.

In Table 6.14, Model 1 examines the relationship between the control variables (firm's size, industry dummy variable, and ownership type dummy variable) and firm performance (labour productivity). The variance explained by this model is 0.07, indicating that 7 percent of the variance of firm performance could be explained by these three control variables. In Model 1, only firm's size is positively related to the firm performance and this positive relationship is a modest one ($p < 0.1$). The statistical results from other regressions (Model 2 and Model 3) show a strong, significant positive relationship between firm's size and firm performance ($p < 0.05$). However, neither the effect of industry dummy variable nor the effect of ownership type dummy variable on the firm performance is significant.

In Model 2, besides control variables, I also include five localisation variables (firm's age, local employment ratio, local content ratio, local capital ratio, and Chinese local sales ratio). Model 2 reaches statistical significance ($F = 2.124$, $p < 0.05$) and accounts for 18.5 percent of the variance of firm performance. Compared to Model 1, the localisation variables explain an extra 11.5 percent of the variance of firm performance (the change in R^2 is 0.115). The empirical result of Model 2 suggests that, for these five localisation variables, only Chinese local sales ratio is significantly positively associated with firm performance ($p < 0.01$). However, for the other four localisation variables (firm's age, local employment ratio, local content ratio, and local capital ratio), I see no significant direct effects from the regression of firm performance (sales per worker) on them. Overall, the Model 2 regression results support Hypotheses 1-b to 5-b.

To test Hypothesis 6-b, I first estimate the complete effect model, which includes the effects of control variables, localisation variables, and R&D intensity on firm performance (Model 3). Again, the model results show consistent relationships between localisation variables and firm performance, and firm's size also shows a

significant positive effect on firm performance (p<0.05). Model 3 reaches weak statistical significance (F=1.898, p<0.1) and accounts for 18.8 percent of the variance of firm performance. The low R^2 value (0.188) indicates that even our complete main effect model, including control variables, localisation variables, and R&D intensity, still explains only a minor part of firm performance.

Table 6.13: Descriptive Statistics and Correlation Coefficients (Export-oriented Industries)

Variables	Mean	S.D.	1	2	3	4	5	6	7
1. Labour productivity	9.93	2.07							
2. Size	15.75	1.72	0.186**						
3. Firm's age	6.12	3.80	-0.085	0.204**					
4. Local employment ratio	97.70	3.26	0.005	0.050	0.235**				
5. Local content ratio	37.49	33.45	-0.015	0.008	0.189**	0.050			
6. Local capital ratio	29.94	41.28	0.000	0.197**	0.087	0.167*	-0.227**		
7. Chinese local sales ratio	42.86	41.14	0.296***	-0.120	-0.144*	-0.190**	0.106	0.018	
8. R& D intensity	0.70	1.22	-0.038	0.008	0.070	-0.259***	0.265***	-0.086	0.115

Notes: (1) Significant levels: *$p<0.1$, **$p<0.05$, ***$p<0.01$
(2) Export-oriented industries: the electronic and textile industry
(3) Labour productivity: Ln(Sales per worker), Size: Ln(Share capital)
(4) Valid sample=84

Table 6.14: Hierarchical Regression Analysis of the Impact of Localisation and R&D Intensity on Firm Performance (Export-oriented Industries)

Variables	Model 1		Model 2		Model 3	
	Dependent variable: Labour productivity =Ln(Sales per worker)					
	Estimated coefficient	t-value	Estimated coefficient	t-value	Estimated coefficient	t-value
Constant	4.999	2.227**	-3.059	-0.418	-2.073	-0.272
Firm's size	0.211	1.934*	0.269	2.463**	0.270 (1.101)	2.453**
Electronic	0.157	1.439	0.127	1.088	0.136 (1.282)	1.150
JV	0.114	1.054	0.125	1.178	0.121 (1.038)	1.131
Firm's age			-0.057	-0.469	-0.047 (1.384)	-0.383
Local employment ratio			0.109	0.983	0.092 (1.233)	0.792
Local content ratio			-0.051	-0.460	-0.035 (1.233)	-0.305
Local capital ratio			-0.077	-0.677	-0.075 (1.206)	-0.650
Chinese local sales ratio			0.340	3.121***	0.343 (1.097)	3.128***
R& D intensity					-0.059 (1.221)	-0.506
F	1.995		2.124**		1.898*	
R²	0.070		0.185		0.188	
Δ R²			0.115		0.003	

Notes: (1) Significant levels: *p<0.1, **p<0.05, ***p<0.01
(2) Export-oriented industries: the electronic and textile industry, valid sample=84
(3) Figures in parentheses represent VIF values
(4) The textile industry and WOS (wholly owned subsidiary) are the reference groups

Moreover, compared to that of Model 2, the R&D intensity variable only explains an extra 0.3 percent of the variance for firm performance (the change in R^2 is 0.003). The statistical results show that the impact of R&D intensity on firm performance is not significant (Hypothesis 6-b is supported).

In Table 6.17, I compare the OLS regression model results of the local-market-seeking group with that of the export-oriented group. The discussion will be presented in chapter 7.

6.4.2. Empirical results (binominal logit regression model)

I have conducted a binomial logit analysis in order to analyse the impact of localisation and R&D intensity on the firm performance (profits) of export-oriented Taiwanese MNE subsidiaries investing in China. In the binominal logit model, the dependent variable (firm performance: profit) is a 0-1 variable indicating whether the respondent firm makes profits in China or not. Table 6.15 provides the definitions of variables and the predicted signs (firm performance: profits).

Table 6.16 provides results for the binomial logit regression models identifying the conditions under which Taiwanese export-oriented MNE subsidiaries make profits in China (i.e., making profits=1, losing money=0). Model 1 provides a baseline specification consisting of the control variables (firm's size, industry dummy variable, and ownership type dummy variable). Model 2 augments this baseline specification with the theoretical variables of interest and reaches highly statistical significance (p<0.01). The table also shows a log-likelihood value for each model k (L(β_k), where k=1,2) as well as a likelihood ratio test statistic (i.e., $\chi^2_{d.f.1-d.f.2}$= -2 [L(β_1)-L(β_2)]), which demonstrates that Model 2 provides greater explanatory power than the model consisting only of the controls (p<0.01).

Table 6.15: Measures and Predicted Signs (Export-oriented Industries)

Variables	Measures	Predicted signs
Dependent variable		
Firm performance (Profit)	Profit: 1 means making profits, 0 means losing money	
Independent variables		
Firm's age	Years of the subsidiary investing in China	*
Local employment ratio	Local Chinese workers/total workers	+
Local content ratio	Procurement in China/total procurement of raw materials, components, and intermediate products	+
Local capital ratio	Local Chinese capital/total working capital (except share capital)	*
Chinese local sales ratio	China's local market sales/total sales	+
R&D intensity	R&D exp./total sales	*
Control variables		
Firm's size	Ln(Share capital)	+
Electronic	Electronic industry=1, Textile industry =0	*
Ownership	Joint venture (JV) =1, Wholly owned subsidiary (WOS) =0	*

Note: (1) In the questionnaire, sales are reported in Chinese yen or new Taiwanese dollars.
They are converted to US dollars.
(2) All variables are subsidiary-level variables
(3) Local capital ratio is regarded as a proxy for the degree of political support
from local Chinese government.
(4) Positive coefficients indicate that increases in the variable tend to increase
the likelihood that the Taiwanese subsidiary makes profits in China

The statistical results presented in Table 6.16 show that Taiwanese export-oriented MNE subsidiaries are more likely to make profits in China as their firm's age increases ($p<0.01$). However, hypothesis 1-b is not supported. Moreover, the empirical results in Table 6.16 indicate that the impact of local content ratio and the impact of local employment ratio respectively on the firm performance (profits) are insignificant. Therefore, hypothesis 2-b and hypothesis 3-b don't receive empirical support either. On the perspective of local sales linkage, the fact that the parameter estimate for the Chinese local sales ratio variable is insignificant suggests that the Chinese local sales do not contribute to the subsidiary-level firm performance (profits) of Taiwanese export-oriented MNEs. The statistical results do not support hypothesis 4-b. In addition, regarding the control variables, the statistical results show that the impact of firm's size on the firm performance is not significant. This is not consistent with our previous findings either.

Table 6.16 Binomial Logit Regression Analysis of the Impact of Localisation and R&D Intensity on Firm Performance (Export-oriented Industries)

	Model 1		Model 2	
	Dependent variable: Profit (=1 means making profits, =0 means losing money)			
	Estimated coefficient	Standard Error	Estimated coefficient	Standard Error
Constant	0.802	2.284	-6.325	9.967
Size	0.003	0.133	-0.179	0.183
Electronic	-0.922	0.728	0.593	0.994
JV	0.924	0.724	1.068	0.966
Firm's age			0.370***	0.105
Local employment ratio			0.063	0.096
Local content ratio			-0.005	0.009
Local capital ratio			0.011	0.007
Chinese local sales ratio			0.002	0.006
R& D intensity			0.190	0.245
x^2	3.721		27.52***	
Log likelihood, $L(\beta_k)$	-56.1495		-44.25	
-2 $[L(\beta_1)-L(\beta_2)]$			23.799***	

Notes: (1) Significant levels: *p<0.1, **p<0.05, ***p<0.01
　　　(2) Export-oriented industries: the electronic and textile industry,
　　　　valid sample= 84
　　　(3) Positive coefficients indicate that increases in the variable tend to increase
　　　　the likelihood that the Taiwanese subsidiary makes profits in China
　　　(4) The textile industry and WOS (Wholly owned subsidiary) are the
　　　　reference groups

Table 6.17: Hierarchical OLS Regression Analysis of the Impact of Localisation and R&D Intensity on the Subsidiary-level Firm Performance
Dependent variable: Labour productivity =Ln(Sales per worker)

Variables	Model 1		Model 2		Model 3	
	Export-oriented group	Local-market-seeking group	Export-oriented group	Local-market-seeking group	Export-oriented group	Local-market-seeking group
Constant	4.999 (2.227)**	6.960 (3.919)***	-3.059 (-0.418)	11.532 (4.821)***	-2.073 (-0.272)	13.418 (5.856)***
Size	0.211 (1.934)*	0.166 (1.721)*	0.269 (2.463)**	0.089 (0.919)	0.270 (2.453)**	0.082 (0.898)
JV	0.114 (1.054)	-0.188 (-0.188)	0.125 (1.178)	-0.127 (-1.345)	0.121 (1.131)	-0.104 (-1.179)
Electronic	0.157 (1.439)		0.127 (1.088)		0.136 (1.150)	
Machinery		0.159 (0.873)		0.218 (1.309)		0.166 (1.061)
Chemical		0.206 (1.139)		0.229 (1.380)		0.220 (1.415)
Firm's age			-0.057 (-0.469)	0.145 (1.494)	-0.047 (-0.383)	0.182 (1.993)**
Local employment ratio			0.109 (0.983)	-0.260 (-2.966)***	0.092 (0.792)	-0.331 (-3.936)***
Local content ratio			-0.051 (-0.460)	-0.056 (-0.605)	-0.035 (-0.305)	-0.054 (-0.627)
Local capital ratio			-0.077 (-0.677)	0.347 (3.330)***	-0.075 (-0.650)	0.327 (3.350)***
Chinese local sales ratio			0.340 (3.121)***	0.085 (0.875)	0.343 (3.128)***	0.008 (0.083)
R& D intensity					-0.059 (-0.506)	-0.329 (-3.979)***
F	1.995	1.140	2.124**	4.013***	1.898*	5.696***
R²	0.070	0.039	0.185	0.252	0.188	0.350
Δ R²			0.115	0.213	0.003	0.098

Notes: (1) Significant levels: *p<0.1, **p<0.05, ***p<0.01 ; figures in parentheses represent t-values
(2) The export-oriented group: the electronic and textile industry (84 firms); the local-market-seeking group: the machinery, chemical, and food industry (117 firms)
(3) The reference industry of the export-oriented group is the textile industry; the reference industry of the local-market-seeking group is the food industry
(4) Wholly owned subsidiary (WOS) is the reference ownership type

6.5. Hypotheses Tests for the Taiwanese Electronic Industry and Chemical Industry Firms Investing in China

Since China's accounting-based indicator is not trustworthy and the binomial logit regression models (firm performance: profits) do not yield meaningful results, in this part I will focus on the OLS regression analysis (firm performance: labour productivity). The hypotheses are developed in Chapter 4 (**3.2. chemical industry vs. electronic industry**). In addition, Table 6.18 presents the definitions of variables and the predicted signs. In this thesis, the valid sample of Taiwanese electronic industry MNE subsidiaries (export-oriented FDI) investing in China is 73 firms. The valid sample of Taiwanese chemical industry MNE subsidiaries (local-market-seeking FDI) investing in China is 52 firms.

6.5.1. Empirical results

Table 6.19 presents the correlation coefficients between the dependent, independent, and control variables. Above the diagonal is electronic industry; below the diagonal is chemical industry. In the electronic industry, none of the variables included in the empirical part has a correlation coefficient that exceeds 0.352. Moreover, in the chemical industry, none of the variables included in the empirical part has a correlation coefficient that exceeds 0.464. The correlation matrix suggests a low degree of correlation between these variables and so I could employ them all in the statistical models.

In this empirical analysis, I conduct hierarchical OLS regression models to compare the impact of localisation and R&D intensity on the subsidiary-level firm performance (labour productivity) of Taiwanese chemical industry MNEs with Taiwanese electronic industry MNEs investing in China. As noted before, the multicollinearity is checked by testing the VIF values of all independent and control variables in the regression models. In this empirical study, the VIF values are all less than 10, suggesting that multicollinearity does not lead to errors in our estimation (Belsely et al., 1980).

Table 6.18: Measures and Predicted signs (the Electronic industry v.s. the Chemical industry)

Variables	Measures	Predicted signs (electronic industry)	Predicted signs (chemical industry)
Dependent variable			
Firm performance (labour productivity)	Ln(Sales per worker)		
Independent variables			
Firm's age	Years of the subsidiary investing in China	*	+
Local employment ratio	Local Chinese workers/total workers	*	-
Local content ratio	Procurement in China/total procurement	*	*
Local capital ratio	Local Chinese capital/total working capital (except share capital)	*	+
Chinese local sales ratio	Local Chinese market sales/total sales	+	+
R&D intensity	R&D exp./total annual sales	*	-
Control variables			
Firm's size	Ln(Share capital)	+	*
Ownership	Joint Venture (JV) =1, Wholly Owned Subsidiary (WOS) =0	*	*

Note: (1) In the questionnaire, sales are reported in Chinese RMB or new Taiwanese dollar. They are converted to US dollar.
(2) Local capital ratio is regarded as a proxy for the degree of political support from local Chinese government.

Table 6.20 reports our empirical results. First, for Taiwanese chemical industry MNE subsidiaries (local-market-seeking FDI strategy) investing in China, in Table 6.20, Model 1 examines the relationships between the control variables (firm's size and the ownership type dummy variable) and firm performance (labour productivity). The variance explained by Model 1 is 0.058, suggesting 5.8 percent of the variance for firm performance could be explained by these two control variables. Besides, the relationship between the ownership-type dummy variable and the subsidiary-level firm performance is not significant. A firm's size is modestly positively related to

firm performance (p<0.1). However, the statistical results from other regressions (Model 2 and Model 3) demonstrate that neither the impact of the ownership type dummy variable nor that of the firm's size on the subsidiary performance is significant.

Nevertheless, for Taiwanese chemical industry MNE subsidiaries (local-market-seeking FDI) investing in China, Model 2 reaches statistical significance (F=2.457, p<0.05) and accounts for 28.1 percent of the variance for firm performance. Compared to that of Model 1, these five localisation variables explain an extra 22.3 percent of the variance for firm performance (the increase in R^2 is 0.223).

Similarly, to test Hypothesis 5-a, I conduct the complete model, which includes the impact of control variables, localisation variables, and R&D intensity on firm performance (Model 3). It can be seen that Model 3 is also statistically significant (F=4.085, p<0.01) and explains a high percent of the variance for firm performance (43.2%). The high R^2 value (0.432) suggests that our complete effect model (Model 3) is able to explain an important part of the subsidiary-level firm performance (sales per worker).

Moreover, the empirical result of Model 3 shows that, for these five localisation variables, firm performance varies significantly positively with local capital ratio (p<0.01). This result supports hypothesis 4-a. The relationship between local employment ratio and firm performance (sales per worker) is significantly negative (p<0.05). Hypothesis 2-a is supported. However, on the other three localisation variables (firm's age, local content ratio, and Chinese local sales ratio), I see no significant direct impact from the regression of firm performance. In other words, the statistical results support neither hypothesis 1-a nor hypothesis 3-a. Overall, except hypothesis 1-a and hypothesis 3-a, the Model 3 regression results support all the hypotheses (hypothesis 1-a to hypothesis 4-a) about the impact of the localisation variable on the subsidiary-level firm performance (sales per worker).

Table 6.19: Correlation Coefficients (the Electronic industry vs. the Chemical industry)

Variables	1	2	3	4	5	6	7	8
1. Labour productivity	1.000	0.067	0.001	0.046	-0.041	0.075	0.275***	-0.048
2. Size	0.242**	1.000	0.249**	0.039	-0.063	0.195**	-0.236**	0.042
3. Firm's Age	0.171	0.464**	1.000	0.239**	0.238**	0.008	-0.159*	0.141
4. Local employment ratio	-0.136	0.093	0.037	1.000	0.034	0.140	-0.186*	-0.240**
5. Local content ratio	0.005	-0.159	0.115	0.220*	1.000	-0.283***	0.042	0.352***
6. Local capital ratio	0.440***	0.433***	0.263**	0.190*	0.212*	1.000	-0.009	-0.056
7. Chinese local sales ratio	0.292**	-0.002	0.084	-0.079	0.268**	0.294**	1.000	0.112
8. R& D intensity	-0.461***	-0.038	-0.076	-0.162	-0.077	-0.195*	-0.313**	1.000

Notes: (1) Significant levels: *$p<0.1$, **$p<0.05$, ***$p<0.01$
(2) Labour productivity: Ln(Sales per worker), Size: Ln(Share capital).
(3) Above the diagonal is electronic industry; below the diagonal is chemical industry.
(4) The valid sample of electronic industry is 73; the valid sample of chemical industry is 52.

Table 6.20: OLS Regression Analysis of the Impact of Localisation and R&D Intensity on Firm Performance (Electronic v.s. Chemical industry)

Dependent variable: Labour productivity =Ln(Sales per worker)

Variables	Model 1		Model 2		Model 3	
	Electronic industry	Chemical industry	Electronic industry	Chemical industry	Electronic industry	Chemical industry
Constant	8.461 (3.627)***	5.927 (2.181)**	-0.094 (-0.012)	16.15 (2.526)**	0.757 (0.094)	20.204 (3.44)***
Size	0.075 (0.636)	0.242 (1.711)*	0.148 (1.159)	0.051 (0.305)	0.150 (1.166)	0. 075 (0.505)
JV	0.130 (1.099)	-0.002 (-0.014)	0.115 (0.929)	-0.078 (-0.555)	0.111 (0.886)	-0.089 (-0.699)
Firm's age			-0.017 (-0.132)	0.067 (0.434)	-0.010 (-0.073)	0.047 (0.342)
Local employment ratio			0.115 (0.925)	-0.184 (-1.356)	0.099(0.758)	-0.264 (-2.127)**
Local content ratio			-0.042 (-0.329)	-0.076 (-0.514)	-0.023 (-0.167)	-0.038 (-0.287)
Local capital ratio			-0.004 (-0.029)	0.418 (2.658)**	0.001 (0.010)	0.38 (2.677)***
Chinese local sales ratio			0.319 (2.593)**	0.178 (1.272)	0.323 (2.602)**	0.045 (0.337)
R& D intensity					-0.054 (-0.407)	-0.42 (-3.378)***
F	0.766	1.519	1.251	2.457**	1.101	4.085***
R²	0.021	0.058	0.119	0.281	0.121	0.432
Δ R²			0.098	0.223	0.002	0.151

Notes: (1) Significant levels: *p<0.1, **p<0.05, ***p<0.01 ; figures in parentheses represent t-values

(2) WOS (Wholly Owned Subsidiary) is the reference group

Finally, compared to that of Model 2, the R&D intensity variable accounts for an extra 15.1 percent of the variance for firm performance (the increase in R^2 is 0.151). The statistical results of Model 3 indicate that the impact of R&D intensity on the subsidiary-level firm performance (sales per worker) is significantly negative ($p<0.01$). Therefore, hypothesis 5-a is also supported.

For Taiwanese electronic industry MNE subsidiaries (export-oriented FDI strategy) investing in China, it can be seen that the variance explained by Model 1 is 0.021, indicating 2.1 percent of the variance for firm performance could be accounted for by these two control variables (firm's size and the ownership type dummy variable). Moreover, the results from all regressions (Model 1, Model 2, and Model 3) show that neither the effect of the firm's size nor that of the ownership type dummy variable on the subsidiary-level firm performance is significant.

In Model 2, in addition to control variables, I employ five localisation variables (firm's age, local employment ratio, local content ratio, local capital ratio, and Chinese local sales ratio). However, Model 2 does not reach statistical significance (F=1.251) and only explains 11.9 percent of the variance for firm performance. Compared to that of Model 1, these five localisation variables only explain an extra 9.8 percent of the variance for firm performance (the increase in R^2 is 0.098).

To test Hypothesis 5-b, I first estimate the complete effect model, which includes the effects of control variables, localisation variables, and R&D intensity on firm performance (Model 3). Model 3 is not statistically significant either (F=1.101) and only accounts for 12.1 percent of the variance for firm performance. The low R^2 value (0.121) indicates that even the complete effect model, including control variables, localisation variables, and R&D intensity, still explains only a minor part of the subsidiary-level firm performance (labour productivity: sales per worker).

The empirical result of Model 3 suggests that, for these five localisation variables, only Chinese local sales ratio is significantly positively associated with firm performance ($p<0.05$). However, on the other four localisation variables (firm's age, local employment ratio, local content ratio, and local capital ratio), I see no significant direct impact from the regression of firm performance (sales per worker). Therefore, the Model 3 regression results support all the hypotheses (hypothesis 1-b

to hypothesis 4-b) about the impact of localisation variable on the subsidiary performance (sales per worker).

Moreover, compared to that of Model 2, the R&D intensity variable only explains an extra 0.2 percent of the variance for firm performance (the change in R^2 is 0.002). It can be seen that the impact of R&D intensity on firm performance (sales per worker) is not significant (Hypothesis 5-b is also supported).

Chapter 7: Discussion

7.1. Discussion for the Local-market-seeking Group

7.1.1. Discussion (OLS regression model results)

The statistical results indicate that Taiwanese local-market-seeking MNE subsidiaries investing in China tend to perform better in terms of sales per worker when they operate for a longer period. According to the internalisation (I) theory, MNEs internalise their own ownership-specific advantages in order to reduce the degree of uncertainty and increase efficiencies (Peng, 2004). The ultimate purpose of Taiwanese local-market-seeking MNE subsidiaries investing in China is to compete successfully in China's fast-growing domestic market and improve firm performance. MNE subsidiaries with more experience usually have accumulated more location-specific knowledge than first-time foreign investors in the host countries (Dollar et al., 2003; Carlsson et al., 2005). Therefore, for Taiwanese local-market-seeking MNE subsidiaries investing in China, the effect of a firm's age on its subsidiary performance (labour productivity) is positive.

For the local-market-seeking group, the relationship between local capital ratio (local financial linkage) and the subsidiary performance (sales per worker) is significantly positive. The local capital ratio is a proxy of political support from local Chinese government. Therefore, for local-market-seeking Taiwanese MNE subsidiaries investing in China, the greater the extent of capital localisation (the degree of political support from local Chinese government) is, the better their firm performance is likely to be.

As regards local worker linkage, in Dunning's (1988) 'eclectic' theory, local production costs and cultural similarities in the host country are two major types of location-specific factors (L). Moreover, according to Porter's (1985) cost leadership strategy, for Taiwanese investors, China's cheaper local labour resources are able to reduce production costs and consequently lead to better profits. However, the empirical results suggest that the impact of the local employment ratio on the subsidiary performance (sales per worker) is significantly negative. Local-market-seeking Taiwanese MNE subsidiaries investing in China are always inclined to employ a large number of local Chinese workers. According to the production

function in Microeconomics theory, local-market-seeking Taiwanese MNE subsidiaries investing in China tend to adopt labour-intensive production technologies. For them, the high local employment ratio is likely to be associated with low capital intensity; therefore the price per unit of output is lower. The value of sales per worker is depressed.

In addition, both local content ratio (local supplier linkage) and Chinese local sales ratio (local sales linkage) are found to have no significant effects on firm performance. Based on Dunning's (1988) 'eclectic' theory, local production costs and the host country's local market are two important location-specific factors (L). From the perspective of local supplier linkage, the empirical results confirm that the firm performance (sales per worker) of Taiwanese local-market-seeking MNE subsidiaries investing in China is not significantly associated with the local content ratio.

Some scholars (Luo, 2003; Luo and Peng, 1999; Van Hoesel, 1999) suggest that for local-market-seeking MNE subsidiaries, local sales are critical for their operations in the host countries. Nevertheless, in our statistical results, it can be seen that the relationship between Chinese local sales ratio (local sales linkage) and firm performance (sales per worker) is insignificant. The empirical result contradicts the earlier proposition that for local-market-seeking MNE subsidiaries investing in China, higher Chinese local sales ratio is likely to lead to better firm performance (sales per worker). The lack of significant direct effect from the local Chinese sales linkage may arise from the complexity of China's domestic market. In order to expand their local sales, local-market-seeking MNE subsidiaries investing in China need to establish widely spread local marketing channels and distribution networks. A large number of local Chinese workers is required (labour intensive). Therefore, the contribution of Chinese local sales to firm performance (sales per worker) is likely to be neutralised by the numerous local Chinese workers.

Internalisation (I) is particularly likely to occur in the case of R&D. MNEs usually need to retain critical technologies for exclusive use within their own organisational boundaries in order to obtain a satisfactory return (Dicken, 2003). The statistical results indicate that the relationship between R&D intensity and firm performance (labour productivity) is significantly negative. For the local-market-

seeking group in China, the local marketing and distribution channels are very important (Strange et al., 1998; Jiang and Prater, 2002). In addition, China is a very price sensitive market (China-Britain Business Council, 2005). The more expenditure spent on R&D, the less expenditure they can use to create local distribution networks or the more expensive their products are likely to be. This result confirms the previous argument that, for Taiwanese local-market-seeking MNE subsidiaries investing in China, higher R&D intensity is likely to cause a negative impact on their firm performance.

Finally, the control variables also have some interesting implications. The statistical results show that the subsidiary performance (labour productivity) does not vary significantly with the firm's size. This suggests that for large-sized local-market-seeking MNE subsidiaries investing in China, the advantage in larger economies of scale does not necessarily contribute to their firm performance. It is likely that, rather than simply enlarging production scale, local-market-seeking MNE subsidiaries investing in China need to utilise more subtle marketing strategies to expand their local sales. This need is due to the complexity of China's huge and multifaceted domestic market. Similarly, the effect of the industry dummy variable is insignificant. The difference of firm performance between wholly owned subsidiary (WOS) and joint venture (JV) is not significant either.

7.1.2. Discussion (binominal logit regression model results)

The statistical results show that the effect of a firm's age on the firm performance (profits) is not significant. According to the internalisation (I) theory, local-market-seeking MNE subsidiaries with more experience are more likely to improve their firm performances (profits) (Dollar et al., 2003; Carlson et al., 2005). Therefore, the result is not reasonable.

The empirical results reveal that the higher local content ratio will produce a negative impact on the firm performance (profits). Moreover, the impact of the local employment ratio on the firm performance (profits) is not significant. In Dunning's (1988) 'eclectic' theory, for MNEs, local production costs in the host country is a very important location-specific factor (L). A cost leadership strategy suggests that a cost leader can charge lower prices and make larger profits than higher cost rivals

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(Porter, 1985). For Taiwanese local-market-seeking MNE subsidiaries, the cost-reducing effect of China's lower-cost local labour resources (worker linkage) and local procurement (supplier linkage) on the subsidiary performance (profits) is critical. Therefore, the results are not reasonable.

In terms of local sales linkage, the result suggests that the Chinese local sales do not contribute to the subsidiary performance (profits). According to Dunning's (1988) 'eclectic' theory, the host country's local market is one of the most important location-specific factors (L). The strategic objective for local-market-seeking MNE subsidiaries is to seek business opportunities and enlarge local sales in China (Luo, 2003; Luo and Peng, 1999; Van Hoesel, 1999). The statistical result is not reasonable.

As regards the R&D activities in China, the results show that the relationship between R&D intensity and subsidiary performance (profits) is not significant. The internalisation theory (I) can serve as a framework for explaining MNEs' R&D. For Taiwanese local-market-seeking MNE subsidiaries investing in China, higher R&D intensity is likely to produce a negative impact on the firm performance (profits). The result is not reasonable either.

The binomial logit regression analysis (firm performance: profits), for the local-market-seeking group, does not yield meaningful statistical results. Therefore, I need to explore the reasons behind the confusing results. However, since the binomial logit regression model is widely used (Reuer et al., 2004; Gomes-Casseres, 1990) and the hypotheses are based on international business theory well established, I shall examine the data accuracy and authenticity. One of the research limitations of this thesis is the reliability of the answer of the 'profit' question in the survey. Since losing money in China will cause a serious negative impact on the company-image and the bank credit record in Taiwan, many Taiwanese corporations, if losing money in China, are likely not to reveal this sensitive financial information. Therefore, because of the serious consequences caused by revealing business secrets and the confusing statistical results (firm performance: profits), I suspect that a remarkable portion of the respondent Taiwanese MNEs were probably untruthful in answering the 'profit' item in the survey.

Moreover, the 'profit' is an accounting-based measure. In general, the accounting principles foreign investors face in China are very ambiguous and

questionable. It is a fact that China's corporate accounting and financial information, both in privately-owned companies and state-owned enterprises (SOEs), is still far from trustworthy. Many companies use two different accounting systems in order to evade tax burdens. Some companies even have three accounting books: one for Chinese government agencies, one for the internal management and a third for the company's top managers (Morcillo, 2004). In summary, in order to facilitate FDI activities, China needs to provide complete and accurate corporate financial data (Greenwood, 2005). Lack of reliable accounting information and poor auditing systems render China's questionable accounting-based measures a formidable obstacle in the study of China's economy.

Several scholars have addressed the negative consequences caused by inaccurate and poor-quality data on the management study. Redman (1998) concludes that questionable data results in negative impacts on the operational, tactical and strategic organisational levels. In addition, Fisher and Kingma (2001) suggest that inaccurate data is likely to yield major 'disasters'. Therefore, data accuracy has been regarded as a major factor and a determinant of data quality (Fisher and Kingma, 2001; Hoxmeier, 1998).

On the other hand, in this thesis, due to the sensitivity of tax, a remarkable portion of the respondent Taiwanese MNEs were probably untruthful in answering the 'profit' item. According to the view-point of Bernstein (1976), the basic premise of an interpretative social science is that interpretation is necessary because 'individuals ascribe meaning to their actions and situations, and ….this self-interpretation is constitutive of social and political reality'. 'But if an actor's self-understanding is constitutive of social reality, then how can it be a distortion or misconception of that reality?' (Moon, 1977) How can there be 'a distinction between what human beings think they are doing and what they are actually doing' (Bernstein, 1976), if the meaning they ascribe to their actions is constitutive of these actions? In other words, since the responses (actions) of human beings to social phenomena might be distortions or misconceptions, researchers always need to scrutinise the dataset, research results and make proper interpretations. In summary, I highly doubt the data accuracy and authenticity of China's accounting-based measures (particularly in firm's profits). Since China's accounting-based measures

are of poor-quality and unreliable, I prefer to use the sales-based measures in the analysis of China's economy.

7.2. Discussion for the Export-oriented Group

7.2.1. Discussion (OLS regression model results)

This empirical study reveals consistent relationships between the localisation variables and firm performance (labour productivity) across all models. Regarding a firm's age, the result suggests that the effect of a firm's age on firm performance is not significant. Based on the internalisation (I) theory, MNE subsidiaries with more experience are likely to increase local knowledge and enhance firm performance in the host countries (Dollar et al., 2003; Carlsson et al., 2005). However, Taiwanese export-oriented MNE subsidiaries (vertical-FDI strategy) in China, only serving as a part of their headquarters' global production system, are aiming at "complementing" the export activity (Helpman, 1984). In other words, the purpose of the export-oriented group investing in China is to exploit their Chinese subsidiary as a low-cost production base. China's export competitiveness will decline over 2008 and 2009 because wage and price inflate (OECD economic outlook, 2008). The production costs rise faster than the benefits that arise from the learning curve effects on the operations of export-oriented MNE subsidiaries investing in a particular location. As input factor costs increase over time, export-oriented (efficiency-seeking) MNE subsidiaries tend to move to new low-cost production areas (Sethi et al., 2003). Therefore, for the export-oriented group, a firm's age (firm's experience) in China does not significantly contribute to the subsidiary performance (labour productivity).

The results show that local content ratio (local supplier linkage) does not have a significant impact on firm performance (sales per worker). In terms of local worker linkage, the local employment ratio is not associated with the subsidiary performance (sales per worker). For the export-oriented group, their Chinese subsidiaries usually serve as companies which take on one or more stages of production as part of the parent companies' global production system. Therefore, the cost of finished goods is substantially determined by the transfer prices of components and raw materials

supplied by the parent companies, not solely controlled by the Chinese subsidiaries. Moreover, from the statistical results, it can be seen that the relationship between local capital ratio (local financial linkage) and firm performance is not significant either. The result also supports our previous argument that it is difficult for Taiwanese export-oriented MNE subsidiaries to establish local financial linkages with local Chinese banks and local ally partner firms. In other words, they mainly depend on the investment capital from Taiwan to support their operations in China.

For the export-oriented group, the impact of Chinese local sales ratio (local sales linkage) on firm performance (sales per worker) is significantly positive. According to Dunning's (1988) 'eclectic' theory, the host country's domestic market is a very important location-specific factor (L). For all foreign companies, China's domestic market is creating many business opportunities (Lieberthal and Lieberthal, 2004). Therefore, for the export-oriented group, Chinese local sales could significantly contribute to the subsidiary performance (sales per worker).

Regarding R&D intensity, the statistical results indicate that the relationship between subsidiary-level R&D intensity and subsidiary performance is insignificant. In the internalisation theory (I), internalisation is particularly likely to occur in the case of R&D. For the export-oriented group, the target market is the international market, not China's domestic market. Due to the seriously prevalent IPR piracies in China, Taiwanese export-oriented MNE subsidiaries investing in China are likely to minimise R&D.

Finally, the control variables show some interesting results. The result suggests that large-sized Taiwanese export-oriented MNE subsidiaries (the electronic and textile industry) investing in China, possessing more benefit-yielding assets, are better able to gain larger economies of scale and enhance firm performance (labour productivity) than small-sized subsidiaries. However, the difference of firm performance between the electronic industry and textile industry is insignificant. Moreover, the difference of firm performance between wholly owned subsidiary (WOS) form subsidiaries and joint venture (JV) form subsidiaries is not significant.

Overall, for the export-oriented group, even the complete model has relatively low explanatory power, accounting for only 18.8 percent of the variance for the subsidiary performance. Taiwanese export-oriented MNE subsidiaries investing in China are primarily serving international buyers rather than China's local customers. Not surprisingly, the impact of localisation and subsidiary-level R&D intensity on the subsidiary performance is limited.

7.2.2. Discussion (binominal logit regression model results)

The statistical results show that Taiwanese export-oriented MNE subsidiaries are more likely to make profits in China as their firm's age increases. Based on the internalisation (I) theory, some scholars suggest that for local-market-seeking MNEs, subsidiaries with a long presence in China tend to exhibit better performance (profits) (Dollar et al., 2003; Carlson et al., 2005). However, the target market of the export-oriented group is the international market, not China's local market. In addition, because input factor costs increase, export-oriented (efficiency-seeking) MNE subsidiaries are likely to relocate to new low-cost production areas (Sethi et al., 2003). Therefore, for the export-oriented group, a firm's age (firm's experience) in China is not likely to produce a positive effect on the subsidiary performance (profits). The result is not reasonable.

Moreover, the empirical results indicate that the effect of local content ratio and the impact of local employment ratio respectively on the firm performance (profits) are insignificant. In Dunning's (1988) 'eclectic' theory, for MNEs, local production costs in the host country is a major location-specific factor (L). According to Porter's (1985) cost leadership strategy, for MNEs, China's lower-cost local labour resources and local procurement respectively are able to reduce input factor costs and increase their profits. Therefore, the results are not reasonable.

On the perspective of local sales linkage, the result suggests that the Chinese local sales do not contribute to the subsidiary performance (profits). In Dunning's (1988) 'eclectic' theory, the host country' local market is a very important location-specific factor (L). Since China entered WTO in 2001, China's home market gradually opened further to foreign companies. For all MNEs, China's exploding

domestic market promises huge opportunities (Lieberthal and Lieberthal, 2004). Therefore, the result is not reasonable.

Besides, the results show that the effect of firm's size on the subsidiary performance (profits) is not significant. For Taiwanese export-oriented MNE subsidiaries investing in China, FDI increases their capacity to serve the international buyers (Chen et al., 2004). Therefore, large-sized firms are more likely to reach larger economies of scale, increase operation efficiency, and yield more profits. The result is not reasonable either.

The binomial logit regression analysis (firm performance: profits), for the export-oriented group, does not yield meaningful statistical results either. In the survey, a remarkable portion of the respondent Taiwanese MNEs were probably untruthful in answering the 'profit' item due to the seriously negative consequences caused by revealing sensitive business secrets. Secondly, the 'profit' is an accounting-based measure. China's corporate accounting and financial information is of poor-quality and questionable. For these two reasons, it is likely that the distorted data source in the answer to the 'profit' item would lead to the confusing results of the binomial logit regression model.

Besides, lack of reliable accounting information and poor auditing systems make China's inaccurate accounting-based measures a formidable obstacle (research limitation) in the study of China's business. Therefore, in the analysis of China's business, I prefer sales-based measures rather than accounting-based measures. I suggest that the critical cost-saving impact of China's lower-cost local worker force (local worker linkage) and local procurement (local supplier linkage) on the subsidiary performance (profits) is not testable in this thesis.

7.2.3. Comparisons (Local-market-seeking vs. Export-oriented FDI)

From the OLS regression model results, it can be seen that for the local-market-seeking group, the localisation variables have relatively high explanatory power for the firm performance. For the export-oriented group, the localisation variables explain an extra 11.5 percent of the variance for firm performance. On the other hand, for the local-market-seeking group, the localisation variables account for an extra 21.3 percent of the variance for firm performance.

The aggregate influence of the localisation variables on the firm performance of local-market-seeking Taiwanese MNE subsidiaries investing in China is larger than that on the firm performance of export-oriented Taiwanese MNE subsidiaries. Therefore, I suggest that local-market-seeking FDI is affected more by the host country local business environment than is export-oriented FDI. The ultimate purpose of the local-market-seeking group is to access China's domestic market and serve local Chinese customers. Therefore, in order to expand local sales, besides local production platforms, they need to create local marketing networks and local distribution channels, et al. Not surprisingly, the aggregate impact of the localisation variables on the subsidiary performance is more important.

The target market for export-oriented Taiwanese MNE subsidiaries investing in China is the international market. Therefore, the aggregate effect of internationalisation variables on the subsidiary performance is likely to be larger (The impact of internationalisation on firm performance is not the focus of this thesis).

The conclusion from the results is that Taiwanese local-market-seeking MNE subsidiaries operating in China for a longer period are more likely to exhibit better performance than short-term subsidiaries. Nevertheless, I find that for Taiwanese export-oriented MNE subsidiaries investing in China, the impact of the firm's age on the firm performance is not significant. In terms of local worker linkage, the results suggest that for the local-market-seeking group, the subsidiary performance level (sales per worker) is negatively associated with the local employment ratio. Because local-market-seeking Taiwanese MNE subsidiaries investing in China tend to adopt labour-intensive production technologies (low capital intensity). The price per unit of output is lower. For the export-oriented group, the relationship between local employment ratio and subsidiary performance (sales per worker) is insignificant.

As regards local supplier linkage, for both export-oriented and local-market-seeking groups, the relationship between local content ratio and firm performance (labour productivity) is not significant. Moreover, in terms of local financial linkage, for the export-oriented group, the effect of local capital ratio on subsidiary performance is not significant. In other words, they mainly rely on the capital provided by their headquarters in Taiwan to support their operations in China. On the

other hand, for the local-market-seeking group, the extent of capital localisation (the degree of support from local Chinese government) is definitely a very important component leading to success in their local business strategy.

Regarding local Chinese sales linkage, the results suggest that for export-oriented Taiwanese MNE subsidiaries investing in China, the local Chinese sales could significantly help to increase their firm performance (sales per worker). However, for the local-market-seeking group, the relationship between Chinese local sales ratio and firm performance (sales per worker) is not significant. The contribution of Chinese local sales to firm performance (sales per worker) is likely to be neutralised by the numerous local Chinese workers required to expand local sales. In terms of R&D activities, the results show that in order to retain their core technologies in Taiwan, Taiwanese export-oriented MNE subsidiaries investing in China always keep out of China R&D activities (critical technologies and production processes) that can be pirated. On the other hand, for the local-market-seeking group, the impact of R&D intensity on the subsidiary performance is significantly negative.

To international investors, undoubtedly China's fast-growing potential domestic market is definitely one new business opportunity. However, since China is a vast, multifaceted, very complicated, and fairly risky market, it is crucial for MNEs' CEOs to identify the motivation and strategic objective of entering China. This thesis chooses the Taiwan-China case as a case of study. However, for other international MNEs, the purposes of investing in China might be different. For instance, Taiwanese electronic firms invest in China because of the appeal of China as the platform of cheaper manufacturing costs for export to other countries (export-oriented FDI strategy). However, for American electronic firms, the ultimate goal is likely to be targeting local Chinese sales (local-market-seeking FDI strategy). In summary, it is now widely acknowledged that a strong and competitive business strategy is a key component leading to above-average returns in China.

7.3. Discussion for the Taiwanese Electronic Industry and Chemical Industry Firms Investing in China

The ultimate purpose of Taiwanese electronic industry MNEs (export-oriented FDI strategy) investing in China is to strengthen their primary relationships with international buyers rather than penetrate China's local market (Chen et al., 2004). From Dunning's (1998) view-point, export-oriented FDI is likely to be less impacted by the host country's local market than is local-market-seeking FDI.

On the other hand, Taiwanese chemical industry MNEs investing in China are characterised mainly by local-market-seeking FDI strategy. Therefore, in addition to China's physical and infrastructure resources for local manufacturing, they also need to establish local marketing and sales networks to enlarge their local market share. It can be seen that, for Taiwanese chemical industry MNE subsidiaries investing in China, these five localisation variables have relatively higher explanatory power for the firm performance (sales per worker). For Taiwanese electronic industry MNE subsidiaries (export-oriented FDI strategy) investing in China, these five localisation variables explain an extra 9.8 percent of the variance in firm performance. For the chemical industry, the localisation variables account for an extra 22.3 percent of the variance in firm performance. Thus, the aggregate influence of the localisation variables on the firm performance of Taiwanese chemical industry MNE subsidiaries investing in China, is larger than that on the firm performance of Taiwanese electronics industry MNE subsidiaries.

As regards the impact of firm's age, the results indicate that, for Taiwanese electronic industry MNE subsidiaries (export-oriented FDI strategy) investing in China, the relationship between firm's age and firm performance (sales per worker) is not significant. In essence, Taiwanese electronic industry MNE subsidiaries investing in China mainly serve as a part of their parent companies' global division of labour. In other words, they usually sell their products to the destinations designated by their headquarters. As the production costs in a particular area go up, they are likely to move to new low-cost production areas. Thus, not surprisingly, the impact of firm's age on the subsidiary performance (sales per worker) is not significant.

However, for Taiwanese chemical industry MNE subsidiaries (local-market-seeking FDI strategy) investing in China, the firm's age is not associated with firm performance (sales per worker). Local-market-seeking MNE subsidiaries (horizontal-FDI strategy) investing in host countries tend to perform better when they operate for a longer period. This empirical result does not support the previous findings and, therefore, it would be worth exploring the characteristics of the Taiwanese chemical industry further. A broad definition of chemical industry covers upstream, midstream, and downstream firms (Lin, and Tsai, 2004). In recent years, attracted by the sustained rapid economic growth and potentially strong local demand, many international petrochemical giants have conducted large-scale investment and provided abundant chemical raw materials in China. In addition, presently there are some 15,000 smaller chemical industry players in China (KPMG, 2006). In other words, in the past decade, the competition in China's domestic market is remarkably increasing in intensity. Therefore, in the past decade, for Taiwanese chemical industry MNE subsidiaries (mainly downstream firms) investing in China, the direct effect of firm's age on firm performance (sales per worker) is not significant.

In terms of local financial linkage, our empirical results suggest that, for Taiwanese electronic industry MNE subsidiaries investing in China, the relationship between local capital ratio and firm performance (sales per worker) is not significant. This result supports our previous argument that it is difficult for Taiwanese electronic industry MNE subsidiaries to create local financial linkages with local Chinese banks. They primarily depend on the financial support provided by their Taiwanese headquarters to conduct their operations in China.

Nevertheless, it can be seen that, for Taiwanese chemical industry MNE subsidiaries investing in China, the firm performance (sales per worker) varies significantly positively with the local capital ratio. The local capital ratio is a proxy of the degree of political support from local Chinese government. Therefore, the greater the extent of capital localisation (the degree of political support from local Chinese government) is, the more likely they are to compete successfully in China.

On the perspective of local worker linkage, the result shows that for Taiwanese chemical industry MNE subsidiaries (local-market-seeking FDI) investing in China, the effect of local employment ratio on firm performance (sales per worker) is

significantly negative. Based on the production function in Microeconomics theory, Taiwanese chemical industry MNE subsidiaries investing in China tend to adopt labour-intensive production technologies. For them, the high local employment ratio is likely to be associated with low capital intensity; therefore the price per unit of product is lower. The value of sales per worker is depressed.

On the other hand, for Taiwanese electronic industry MNE subsidiaries investing in China, the relationship between local employment ratio and firm performance (sales per worker) is not significant. The empirical result confirms that the firm performance (sales per worker) primarily depends on their relationships with the international buyers rather than on local Chinese worker employment.

As regards local supplier linkage and local sales linkage, the results suggest that, for Taiwanese chemical industry MNE subsidiaries investing in China, neither local content ratio (local supplier linkage) nor Chinese local sales ratio (local sales linkage) significantly impacts firm performance (sales per worker). This result contradicts the earlier proposition that, for local-market-seeking MNE subsidiaries investing in China, higher Chinese local sales ratio is likely to result in better firm performance (sales per worker). For Taiwanese chemical industry MNE subsidiaries investing in China, the lack of significant direct impact from local Chinese sales linkage may originate from the intense competition in China's domestic market. For the chemical industry, presently there are a large number of foreign investors and local firms in China's local market. In order to compete successfully, Taiwanese chemical industry MNE subsidiaries need to create expansive local marketing and sales networks (a vast number of local Chinese workers are hired)(labour intensive). Thus, the contribution of Chinese local sales ratio to firm performance (sales per worker) is easily neutralised by the numerous local Chinese workers.

For Taiwanese electronic industry MNE subsidiaries investing in China, local content ratio (local supplier linkage) is found to have no significant impact on firm performance. Moreover, the effect of Chinese local sales ratio (local sales linkage) on the subsidiary performance (sales per worker) is significantly positive. Despite targeting most sales at the international market, Taiwanese electronic industry MNE subsidiaries investing in China have noticed the potentially huge business opportunities and created local sales networks to expand their local market share in

China. Local Chinese sales are likely to significantly improve their subsidiary performance (sales per worker).

On the issue of R&D intensity, our statistical results show that, for Taiwanese chemical industry MNE subsidiaries investing in China, the firm performance (labour productivity) significantly negatively varies with R&D intensity. The more expenditure spent on R&D, the less expenditure they can utilise to create local distribution networks or the more expensive their products are likely to be. For Taiwanese chemical industry MNE subsidiaries investing in China, higher R&D intensity is likely to cause a negative impact on the firm performance (sales per worker).

On the other hand, for Taiwanese electronic industry MNE subsidiaries investing in China, the target market is the international market, not China's local market. The empirical results indicate that the relationship between R&D intensity and subsidiary performance (sales per worker) is not significant. This follows our previous explanation that Taiwanese electronic industry MNE subsidiaries (export-oriented FDI) investing in China are primarily enthusiastic to obtain basic resources (lower-cost labour force, land, and natural resources), with much less concern for strategic and knowledge assets. They always prefer keeping R&D and critical production processes that can be pirated out of China.

Finally, the control variables also reveal some interesting implications. For Taiwanese chemical industry MNE subsidiaries investing in China, the results indicate that the impact of firm's size and the ownership type dummy variable on firm performance (labour productivity) is not significant respectively. This implies that, for large-sized Taiwanese chemical industry MNE subsidiaries investing in China, the advantage in larger economies of scale does not definitely increase firm performance. It is likely that, rather than simply expanding production scale, they have to exploit more effective marketing strategies to promote their local sales due to the intense competition in China's chemical industry market. Similarly, the impact of the ownership type dummy variable is insignificant. This suggests that the difference of firm performance between wholly owned subsidiary (WOS) and joint venture (JV) is not significant either.

However, for Taiwanese electronic industry MNE subsidiaries investing in China, both firm's size and the ownership type dummy variable are found to have no significant effect on firm performance (sales per worker). In terms of the impact of firm's size, large-sized export-oriented MNE subsidiaries, primarily aiming their sales at the international market, controlling more benefit-yielding assets, are more likely to enjoy larger economies of scale and improve their firm performance (sales per worker). However, the empirical result contradicts our predicted sign and previous findings; therefore, it would also be worth examining further the features of the Taiwanese electronic industry. In global electronic product manufacturing systems, most Taiwanese electronic industry MNEs are long known as OEM or ODM subcontractors for the international buyers (such as American, Japanese, and European electronic industry MNEs) (Lin, 2000). Therefore, in order to beat their business rivals, Taiwanese electronic industry MNEs are likely to utilise price-cutting to win large orders from their international buyers. As a result, for large-sized Taiwanese electronic industry MNE subsidiaries (export-oriented FDI) investing in China, the advantage lying in larger economies of scale is easy to neutralise. In addition, the difference of firm performance between wholly owned subsidiary (WOS) and joint venture (JV) is not significant either.

This part chooses the Taiwanese electronic industry and chemical industry MNEs as cases of study. Basically, as regards the impact of localisation and R&D intensity on the subsidiary performance, the empirical results in this part are consistent with our findings in the previous parts.

Chapter 8: Qualitative Research: Exploring the Individual In-depth Interviews with the Senior Managers of Taiwanese MNEs Investing in China

8.1. Qualitative Approach in IB Studies

8.1.1. Individual In-depth Interview

In qualitative analysis, interviewing is one of the most generally used survey methods (Berg, 1998; Denzin & Lincoln, 1998). Used to obtain qualitative information through a social interaction between the interviewer and the interviewee(s), interviewing is able to offer data on related behaviour, attitudes, and evaluations, and contribute to an in-depth comprehension of research participants' viewpoints or experiences (Walker, 1985). In general, the two most commonly used interviewing methods are the individually intensive or in-depth interviews and focus group discussions (Wright, 1996). In this chapter, I report on individual in-depth interviews with the senior managers (primarily top managers) of Taiwanese MNEs in the manufacturing sector investing in China. Basically, in-depth interviewing entails not only asking questions, but also the organised recording and documenting of responses linked with cross checking for clarification and deeper understanding of the responses. In other words, the aim of individual in-depth interviewing is to understand the interviewee's view of a topic through his (her) terminology and judgements. Unlike focus group interviews, individual in-depth interviews are conducted with one individual at a time.

Patton (1990) suggests three basic approaches to in-depth interviewing for research or evaluation: the informal conversational interview, the interview guide approach, and the standardised open-ended interview. Each approach serves a particular goal and has various preparatory and instrumentation prerequisites. Although these approaches differ in the format and framework of questioning, they have in common the fact that the participant's replies are open-ended and not limited to choices offered by the interviewer.

(1) Informal conversational interview: This type of interview depends mostly on the spontaneous formation of questions in the natural process of an interaction,

and the respondent usually may not even know that an "interview" is undertaken. Not surprisingly, under these immediate contexts, it is usually unlikely to have a predetermined set of questions. Because different information is received from different respondents, this type of interview may yield less systematic or comprehensive data, and it could be difficult and time-consuming to explore the data.

(2) Interview guide approach: This is the most commonly used method for in-depth interviewing. In this method, the interviewer has usually prepared an interview guide that lists a pre-determined set of topics or issues to be covered, but is free to utilise the wording and sequence of the questions to some degree. The significant advantage is that the result is more systematic and comprehensive than in the informal conversational interview. However, the drawback of this approach is that it does not allow the interviewer to examine topics or issues of interest that were not included in the pre-determined interview guide.

(3) Standardised open-ended interview: This approach comprises a set of open-ended questions thoughtfully developed and arranged in advance. It is still considered qualitative analysis rather than quantitative analysis, because the responses are open-ended. This is the most organised, standardised, and efficient of the in-depth interviewing approaches and is particularly helpful for decreasing bias when it is necessary to compare the results of various respondents. Nevertheless, the primary weakness is that the interviewer has minimum adaptability to react to the particular concerns of the respondent, and it is not assured that the questions asked tap into the issues that are most proper for this particular interviewed individual (Patton 1990).

8.1.2. Elite Interview

It is likely that most researchers in international business studies will interact with 'elite interviewees' during some period of their surveys. However, the traditional qualitative research handbooks (Seidman, 2006; Morgan, 1997) do not usually put emphasis on the particular circumstances and subjects encountered by international business researchers. In international business research the respondent usually features as an important elite person representing, for instance, enterprise headquarters, subsidiary leadership or a particular department. Traditional texts on qualitative study usually presume that the researcher is interacting with people from a 'non-elite' social class (Welch et al.).

Elite interviews, in international business studies, are an important source of information which can assist in understanding the context of cross-border business development, or clarify particular crucial issues or problems.

8.2. Sample, Questionnaire, and Interview Process

8.2.1. Sample Considerations

The individual in-depth interviews were undertaken in Taiwan from September to December 2006, with the respective senior managers about the operations of their subsidiaries investing in China. I selected the sample of 20 manufacturing sector firms from the "Directory of Enterprises Investing in Mainland China", compiled by the Investment Commission of the Ministry of Economic Affairs (MOEAIC), Taiwan Executive Yuan. The sample of 20 firms included 5 industries: the electronics industry, machinery industry, chemical industry, textile industry, and food industry. Each industry sample comprises 4 firms (1 large-sized firm, 1 small-sized firm, 1 established firm, and 1 new entrant firm). As regards the sample classification criteria, based on the Taiwanese government definition, small-sized firms are defined as subsidiaries in China with less than 300 workers. On the other hand, large-sized firms are classified as subsidiaries in China with more than 300 workers. In addition, in this thesis, established firms are defined as firms with subsidiaries operating in China for longer than 5 years, new entrant firms as those with subsidiaries with the firm's age being between 2 to 5 years. In this qualitative research, although not randomly sampled, enterprises were purposely selected to provide variety in the type of Taiwanese MNE subsidiaries investing in China.

8.2.2. Questionnaire

This live-interview situation created opportunities for respondent managers to express further verbal insights on their operations in China. It also permitted senior managers the freedom to explain their enterprises' policies and development strategies and to give informed commentaries on local employment, local sales, R&D, and competitive aspects of their industries investing in China. However, in order to compare the results of various respondents, in this survey, basically I employ a standardised open-ended approach: the method comprises of a set of questions thoughtfully developed

and arranged in advance. I construct the standardised questionnaire, based on a UNIDO survey questionnaire, to gather information on specific areas of interests.

The UNIDO survey was designed and conducted, in 2005, by the United Nations Industrial Development Organisation (UNIDO) in 15 African countries (emerging markets). 'The point of departure of this survey was a perceived necessity to move away from a solely quantitative view of FDI. The enterprise level analysis provides additional information on the underlying motivations, operations, performance and growth of individual investors and their actual investments in Africa' (UNIDO, 2006). This chapter is a qualitative study of Taiwanese MNEs investing in China (an emerging market) which complements and supplements the empirical findings of previous chapters. Therefore, in this chapter, I employ the UNIDO questionnaire.

Not surprisingly I needed to modify the UNIDO survey questionnaire, according to the feedback provided by some international business scholars, to fit the situation of Taiwanese MNE subsidiaries investing in China. The final contents of the survey questionnaire of this chapter include 9 profiles: (a) a profile of the subsidiary and its operations in China, (b) a section for exporters, (c) a work force profile, (d) a profile of the parent company in Taiwan, (e) a profile of the local partner (if joint venture), (f) the impact on China's local economy, (g) investment and operating experience in China, (h) respondent's suggestions and closing questions, and (i) a contact and reference section. The results were collated and analysed on a comparative basis in each industry.

8.2.3. Interview Process

In terms of the interview process, directly contacting the senior managers of Taiwanese MNEs headquarters was not a productive procedure because of the wary attitudes of Taiwanese businesspeople about being interviewed by strangers. Therefore, arranging the individual in-depth interviews through relevant industry associations, academic institutes, and government departments via telephone, faxes, and letters proved to be more fruitful. In the process of this contact it was found that since Cross-Strait economic affairs are highly sensitive, in general, Taiwanese businesspeople are extremely cautious about cooperating with academic interviewers,

especially about their investments operating in China. Therefore, I guaranteed to the senior managers that the survey results would be analysed in UK, written in English, and that no company name would be revealed or published. In other words, confidentiality of responses was promised to the interviewees. Not surprisingly, in the process for arranging the individual interviews, some of the senior managers contacted were reluctant to participate, as they were very busy working in their enterprise.

Although the sample size was small, with only 20 companies chosen for interviews, it was difficult and time-consuming to arrange and undertake the individual in-depth interviews with senior managers in Taiwan. On average, the interviews lasted two to three hours. The interviewees, in this research, included Taiwan parent company presidents, vice presidents, and senior managers who were familiar with their operations in China. All respondents were male (except one person) with an age range from early 40s to early 60s; but it is noticeable that only one woman was represented in the top management echelons in the companies interviewed. In addition, because this research was not funded, it relied heavily on the assistance of related industry associations, academic institutes, and government departments. Without being able to offer financial incentives, it was necessary to depend on good personal contacts and the goodwill of senior managers to conduct the interviews and assessment.

The interviews were undertaken in both Chinese (Mandarin) and the Taiwanese local language. In the process of the interviews it was found that many (17) interviewees had been on management assignments in China and were in the top positions of the subsidiaries. In addition, I also found that the use of telephone or faxed questionnaires and large postal surveys used in the quantitative method could not have adequately substituted for the results which the individual interviews in the qualitative method provided. It confirmed that qualitative research holds significant advantages over quantitative research in obtaining in-depth responses and data from leading companies and in overcoming individual interviewees' reservations about confidentiality.

The interviews were undertaken, on a one-to-one basis, in Taiwan, with the respective company senior managers. Respondents were encouraged to mail the

completed photocopies of their questionnaires back, particularly if they or their companies had additional comments to make after the interviews. Eight of the respondent companies did so and the results correlated well with the questionnaires completed during the individual interviews. Overall, the interview data helped us to explore the operations of Taiwanese MNE subsidiaries investing in China, in the context of relations with Chinese local linkages, R&D strategy, the subsidiary-level firm performance, and the evaluation of the impact on China's local economy. The 20 Taiwanese companies, investing in China, that were interviewed are categorised in Table 8.1.

Table 8.1 Companies Interviewed in the Qualitative Research

Industry	Company classification	Company Name (representative code)	Employees (in Chinese subsidiary)	Firm's age (years) (Chinese subsidiary)
Electronic industry	(1) Large-sized firm	EB Company	1000	7
	(2) Small-sized firm	ES Company	35	8
	(3) Established firm	EL Company	1500	10
	(4) New entrant firm	EH Company	30	3
Textile industry	(1) Large-sized firm	TB Company	700	8
	(2) Small-sized firm	TS Company	250	16
	(3) Established firm	TL Company	2000	15
	(4) New entrant firm	TH Company	100	3
Chemical industry	(1) Large-sized firm	CB Company	12000	10
	(2) Small-sized firm	CS Company	70	10
	(3) Established firm	CL Company	160	12
	(4) New entrant firm	CH Company	25	3
Machinery industry	(1) Large-sized firm	MB Company	465	12
	(2) Small-sized firm	MS Company	146	14
	(3) Established firm	ML Company	290	12
	(4) New entrant firm	MH Company	80	2
Food industry	(1) Large-sized firm	FB Company	16000	16
	(2) Small-sized firm	FS Company	98	9
	(3) Established firm	FL Company	15000	14
	(4) New entrant firm	FH Company	118	3

Confidentiality of responses to the interviewees was promised. Therefore, we use a representative code, instead of the real company name, to stand for the interviewed company in this chapter.

8.3. Case Studies of the Interviewed Companies

8.3.1. Localisation, Firm Performance, and R&D Intensity

From the perspective of localisation for Taiwanese MNEs investing in China, the case studies of these 20 companies raise some key themes to explore. First, it can be seen that while in previous chapters, the electronic industry is categorised as of the export-oriented group (the local sales ratio is 43.42%); these four respondent electronic industry companies mainly target sales at China's domestic market (the local sales ratio is 75%, 65%, 55%, and 90% respectively). The Marketing Manager of Company EH (the local sales ratio: 90%) expressed her view point,

> *'as China's economy is growing strongly, the electronic product use in China is spreading more rapidly than in any other country. Besides, our Chinese subsidiary is a small size firm (only 30 employees); therefore we concentrate all of our efforts to exploit China's large and potential domestic market.'*

Moreover, in previous chapters, the textile industry is also classified as of the export-oriented group (the local sales ratio is 39.18%); nevertheless, the local sales ratio of both TB and TH companies is very high (85% and 80% respectively). According to the Senior Manager of Company TB, this is

> *'because the chemical Fiber products of our Chinese subsidiary mainly include industrial yarn, textured filament yarn, POY, and polyester staple fiber. The primary objective of our operations in China is to provide intermediate-products (chemical Fiber products) to the downstream textile firms investing in China. This is the reason the local sales ratio of our Chinese subsidiary is so high (85%).'*

The President of Company TH (*local sales ratio: 80%*) pointed out,

> *'our company is one of the leading high technology textile firms. Our subsidiary investing in China is a manufacturer of fire resistant fabric in fire protection industries. The products of our Chinese subsidiary are sold well in China's local market; however, the firm performance in the international market has not reached that level yet.'*

Besides, Table 8.2 shows that both chemical industry and food industry respondent companies investing in China are of local-market-seeking strategy. For chemical

industry respondent firms, the local sales ratio is 100%, 60%, 100%, and 100% respectively; for food industry respondent firms, the local sales ratio is 90%, 90%, 99%, and 100% respectively. Both chemical industry and food industry respondent companies undertake FDI activities in China primarily to penetrate China's local market.

It is noted that the empirical results of the previous chapters demonstrate that machinery industry subsidiaries are also targeting sales-expansion in China's local market (local-market-seeking strategy). However, it can be seen that the local sales ratio of Company MS is low (30%). The President of Company MS explained,

> *'the main product of our Chinese subsidiary is food machine. At present the competition of the food machine market in China is very intense and the average price is very low. Therefore, in order to gain higher profits, the primary goal of our operation in China is to serve the customers of the international market (export-oriented strategy).'*

In examining the interview contents, I suggest that for the 20 respondent companies, the localisation strategy demonstrates some common features. In terms of local employment, the 20 companies all hire a very high percentage of the local Chinese workforce (all local employment ratios are higher than 93%, except 3 companies: CS, MH, and CH). This finding is consistent with that of previous research. It is well known that a distinctive feature of China is the abundant and cheaper labour resources. Although in recent years the wage costs in China (especially in the coastal areas) has gradually gone up, it is still significantly lower than the wage costs in Taiwan. Therefore, it is not surprising that Taiwanese firms investing in China are very enthusiastic to enhance profitability by utilising the lower-cost local workforce. As regards the three low local-employment-ratio respondent companies (CS, MH, and CH), the Senior Manager of Company MH replied,

> *'our subsidiary in China is a small-sized firm (only 80 workers total). Out of the total workers, 14 workers are from Taiwan. Thus the local employment ratio, of our Chinese subsidiary, is relatively low (82.5%).'*

Similarly, both the President of Company CS (90%) and the General Manager of Company CH (92%) stated,

> *'basically our subsidiary investing in China is a small -sized firm; therefore the local employment ratio of our Chinese subsidiary is low.'*

In addition, foreign companies in China are also likely to exploit the cheap local inputs to reduce production costs and improve profitability. Therefore, in Table 8.2, it can be seen that out of the 20 respondent companies, 9 companies display a high extent of procurement localisation in China (local content ratio higher than or equal to 50%). In this survey, it is noted that the local suppliers in China include foreign, Taiwanese, and Chinese local companies. The President of Company ES (local content ratio: 85%) and the President of Company TS (local content ratio: 80%) commented that,

> *'the primary reason is that we need to reduce the input factor costs. Because of the high import cost, the materials and components imported from the Taiwanese parent company would be much more expensive than those purchased in China's domestic market. Nevertheless, in order to obtain excellent quality materials and components in China we always collaborate with dependable local suppliers that have good reputations.'*

It is noticeable that based on the in-depth interview responses, the main barriers for the respondent companies to expand local sourcing of inputs or subcontracting of operations in China are: unreliable product quality, not-punctual goods delivery, and lower-level technology. This opinion was expressed by most respondent companies. Therefore, overall Taiwanese companies investing in China maintain that innovation and continued attention to product quality are much more important in their strategic investment thinking, rather than merely in pursuing low-cost input factors.

Table 8.2   Chinese Subsidiary's Firm Performance, Localisation, and R&D Intensity

(20 Case Study Firms, year 2005)

Respondent company	Firm performance (sales/#worker) ($USD)	Local employment ratio	Chinese local sales ratio	Local content ratio	Firm's age (year)	R&D intensity	Firm's size: employees (persons)	Ownership
EB	32,000	98.5%	75%	40%	7	0	1000	WOS
ES	57,142	94.3%	65%	85%	8	0	35	JV
EL	20,000	98.9%	55%	40%	10	1%	1500	WOS
EH	56,666	93.3%	90%	30%	3	0	30	WOS
TB	1,028,571	97.6%	85%	45%	8	0	700	WOS
TS	1,600	99.2%	20%	80%	16	0	250	WOS
TL	27,000	99.2%	50%	35%	15	0.4%	2000	JV
TH	30,000	98%	80%	45%	3	0.3%	100	WOS
CB	50,000	98.2%	100%	30%	10	0	12000	WOS
CS	114,286	90%	60%	40%	10	0.63%	70	WOS
CL	75,000	98.1%	100%	50%	12	0.17%	160	WOS

Table 8.2   Chinese Subsidiary's Firm Performance, Localisation, and R&D Intensity

(20 Case Study Firms, year 2005) (Continued)

Respondent company	Firm performance (sales/#worker) ($USD)	Local employment ratio	Chinese local sales ratio	Local content ratio	Firm's age (year)	R&D intensity	Firm's size: employees (persons)	Ownership
CH	151,200	92%	100%	40%	3	0	25	WOS
MB	80,645	98.9%	50%	70%	12	6.7%	465	WOS
MS	27,397	98.2%	30%	70%	14	2.5%	146	WOS
ML	68,966	97.9%	90%	35%	12	1%	290	WOS
MH	25,000	82.5%	50%	65%	2	0	80	WOS
FB	28,938	98.3%	90%	70%	16	2.6%	16000	JV
FS	19,898	94.9%	90%	55%	9	0	98	WOS
FL	113,333	98.7%	99%	40%	14	0.6%	15000	WOS
FH	6,356	98.3%	100%	55%	3	0	118	WOS

Moreover, it can be seen that, in Table 8.2, four respondent companies (TB, CS, CH, and FL) enjoy higher firm performance (labour productivity). As the Senior Manager of Company TB (sales per worker: $1,028,571 USD) explained,

> *'the main product (chemical Fiber products) of our Chinese subsidiary is simple and a kind of mass material. In nature, the production volume of chemical Fiber product is always of large scale. So, the subsidiary-level labour productivity (sales per worker) is very high; however, the margin is very low.'*

Similarly, the Vice President of Company FL (sales per worker: $113,333 USD) also commented that,

> *'since the 90's, our Provisions group has actively laid out businesses in China. Our Provisions group in China includes five divisions (foodstuffs, animal feed, flour, edible oils, and aquatic products). In essence, for the provisions industry, the large-scale production volume is needed. Consequently, the labour productivity (sales per worker) of our subsidiaries investing in China is high; nevertheless, the margin is quite low.'*

Besides, higher labour productivity (sales per worker) is likely to be caused by a small number of employees. This point is illustrated in the President of Company CS (sales per worker: $114,286 USD) and the General Manager of Company CH's (sales per worker: $151,200 USD) expressions.

> *'Our subsidiary investing in China is a small size firm; therefore the subsidiary-level labour productivity (sales per worker) in China is higher.'*

An important aspect of this survey is to explore the subjective self-evaluation of the subsidiary performance. All interviews ask respondent investors about the last three years' firm performance of the subsidiaries investing in China. In this survey, 7 respondent investors evaluate that the investment in China performed above what was expected; 7 companies assess that the subsidiary performance is in line with the expectations. Only 6 respondent companies (1 electronic firm, 1 food firm, 1 chemical firm, 1 machinery firm, and 2 textile firms) view the investment in China as performing below what was expected. According to the above, there are no significant divergences, of the subjective self-evaluation of firm performance, between different investor industries. In summary, in this survey most respondent

companies (70%) consider that their outward FDI in China performed above (or in line with) the expectations of Taiwan parent company.

In addition, one of the objectives of this thesis is to examine the R&D undertaken by Taiwanese MNEs investing in China. In the individual in-depth interviews, this is done by looking at the R&D intensity of the respondent subsidiaries. In this chapter, the R&D intensity is also defined as the percentage of the R&D expenditure as a proportion of the total annual sales. In Table 8.2, it can be seen that overall the R&D intensity in 2005 is very low. It is noticeable that out of the 20 respondent companies, 10 subsidiaries do not conduct any R&D activities in China. Besides, only 3 subsidiaries are shown to undertake R&D intensity higher than 1% in China (Company MB, FB, and MS). This result is also consistent with our previous conclusion that in spite of geographical proximity, similar culture, identical language, and relatively low R&D coordination costs, due to China's weak IPRs' protections, Taiwanese firms always keep critical technology out of China and conduct R&D activities in Taiwan. The way in which Taiwanese MNE subsidiaries perform in R&D may provide some clues about the features of China's local business environment.

In terms of the higher R&D intensity, the Senior Manager of Company MB (R&D intensity: 6.7%) replied,

> *'our company is prestigious; the biggest maker of mechanical power presses in Taiwan. The products of our Chinese subsidiary include C-type presses, straight side presses, etc. The R&D intensity of our Chinese subsidiary is high because, for the machinery industry, the competition of China's local market is getting more and more intense. In order to offer the best quality products and compete successfully, we need to go on investing in R&D activities.'*

Besides, the General Manager of Company FB (R&D intensity: 2.6%) explained,

> *'as regards food industry in China's domestic market, it is a fact that Chinese local firms usually try to compete with us by lowering their prices. However, customers are very sensitive to product quality. To deliver superior value to Chinese local customers, for us, R&D is very important. We need to put more efforts and expenditure into R&D activities.'*

The President of Company MS (R&D intensity: 2.5%) stated,

> *'the R&D intensity of our Chinese subsidiary is relatively high, because whenever you need to grow, you need to learn and innovate. In order to upgrade product quality and expand market share, we have to spend more expenditures in R&D activities.'*

In general, for our sample companies, the R&D intensity of their Chinese subsidiaries is very low. However, in order to upgrade product quality and enlarge market share, some subsidiaries (company MB, FB, and MS) have to spend more expenditures on R&D activities in China. In other words, the degree of R&D intensity depends on the subsidiary characteristics.

8.3.2. The Comparative Analysis between the Quantitative Study and Qualitative Study

From Table 8.3, it can be seen that in the quantitative study and qualitative study, the average local employment ratio of these five industries investing in China is 96.498% and 96.25% respectively. Moreover, as regards local supplier linkage, in the quantitative study and qualitative study, the average local content ratio of these five industries investing in China is 48.79% and 51.00% respectively.

In the area of R&D, in the quantitative study and qualitative study, the average R&D intensity of these five Taiwanese manufacturing industry subsidiaries in China is 0.73% and 0.795% respectively. It is noticeable that in the qualitative analysis, the R&D intensity of the Taiwanese machinery industry subsidiaries in China is 2.55%, much higher than the value (0.66%) of the quantitative analysis. Nevertheless, in the qualitative analysis, the R&D intensity of the Taiwanese electronic industry and chemical industry subsidiaries in China is 0.25% and 0.2%, lower than the values (0.75% and 0.83%) of the quantitative analysis respectively.

As regards Chinese local sales ratio, in the qualitative analysis, the average Chinese local sales ratio of these five industry subsidiaries investing in China is 73.95%, much higher than the average ratio (51.72%) of the quantitative analysis. In the quantitative study, the electronic industry and textile industry are classified as of export-oriented FDI strategy (the local sales ratio is 43.42% and 39.18% respectively). However, in the qualitative analysis, these two Taiwanese industry

subsidiaries mainly target sales at China's domestic market (the local sales ratio is 71.25% and 58.75% respectively).

In the quantitative analysis, the data collection of this annual project is a large scale survey (the sample consists of 3,050 companies whose investment capital in China over $1 million US dollars, officially registered to the Taiwanese government). On the other hand, in the in-depth interviews with Taiwanese managers, the sample size is small, with only 20 companies investing in China (4 companies for each industry). Therefore, it is not surprising that there could be some different ratios in the quantitative analysis and qualitative analysis.

In Table 8.4, I examine the impact of localisation and R&D intensity on subsidiary performance (labour productivity). The model does not reach statistical significance (F=1.258) and accounts for 7.9 percent of the variance of subsidiary performance (adjusted R² value: 0.079).

In the quantitative analysis, the statistical results suggest that Taiwanese local-market-seeking MNE subsidiaries investing in China tend to perform better in terms of sales per worker when they operate for a longer period. For the export-oriented group, the relationship between firm's age and subsidiary performance (sales per worker) is not significant. In the qualitative analysis, the impact of firm's age on the subsidiary performance is not significant.

In the quantitative analysis, as regards local worker linkage, the results indicate that for the export-oriented group, the local employment ratio is not associated with the subsidiary performance (sales per worker). For the local-market-seeking group, the relationship between local employment ratio and subsidiary performance (sales per worker) is significantly negative. In the qualitative analysis, the impact of local employment ratio on the subsidiary performance is insignificant.

In the quantitative analysis, regarding local supplier linkage, for both export-oriented and local-market-seeking groups, the relationship between local content ratio and subsidiary performance (sales per worker) is not significant. In the qualitative analysis, the effect of local content ratio on the subsidiary performance is not significant.

In the quantitative analysis, as regards local Chinese sales linkage, the results show that for the local-market-seeking group, the relationship between Chinese local

sales ratio and subsidiary performance (sales per worker) is not significant. For the export-oriented group, Chinese local sales are able to significantly contribute to the subsidiary performance (sales per worker). In the qualitative analysis, the impact of Chinese local sales ratio on the firm performance is insignificant.

In the quantitative analysis, regarding R&D activities, the results suggest that for the export-oriented group, the relationship between R&D intensity and subsidiary performance (sales per worker) is not significant. For the local-market-seeking group, the impact of R&D intensity on the subsidiary performance is significantly negative. In the qualitative analysis, the effect of R&D intensity on the subsidiary performance is insignificant.

In the qualitative analysis, the empirical results would seem to contradict the views of the interviewees with regard to the significance of location-specific factors in China. In the in-depth interviews, the sample size is very small, with only 20 companies. Therefore, there could be different results in the quantitative study and qualitative study.

Table 8.3 The Different Ratios in the Quantitative Study and Qualitative Study

	Chinese local sales ratio (%)		Local content ratio (%)		Local employment ratio (%)		R&D intensity (%)	
	The Quantitative Study	The Qualitative Study	The Quantitative Study	The Qualitative Study	The Quantitative Study	The Qualitative Study	The Quantitative Study	The Qualitative Study
1. Electronic	43.42	71.25	36.12	48.75	97.522	96.25	0.75	0.25
2. Machinery	51.98	55.00	59.00	60.00	94.8852	94.375	0.66	2.55
3. Chemical	63.14	90.00	51.17	40.00	96.2007	94.575	0.83	0.20
4. Textile	39.18	58.75	46.55	51.25	98.9097	98.50	0.36	0.175
5. Food	66.78	94.75	76.89	55.00	96.9942	97.55	0.89	0.80
Mean	51.72	73.95	48.79	51.00	96.4980	96.25	0.73	0.795

Table 8.4 The Impact of Localisation and R&D Intensity on Subsidiary Performance

(The In-depth Interviews with Taiwanese Managers)

Subsidiary Performance: Labour productivity =Ln(Sales per worker)

Variables	Estimated coefficient	t-value	Sig.
Constant	20.430	2.471[**]	0.029
Firm's age	0.137	0.414	0.686
Local employment ratio	-0.351	-1.210	0.250
Local content ratio	-0.378	-1.348	0.203
Chinese local sales ratio	0.418	1.478	0.165
R& D intensity	0.366	1.403	0.186
JV	0.071	0.276	0.787
F		1.258	0.345
Adjusted R²		0.079	

Notes: (1) Significant levels: [*] $p<0.1$, [**] $p<0.05$, [***] $p<0.01$
    (2) Valid sample=20
    (4) The WOS (Wholly Owned Subsidiary) is the reference group

8.3.3. Conclusion

In this chapter, the respondent Taiwanese investors contributed additional contextual information which improved the knowledge and understanding of their operating strategies, firm performance, and the local business circumstances in China. Overall Taiwanese respondent firms express concerns about the importance of China's local investment climate and the need to compete not just on product quality but also on other elements of the mix, in particular business policies and local connections in China. In general, according to the subjective assessment, the respondent investors are mainly satisfied with their firm performance in China.

    For MNEs, FDI is an attempt to exploit firm-specific assets in the host countries. The choice of location for FDI is based on the location-specific advantages

that maximise the value of firm-specific assets net of set-up costs (Dunning, 1981; Caves, 1971). Therefore, location-specific advantages are a very important cornerstone in the competitive make-up of the international business mixes of successful Taiwanese companies investing in China.

Taiwanese firms have realized the significance of the Chinese local resources and have striven to incorporate the Chinese location-specific advantages into their winning strategies which include developing cost advantages, such as cheaper production processes and the provision of greater product values to suit customers in different markets. This survey is able to shed light on the localisation strategies adopted by Taiwanese companies in China.

In this thesis, the analysis of investors' perceptions of their investment location reveals that as China's economy improves, Taiwanese respondent firms are mainly positive about the recent developments in the Chinese location factors. However, on the perspective of R&D intensity, because of the prevalent IPRs' infringements, most Taiwanese respondent firms are extremely careful not to conduct R&D activities in China.

In summary, the qualitative results demonstrate that the business mix is the subject of continuous research and exploration so that rapid changes could be implemented to adapt localisation strategies to China's dynamic local commercial settings. At the same time, for Taiwanese investors, products and their R&D policies also require a programme of planned, regular and ongoing investigation, while the subsidiary-level firm performance needs to be improved. For Taiwanese companies, these elements of the operating strategy mix in China are mutually supportive in the long run, with the resulting use of local resources as a critical competitive tool in the global market.

Chapter 9: Conclusion and Suggestions for Further Research

9.1. Conclusion

In this thesis I examine the impact of localisation and R&D intensity on the firm performance of MNE subsidiaries investing in an emerging market. Using Taiwanese MNE subsidiaries investing in China as the sample, from the empirical results, it can be seen that, the aggregate influence of the localisation variables on the firm performance of local-market-seeking Taiwanese MNE subsidiaries, investing in China, is larger than that on the firm performance of export-oriented Taiwanese MNE subsidiaries. Therefore, I suggest that local-market-seeking FDI is more affected by host country local business environment than is export-oriented FDI.

The ultimate purpose of the local-market-seeking group is to access China's domestic market and serve local Chinese customers. Therefore, in order to expand local sales, besides local production platforms, they need to create local marketing networks and local distribution channels, et al. Not surprisingly, the aggregate impact of the localisation variables on the subsidiary-level firm performance is more important.

Nevertheless, the target market for export-oriented Taiwanese MNEs investing in China is the international market. Therefore, the aggregate effect of internationalisation variables on the subsidiary-level firm performance is likely to be larger (the impact of internationalisation on firm performance is not the focus of this thesis).

Our conclusion from the statistical results was that Taiwanese local-market-seeking MNE subsidiaries operating in China for a longer period are more likely to improve their firm performance than subsidiaries operating in the short-term. Nevertheless, I find that, for Taiwanese export-oriented MNE subsidiaries investing in China, the impact of firm's age on the firm performance is not significant. In terms of local worker linkage, our results suggest that the firm performance (sales per worker) of Taiwanese export-oriented MNE subsidiaries investing in China mainly depends on their sales in the international market rather than on local Chinese worker

employment. For the local-market-seeking group, the relationship between local employment ratio and subsidiary performance (sales per worker) is significantly negative.

As regards local supplier linkage, for both export-oriented and local-market-seeking groups, the relationship between local content ratio and firm performance (labour productivity) is not significant. Moreover, in terms of local financial linkage, for the export-oriented group, the effect of local capital ratio on the subsidiary-level firm performance is not significant. In other words, export-oriented Taiwanese MNE subsidiaries, investing in China, mainly rely on the capital provided by their headquarters in Taiwan to support their operations. On the other hand, for the local-market-seeking group, the extent of capital localisation (the degree of support from local Chinese government) is definitely a very important component leading to success in their local business strategy.

Regarding local Chinese sales linkage, our results suggest that for export-oriented Taiwanese MNE subsidiaries investing in China, the local Chinese sales could significantly help to increase their firm performance (sales per worker). In recent years, more and more Taiwanese export-oriented MNE subsidiaries investing in China have begun to manufacture their own brand-name products sold in China's domestic market. However, for the local-market-seeking group, the relationship between Chinese local sales ratio and firm performance (sales per worker) is not significant. The contribution of Chinese local sales ratio to firm performance (sales per worker) is likely to be neutralised by the numerous local Chinese workers required to expand local sales.

In terms of R&D activities, our results show that in order to retain their core competitiveness in Taiwan, Taiwanese export-oriented MNE subsidiaries investing in China always keep out of China R&D activities (critical technologies and production processes) that can be pirated. On the other hand, for the local-market-seeking group, the impact of R&D intensity on the subsidiary-level firm performance is significantly negative.

It is noteworthy that, in our survey, a remarkable portion of the respondent Taiwanese MNEs were probably untruthful in answering the 'profit' item due to the seriously negative consequences caused by revealing sensitive business secrets.

Besides, the 'profit' is an accounting-based measure. China's corporate accounting and financial information is poor-quality and questionable. For these two reasons, it is likely that the distorted data source in the answer to the 'profit' item would lead to the confusing statistical results of the empirical models. Therefore, in the analysis of China's business, I prefer sales-based measures (sales per worker) rather than accounting-based measures (profit).

In chapter 8, I conduct a qualitative study of Taiwanese MNEs investing in China and meant to complement and supplement the empirical findings of previous chapters. This qualitative study is able to shed light on the localisation strategies adopted by Taiwanese companies in China. The qualitative results demonstrate that the business mix is the subject of continuous research and exploration so that rapid changes could be implemented to adapt localisation strategies to China's dynamic local commercial settings. At the same time, for Taiwanese investors, products and their R&D policies also require a programme of planned, regular and ongoing investigation, while the subsidiary performance needs to be improved. For Taiwanese companies, these elements of the operating strategy mix in China are mutually supportive in the long run, with the resulting use of local resources as a critical competitive tool in the global market.

In summary, Taiwanese investors express concerns about the importance of China's local linkages and the need to compete not just on product quality but also on other elements of the mix, in particular business policies and local connections in China. In other words, Taiwanese firms have striven to incorporate China's location-specific advantages into their winning strategies which include developing cost edges, as in a cheaper production process and the provision of greater product values to suit customers in different markets. It is critical to understand the nature of a host country, as MNEs investing in different locations undertake different local linkages in an attempt to access location-specific resources.

However, with regards to R&D intensity, it can be seen that Taiwanese businesspeople in China are preoccupied with basic resource-seeking, with much less concern for knowledge assets. Taiwanese investors are extremely cautious about knowledge resource exchanges with local Chinese institutes.

It is crucial for MNEs' CEOs to identify the motivation and strategic objective for entering emerging markets. This thesis chooses the Taiwanese investment in China as a case of study. However, to other MNEs, the purposes of investing in China might be different. For example, Taiwanese electronic firms invest in China for the appeal of viewing China as the platform of low manufacturing costs for export to other countries (export-oriented FDI). However, for American (Japanese or European) electronic firms, the ultimate goal is likely to be targeting at local Chinese sales (local-market-seeking FDI). In summary, it is widely acknowledged that a strong and competitive local business strategy is a key component leading to above-average returns in China.

Some scholars examine the impact of localisation on subsidiary performance (Sakakibara and Yamawaki, 2008; Lam and Yeung, 2008). It is noted that they do not address the effect of strategic goals on the relationship between localisation and subsidiary performance. These two FDI strategies (local-market-seeking FDI and export-oriented FDI) have very different implications for investment in host countries. The ultimate purposes and operation types of these two FDI strategies are significantly different (Hanson et al., 2001; Helpman, 1984; Markusen, 1984). In this thesis, for these two groups, it can be seen that each localisation variable exerts a different impact on subsidiary performance. In a deeper way, I examine the relationship between localisation and subsidiary performance.

In terms of R&D intensity, the existing studies (Andras and Srinivasan, 2003; Kotabe et al., 2002; Eberhart et al., 2004; Holak, Parry, and Song, 1991) do not analyse the effect of strategic goals on the relationship between R&D intensity and firm performance. In this thesis, for these two FDI strategies, R&D intensity produces a different effect on subsidiary performance. The findings of this thesis shed further light on the analysis in regards to the impact of localisation and R&D intensity on subsidiary performance.

According to Dunning's (1988) 'eclectic' theory, MNEs that possess ownership-specific advantages (O) internalise (I) these advantages to invest overseas to seek location-specific factors (L). In this thesis, for the export-oriented group, the localisation variables explain 11.5 percent of the variance for subsidiary performance. On the other hand, for the local-market-seeking group, the localisation variables

account for 21.3 percent of the variance for subsidiary performance. Moreover, for these two groups, the relationship between each localisation variable and subsidiary performance is different (except local content ratio). From the discussions of the empirical results, it can be seen that location-specific factors such as the host country's local labour resources, local capital resources, and local sales are likely to affect MNEs' business behaviours and subsidiary performance. The results of this thesis support Dunning's (1988) 'eclectic' theory.

Dunning's (1988) 'OLI' theory suggests that MNEs internalise (I) the use of their ownership-specific advantages (O) to obtain a satisfactory return by investing in host countries. Technology is a particularly important source of ownership-specific advantages. For these two groups, the R&D intensity of their Chinese subsidiaries is very low. Because of China's weak IPR protections, Taiwanese export-oriented MNE subsidiaries prefer to conduct R&D in Taiwan in order to retain the core technologies of their parent companies. On the other hand, for the local-market-seeking group, China is a very price sensitive market and the local distribution networks in China are critical. Higher R&D intensity is likely to decrease their subsidiary performance because of less local distribution expenditures or the higher price per unit of product. The findings of this thesis also support Dunning's (1988) 'OLI' theory. Dunning's (1988) 'OLI' framework provides a very useful theoretical base in this thesis.

Chen et al. (1998 and 2004) have recently brought to our attention the research of local linkages. The determinants, features, and importance of local linkages in host countries have been examined in their studies. However, what is missing in their studies is the analysis that relates subsidiary performance to local linkages. Moreover, Sakakibara and Yamawaki's (2008) study does not provide any theoretical explanations about FDI and local linkages.

Dunning's (1988) 'OLI' theory has specified the increasing importance of location-specific factors. According to Dunning's (1988) 'OLI' theory, 'there must be location-specific factors that make it more profitable for the firm to exploit its assets in foreign, rather than in domestic, locations.' (Dicken, 2003: 205) The development of MNE subsidiaries is substantially affected by the host country's local

business environment (Narula and Dunning, 2000). The goal for MNE subsidiaries to operate abroad is to improve firm performance.

There are several empirical studies that investigate the characteristics and importance of location-specific factors in the context of FDI (Sethi et al., 2003; Tatoglu and Glaister, 1998; Campa and Guillén, 1998; Erramilli et al., 1997), but very few linking location-specific factors to firm performance.

This thesis intends to contribute to the body of literature in location-specific factors (L) by exploring, for each location-specific factor, the relationship between the degree of localisation (the intensity of the local linkage) and the subsidiary performance of MNEs investing in an emerging market. In addition, this thesis also tests the effect of strategic purposes on the relationship between localisation and firm performance.

9.2. Suggestions for Further Research

In recent years, the investment climate of China is changing remarkably. Apart from contributing to a better understanding of the impact of localisation and R&D intensity on the subsidiary-level firm performance of MNEs investing in China, this thesis is also intended to provide two critical issues that need further research. First, as discussed before, since 2005 the average labour costs in China (particularly in the coastal areas) have gone up significantly. It is noticeable that China's new labour law (Law of the People's Republic of China on Employment Contracts) was adopted at the 28th Session of the Standing Committee of the 10th National People's Congress on June 29, 2007 and effective from January 1, 2008 (The State Council, PRC, January 1, 2008). The new labour law strictly demands foreign companies provide 'well arranged' protections for local Chinese workers; however, it also imposes significant burdens on companies. In other words, the new labour law is likely to remarkably change the balance of power between foreign investors and local Chinese workers. Besides, China's trade unions could be transformed by the new law. The new law grants them the right to litigate. To foreign investors, the new labour law considerably enlarges the labour costs and increases the incentive to bribe corrupt officials to look the other way.

The prospects for unit labour cost depend on whether or not China will accomplish one of its industry policy goals—to transfer lower quality manufacturing production away from the crowded coastal provinces and into the vast inner areas. In fact, the Chinese government is trying to utilise policies to encourage low value-added export-processing industries to relocate west to capitalise the inland. If successful, the policy could help enhance China's overall labour productivity. In summary, I think it is too early to fully conclude the impact of China's rising labour costs on the foreign investors. However, undoubtedly this is a critical issue worth monitoring closely.

Second, China has also changed the tax incentives policy on foreign enterprises. Originally, in China, foreign-funded enterprises in some special regions tax was levied at a preferential rate of 24 percent or 15 percent, and for domestic low-profit enterprises tax was levied at two brackets of special rates of 27 percent and 18 percent respectively. A gauge based on a countrywide survey of enterprise income tax sources in China demonstrates that the average enterprise income tax burden on domestic enterprises is 25 percent while that on foreign-funded enterprises is 15 percent, 10 percentage points lower than that on domestic enterprises. In order to unify the income tax rate between domestic and foreign-funded enterprises and foster a legal taxation circumstance for fair competition, in March 2007, the Chinese government announced the 'Enterprise Income Tax Law of the People's Republic of China' and began to carry it out from 1 Jan. 2008 (Ministry of Commerce, PRC).

The 'Enterprise Income Tax Law of the People's Republic of China' sets a new tax rate of 25 percent for both domestic and foreign-funded enterprises. According to the explanations provided by the Chinese government, 'it is mainly intended to ease the tax burden on domestic enterprises, and keep as little rise as possible in the tax burden on foreign-funded enterprises. The loss of revenues should be within an acceptable margin and the level of enterprise income tax rates in the world, especially the neighbouring countries (regions), has to be taken into account.' ('Explanation on the Draft Enterprise Income Tax Law of the People's Republic of China', the Tenth National People's Congress of PRC) Nevertheless, it is a fact that for MNEs, the tax incentives in China have been cancelled and the income tax burden has increased.

The first research limitation of this thesis is the representative of data sample. The investment flowing from Taiwan to China has continuously soared; however, it is quite difficult to calculate the exact figures because people, capital, and goods move across the Strait indirectly, and because a proportion of Taiwanese investment in China continues to go unreported due to the sensitive cross-Strait political relationship. Since the sample list of this thesis was drawn from the Directory of Enterprises Investing in Mainland China, complied by MOEAIC (Ministry of Economic Affairs, Investment Commission), the Taiwanese unreported investment flowing into China is not available in this research. In addition, the Taiwanese companies investing in China without the government's approval are mainly small and medium enterprises (SMEs). The data sample is therefore likely to be biased toward relatively large companies. However, a sizeable number of SMEs are still covered in the survey.

The second research limitation of this thesis is the reliability of the answer of the 'profit' question in the survey. Since losing money in China will cause a serious negative impact on the bank credit record in Taiwan, many Taiwanese businesspeople, losing money in China, are likely not to reveal this financial information. In addition, due to the sensitivity of tax, it is extremely difficult to make sure that the respondent firms in the survey answer the 'profit' question honestly.

The investment climate of China is changing remarkably. In March 2008, I asked the 20 respondent Taiwanese firms, in chapter 8, to assess the projected future investment in China over the next three years. Not surprisingly the expected new investment that the respondent firms provide is one of the most essential measures of investor confidence and indicators of future Taiwanese FDI growth. It also provides a gauge of both the direction and volume of future Taiwanese investment flowing into China. In the forthcoming surveys of the next years, these forecasts of new investment could be monitored for accuracy.

From Table 9.1 it can be seen that only 3 companies are forecasting increasing new investment in China. On the other hand, 2 companies, out of the survey total sample of 20, respond that they are going to decrease the investment scale in China over the next 3 years. One company is planning to move the manufacturing facilities to the inner areas. It is noted that 14 of the respondent companies are planning to

keep the same investment scale in China. Out of these 14 companies, 1 company has decided to conduct new investments in Vietnam. This result seems to reflect the fact that because of the increased labour costs and tax burden, most Taiwanese companies do not expect to change their investment scales in China over the next three years. In other words, at the present stage, they are 'waiting-and-seeing.'

I suggest that further research effort should be invested in this topic because this will offer a significant understanding of adaptations that foreign investors need to make in China in the future. Such research will also shed some light on China's business environment and the inward FDI trend flowing into China in the coming years.

Table 9.1 The Projected Future Investment over the Next Three Years

Industry	Company Name (representative code)	Keep the Same Investment Scale	Increase the Investment Scale	Decrease the Investment Scale	Move to Inner Provinces	Move to Vietnam
Electronic industry	EB Company		×(slight new investment)			
	ES Company	×				
	EL Company	×				
	EH Company		×(slight new investment)			
Textile industry	TB Company	×				
	TS Company				×	
	TL Company	×				
	TH Company	×				
Chemical industry	CB Company	×				×(new investment)
	CS Company	×				
	CL Company	×				
	CH Company			×		
Machinery industry	MB Company	×				
	MS Company	×				
	ML Company		×(slight new investment)			
	MH Company	×				
Food industry	FB Company	×				
	FS Company	×				

Table 9.1 The Projected Future Investment over the Next Three Years (Continued)

	Company Name (representative code)	Keep the Same Investment Scale	Increase the Investment Scale	Decrease the Investment Scale	Move to Inner Provinces	Move to Vietnam
Food industry	FL Company	×				
	FH Company			×		

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Appendices

Appendix 1. Questionnaire: Investigation for the Operations of Taiwanese Subsidiaries Investing in China (2004) (Traditional Chinese Version)

Appendix 1. 問卷: 對大陸投資事業營運狀況調查(2004 年) (中華經濟研究院)

題號:0_3

題目內容:地區別

選項內容:

(01)北京

(02)上海

(03)廣東

(04)福建

(05)江蘇

(06)浙江

(07)湖北

(08)湖南

(09)四川

(10)河北

(11)河南

(12)山東

(13)東北地區

(14)其他地區

題號:0_4

題目內容:貴公司是否有正常營運

選項內容:

(01)有(填答 A 項)

(02)沒有(填答 B 項)

題號:1_1

題目內容:本案中國大陸投資事業設立年度

選項內容:

(01)西元_____年

(98)不知道/拒答

題號:1_2

題目內容:本案 2004 年中國大陸投資事業營業收入

選項內容:

(01) _____萬人民幣

(98)不知道/拒答

題號:1_3

題目內容:本案母公司 2004 年雇用員工人數

選項內容:

(01) _____人

(98)不知道/拒答

題號:1_4

題目內容:本案中國大陸事業於 2004 年之雇用員工總人數

選項內容:

(01)@@本案中國大陸事業於 2004 年，雇用員工總人數_____人

　(11)業務、管理與行政人員_____位(來自台灣_____位)

　(12)技術、製造及研發人員_____位(來自台灣_____位)

(19)不知道/拒答

(98)##不知道/拒答

題號:1_5

題目內容:本案中國大陸事業 2004 年來自台灣技術及研發人員

選項內容:

(01)新增_____位

(98)不知道/拒答

題號:1_6

題目內容:貴公司截至 2004 年底之大陸投資事業之股本金額

選項內容:

 (01) _____ 萬人民幣

 (98)不知道/拒答

題號:1_7

題目內容:本案母公司 2004 年有無新增投資

選項內容:

(01)有_____萬新台幣

(02)無

(03)減資_____萬新台幣

(98)不知道/拒答

題號:2

題目內容:本案投資型態為

選項內容:

(01)獨資

(02)合資(本案若合資請填答第三題)

(95)其他_____

(98)不知道/拒答

題號:3

題目內容:本案投資事業若屬合資,其合作對象為

選項內容:

(01)當地國營企業

(02)當地個體戶

(03)外商

(95)其他_____

(98)不知道/拒答

題號:4

題目內容:本案投資事業對中國大陸投資的動機為(可複選)

選項內容:

(01)勞工成本低廉

(02)土地成本低廉

(03)利用當地原物料資源

(04)中國大陸內銷市場廣大

(05)利用當地外銷配額

(06)利用當地最惠國待遇及優惠關稅

(07)租稅優惠及其他獎勵措施

(08)配合國外客戶要求

(09)配合國內中、下游廠商登陸

(10)國內投資環境不佳

(11)有效利用公司資本技術

(95)其他_____

(98)不知道/拒答

題號:5

題目內容:本案投資事業主要技術來源為（可複選）

選項內容:

(01)國內母公司

(02)當地自行研發

(03)購買當地技術

(04)當地合資企業提供

(05)台灣研發機構

(06)中國大陸研發機構

(07)當地 OEM、ODM 廠商技術移轉

(95)其他

(98)不知道/拒答

題號:6

題目內容:母公司與本案投資事業 2004 年研發經費占總營業額之比例（請四捨五入至整數位）

選項內容:

(01)@@母公司

　(11)0

　(12)1％

　(13)2％

　(14)3％

　(15)4％

　(16)5％

　(17)其他_____

(02)@@本案投資事業

　(21)0

(22)1%

(23)2%

(24)3%

(25)4%

(26)5%

(27)其他_____

(98)##無進行研發活動(請直接跳至第九題做答）

題號:7

題目內容:本案投資事業進行研發創新活動之動機（可複選）

選項內容:

(01)開發新產品

(02)拓展新市場

(03)進入新的產業、進行多角化經營

(04)持續降低生產成本及提高效率

(05)避免技術落後於同業

(95)其他_____

(98)不知道/拒答

題號:8

題目內容:本案投資事業進行研發創新之合作對象（可複選）

選項內容:

(01)@@客戶

　(11)母公司　　(12)本案投資事業

(02)@@材料供應商

　(21)母公司　　(22)本案投資事業

(03)@@中衛協力廠商

　(31)母公司　　(32)本案投資事業

(04)@@技術顧問公司

　(41)母公司　　(42)本案投資事業

(05)@@科研機構或技術移轉單位

　(51)母公司　　(52)本案投資事業

(06)@@大專院校

　(61)母公司　　(62)本案投資事業

(95)@@其他_____

　(91)母公司　　(92)本案投資事業

(98)##不知道/拒答

題號:9

題目內容:本案投資事業的產品行銷方式為（可複選）

選項內容:

(01)由台灣母公司行銷

(02)當地事業自行行銷

(03)透過台灣其他企業行銷

(04)透過當地其他事業行銷

(05)透過第三國企業行銷

(06)透過其他地區子公司行銷

(95) _____其他

(98)不知道/拒答

題號:10

題目內容:本案投資事業 2004 年採購原料、零組件及半成品之來源所占比例

選項內容:

(01)向台灣採購_____％

(02)向中國大陸當地台商企業採購_____％

(03)向中國大陸非台商企業採購_____％

(04)自其他國家進口_____％

(05)合 計總額為_____萬美元，100 ％

(98)不知道/拒答

題號:11

題目內容:本案投資事業 2004 年產品銷售地區所占比例

選項內容:

(01)回銷台灣（含母公司及其他公司_____％

(02)在中國大陸當地銷售_____％

(03)外銷其他國家（不含中國大陸_____％

(04)合 計總額為_____萬美元，100 ％

(98)不知道/拒答

題號:12

題目內容:貴公司的外銷訂單來源，由下列各公司的接單比例

選項內容:

(01)由台灣母公司接單_____％

(02)由中國大陸子公司接單_____％

(03)由其他地區子公司接單_____％

(98)無接外銷訂單

題號:13

題目內容:貴公司的外銷接單中，由下列各公司的出貨比例

選項內容:

(01)由台灣母公司出貨_____％

(02)由中國大陸子公司出貨_____％

(03)由其他地區子公司出貨_____％

(98)不知道/拒答

題號:14

題目內容:貴公司目前在台灣、中國大陸各設立那些部門（可複選）

選項內容:

(01)@@營運總部

　(11)母公司　(12)中國大陸投資事業

(02)@@製造生產中心

　(21)母公司　(22)中國大陸投資事業

(03)@@研發及設計中心

　(31)母公司　(32)中國大陸投資事業

(04)@@行銷中心

　(41)母公司　(42)中國大陸投資事業

(05)@@財務籌資中心

　(51)母公司　(52)中國大陸投資事業

(06)@@採購中心

　(61)母公司　(62)中國大陸投資事業

(95)@@其他_____

　(91)母公司　(92)中國大陸投資事業

(98)##不知道/拒答

201

題號:15

題目內容:貴公司對中國大陸投資後，對國內母公司營運之影響

選項內容:

(01)@@投資規模

　(11)有利或增加　(12)不影響　(13)不利或減少

(02)@@生產規模

　(21)有利或增加　(22)不影響　(23)不利或減少

(03)@@出口市場拓展

　(31)有利或增加　(32)不影響　(33)不利或減少

(04)@@產品品質提昇

　(41)有利或增加　(42)不影響　(43)不利或減少

(05)@@生產技術提升

　(51)有利或增加　(52)不影響　(53)不利或減少

(06)@@研究發展經費

　(61)有利或增加　(62)不影響　(63)不利或減少

(07)@@員工雇用

　(71)有利或增加　(72)不影響　(73)不利或減少

(08)@@加強與國外企業策略聯盟

　(81)有利或增加　(82)不影響　(83)不利或減少

(09)@@業務多元化

　(91)有利或增加　(92)不影響　(93)不利或減少

(98)##不知道/拒答

題號:16

題目內容:本案投資事業未來一年可能發展方向（可複選）

選項內容:

(01)增加投資金額

(02)可以自行接單

(03)在當地上市、上櫃

(04)回台灣上市、上櫃

(05)回台灣投資

(98)不知道/拒答

題號:17

題目內容:本案投資事業 2004 年全年之獲利／虧損率（稅後盈虧／營業收入）為（請四捨五入至整數位）

選項內容:

(01)獲利率 0～5％

(02)獲利率 6～10％

(03)獲利率 11～20％

(04)獲利率 21％及以上

(05)虧損率 0～5％

(06)虧損率 6～10％

(07)虧損率 11～20％

(08)虧損率 21％及以上

(98)不知道/拒答

題號:18

題目內容:本案投資事業 2004 年全年稅後盈餘，與去年比較增減原因為（可複選）：

選項內容:

(01)@@稅後盈餘增加，其原因為

　　(11)開發新產品

　　(12)生產技術提升

　　(13)管理良好

　　(14)財務操作良好

　　(15)當地市場需求增加

　　(16)國外市場需求增加

　　(17)投資環境變好

　　(18)其他_____

(02)@@稅後盈餘減少，其原因為

　　(21)產品品質不佳

　　(22)同業競爭激烈

　　(23)管理不善

　　(24)貨款收回不易

　　(25)財務操作不佳

　　(26)當地市場萎縮

　　(27)國外市場萎縮

(28)投資環境變差

　(29)其他＿＿＿＿＿＿

(98)##不知道/拒答

題號:19

題目內容:本案投資事業 2004 年全年稅後如有虧損，其原因爲（可複選）

選項內容:

(01)@@個體因素

　(11)產品品質不佳

　(12)同業競爭激烈

　(13)管理不善

　(14)貨款收回不易

　(15)財務操作不佳

　(16)其他＿＿＿＿＿＿

(02)@@總體因素：

　(21)土地廠房成本太高

　(22)勞動生產力低

　(23)融資困難

　(24)自由化不足

　(25)行政效率欠佳

　(26)基礎設施不足

　(27)額外支出太多

　(28)當地市場萎縮

　(29)國外市場萎縮

　(30)其他＿＿＿＿＿＿

(98)##不知道/拒答

題號:20

題目內容:本案投資事業 2004 年共計匯回國內之

選項內容:

(01)投資收益金額爲：＿＿＿＿＿＿萬美元

(02)減資（或撤資）金額爲：＿＿＿＿＿＿萬美元

(98)不知道/拒答

題號:21

題目內容:本案投資事業以往對盈餘之運用方式為（可複選）

選項內容:

(01)保留盈餘

(02)彌補往年虧損

(03)分配給股東

(04)盈餘轉增資

(05)轉投資當地其他事業

(06)轉投資其他地區

(07)匯回國內

(95)其他方式

(98)不知道/拒答

題號:22

題目內容:本案投資事業除股本外，主要營運資金來源為

選項內容:

(01)由國內母公司匯款提供，占_____%

(02)自國內金融機構融資借款，占_____%

(03)@@自中國大陸金融機構融資借款，占_____%

　(31)有

　(32)無母公司擔保或保證

　(33)無填答

(04)@@自第三國金融機構融資借款，占_____%

　(41)有

　(42)無母公司擔保或保證

　(43)無填答

(05)##由大陸合資事業提供，占_____%

(06)發行海外公司債，占_____%

(95)其他_____，占_____%

(98)不知道/拒答

題號:23

題目內容:本案中國大陸投資事業在經營方面所遭遇問題的重要程度

選項內容:

(100)@@政府行政效率不彰

　(101)高　(102)中　(103)低

(110)@@法規不明確、攤派多、隱含成本高

　(111)高　(112)中　(113)低

(120)@@基礎建設不足

　(121)高　(122)中　(123)低

(130)@@內銷市場開拓困難

　(131)高　(132)中　(133)低

(140)@@同業競爭激烈

　(141)高　(142)中　(143)低

(150)@@缺水、缺電

　(151)高　(152)中　(153)低

(160)@@海關手續繁複

　(161)高　(162)中　(163)低

(170)@@融資困難

　(171)高　(172)中　(173)低

(180)@@油價上漲

　(181)高　(182)中　(183)低

(190)@@貨款不易收回

　(191)高　(192)中　(193)低

(200)@@缺乏勞動力

　(201)高　(202)中　(203)低

(210)@@面臨外銷市場障礙(例如，配額、反傾銷控訴等)

　(211)高　(212)中　(213)低

(220)@@宏觀調控

　(221)高　(222)中　(223)低

(230)@@當地政府查稅增加營運困擾

　(231)高　(232)中　(233)低

(950)@@其他_____

　(951)高　(952)中　(953)低

(998)##不知道/拒答

題號:24

題目內容:貴公司對中國大陸投資，最希望政府協助及輔導之項目爲（可複選）

選項內容:

(01)貨運便捷化

(02)放寬投資金額限制

(03)簡化投資申請手續

(04)提供融資及保險之協助

(05)提供相關投資法令之諮詢服務

(06)提供經營管理之諮詢服務

(07)放寬中國大陸員工來台受訓及就業之限制

(08)協助台商回台投資

(09)簽署投資保障協定

(10)解決台商子女教育問題

(95)其他_____

(98)不知道/拒答

題號:25

題目內容:台灣及中國大陸投資經營環境比較

選項內容:

(100)@@研發技術人才充沛

　(101)台灣較佳　(102)中國大陸較佳　(103)兩岸相差無幾

(110)@@基礎建設完善

　(111)台灣較佳　(112)中國大陸較佳　(113)兩岸相差無幾

(120)@@海外人才引入方便性

　(121)台灣較佳　(122)中國大陸較佳　(123)兩岸相差無幾

(130)@@政策法令透明度及明確性

　(131)台灣較佳　(132)中國大陸較佳　(133)兩岸相差無幾

(140)@@融資或籌資方便性

　(141)台灣較佳　(142)中國大陸較佳　(143)兩岸相差無幾

(150)@@政府行政效能

　(151)台灣較佳　(152)中國大陸較佳　(153)兩岸相差無幾

(160)@@智慧財產權保護

　(161)台灣較佳　(162)中國大陸較佳　(163)兩岸相差無幾

(170)@@租稅獎勵誘因

　(171)台灣較佳　(172)中國大陸較佳　(173)兩岸相差無幾

(180)@@環保法令管制

(181)台灣較佳　(182)中國大陸較佳　(183)兩岸相差無幾

(950)@@其他_____

(951)台灣較佳　(952)中國大陸較佳　(953)兩岸相差無幾

(998)##不知道/拒答

題號:26

題目內容:貴公司截至 2004 年底，國內外投資總額中，對中國大陸投資總額所占
比例為（請四捨五入至整數位）

選項內容:

(01)10%以下

(02)11～20%

(03)21～30%

(04)31～40%

(05)41～50%

(06)51～60%

(07)61～70%

(08)71～80%

(09)81～90%

(10)91～100%

(98)不知道/拒答

題號:27

題目內容:貴公司 2004 年，國內外投資事業之營業收入總額中，所有中國大陸投資事業所占比
例為（請四捨五入至整數位）

選項內容:

(01)建廠中，未營業

(02)10%以下

(03)11～20%

(04)21～30%

(05)31～40%

(06)41～50%

(07)51～60%

(08)61～70%

(09)71～80%

(10)81〜90%

(11)91〜100％

(98)不知道/拒答

題號:28

題目內容:2004 年貴公司除已在中國大陸投資之外，有無在其他地區投資

選項內容:

(01)無

(02)有，2003 年當年度在台灣投資_____萬美元

(03)有，2003 年當年度在除台灣、中國大陸以外地區合計投資_____萬美元

(98)不知道/拒答

題號:29

題目內容:貴公司 2004 年當年度對台灣投資金額，與 2002 年相較

選項內容:

(01)增加，_____萬美元

(02)減少，_____ 萬美元

(03)不變

(98)不知道/拒答

題號:B_1

題目內容:本中國大陸投資案無法提供營運狀況之原因為

選項內容:

(01)尚未實行投資

(02)尚在建廠階段

(03)已撤資、轉讓

(04)已歇業

(95)其他_____

(98)不知道/拒答

題號:B_2

題目內容:案尚未投資、尚在建廠階段、已撤資已轉讓或已歇業關廠之原因為

選項內容:

(01)資金籌措不易

(02)投資計畫變更

(03)土地廠房問題

(04)投資環境變差

(05)獲利不佳

(06)合夥糾紛

(07)勞工糾紛

(95)其他_____

(98)不知道/拒答

題號:C

題目內容:公司行業別分類（必填）

選項內容:

(01)農林漁牧業

(02)礦業及土石採取業

(03)食品飲料製造業

(04)紡織業

(05)成衣服飾業

(06)皮革製品製造業

(07)木竹籐柳製造業

(08)家具及裝設業

(09)造紙業

(10)印刷業

(11)化材料業

(12)化學品製造

(13)石油及煤製品製造業

(14)橡膠製品製造業

(15)塑膠製品製造業

(16)非金屬礦物製品製造業

(17)金屬基本工業

(18)金屬製品製造業

(19)機械設備製造配修業

(20)電腦電信及視聽電子產品製造業

(21)電子零組件製造業

(22)電力機械器材及設備製造配修業

(23)運輸工具製造修配業

(24)精密器械製造業

(25)其他工業製品

(26)水電燃氣業

(27)營造業

(28)批發及零售業

(29)住宿及餐飲業

(30)運輸、倉儲及通信業

(31)金融及保險業

(32)不動產及租賃業

(33)專業、科學及技術服務業

(34)教育服務業

(35)醫療保健及社會福利服務業

(36)文化、運動及休閒服務業

(95)其他服務業

(98)不知道/拒答

Appendix 2 Questionnaire: Investigation for the Operations of Taiwanese Subsidiaries Investing in China (2004)
The Chun-Hua Institute for Economic Research (CIER)

Question number: 0_3

Question: Location

Choice:

(01) Beijing

(02) Shanghai

(03) Guangdong

(04) Fujian

(05) Jiangsu

(06) Zhejiang

(07) Hubei

(08) Hunan

(09) Sichuan

(10) Hebei

(11) Henan

(12) Shandong

(13) Northeastern Area

(14) Other areas

Question number: 0_4

Question: Is your company normally operating in China at present?

Choice:

(01) Yes

(02) No

Question number: 1_1

Question: What year did your company begin to invest in China?

Choice:

(01) _____ year

(98) I don't know/refuse to answer

Question number: 1_2

Question: What is the total sales amount of your Chinese subsidiary in 2004?

Choice:

(01) _____ RMB

(98) I don't know/refuse to answer

Question number: 1_3

Question: How many workers did your Taiwan parent company employ in 2004?

Choice:

(01) _____ workers

(98) I don't know/refuse to answer

Question number: 1_4

Question: How many workers did your Chinese subsidiary employ in 2004?

Choice:

(01)@@ In 2004 your Chinese subsidiary employed _____ workers

   (11) Workers in sales, management, and administrations, _____ workers,

       (_____workers from Taiwan)

    (12) Workers in technology, R&D, and manufacturing _____ workers,

       (_____workers from Taiwan)

(19) I don't know/refuse to answer

(98) ##I don't know/refuse to answer

Question number: 1_5

Question: In 2004 how many R&D workers in your Chinese subsidiary came from Taiwan?

Choice:

   (01) _____ workers

   (98) I don't know/refuse to answer

Question number: 1_6

Question: In 2004 what amount is the share capital of your Chinese subsidiary?

Choice:

(01) _____ RMB

(98) I don't know/refuse to answer

Question number: 1_7

Question: By how much did your Taiwan parent company increase (or decrease) the investment into your Chinese subsidiary in 2004 (compare with 2003)?

Choice:

(01) Increase _____ NTD (New Taiwanese Dollar)

(02) No

(03) Decrease _____ NTD

(98) I don't know/refuse to answer

Question number: 2

Question: Of what type of ownership is your Chinese subsidiary?

Choice:

(01) Wholly Owned Subsidiary (WOS)

(02) Joint Venture (JV) (Please answer Question number: 3)

(95) Other type, _____

(98) I don't know/refuse to answer

Question number: 3

Question: If your Chinese subsidiary is a joint-venture, what company does your company ally with?

Choice:

(01) Chinese State-Owned Enterprise (SOE)

(02) Chinese private enterprise

(03) Foreign enterprise

(95) Other type, _____

Question number: 4

Question: What are the motives for your company to invest in China? (multiple choices)

Choice:

(01) Cheap Labour Cost

(02) Cheap Land Cost

(03) Utilise the raw material in China

(04) Exploit China's domestic market

(05) Exploit the export quota of China

(06) Take advantage of the most-favoured nation treatment or preferential tariff of China

(07) Tax incentives and other investment promotion measures

(08) The demand from foreign customers

(09) Cooperate with other downstream Taiwanese firms which have already invested in China

(10) Bad investment climate in Taiwan

(11) Efficiently utilise the technology and capital of parent company

(95) Other answer, _____

(98) I don't know/refuse to answer

Question number: 5

Question: What are the technology sources of your Chinese subsidiary? (multiple choices)

Choice:

(01) Taiwan parent company

(02) Developed by the Chinese subsidiary

(03) Purchase local technology in China

(04) Provided by JV ally partner company

(05) Taiwanese R&D institutes

(06) Local Chinese R&D institutes

(07) Transferred by OEM, ODM firms in China

(95) Other answer, _____

(98) I don't know/refuse to answer

Question number: 6

Question: In 2004 what percentage of the total annual sales does the R&D expenditure account for? (Taiwan parent company and Chinese subsidiary respectively)

Choice:

    (01) @@ Taiwan parent company

        (11) 0%

        (12) 1%

        (13) 2%

        (14) 3%

        (15) 4%

        (16) 5%

        (17) Other answer, _____

    (02) @@ Chinese Subsidiary

        (21) 0%

        (22) 1%

        (23) 2%

        (24) 3%

        (25) 4%

        (26) 5%

        (27) Other answer, _____

    (98)## No R&D activities (go to Question number: 9)

Question number: 7

Question: What are the motives for your Chinese subsidiary to conduct R&D activities? (multiple choices)

Choice:

(01) Develop new products

(02) Extend into a new market

(03) Enter new industries and diversify products

(04) Reduce production costs and increase efficiency

(05) Avoid falling behind in technological advancements

(95) Other answer, _____

(98) I don't know/refuse to answer

Question number: 8

Question: What individuals or institutes does your company cooperate with to conduct R&D activities in China? (multiple choices)

Choice:

(01) @@ Customers

  (11) Taiwan parent company (12) Chinese subsidiary

(02) @@ Material suppliers

  (21) Taiwan parent company (22) Chinese subsidiary

(03) @@ Cooperative firms

  (31) Taiwan parent company (32) Chinese subsidiary

(04) @@ Technology consulting company

  (41) Taiwan parent company (42) Chinese subsidiary

(05) @@ R&D institutes

  (51) Taiwan parent company (52) Chinese subsidiary

(06) @@ Universities or colleges

  (61) Taiwan parent company (62) Chinese subsidiary

(95) @@ Other answer, _____

  (91) Taiwan parent company (92) Chinese subsidiary

(98) ##I don't know/refuse to answer

Question number: 9

Question: What channels does your Chinese subsidiary use to market and distribute products? (multiple choices)

Choice:

(01) Through Taiwan parent company

(02) Through the Chinese subsidiary

(03) Through other enterprises in Taiwan

(04) Through other enterprises in China

(05) Through other enterprises in another country (other than Taiwan and China)

(06) Through other subsidiary in another country (other than Taiwan and China)

(95) Other answer, _____

(98) I don't know/refuse to answer

Question number: 10

Question: In 2004 what percentages of the sources for raw materials, components, and intermediate-products, did your Chinese subsidiary procure from?

Choice:

(01) Taiwan _____ ％

(02) Other Taiwanese firms in China _____ ％

(03) Non-Taiwanese firms in China _____ ％

(04) Another country _____ ％

(05) Total amount $_____ million USD, 100％

(98) I don't know/refuse to answer

Question number: 11

Question: In 2004 what percentage of products, did your Chinese subsidiary sell in each area?

Choice:

(01) Exported back to Taiwan (including to Taiwan parent company and other companies)_____ ％

(02) Sold in China's domestic market _____ ％

(03) Exported to other countries _____ ％

(04) Total amount $_____ million USD, 100％

(98) I don't know/refuse to answer

Question number: 12

Question: In 2004 what percentage of your export orders did your subsidiary (or Taiwan parent company) receive?

Choice:

(01) Received by Taiwan parent company _____ %

(02) Received by your Chinese subsidiary _____ %

(03) Received by your subsidiaries in other countries _____ %

(98) No export orders

Question number: 13

Question: In 2004 what percentage of export orders were delivered by?

Choice:

(01) Your Taiwan parent company _____ %

(02) Your Chinese subsidiary _____ %

(03) Your subsidiaries in other countries _____ %

(98) I don't know/refuse to answer

Question number: 14

Question: What departments does your company create in Taiwan and China respectively (multiple choices)?

Choice:

(01) @@ Operation headquarter

  (11) Taiwan parent company   (12) Chinese subsidiary

(02) @@ Manufacturing centre

  (21) Taiwan parent company   (22) Chinese subsidiary

(03) @@ R&D centre

  (31) Taiwan parent company   (32) Chinese subsidiary

(04) @@ Marketing centre

  (41) Taiwan parent company   (42) Chinese subsidiary

(05) @@ Finance centre

  (51) Taiwan parent company   (52) Chinese subsidiary

(06) @@ Purchasing centre

   (61) Taiwan parent company   (62) Chinese subsidiary

(95) @@ Other department _____

   (91) Taiwan parent company   (92) Chinese subsidiary

(98) I don't know/refuse to answer

Question number: 15

Question: How does your investment in China impact your Taiwan parent company?

Choice:

(01) @@ Investment scale

   (11) Beneficial or increase   (12) No impact (13) Damaging or decrease

(02) @@ Production scale

   (21) Beneficial or increase   (22) No impact (23) Damaging or decrease

(03) @@ Export market extension

   (31) Beneficial or increase   (32) No impact (33) Damaging or decrease

(04) @@ Product quality upgrade

   (41) Beneficial or increase   (42) No impact (43) Damaging or decrease

(05) @@ Production technology upgrade

   (51) Beneficial or increase   (52) No impact (53) Damaging or decrease

(06) @@ R&D expenditure

   (61) Beneficial or increase   (62) No impact (63) Damaging or decrease

(07) @@ Staff employment

   (71) Beneficial or increase   (72) No impact (73) Damaging or decrease

(08) @@ Alliance with foreign enterprises

   (81) Beneficial or increase   (82) No impact (83) Damaging or decrease

(09) @@ Operation diversifications

   (91) Beneficial or increase   (92) No impact (93) Damaging or decrease

(98) ##I don't know/refuse to answer

Question number: 16

Question: What are the possible developments for your Chinese subsidiary in the next year (multiple choices)?

Choice:

    (01) Increase investment

    (02) Receive orders by itself

    (03) List publicly on China's stock markets

    (04) List publicly on Taiwan's stock market

    (05) Go back to invest in Taiwan

    (98) I don't know/refuse to answer

Question number: 17

Question: In 2004 what was the profit (or loss) ratio (post-tax profit or loss/sales) of your Chinese subsidiary?

Choice:

    (01) Profit ratio (0 to 5%)

    (02) Profit ratio (6 to 10%)

    (03) Profit ratio (11 to 20%)

    (04) Profit ratio (over 21%)

    (05) Loss ratio (0 to 5%)

    (06) Loss ratio (6 to 10%)

    (07) Loss ratio (11 to 20%)

    (08) Loss ratio (over 21%)

    (98) I don't know/refuse to answer

Question number: 18

Question: Compared with 2003, what are the reasons for the post-tax profit increase (or decrease) of your Chinese subsidiary in 2004 (multiple choices)?

Choice:

    (01) @@ Reasons for post-tax profit increase:

        (11) Develop new products

        (12) Upgrade manufacturing technology

        (13) Good management

        (14) Good finance

        (15) Demand increased in China's domestic market

(16) Demand increased in the international market

(17) Better investment climate in China

(18) Other answer, _____

(02) @@ Reasons for post-tax profit decrease:

(21) Bad product quality

(22) Market competition

(23) Bad management

(24) Difficult to collect the sales money

(25) Bad finance

(26) Demand decreased in China's domestic market

(27) Demand decreased in the international market

(28) Poorer investment climate in China

(29) Other answer, _____

(98)## I don't know/refuse to answer

Question number: 19

Question: Why did your Chinese subsidiary lose money (post-tax) in 2004 (multiple choices)?

Choice:

(01) @@Micro reasons

(11) Bad product quality

(12) Market competition

(13) Bad management

(14) Difficult to collect the sales money

(15) Bad finance

(16) Other answer, _____

(02) @@ Macro reasons

(21) High costs for land and factories

(22) Low labour productivity

(23) Difficult to loan

(24) Inadequate liberalisation

(25) Bad government efficiency

(26) Inadequate infrastructures

(27) Extra expenditures

(28) Demand decreased in China's domestic market

(29) Demand decreased in the international market

(30) Other answer, _____

(98)## I don't know/refuse to answer

Question number: 20

Question: In 2004 what amount did your Chinese subsidiary repatriate back to Taiwan?

Choice:

(01) Profit $_____ USD

(02) Decrease (or withdrawal) of investment $_____ USD

(98)## I don't know/refuse to answer

Question number: 21

Question: How did your Chinese subsidiary use its profits (multiple choices)?

Choice:

(01) Retained the profits

(02) Compensated the loss in the previous years

(03) Distributed to the shareholders

(04) Increased the investment in your Chinese subsidiary

(05) Increased the investment in other enterprises in China

(06) Invested in another country

(07) Repatriated back to Taiwan

(95) Other answer _____

(98)## I don't know/refuse to answer

Question number: 22

Question: What sources does the working capital of your Chinese subsidiary come from?

Choice:

(01) Provided by Taiwan parent company, _____ %

(02) Borrowed from banks in Taiwan, _____ %

(03) @@Borrowed from local Chinese banks, _____ %

  (31) Yes   (32) No guarantee by Taiwan parent company   (33) No

(04) @@Borrowed from banks in another country, _____ %

  (41) Yes   (42) No guarantee by Taiwan parent company   (43) No

(05) Provided by local Chinese JV ally partner enterprise, _____ %

(06) Overseas GDR, _____ %

(95) Other source, _____%

(98)## I don't know/refuse to answer

Question number: 23

Question: What problems does your subsidiary in China face at present (according to the degree of severity)?

Choice:

  (100) @@ Low government efficiency

    (101) High   (102) Medium (33) Low

  (110) @@ Ambiguous regulations and high invisible costs

    (111) High   (112) Medium (113) Low

  (120) @@ Inadequate infrastructures

    (121) High   (122) Medium (123) Low

  (130) @@ Difficulty in exploiting China's domestic market

     (131) High   (132) Medium (133) Low

  (140) @@ Market competition

    (141) High   (142) Medium (143) Low

  (150) @@ Water and electricity shortage

    (151) High   (152) Medium (153) Low

  (160) @@ Complex Customs procedures

    (161) High   (162) Medium (163) Low

  (170) @@ Difficult to loan

    (171) High   (172) Medium (173) Low

  (180) @@ High oil price

    (181) High   (182) Medium (183) Low

(190) @@ Difficult to collect sales money

  (191) High   (192) Medium   (193) Low

(200) @@ Labour shortage

  (201) High   (202) Medium   (203) Low

(210) @@ Export barriers (such as export quota, anti-dumping)

  (211) High   (212) Medium   (213) Low

(220) @@ Macroeconomic control measures

  (221) High   (222) Medium   (223) Low

(230) @@ Ambiguous tax regulations

  (231) High   (232) Medium   (233) Low

(950) Other answer, _____

   (951) High   (952) Medium   (953) Low

(998)## I don't know/refuse to answer

Question number: 24

Question: How could the Taiwanese government help the operation of your Chinese subsidiary (multiple choices)?

Choice:

   (01) More convenient cargo

   (02) Less restriction on investment amount

   (03) Simplify the application procedures for investment

   (04) Provide help for loans and insurance

   (05) Provide consulting services for investment regulations

   (06) Provide consulting services for operation management

   (07) Less restriction for local Chinese workers come to Taiwan for training

   (08) Help Taiwanese enterprises to go back to invest in Taiwan

   (09) Sign contracts for investment protection with the Chinese government

   (10) Solve the education problems for Taiwanese businesspeoples' children

   (95) Other answer, _____

   (98) I don't know/refuse to answer

Question number: 25

Question: Please compare Taiwan's investment climate with China's investment climate.

Choice:

(100) @@ R&D talents

   (101) Taiwan better   (102) China better   (103) Almost the same

(110) @@ Infrastructures

   (111) Taiwan better   (112) China better   (113) Almost the same

(120) @@ Appeal to overseas talents

   (121) Taiwan better   (122) China better   (123) Almost the same

(130) @@ Transparency and accuracy of regulations and policies

   (131) Taiwan better   (132) China better   (133) Almost the same

(140) @@ Loan and finance

   (141) Taiwan better   (142) China better   (143) Almost the same

(150) @@ Government efficiency

   (151) Taiwan better   (152) China better   (153) Almost the same

(160) @@ Intellectual property right protections

   (161) Taiwan better   (162) China better   (163) Almost the same

(170) @@ Investment promotion measures (such as tax incentives)

   (171) Taiwan better   (172) China better   (173) Almost the same

(180) @@ Regulations for environmental protection

   (181) Taiwan better   (182) China better   (183) Almost the same

(950) Other answer, _____

   (951) Taiwan better   (952) China better   (953) Almost the same

(998)## I don't know/refuse to answer

Question number: 26

Question: Until 2004 what percentage of your company's investment in China accounted for your company's total investment (including in Taiwan, China, and other areas)?

Choice:

(01) Below 10%

(02) 11 to 20%

(03) 21 to 30%

(04) 31 to 40%

(05) 41 to 50%

(06) 51 to 60%

(07) 61 to 70%

(08) 71 to 80%

(09) 81 to 90%

(10) 91 to 100%

(98) I don't know/refuse to answer

Question number: 27

Question: In 2004 what percentage of your Chinese subsidiary's sales account for your company's total sales (including in Taiwan, China and other areas)?

Choice:

(01) Not begin operation yet

(02) Below 10%

(03) 11 to 20%

(04) 21 to 30%

(05) 31 to 40%

(06) 41 to 50%

(07) 51 to 60%

(08) 61 to 70%

(09) 71 to 80%

(10) 81 to 90%

(11) 91 to 100%

(98) I don't know/refuse to answer

Question number: 28

Question: Besides the investment in China, did you company invest in other areas in 2004?

Choice:

    (01) No

    (02) Yes, invested in Taiwan $_____ USD at 2004

    (03) Yes, invested in other areas (other than Taiwan, China) $_____ USD at 2004

    (98) I don't know/refuse to answer

Question number: 29

Question: Compared with 2003, your company's investment in Taiwan

Choice:

    (01) Increased by $_____USD in 2004

    (02) Decreased by $_____USD in 2004

    (03) Almost the same

    (98) I don't know/refuse to answer

Question number: B_1

Question: What are the reasons for your company not being able to answer questions about the operation of your Chinese subsidiary?

Choice:

    (01) Not invested yet

    (02) Still on factory-building stage

    (03) Withdrew the investment in China

    (04) Quit the operation

    (95) Other answer, _____

    (98) I don't know/refuse to answer

Question number: B_2

Question: Why has your company not begun to invest, or still at the factory-building stage, or withdrawn the investment, or quit the operation in China?

Choice:

    (01) Not easy to raise capital

    (02) Investment plan changes

    (03) Problems with factory or land

    (04) Worsening investment climate

    (05) Bad profit

    (06) Disputes with the JV ally partner company

    (07) Labour disputes

    (95) Other answer, _____

    (98) I don't know/refuse to answer

Question number: C

Question: Of what industry is your company?

Choice:

    (01) Agriculture, forestry, fishing & animal husbandry

    (02) Mining & quarrying

    (03) Food & beverages

    (04) Textile mills

    (05) Apparel, clothing & accessories

    (06) Leather, furs & allied products

    (07) Wood & bamboo products

    (08) Furniture & fixtures

    (09) Pulp paper & paper products

    (10) Printing & related support activities

    (11) Chemical materials

    (12) Chemical products

    (13) Petroleum & coal products

    (14) Rubber products

    (15) Plastic products

    (16) Non-metallic mineral products

(17) Basic metal

(18) Fabricated metal products

(19) Machinery & equipments

(20) Computer, video & radio products

(21) Electronic parts & components

(22) Electrical machinery, supplies & equip.

(23) Transport equipments

(24) Precision instruments

(25) Other industrial products

(26) Electricity, gas & water

(27) Construction

(28) Trade (wholesales & retailers)

(29) Accommodation & restaurant

(30) Trans. Storage & communication

(31) Finance & insurance

(32) Real estate, rental & leasing

(33) Professional scientific & technical services

(34) Educational services

(35) Health care & social welfare services

(36) Cultural, sport & recreational services

(95) Other services

(98) I don't know/refuse to answer

Appendix 3: 質化分析中文問卷（20 家投資中國之台灣廠商訪談）

一、貴公司於大陸投資之主要商業活動為？（可複選）
　□ 1. 生產、製造
　□ 2. 銷售、行銷
　□ 3. 研究、發展
　□ 4. 財務
　□ 5. 其它服務
　□ 6. 總部功能
　□ 7. 其它

二、貴公司於大陸投資之主要產品為
　□ 1. 服務
　□ 2. 成品
　□ 3. 半成品
如果為半成品，請註明其銷售之地區之百分比（總和 100％）？
　　大陸之公司＿＿＿＿＿＿％
　　台灣公司/台灣母公司或其子公司＿＿＿＿＿＿％
　　位於其它國家之其它公司＿＿＿＿＿＿％

三、貴公司於大陸投資之事業之股份結構（總和 100％）？
台灣母公司＿＿＿＿＿＿％
大陸國營公司＿＿＿＿＿＿％
大陸私人企業＿＿＿＿＿＿％
外商企業＿＿＿＿＿＿％
其它（請註明）＿＿＿＿＿＿％

四、貴公司於大陸投資事業已營運＿＿＿＿＿＿年

五、貴公司於大陸投資之起初投資資金約為＿＿＿＿＿＿美元

六、貴公司於大陸投資之進入模式為：
　□ 1.獨資
　　□ a.建立一全新公司
　　□ b.由大陸私人企業購入廠房及設施
　　□ c.由大陸國有企業出售資產過程中，購入其廠房及設施
　□ 2.合資，貴公司於營運起初之股權比例＿＿＿＿＿＿％
　　□ a.貴公司投資於一大陸公司之營運

□ b. 與大陸本地企業合資建立一新公司
　　　　□ c. 與大陸本地企業合資，由大陸其它私有企業購入其廠房及設施
　　　　□ d. 與大陸本地企業合資，於其它國有企業出售資產過程中，購入其廠房
　　　　　　及設施
　　　　□ e. 只是代理權或執照同意權簽訂，起初並無實質資金投入
若為合資，誰發動此合資事業
　　　　□ a. 大陸合資企業
　　　　□ b. 台灣母公司
　　　　□ c. 中間廠商，請註明_____
　　　　□ d. 其它，請註明_____
　　　　□ e. 不知道
□ 3. 不知道

七、貴公司大陸子公司於過去三年內之增加(或減少)投資金額為_____美
　　元

八、貴公司預期未來三年大陸子公司之增加(或減少)投資金額為_____美
　　元

九、貴公司去年於大陸投資事業之銷售總額為_____美元

十、貴公司去年大陸投資事業銷售總額之增長率（與前年相較）為_____％
　　　　　　　　　　　　　　　　　或減少率（與前年相較）為_____
％

十一、貴公司預期未來三年於大陸投資事業之年度銷售總額增長率為：（若預
　　　期為減少則將數字寫於(　)符號內）：　　　　2006 年_____％
　　　　　　　　　　　　　　　　　　　　　2007 年_____％
　　　　　　　　　　　　　　　　　　　　　2008 年_____％

十二、貴公司於大陸投資事業之資產總值(含土地、建築物、設備、營運資金
　　　等)估計約為_____美元

十三、貴公司去年於大陸投資事業之銷售總額中，外銷比例為_____％

外銷廠商填答部份
(若貴公司於大陸投資事業之銷售外銷比例超過10％，則填答此部份；若否，
則請跳答至第二十二題)：

十四、此外銷總額中，銷售至各地區之比例(總合為100％)：
　　　回銷台灣_____％
　　　銷至美國_____％

銷至歐盟＿＿＿＿＿＿＿＿＿％
銷至亞太地區（台灣除外）＿＿＿＿＿＿＿＿％
銷至中東地區＿＿＿＿＿＿＿＿％
銷至非洲＿＿＿＿＿＿＿＿％
其它＿＿＿＿＿＿＿％
☐ 並無追蹤外銷目的地

十五、 此外銷總額中，銷售至台灣母公司或其其它之子公司之比例為
＿＿＿＿＿＿＿＿％

十六、 貴公司之大陸營運之外銷方式為
☐ 1. 直接外銷
☐ 2. 透過貿易商、經銷商或中介廠商
☐ 3. 透過台灣母公司或外國合資公司之管道

十七、 請評估亞太經濟合作組織(APEC)對貴公司於大陸營運事業外銷的重要性：
☐ 1. 不重要
☐ 2. 有幫助
☐ 3. 重要
☐ 4. 非常重要
☐ 5. 至關緊要

十八、 如果上題答案為非常重要或至關緊要，請敘述 APEC 對貴公司於大陸營運事業外銷之助益：
＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿
＿

十九、對於貴公司於大陸營運事業之外銷拓展，您認為最重要的三個障礙依序為：
1.＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿
＿
2.＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿
＿
3.＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿
＿

二十、過去三年內，貴公司於大陸投資事業之年度外銷營收之增長（減少）率為何？（若為減少則將數字寫於（ ）符號內）
2003 年＿＿＿＿＿＿％
2004 年＿＿＿＿＿＿％
2005 年＿＿＿＿＿＿％
二十一、未來三年，貴公司預期於大陸投資事業之年度外銷營收之增長（減少）率為何？（若為減少則將數字寫於（ ）符號內）

員工人力配置

二十二、貴公司於大陸投資事業之員工總數為_____人，其中正式員工為_____%，臨時員工為_____%（總合為 100%）

二十三、上題總員工中，不需特別技術之勞工為_____%，有特別技術之勞工為_____%，行政管理、科技研發之員工為_____%，其它（請註明）為_____%（總合為 100%）

二十四、上題總員工中：

	總數	大陸當地員工	台灣派遣過去之員工	其它國家員工
經理管理者幾人？				
工程師及科技人員幾人？				
大學畢業程度（含）以上幾人？				

二十五、2005 年會計年度，貴公司於大陸投資事業之年度員工薪資總數為_____美元

二十六、過去三年內，貴公司於大陸投資事業之年度員工之增長(減少)率為何？（若為減少則將數字寫於（ ）符號內）

2003 年_____%
2004 年_____%
2005 年_____%

二十七、未來三年，貴公司預期於大陸投資事業之年度員工之增長(減少)率為何？（若為減少則將數字寫於（ ）符號內）

2006 年_____%
2007 年_____%
2008 年_____%

二十八、如果貴公司於大陸之投資事業(獨資或合資)，而母公司之營運總部位於台灣，則請回答 a.
如果貴公司於大陸投資事業(獨資或合資)，而於台灣之營運已停止，則請回答 b.
如果 a 與 b 無法清楚定義貴公司，則請回答 c.

---

a. 請問貴公司之名稱為_____，營運總部位於_____（縣市）

Ⅰ.請估計貴公司去年全球年度總營收
　□ ＜＄100 萬美元　　□ ＄100 至 500 萬美元　　□ ＄500 至 2000 萬美元
　□ ＄2000 至 5000 萬美元　□ ＄5000 至 2 億美元　□ ＄2 億至 5 億美元
　□ ＞＄5 億美元

Ⅱ.貴公司全球總共有_____個子公司
　　有_____個子公司在大陸
　　有_____個子公司在亞洲（除了大陸）
　　有_____個子公司在北美
　　有_____個子公司在歐洲
　　其它（請註明）_____
　　□ 不知道

Ⅲ. 貴公司為一
　　□ 私人公司　　□ 官股持股大多數公司　　　□ 國營公司

或

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b. 請問貴公司之名稱為_____

Ⅰ.除了大陸，請問貴公司尚於何地區營運（可複選）
　□ 1.亞洲（除了大陸）　　□ 2.北美　　□ 3.歐洲
　□ 4.中東　　　□ 5.非洲　　□ 6.其它（請註明）_____

或

---

c. 若 a 與 b 無法清楚定義貴公司，請提供一關於貴公司較適合且詳盡的描述：

二十九、貴公司投資大陸之主要動機？（可複選，但請標明順序）
　□ 降低生產成本
　□ 進入大陸市場
　□ 使用大陸當地自然資源
　□ 加入一特定合資事業
　□ 其它，請註明_____

三十、若貴公司於大陸之投資事業並非獨資，而是與大陸當地企業合資，請問該大陸當地企業為：

□ 1.國有企業
□ 2.當地個體戶
□ 3.外商
□ 4.其它，請註明_____

貴公司於大陸投資，對大陸當地經濟之影響

三十一、請回答下表，貴公司於大陸之投資事業：

	2005年度費用(單位：美元)	貴公司自己執行之費用百分比(單位：%)	發包給大陸當地機構執行之費用百分比(單位：%)	若發包給大陸當地機構執行，請註明該機構之型態（如顧問公司，工程公司，研發或科技機構，大學等）
研發（包含產品設計及製程升級）				
員工訓練				

三十二、請問貴公司於大陸之子公司是否有加入地區台商協會？

□ 1.是
□ 2.否

如果是，請敘述身為協會一員之利益_____

三十三、請問貴公司是否向任何政府機構提供諮詢？

□ 1.是
□ 2.否

若是，請提供更詳盡資訊_____

三十四、2005年度貴公司於大陸之投資事業於原料採購之成本？_____美元

三十五、上題之原料採購（合計100%）： 直接由母公司進口_____%
向大陸當地製造業採購_____%
向大陸當地中介公司採購_____%
由外商公司採購_____%
其它，請註明_____%

三十六、請問貴公司於大陸之投資事業，是否將部份業務轉包於大陸當地公司？

（例如部份零組件製造，部份業務運作等）

□ 1.是，2005 年度之轉包費用為＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿美元

□ 2.否

三十七、請問貴公司於大陸之投資事業，是否將部份間接性質的服務業務轉包於大陸當地公司？（例如維修、保全、會計等業務）

□ 1.是，2005 年度之間接性質的服務業務轉包費用為＿＿＿＿＿＿＿美元

□ 2.否

三十八、請按順序列舉三個擴大使用大陸當地資源或將部份業務轉包至大陸當地公司，之主要障礙：

＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

三十九、請問貴公司於大陸之投資事業是否與大陸當地之供應廠商或轉承包公司，有互動來往以提升該大陸企業之營運？

提升營運效率	□是	□否
提升產品品質	□是	□否
轉移技術或專業知識予大陸企業	□是	□否
共同設計產品、產品發展等	□是	□否

四十、貴公司於大陸之投資事業是否有影響貴公司之供應廠商（無論台灣廠商或外國廠商），將其營運移轉至大陸？

□是　　　□否

若貴公司於大陸之投資事業為貴公司獨資，請答四十一至四十五題

或者

若貴公司於大陸之投資事業為貴公司與大陸當地企業合資，請答四十六至四十九題

或者

若貴公司於大陸投資事業，而在台灣已停止營運，請答五十至五十一題

若貴公司於大陸之投資事業為貴公司獨資：

四十一、請評估母公司（或其它子公司）對在大陸子公司營運的貢獻之重要程度？

	沒有	不多且不明顯	不多但明顯	重要	至關重要
母公司（或其它子公司）擁有之專利對於製造之貢獻					
母公司（或其它子公司）擁有之商標對於製造之貢獻					
由母公司（或其它子公司）轉移之技術及知識					
母公司（或其它子公司）擁有之國際行銷網					
母公司（或其它子公司）擁有之購料網					
母公司（或其它子公司）成為直接買主或供應廠商					
其它（請註明）＿＿＿＿＿＿＿					

四十二、請問 2005 年度貴公司由台灣母公司（或其它子公司）派往大陸子公司的管理或科技幹部，在大陸共花了多長時間協助子公司的營運？
＿＿＿＿＿＿天

四十三、請問 2005 年度貴公司大陸子公司的幹部，在大陸以外的地區共接受母公司（或其它子公司）的訓練天數（平均每位幹部的天數）？＿＿＿＿＿天

四十四、請問貴公司於大陸的投資事業之機械或其它設備，由台灣母公司（或其它子公司）購入之百分比？
　□ 1．＜10%　□2．10-30%　□3．30-50%　□4．50-75%　□5．＞75％

四十五、請問貴公司於大陸的投資事業，是否有將下列項目轉移至台灣母公司（或其它子公司）？

產品設計　　　　　　　□ 是　　　□ 否
另類形式的知識　　　　□ 是　　　□ 否
專利/版權/商標產品　　□ 是　　　□ 否

若貴公司於大陸之投資事業為貴公司與大陸當地企業合資：

四十六、台灣母公司對大陸子公司營運（於下列項目）之貢獻：

貢獻	對大陸子公司營運之貢獻的重要程度				
	沒有	不多且不明顯	不多但明顯	重要	至關重要
經由同意授權的商標商品					
經由同意授權的科技或專利					
科技專業能力或知識之轉移					
進入全球市場					
進入大陸市場					
進入區域市場					
資產及財務					
其它（請註明）_____					

四十七、大陸當地合資夥伴公司對大陸子公司營運（於下列項目）之貢獻：

貢獻	對大陸子公司營運之貢獻的重要程度				
	沒有	不多且不明顯	不多但明顯	重要	至關重要
經由同意授權的商標商品					
經由同意授權的科技或專利					
科技專業能力之轉移					
進入全球市場					
進入大陸市場					
進入區域市場					
資產及財務					
其它（請註明）_____					

四十八、您對大陸當地合夥公司對此大陸合資企業的業務運作之涉入程度之評價
□1. 涉入程度很少，只是定期（或偶爾）討論總體目標
□2. 涉入程度可觀，對決策有相當程度的影響（請註明）
_____

□3. 充分分擔管理責任，並進入決策階層（請註明）
_____

□4. 其它（請註明）_____

四十九、大陸當地合夥公司對此大陸合資企業的董事會決策之影響程度（可複選）
□1. 有指定一位（或以上）之董事
□2. 指定董事會主席
□3. 能改變董事會決策
□4. 無

若貴公司於大陸投資事業，而在台灣已停止營運，請答五十至五十一題：

五十：在貴公司於大陸投資之前，是否曾於其它國家投資相似的業務？

是	有投資不一樣的業務	無
□1. 在亞洲	□1. 在亞洲	□
□2. 在北美	□2. 在北美	
□3. 在歐洲	□3. 在歐洲	
□4. 其它地區	□4. 其它地區	

五十一、請評估台灣資源對大陸投資事業之重要程度

	沒有	不多且不明顯	不多但明顯	重要	至關重要
專利及商標					
管理知識					
科技專業能力					
行銷能力					
財務能力					
與國際市場連結（如行銷、購料、知識取得等）					
其它（請註明）_____					
若貴公司於最近三年內投資大陸（即由 2003 年起），則請答五十二題及五十三題；若貴公司於 2003 年之前即已投資大陸，則請勾選此格□，並跳答五十四題					

五十二、在貴公司決定投資大陸前，貴公司需要何種資訊或服務（請回答此項資訊或服務的重要程度；若為<u>非常重要或至關緊要</u>，請回答貴公司得到的此項資訊或服務之品質，請並標明大陸何機構提供此項資訊或服務予貴公司）

投資前所需要之資訊或服務	此項資訊或服務的重要程度					此項資訊或服務之提供品質					提供之大陸機構
	不重要	有幫助	重要	非常重要	至關緊要	無提供	不佳	充分	良好	非常好	
於大陸從事商業活動所需之資訊(批准程序、勞工法規、進出口法規及關稅)及大陸整體投資環境											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它_____
大陸市場或顧客之資訊											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它_____
於大陸從事商業活動所需成本之資訊(勞工成本、土地成本、設施及水電成本等)											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它_____
公司稅繳及投資促進條例之資訊											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它_____
供應廠商、服務提供廠商（如法律諮詢、新進員工訓練服務）以及既有產業之資訊											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它_____
投資前的考察之旅，藉以決定適合的投資地點											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司

	不重要	有幫助	重要	非常重要	至關緊要	無提供	不佳	充分	良好	非常好	
											☐工業協會或商會 ☐其它＿＿＿＿＿＿
對於潛在的大陸當地合夥企業(日後可能合作合資企業)之介紹											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿＿
其它（請註明）											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿＿
	不重要	有幫助	重要	非常重要	至關緊要	無提供	不佳	充分	良好	非常好	

五十三、在貴公司於大陸的投資事業已開始運作後，貴公司需要何種服務（請回答此項服務的重要程度；若為<u>非常重要或至關緊要</u>，請回答貴公司得到的此項服務之品質，並請標明大陸何機構提供此項服務予貴公司）

投資後所需要之服務	此項服務的重要程度					此項服務之提供品質					提供之大陸機構
	不重要	有幫助	重要	非常重要	至關緊要	無提供	不佳	充分	良好	非常好	
公司註冊及執照發放											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿＿
許可之批准（如工作許可、進出口許可等）											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿＿
法律及會計服務之介紹											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿＿
投資促進優惠之申請											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿＿
廠房（辦公室）之購買/租賃											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿＿
發現適合的投資地點											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司

	不重要	有幫助	重要	非常重要	至關緊要	無提供	不佳	充分	良好	非常好	
											☐工業協會或商會 ☐其它＿＿＿＿＿＿
建築物之建造											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿＿
公共設施及水電											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿＿
	不重要	有幫助	重要	非常重要	至關緊要	無提供	不佳	充分	良好	非常好	

投資後所需要之服務	不重要	有幫助	重要	非常重要	至關緊要	無提供	不佳	充分	良好	非常好	提供之大陸機構
設備之購買											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿
新進人員訓練之支持											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿
員工訓練之支持											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿
尋找當地供應廠商											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿
業務開始營運的問題之解決											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿
其它（請註明）：											☐大陸地方的投資促進協會 ☐經濟特區之負責機關 ☐其它相關政府部門或機構 ☐私人諮詢公司 ☐工業協會或商會 ☐其它＿＿＿＿＿
	不重要	有幫助	重要	非常重要	至關緊要	無提供	不佳	充分	良好	非常好	

五十四、請依序列舉三個必須解決的問題，貴公司得以繼續增加在大陸的投資：

1. _____
2. _____
3. _____

五十五、貴公司於大陸投資之公司，是否有向<u>大陸地方的投資促進協會登記</u>或經由此協會發放執照？

```
┌──□ 1. 是
│   □ 2. 否------------------->
│   □ 3. 不知道
│
```

┌───┐
│ 若無登記，請問為何不登記（可複選）   │
│ □ a.沒聽過   │
│ □ b.不清楚登記的好處   │
│ □ c.協會提供之服務不符公司需求   │
│ □ d.協會提供之服務符合公司需求，但加   │
│   入協會之成本（時間，金錢等）過高   │
│ □ e.其它，請註明：_____   │
└───┘

┌───┐
│ 1. 若有登記，請問為何登記？   │
│ □ a.此登記為強制性質   │
│ □ b.此協會能提供貴公司各種資訊，而這些資訊對貴公司之營運有助益   │
│ □ c.協會是外商能得到許可、執照及登記表等不可或缺之機構   │
│ □ d.協會是外商洽辦許多政府機關的便利窗口   │
│ □ e.無特定原因，其它公司，供應商也有登記   │
│ □ f.其它，請註明   │
│   │
│ 2. 協會登記程序、發放執照之效率為何？   │
│ □ a.非常好   □ b.好   □ c.不好不壞   □ d.不好   □ e.非常差 │
│   │
│ 3. 若有登記，請問協會之執照或登記是否對貴公司於大陸之營運有所助益，並可簡│
│ 化建廠程序？   │
│ □ a.非常有用 □ b.有用 □ c.差不多   □ d.沒用   □ e.非常差   │
│   │
│ 4.過去三年，協會的表現有達到貴公司的期望嗎？   │
│ □ a.非常好   □ b.好   □ c.不好不壞   □ d.不好   □ e.非常差 │
└───┘

五十六、貴公司是否可提供三項對協會的服務之改進建議
  1. _____
  2. _____
  3. _____

五十七、請列舉貴公司於大陸投資建廠初期或營運時期，所接觸的提供商業服務的機構中，對貴公司幫助最大的前三名機構？
  1. _____
  2. _____

3. _____

五十八、對貴公司於大陸之營運，請評估下列地方因素的重要程度，若您的答案為重要、非常重要、至關緊要，則請再評估過去三年此地方因素之變化：

投資前所需要之資訊或服務	此項地方因素的重要程度					此項地方因素過去三年之變化				
	不重要	有幫助	重要	非常重要	至關緊要	退步很多	退步	無變化	更好	進步很多
商業環境狀況										
政治穩定度										
經濟穩定度										
公共建設品質										
政府相關機構之服務										
司法系統										
投資環境之透明度										
生活品質										
人身安全										
其它的外商										
經濟特區的便利程度										
大陸當地市場狀況										
當地市場										
區域市場										
重要關鍵客戶的存在										
大陸當地資源										
勞工成本										
技術人力資源的運用										

原物料的運用									
當地供應廠商									
其它地方因素									
投資促進優惠配套措施									
地方投資促進協會之協助									
已有資產之收購									
大陸當地合夥廠商（合作合資企業）									
特定的投資計畫大綱									
其它（請註明）									
	不重要	有幫助	重要	非常重要	至關緊要	退步很多	退步	無變化	更好	進步很多

五十九、貴公司於大陸投資事業之營運表現，過去三年是否有達到預期？
□ 1.遠超預期　　□ 2. 超過預期　　□ 3.達到預期　　　□ 4.低於預期
□ 5.遠低於預期

公司基本資料

1.
　　a. 公司名稱：＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿
　　b. 公司所在縣市：＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

2. 代表貴公司回答此問卷的人員：
　　＿＿＿＿＿＿＿＿＿＿＿＿＿（先生、女士）

　　職位：
　　□ a.董事長/老闆，總經理
　　□ b.副總經理、主任祕書
　　□ c.資深經理（財務經理除外）
　　□ d.財務經理
　　□ e.助理、分析師、祕書等

□ f.顧問，諮詢專家
□ g.其它（請註明）＿＿＿＿＿＿＿＿＿

公司可聯絡住址：

＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

公司電話： 1.＿＿＿＿＿＿＿＿＿＿＿＿＿＿

2.＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

公司傳真： ＿＿＿＿＿＿＿＿＿＿＿ E-mail 帳號

＿＿＿＿＿＿＿＿＿＿＿

公司網址： www＿＿＿＿＿＿＿＿＿＿

Appendix 4. Questionnaire of Qualitative Research: In-depth Interviews with the Senior Managers of 20 Taiwanese MNEs Investing in China (Based on the questionnaire of 'FDI Survey 2005, Foreign Direct Investor Perceptions in Sub-Saharan Africa, UNIDO)

1. What are the main business activities of your subsidiary in China ? (you can mark more than one)
  ☐ 1. Production/manufacturing
  ☐ 2. Distribution/Sales & marketing
  ☐ 3. Research & development
  ☐ 4. Financial services
  ☐ 5. Other services
  ☐ 6. Headquarter function
  ☐ 7. Other

2. Is the main product of your Chinese subsidiary a:
  ☐ 1. Service
  ☐ 2. Finished product
  ☐ 3. Semi-finished product
If it is a semi-finished product, please indicate the % sold to（total 100％）?
  China's domestic companies_____％
  Companies in Taiwan_____％
  Companies in other countries _____％

3. What is the current ownership structure of your Chinese subsidiary ?（total 100％）?
  Taiwan parent company_____％
  China's state owned enterprises (SOEs)_____％
  China's private enterprises_____％
  Foreign companies_____％
  Other（please specify）_____％

4. What year did you start operations in China_____year

5. What was the total amount of original investment in China? _____USD

6. Mode of entry in China:

☐ 1. Wholly owned subsidiary

    ☐ a. Establishment of a new operation (greenfield)

    ☐ b. Acquisition of existing assets from private owners

    ☐ c. Acquisition of existing state owned assets through a privatisation
        programme

☐ 2.Joint Venture, the percentage of ownership by Taiwan parent company at time

of entry _____%

    ☐ a. Taiwan parent company invested in local partner's company

    ☐ b. Established a new operation jointly with local partner

    ☐ c. Acquisition of other assets together with a local partner from a private owner

    ☐ d. Acquisition of other assets together with a local partner from the state through a privatisation programme

    ☐ e. Only licensing and/or franchising agreement without initial equity involvement

if a joint venture, who initiated the partnership?

    ☐ a. Local partner firm in China

    ☐ b. Taiwanese parent company

    ☐ c. Intermediary (please specify)_____

    ☐ d. Other (please specify)_____

    ☐ e. Do not know

☐ 3. Do not know

7. Estimated new investment or disinvestments made by your company in China during the last 3 years (if disinvestments, please put the figure in brackets ( ))_____USD

8. Anticipated new investment or disinvestments you think your company may make over the next 3 years in China (if decrease expected, please put the figure in brackets ( )) _____USD

9. The value of your Chinese subsidiary's total sales in 2005_____USD

10. In 2005, there was a: growth in sales of_____%
                   or decrease in sales of_____%

11. Anticipated increase or decrease in annual sales over the next 3 years: (if decrease expected, please put the figure in brackets ( )):
                   2006_____%
                   2007_____%
                   2008_____%

12. What is the book value of your Chinese subsidiary's total assets (land, building, equipment, working capital, etc): _____USD

13. What percentage of your Chinese subsidiary's total sales were exports in 2005_____%

Section for Exporters

(Please only fill in this section if your exports exceed 10% of your Chinese subsidiary's total sales, otherwise skip to question 22):

14. What percentage of your exports goes to (total 100％)?
    Taiwan＿＿＿＿＿＿＿＿＿％
    USA＿＿＿＿＿＿＿＿＿％
    EU＿＿＿＿＿＿＿＿＿％
    Asia/Pacific（except Taiwan）＿＿＿＿＿＿＿＿＿％
    Middle East＿＿＿＿＿＿＿＿＿％
    Africa＿＿＿＿＿＿＿＿＿％
    Other＿＿＿＿＿＿＿＿＿％
    □ not trace destination of exports

15. What percentage of your exports is to your Taiwan parent company or other subsidiaries ＿＿＿＿＿＿＿＿＿％

16. Does your Chinese subsidiary export (you can check more than one)
    □ 1.Directly
    □ 2.Through an agent/distributor or intermediary
    □ 3.Through parent company (or foreign partner) channels

17. Evaluate the importance of APEC on the export activities of your Chinese subsidiary：
    □ 1.Not important
    □ 2.Helpful
    □ 3.Important
    □ 4.Very important
    □ 5.Crucial

18. If very important or crucial, please specify how they are helping the export activities of your Chinese subsidiary：
    ＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

19. What do you consider the top 3 most important barriers to expanding your export activities in China? (Please list in order of importance)
    1.＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿
    2.＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿
    3.＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

20. What is the estimated annual increase or decrease in export revenue of your Chinese subsidiary over the last 3 years？ (if decrease, please put the figure in brackets ( ))

2003_____％
2004_____％
2005_____％

21. What is the anticipated annual increase or decrease in export revenue of your Chinese subsidiary over the next 3 years？(if decrease, please put the figure in brackets ( ))

2006_____％
2007_____％
2008_____％

Work Force Profile (Chinese subsidiary)

22. Total number of employees_____, permanent_____ ％ , temporary_____％ (total 100％)

23. Of the total employed, unskilled labour_____％, skilled labour_____％, administrative, management, technical_____％, other（please specify）_____％ (total 100％)

24. Of total employment：

	Total number	Local Chinese workers	Come from Taiwan parent company	From other country
How many are managers？				
How many are engineers/scientists？				
How many are university graduates？				

25. What is the total amount of the annual wages (total wage bill of the fiscal year 2005) _____USD?

26. What is the increase or decrease in employment over the last 3 years？ (if decrease, please put the figure in brackets ( ))

2003_____％
2004_____％
2005_____％

27. What is the anticipated increase or decrease in employment over the next 3 years ? (if expected decrease, please put the figure in brackets ( ))

2003_____%

2004_____%

2005_____%

28. If your Chinese subsidiary is a (wholly owned or joint venture) subsidiary of a parent company with headquarters in Taiwan, please answer a.
If your Chinese subsidiary is a (wholly owned or joint venture) subsidiary, but the operations of your Taiwan parent company are not ongoing, please answer b.
If a and b do not clearly define your Chinese subsidiary, please answer c.

---

a. The company name of your Taiwan parent company_____, with a headquarter in _____ （city）

Ⅰ.Estimated reported annual value of the parent company's total global sales (USD)

□ ＜ ＄1m □ ＄1-5m □ ＄5-20m □ ＄20-50m □ ＄50-200m

□ ＄200-500m □ ＞ ＄500m

Ⅱ.In total, how many subsidiaries does your parent company have? (indicate number)_____

in China_____(indicate number)

in Asia _____(indicate number)

in North America_____(indicate number)

in Europe_____(indicate number)

other（please specify）_____(indicate number)

□ do not know

Ⅲ. Your Taiwan parent company is

□ private □ publicly quoted □ state owned

Or

---

b. Besides China, which areas does your Taiwan parent company has ongoing business activities in?（you may choose more than one）

□ 1.Asia（except China） □ 2.North America □ 3.Europe

□ 4.Middle East □ 5.Africa □ 6.Other（please specify）_____

Or

---

c. If a and b do not describe your Taiwan parent company accurately, please give a more suitable description：

---

29. What was the main motivation for your company to invest in China？（you may choose more than one answer, but please specify the order of importance）
- ☐ To lower production costs
- ☐ To access China's local market
- ☐ To access natural resources/inputs
- ☐ To join a specific partner
- ☐ Other (please specify)_____

30. If your Chinese subsidiary is not a wholly owned subsidiary, but a joint venture with a local Chinese partner, the local Chinese partner is a:
- ☐ 1. state owned enterprise
- ☐ 2. private company
- ☐ 3. foreign company
- ☐ 4. other, (please specify)_____

Impact of your investment on China's local economy

31. Please indicate in the table below the approximate expenditure of your Chinese subsidiary on R&D and training and indicate how much of it was carried out in-house or outsourced to a local Chinese contractor in 2005 (if none, please specify)：

	Approximate annual expenditure (USD)	The percentage of expenditure on in-house activities (%)	The percentage of expenditure outsourced to a local Chinese institution (%)	If outsourced to a local Chinese institution, please specify its type (eg. consulting company, engineering company, R&D or technology institution, university, etc.)
R&D(including product design and process upgrading)				
Training				

32. Is your Chinese subsidiary a member of the local Taiwanese Businesspeople Association in China ?
☐ 1.Yes
☐ 2. No

If yes, please specify the benefits of membership_____

33. Do you play an advisory role with/for any government institution?
☐ 1.Yes
☐ 2. No
If yes, please explain_____

34. Total cost of bought-in materials in 2005_____USD

35. The percentage of bought in materials that are (total 100％):
   imported from Taiwan _____％
   imported from other countries _____％
   procured from local Chinese firms_____％
   procured from other Taiwanese firms in China_____％
   procured from foreign companies in China_____％
   other (please specify)_____％

36. Does your Chinese subsidiary subcontract operations to local Chinese firms?
(e.g. sub-component manufacturing, sub-operations, etc.)
□ 1. Yes, please estimate the annual expenditure on sub-contracts in 2005_____USD
□ 2. No

37. Does your Chinese subsidiary subcontract indirect services to local Chinese suppliers? (e.g. maintenance, security, accounting, catering, etc.)
□ 1.Yes, please estimate the approximate annual expenditure on sub-contracting indirect services in 2005_____USD
□ 2. No

38. Please rank the three main barriers to expanding local sourcing of inputs or sub-contracting of operations
_____
_____

39. Does your Chinese subsidiary interact with local Chinese suppliers/sub-contractors to improve their operations in the following ways?
   Upgrade their efficiency   □Yes □No
   Upgrade the quality of their products   □Yes □No
   Transfer technology or know-how through designs or process know-how □Yes □No
   Conduct joint product design/ product development/specifications etc.? □Yes □No

40. Have you influenced the relocation of any of your suppliers (Taiwanese companies or international companies) to China?
□Yes □No

> If your Chinese subsidiary is a wholly owned subsidiary, please answer questions 41-45

<div align="center">Or</div>

> If your Chinese subsidiary is a joint venture (the partner is a local Chinese firm), please answer questions 46-49

<div align="center">Or</div>

> If the operations of your Taiwan parent company are not ongoing, please answer questions 50-51

If your Chinese subsidiary is a wholly owned subsidiary:

41. How important to your operations in China are the contributions of your Taiwan parent company (or its other subsidiaries) in the following areas?

	None	Few/insignificant	Few but significant	Important	Crucial to operations
Production under patents held by the parent company (or its other subsidiaries)					
Production under trademarks held by the parent company (or its other subsidiaries)					
Know-how transfer through product/process design from the parent company (or its other subsidiaries)					
International marketing network of the parent company (or its other subsidiaries)					
Procurement network of the parent company (or its other subsidiaries)					
The parent company (or its other subsidiaries) as direct buyer(s) or supplier(s)					
Other(please specify)_____					

42. Estimated number of work-days of managerial or technical staff sent from the Taiwan parent company to assist your Chinese subsidiary in 2005_____

43. Approximate number of days of training given to your staff at the Chinese subsidiary outside China in 2005_____

44. What percentage of your machinery and equipment has been procured through your Taiwan parent company (or its other subsidiaries)?

　□ 1. ＜10％　□2. 10-30％　□3. 30-50％　□4. 50-75％　□5. ＞75％

45. Is there any input from your Chinese subsidiary to your Taiwan parent company (or its other subsidiaries) in terms of any of the following?

Product specification/design	□Yes	□No
Other forms of know-how	□Yes	□No
Patents/copyrights/branded products	□Yes	□No

If your Chinese subsidiary is a joint venture (the partner is a local Chinese firm)

46. How important to your operations in China are the contributions of your Taiwan parent company in the following categories?

Contribution	How important is it to the operations of your Chinese subsidiary?				
	None	Few/insignificant	Few but significant	Important	Crucial to operations
Branded products through licensing agreements					
Technology /patents through licensing agreements					
Technical expertise (know-how) through product/process design, training, etc.					
Global market access					
China's local market access					
Regional market access					
Equity financing					
Other(please specify)_____ _____					

47. How important to your operations in China are the contributions of the local Chinese ally partner firm in the following categories?

Contribution	How important is it to the operations of your Chinese subsidiary?				
	None	Few/insignificant	Few but significant	Important	Crucial to operations
Branded products through licensing agreements					
Technology /patents through licensing agreements					
Technical expertise (know-how) through product/process design, training, etc.					
Global market access					
China's local market access					
Regional market access					
Equity financing					
Other(please specify)_____ _____					

48. How would you rate the local Chinese ally partner firm's involvement in the executive management of the joint venture?

□1. Very little input. Periodic (Occasional) discussion of overall objectives

□2. Considerable input. Actively contributes to management decisions. Please specify_____

□3. Fully shares managerial responsibility. Has contributed managerial staff. Please specify_____

□4. Other. Please specify_____

49. What is the level of influence of the local Chinese ally partner firm on the decisions of the board? Please tick as many as applicable.

□1. Has appointed one or more members of the Board

□2. Has appointed the Chairman of the Board

□3. Can block management decisions

□4. None

If the operations of you Taiwan parent company are not ongoing, please answer question 50-51:

50. Did your company own/manage a similar line of business in another country prior to investing in China?

Yes	Not the same line of business	No
☐1. In Asia	☐1. In Asia	☐
☐2. In North America	☐2. In North America	
☐3. In Europe	☐3. In Europe	
☐4. Elsewhere	☐4. Elsewhere	

51. Rate the importance of the following inputs in Taiwan to the operations of your Chinese subsidiary:

	None	Few/insignificant	Few but significant	Important	Crucial to operations
Patents/ Trademarks					
Management know-how					
Technical know-how					
Marketing know-how					
Financial strength					
International connections (for markets/procurement/know-how/acquisitions, etc.)					
Other(please specify)_____					

Questions 52 and 53 are applicable only to Chinese subsidiaries which have started operating in China within the last 3 years (from 2003). If your operations started earlier please tick this box ☐ and skip directly to question 54

52. Before your company decided to invest in China, what information/services were needed? (please indicate how important you consider this service to be AND, if very important or crucial, indicate how your would rate the quality of the service provided and the entity that provided it in China)

Type of pre-investment services requested/used	How important is/was this service to you?					How well was it provided?					Who provided it
	Not important	Helpful	Important	Very important	Crucial	Not provided	Poorly	Sufficient	Well	Very well	
Information on doing business in China (permits, labour regulations, importing/exporting regulations and tariffs etc.) and the general China's business climate											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other ____
Information on customers, markets, or professional bodies											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other ____
Information on the cost of doing business in China (labour costs, property costs, utilities costs, etc.)											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other ____
Information on corporate taxation and incentives											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other

	Not important	Helpful	Important	Very important	Crucial	Not provided	Poorly	Sufficient	Well	Very well	
Information on suppliers, service providers (legal support, recruitment support, etc.) and existing industry or sector											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other_____
Pre-investment fact finding trip. Finding suitable sites/property											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other_____
Business introductions to potential (joint venture) partners in China											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other
Other _____											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other

53. What services did you need after establishing your operations in China? (please indicate both how important you consider this service to be AND, if very important or crucial, indicate how your would rate the quality of the service provided and the entity that provided it in China)

Type of post-investment services requested/used	How important is/was this service to you?					How well was it provided?					Who provided it
	Not important	Helpful	Important	Very important	Crucial	Not provided	Poorly	Sufficient	Well	Very well	
Company registration and licensing											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other
Obtaining permits (work permits, import/export permits, etc)											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other _____
Introduction to legal & accounting services											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other _____
Incentive applications											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other

	Not important	Helpful	Important	Very important	Crucial	Not provided	Poorly	Sufficient	Well	Very well	
Office/Factory purchase/lease											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other
Finding suitable sites											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other _____
Building construction											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other
Utilities and infrastructure											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other

Type of post-investment services requested/used	How important is/was this service to you?					How well was it provided?					Who provided it
	Not important	Helpful	Important	Very important	Crucial	Not provided	Poorly	Sufficient	Well	Very well	
Equipment purchase											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other _____
Recruitment support											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other _____
Staff training support											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other
Finding local suppliers											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other _____
Business start-up problem solving											☐ Investment Promotion Agency ☐ Export processing zone authority

	Not important	Helpful	Important	Very important	Crucial	Not provided	Poorly	Sufficient	Well	Very well	
						266					☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other_____
Other _____											☐ Investment Promotion Agency ☐ Export processing zone authority ☐ Other governmental department or agency ☐ Private consulting company ☐ Industry associations/Chambers of commerce ☐ Other

54. Rank the 3 most important issues that have to be addressed to induce you to increase your investments in China?

    1._____

    2._____

    3._____

55. Has your Chinese subsidiary registered or been provided with a certificate by the Investment Promotion Agency (IPA) in China?

☐ 1.Yes

☐ 2.No ------------------->

☐ 3.Do not know

> If you are not registered with the IPA, please indicate why not (more than one answer possible)
> ☐ a. Never heard of it
> ☐ b. Benefit of registration is unclear
> ☐ c. Services provided do not meet company's needs
> ☐ d. Offered services would meet company's needs, but costs to access the IPA services (time, money) considered as too high
> ☐ e. Other, please specify_____

> 1. If you are registered with the IPA, please indicate why (more than one answer possible) ?
> ☐ a. Company registration is compulsory
> ☐ b IPA supplies the company with various information which facilitates core business activities
> ☐ c. IPA is indispensable for obtaining permits, licenses, registration forms, etc.
> ☐ d. IPA acts as a one-stop shop replacing several governmental institutions.
> ☐ e. No particular reason, but other companies/ suppliers/customers are registered as well.
> ☐ f. Other, please specify
>
> 2. How efficient was the certification process ?
>
> ☐ a. Excellent   ☐ b. Good   ☐ c. Neutral   ☐ d. Bad   ☐ e. Very bad
>
> 3. If you are registered with the IPA, please indicate how useful the IPA certificate or registration was in actually obtaining benefits and simplifying process of getting established ?
>
> ☐ a. Excellent   ☐ b. Good   ☐ c. Neutral   ☐ d. Bad   ☐ e. Very bad
>
> 4. Has the IPA performed to expectations in the last 3 years ?
>
> ☐ a. Excellent   ☐ b. Good   ☐ c. Neutral   ☐ d. Bad   ☐ e. Very bad

56. Rank the top three improvements you suggest the IPA could make to their services?

    1._____

    2._____

    3._____

57. Of all the business services providers you have contacted while setting up/ operating in China, rank the top 3 most helpful (please specify) ?

1._____

2._____

3._____

58. Please indicate the importance to your Chinese subsidiary of the following location factors and assess how they have changed over the last 3 years:

	Importance of each factor					How have these factors changed over the last 3 years?				
	Not important	Helpful	Important	Very important	Crucial	Much worse	Worse	Same	Better	Much better
Business climate conditions										
Political stability										
Economic stability										
Quality of infrastructure										
Government agency support services										
Legal framework										
Transparency of investment climate										
Quality of life										
Physical security										
Existing foreign investor										
Availability of Export Processing Zones										
Market conditions										
Local market										
Regional market										
Presence of key clients										

	Not important	Helpful	Important	Very important	Crucial	Much worse	Worse	Same	Better	Much better
Local resources										
Labour costs										
Availability of skilled labour										
Availability of raw materials										
Local suppliers										
Other location factors										
Incentive package										
The IPA assistance										
Acquisition of existing assets										
Presence of Joint Venture partner										
Specific investment project proposal										
Other										

59. Has your investment in China performed up to expectations in the last 3 years ?

□ 1. Well above □ 2. Above   □ 3. In line with   □ 4. Below   □ 5. Well below

<u>Contact and reference section</u>

1.   a. Company Name:_____
       b. City:_____

2. Name of person representing company completing this questionnaire
     Family Name_____First Name_____Mr.__Mrs.___Ms.__Dr.___

Position:

☐ a. Chairman, Managing Director or Owner

☐ b. Director, Company Secretary

☐ c. Senior Manager (except financial)

☐ d. Financial manager

☐ e. Assistant, Analysts, Secretary, etc.

☐ f. Consultant, Specialist Advisor, etc.

☐ g. Other (please specify)_____

Contactable address

_____

Telephone No 1:_____   Telephone No 2:_____
Fax number: _____   E-mail address_____
Company website: www_____