

**THE UNIVERSITY OF HULL**

**FDI AND REGULATION WITH PARTICULAR REFERENCE TO  
ENTRY OF MULTINATIONAL SUPERMARKET FIRMS INTO  
MALAYSIA**

**Being a Dissertation Submitted for the Degree of  
Doctor of Philosophy  
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**By**

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## ABSTRACT

This dissertation has concentrated on a study of a particular class of foreign direct investment (FDI) and multinational firms (MNFs), that of services and supermarket firms. This focus contrasts sharply with most previous works on FDI, which have concentrated on manufacturing FDI and manufacturing firms. While the empirical works on FDI have also typically used aggregated data in conjunction with econometric methods to establish statistically significant determinants, this dissertation in addition has looked more deeply at micro economic analysis. This dissertation is also different from previous works because it has considered FDI from various perspectives, including not only from the well-known perspective of the FDI theory but also from a firm specific approach of vertical integration and regulation. In contrast to the macro and aggregative results of the FDI approach the results stemming from the micro methodology are disaggregated and firm specific.

The key feature of the aggregate FDI approach taken here is a service-manufacturing distinction. Based on that distinction it is shown that there is a difference in the magnitude of the variables (relative to their standard errors) between services and manufacturing FDI in Malaysia and also for the UK. These results, which are established and explored in Chapter Five, suggest that at a macro level there is a service related result quite different from the manufacturing case for any government seeking to attract services as well as manufacturing FDI. One of the key variables to the services manufacturing distinction is the openness variable and this variable is also central in the context of regulation.

This dissertation has also looked at vertical integration analysis because MNFs and firms in the supermarket activity are vertically integrated or coordinated corporations spanning services as well as manufacturing related activities. In this context this dissertation has expanded on the earlier work on vertical integration by Hasan and Ryan (2003) and has also given a multinational dimension to that analysis. It has looked at the factors affecting the degree of integration or coordination between retailers and suppliers and ways in which a relative advantage in productivity may relate to a difference in the transfer price. Additionally it comprehends the distributional impact on profits, suppliers, workers and consumers. It is argued that in the multinational interpretations a net welfare gain to the host nation may only accrue to its consumers because profits of the MNFs may be taken out of the country and inputs may be outsourced, benefiting suppliers or workers from different nations instead of the host country.

The micro economic approach has also looked at regulation mechanisms and ways in which the rate of entry of FDI and the MNFs may be regulated. In this context the openness variable, which is a standard and statistically significant variable in aggregate econometric approaches, is also a key variable in the micro regulation model, where it has a wider application including not only to tariffs on imports and exports but also on the rate of profits. In general the regulation model has shown how variations in the magnitude of taxes on the profits of MNFs may have an impact not only on the rate and magnitude of entry of FDI but also on the type of FDI (manufacturing or services) that is encouraged or discouraged by a host government. In a more specific analysis, the model has also looked at how market structures as well as the level of integration or

disintegration may be affected by varying the level of taxes and subsidies on the inputs. These outcomes on vertical integration and regulation, together with the macro aggregate results, may have implications both for theory and for policy, as well as for the way host government may manipulate these aspects.

From the theoretical context this dissertation has made contributions to the study on FDI and the MNFs where the analysis has looked at both macro and the micro methodology. The macro analysis has looked at the services-manufacturing distinction, whereas in the disaggregated methodology services and manufacturing may be systematically integrated or coordinated and the services-manufacturing distinction is harder to draw.

With regard to policy, this dissertation has looked at the implications for the determinants affecting FDI entry, the multinational interpretations on vertical integration as well as its distributional impact, and also regulation mechanisms. It was shown how results on the impact of regulating taxes and subsidies which may shape industrial structure leading to integration or disintegration may be crucial. In general the policy is to encourage the entry of FDI and the MNFs but with some trade-offs as these firms may drive out local firms. Finally the competition policy in Malaysia is not well developed and therefore not comparable or analogous to the more developed competition policy of the EU and the UK. Therefore there are good grounds for Malaysia to examine the well developed competition policy of these countries, as useful lessons could be drawn from the EU and the UK in particular, where the emphasis might be different.

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0 Background of the Dissertation**

This dissertation stems from my interests in regulatory policy on foreign direct investment (FDI) and multinational firms (MNFs) in the services sector with particular reference to supermarket firms. Currently most literature and empirical studies on FDI and MNFs concentrate on the manufacturing sector and there is a lack of studies involving firms in services. This is in sharp contrast to the fact that the inflows of FDI and entry of MNFs in the services sector have become bigger and greater than those in the manufacturing sector<sup>1</sup> (UNCTAD, 2003).

The entry of multinational supermarket firms into developing economies is a particular example of services related FDI. It is also a new phenomenon in FDI inflows that has brought structural changes and retail transformation inflicting radical change not only on traditional and small traders but also on local supermarket firms in the host country. These MNFs have made their presence felt through new techniques in organizing production activities, supply chain management and marketing where these technologies seem superior to existing techniques of domestic firms and as a result, they are able to gain market power and a dominant position vis-à-vis domestic firms.

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<sup>1</sup> On average, services FDI accounted for about two-thirds of total FDI inflows over the period 2000-2002.

Given the spread and scale of operation of the multinational supermarket firms, not only does this dissertation seem a path breaking effort in this area of research but also, the theoretical and analytical analysis, which this dissertation may contribute, seems timely. To my knowledge there are no previous studies that have looked at multinational supermarket firms which are vertically integrated multinationals spanning both manufacturing and services within the context of FDI and entry. Because the entry of multinational supermarket firms is of current and pressing concern to the government of Malaysia, this dissertation is timely, too, from a policy making perspective because it involves a variety of issues other than FDI, which have not been looked before.

## **1.1 Methodology**

This dissertation will look at services FDI and in particular multinational supermarket firms from three approaches. Firstly, services FDI will be analysed from the perspective of the FDI literature, looking at both the theory and the empirical studies on the entry of FDI into the host country. In particular the purpose of the literature review and the empirical studies will be to identify econometrically the manufacturing-services distinction within the context of the FDI theory and multinational firms. In that context, two separate regressions on an aggregate FDI model of services and manufacturing FDI into the host country will be developed against some macro economic variables. One of the key variables to be included is particularly an openness variable reflecting the policy of the host country and measured by its imports plus exports to GDP. Time series FDI annual data from

Malaysia and the UK<sup>2</sup> will be tested using regression techniques. The empirical results obtained from the two regressions will establish the manufacturing services distinction at an aggregate level.

The results from the aggregated approach suggest a strong case for disaggregation and a micro approach. This is especially the case since associated policy implications are arguably significantly microeconomic in character. In that context, recognising that MNFs are vertically integrated or coordinated structures spanning both services and manufacturing related activities, this dissertation will look actively at vertical integration. This is a micro methodology that will look at the lack of treatment of vertical integration with reference to MNFs in the FDI literature. This is the second approach that will draw upon a formal proof of the well known double marginalization results of vertical integration contained in Hasan and Ryan (2003) but from the context of multinational interpretations with extensions on quality, efficiency and the endogeneity of the transfer price in 'make or buy' decisions. The results from the stylised facts are intuitive but useful conclusions could be drawn from the interpretations, with potential applications to supermarket firms. In addition, this dissertation will also examine the distributional impact of vertical integration with respect to profits, suppliers, workers and consumers and in the multinational interpretations it will be shown that the benefits may accrue to different nations and the net welfare gains to the host nation may not be significant.

The third approach is to look at regulation in the context of entry of MNFs and also with potential applications to multinational supermarket firms. This will

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<sup>2</sup> The UK is used as a comparator because it has long time series data.

relate back to the manufacturing-services distinction on the openness variable (in the econometric work) that may suggest a potential link to regulation of the host country. Regulatory parameters such as taxes and subsidies may have an impact on market structures leading to integration or disintegration and 'make or buy' decisions and also optimal ways in which entry may be regulated. The results stemming from the macro and micro analysis may lead to some theory and policy implications in general and in country specific ways.

## **1.2 Theoretical Framework**

The macro approach, which is relevant to study the entry of FDI and MNEs, is the FDI theory that was pioneered by the late Stephen Hymer (1960). Before this the most prevailing explanation of FDI was the neo-classical theory, namely, the Theory of International Capital Movements. Under an assumption that capital moves in response to changes in interest rates or profits differentials, each investor maximises his profits by investing where returns are highest. However, this investment theoretic approach of interest rate differentials could not explain the cross movements of capital between two countries, or in other words, why capital moves in two directions, even though interest rate may be higher in the other country. The neoclassical approach also neglected to recognise the role of MNEs and of market imperfections.

FDI theory, instead, argued that in order to analyse FDI, one must also analyse MNEs. Hymer focused his attention on the MNEs as the institution for international production and moved towards an analysis of the MNEs based upon

industrial organisation theory. All other contributions to FDI literature (see for example, Vernon, 1966, Williamson, 1975, Buckley and Casson, 1976 and Dunning, 1981, 1991, 1993) can be seen as an extension of Hymer's initial work because each theory is a result of an economist finding the previous theory lacking in some aspects. The best example of this is the work of Dunning (1991) who combined all other previous works and come out with the 'OLI paradigm' (Ownership, Locational and Internalisation paradigm).

However, as mentioned earlier, the literature on FDI and MNFs related to the various strands of the FDI theories focused on firms in the manufacturing sector, even though Dunning (1993) and UNCTAD (1998 and 2003) acknowledged that FDI in services is the fastest growing component of MNFs activities. This raises questions as to whether the FDI theory is adequate in explaining the internationalisation of service firms (including supermarkets). In this context authors such as Boddewyn *et al.* (1986) and Li and Guisinger (1992) have examined and investigated the applicability of the MNFs-FDI theory to service firms and concluded that the theory could be extended to explain the internationalisation of service firms as well.

With regard to empirical works carried out to study the determinants of entry of FDI and MNFs, most were also on manufacturing FDI (see for example Chakrabarti, 2001, Billington, 1999, Culem, 1998, Govindan, 1997, Beer and Cory, 1996, Lim, 1993 and Tsai, 1991). The only work so far that was related to FDI in services (including retail firms) was by Li and Guisinger (1992). These authors argued that FDI and MNFs are attracted to the demand side variables of the host

country, which include market size (GNP/GDP/Per Capita Income), wages, openness, interest rates, government policy, infrastructure, inflation, etc. The emphasis here is on the openness variable which is arguably a policy variable and which is central to the macro and also the micro approach, which relates to issues involving regulation and integration. Based on past empirical studies, equally important is the variable of market size of the host country, especially for market seeking types of FDI such as supermarket firms. These firms may be attracted to a large market and a fast growing economy. The empirical studies on FDI are basically sectoral and also aggregative rather than firm specific and micro.

The micro approach which is identified in the methodology is the literature on vertical integration. There is a substantial and well-known work on this topic stemming from an earlier framework by Coase (1937) and advanced by Williamson (1971). Since then, the debate on the advantages and disadvantages of vertical integration has been ongoing. Authors on this topic include Spengler (1950), Arrow (1975), Clarke (1985), Grossman and Hart (1986), Perry (1986), Hamilton and Mqasqas (1996), and Baumol (2001). Given that the emphasis in this dissertation is on supermarket firms, there is also a specialised literature arguing the benefits of vertical integration in the food supply chain where some well known authors on this topic include Etgar (1978), Perry (1989), Martin (1994) and Dobson and Waterson (1996). More generally these authors have argued that supermarket firms may integrate in order to obtain market power and a monopoly position.

Within these theoretical contexts the general phenomena pertaining to vertical integration were explicitly modelled by Hasan and Ryan (2003). They have

developed a stylised model of vertical integration with applications to the supermarket activity. The model has provided a formal proof of the well known results of the double dividend arguments and also an extension incorporating conditions of quality, efficiency and the 'make or buy' decisions. This dissertation will revisit the work of Hasan and Ryan but with further extensions not examined by them, where the focus will be on multinational interpretations.

The micro analysis in turn will lead to an extension on regulation, acknowledging that regulatory issues are an essential part of government policy. The analysis may again refer to the openness variable which is a key variable in the services-manufacturing distinction that was developed in this dissertation (Chapter Five) which has a significant role in the regulatory context. The regulation mechanism developed in this dissertation is another variant that may be contrasted with the existing regulatory practices of Malaysia.

The explicit regulatory mechanism which will be developed in this dissertation may make contact with the implicit regulatory idea of the contestability theory advanced by Baumol *et al.* (1982) and more specifically the contestability extension of Ryan (2000) which is in fact a refinement of the contestability idea. In the extension provided by Ryan, the regulators may vary the regulatory conditions to make the market more contestable for entry where this may be termed as regulated contestability. Ryan also distinguished between physical and financial contestability and between market and industrial contestability where each of these distinctions may refer to the conditions of entry and exit.



### **1.3 Organisation of the Dissertation**

The organisation of this dissertation is structured into eight chapters. After this introductory chapter, the next two chapters will give an overview on the regulation practices of Malaysia (developing) and UK (developed) and the industry structure, entry of the MNFs and market concentration of the retail and supermarket sector in Malaysia. Subsequently after these background analyses, the following four chapters, which are the crux of the dissertation, focus successively on FDI, the services-manufacturing distinction, vertical integration and regulation. The final chapter will conclude this dissertation with some implications for theory and policy.

Prior to the core chapters and to provide further motivation for the focus on regulation and on supermarkets in this dissertation, Chapter Two will discuss government intervention and regulatory policy on FDI in Malaysia, focussing on the practices of a particular class of service firms, that is, the supermarket sector. A contrast between the regulatory practices of Malaysia and the UK is the main contribution of this chapter. It points out that Malaysia's competition policy is limited in scope, in contrast to the well developed regulatory framework of the UK. It also explains that Malaysia, like some other developing countries, has an idiosyncratic policy of imposing equity limits on foreign firms operating in its retail sector, whereas there is no such restriction in developed countries, such as the UK. The restrictive FDI policies in the retail sector in Malaysia are pursued in the context of encouraging the development of Bumiputera firms, as well as to encourage joint-ventures between local and foreign firms with a view to technology transfer. Under this policy, foreign firms operating in the retail and supermarket sector in Malaysia

are only permitted to hold 51.0 per cent equity with the balance of 49.0 per cent for Malaysians, including at least 30.0 per cent for the Bumiputera ethnic group.

Within the regulatory framework, Chapter Three will assess the importance of the retail sector's contribution to the economy of Malaysia and that of developed economies such as the UK. The main focus in this chapter will be on the entry of multinational supermarket firms and its impact on market structure and concentration in Malaysia vis-à-vis the UK. It shows that a concentrated market is more likely to be a barrier to entry for supermarkets in the UK rather than government intervention, as in the case of Malaysia, which now hosts several multinational supermarket firms.

Chapter Four analyses the theoretical literature on FDI and points out that there are several variants of the FDI Theory, each of which is an improvement on the previous one. It is also argued that these variants are about manufacturing FDI and hence there is a need to look at the relevance of the FDI theory in explaining services FDI. The related discussions lead into a critique of the FDI literature, which is the main output of this chapter.

After reviewing the FDI theory, the services-manufacturing distinction of FDI into the host country will be discussed in Chapter Five. This will lead to the development of an aggregate model of FDI against several macroeconomic variables including market size, growth rate, inflation, interest rates, exchange rates, and also a variable on openness. The empirical results show quite different response to country specific locational determinants and one major result is the distinction between services and manufacturing FDI. In this context the openness variable is distinctive,

not only in the FDI model but also in the context of regulation which will be discussed in Chapter Seven.

The results from the econometric methodology are aggregative and macro in analysis and these need to be complemented with an analysis looking at micro and firm specific approaches. Recognising that the MNEs and especially supermarket firms are vertically integrated or coordinated structures, Chapter Six will look at vertical integration, including not only the well known double marginalisation arguments, but also multinational interpretations incorporating quality, efficiency and 'make or buy' decisions. The next significant contribution of this chapter will be on the distributional impact stemming from the impact of vertical integration on collective profits, suppliers, workers and consumers. This dissertation argues that in the multinational context, the distributional gains may benefit other nations and not only be confined to the host country, because profits may be repatriated and suppliers may be from other countries.

Since the inflow of FDI and the rate of entry of the MNEs into the host country may be of policy concern to the host government, attention in Chapter Seven will be directed to regulation mechanisms. In this context the openness variable which is significant in the services-manufacturing distinction will also play a central role here. Chapter Seven will examine how the regulatory environment, such as raising or lowering the 'openness level' on taxes, tariffs or subsidies, may not only affect entry and market structures but will also change the 'make or buy' decisions. In fact, as Chapter Seven discovers, the openness variable may be used to discriminate between big foreign firms and small inefficient firms. In addition, this

chapter makes links to the implicit regulatory idea of the contestable market theory and in particular to the idea of regulated contestability.

Finally, Chapter Eight concludes with a summary of the key results, together with some implications for theory and policy. Some of the main results are that there is a service-manufacturing distinction, with key determinants different in services in contrast to manufacturing; that services and manufacturing are systematically integrated and the impact of regulation on entry of FDI and industry structure. In terms of the theory implications, this dissertation has looked at FDI not only from the perspective of FDI theory but also in relation to vertical integration and regulation. There is a strong argument for disaggregation, not only because the determinants of FDI are different for services and manufacturing but because MNFs in services and manufacturing are argued to be systematically integrated, which the FDI theory has not looked at. The different but systematically interrelated approaches taken in this dissertation have strengthened the analysis on FDI and MNFs in the context of understanding multinational supermarket firms. In terms of the policy aspects, on the other hand, it has looked in general and also in the context of Malaysia, to the implications on government intervention, on the entry of FDI and the multinational supermarket firms, on vertical integration and distributional impact and also on regulation related issues.

## **CHAPTER TWO**

### **GOVERNMENT INTERVENTION AND REGULATION IN THE RETAIL AND SUPERMARKET SECTOR**

#### **2.0 Introduction**

The entry of foreign multinational supermarket firms into the Malaysian retail market is subjected to regulation and control. This policy is distinctive among the developing countries where certain sectors are highly protected and are meant for the locals. This chapter will examine the type of intervention in the retail sector and the regulation and control the Malaysian government imposed on firms operating especially in the supermarket activity.

Section 2.1, of this chapter will be divided into two parts. Part one (2.1.1) will begin with the analysis of the various regulatory acts implemented by the Malaysian government in the retail sector, whereas part two (2.1.2) will discuss the interventionist administrative policy imposed on foreign multinational supermarket firms operating in the supermarket activity in Malaysia. The most distinctive policy is the equity regulation on foreign firms as a tool for protecting local entrepreneurs and also as a means of income distribution favouring the Bumiputera (Malay) group. Section 2.2 will look at the regulatory policies of other neighbouring developing countries. An important contribution of this chapter is in Section 2.3, where a contrast is made between the competition policy of the UK and the regulatory policy in Malaysia. In this context it will look at the links of the two regulatory mechanisms

to efficiency and innovation, which are not reflected in the regulatory practice in Malaysia. The concluding Section 2.4 will summarise the discussions and note that a policy that has links to innovation, efficiency and productivity is superior to any other regulatory policy without such linkages.

## 2.1 Intervention in the Retail Sector

Government intervention in general and regulation in particular are quite pervasive in the Malaysian economy, especially in the retail trade sector. According to Ariff (1991) much of the regulation and intervention revolves around the New Economic Policy (NEP, 1971-1990)<sup>3</sup>, aimed at eradicating poverty and restructuring of society, so that the pattern of employment, ownership and control in the economy will reflect the racial composition of the country. Therefore the main prong of the NEP is to redistribute income among the major ethnic groups in Malaysia, particularly favouring the Bumiputera. However, there have been some efforts since 1985 to deregulate and decontrol the economy on an *ad hoc* or piecemeal basis.

One would expect that with a large number of entries and exits, the retail sector is, in most cases, a sector in which there are few regulations on entry. But the fact is, this sector is often subjected to numerous regulations and one in which government interventions have been perverse. Pilat (1997) states that the main restrictions relate to requirements for setting up and opening a business, which

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<sup>3</sup> The NEP (1971-1990) was formulated with the long-term objective of achieving national unity through two-pronged development strategies. The first prong is to reduce and eventually eradicate poverty by raising the income levels and increasing employment opportunities and the second prong aims at accelerating the process of restructuring Malaysian society to correct the economic imbalance between ethnic groups in Malaysia (Fourth Malaysia Plan 1981-1985).

include entry formalities (trade register), regulations on the establishment, extension and location of commercial premises, regulations on specific operations, opening hours, price controls and impediments to the establishment of large outlets. Most of these regulations, such as trade register<sup>4</sup> are regarded as ‘formalities’, and will not affect the market mechanism so much as price controls and the establishment of large outlets (economies of scale) have done.

Regulatory controls in the retail-trading sector in Malaysia are of two different kinds, legislative and administrative intervention. While legislative controls are in the form of Acts passed by the Malaysian Parliament, the administrative interventions are in the form of policy decisions passed by the Cabinet.

### 2.1.1 Legislative Acts

The government intervenes in many markets, even in markets that are highly competitive, such as the retail sector. This intervention can take a number of forms. One of them is legislative controls aimed to protect consumers and to ensure ethical business conduct. In other words, these are public interest regulation and private interest regulation (Marsden and Wrigley, 1996). These two forms of regulatory frameworks will naturally collide with one another as they are basically protecting the interests of different groups in relation to one public good, especially in the food sector. Therefore, in a system of public interest regulation, the state has some direct involvement and is normally claimed to be the guardian of public welfare. To protect consumers against undue practices of retailers and to ensure ethical business

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<sup>4</sup> In most OECD countries trade register is not a requirement for operating a business.

conduct, substantial legislation, has been enacted by the Malaysian government. These laws on domestic commerce include several Acts<sup>5</sup>, which are under the jurisdiction of The Ministry of Domestic Trade and Consumer Affairs Malaysia (MDTCA) as follows:

- i. Price Control Act 1946;
- ii. Control of Supplies Act 1961;
- iii. Weights and Measures Act 1972;
- iv. Trade Description Act 1972;
- v. Direct Sales Act 1993; and
- vi. Consumer Protection Act 1999.

A major instrument in ensuring an ethical business practice which will also help in protecting consumer welfare in Malaysia is The Price Control Act 1946 and the Control of Supplies Act 1961. The Price Control Act 1946<sup>6</sup> together with the subsidiary legislations made under it are used to fix a reasonable price of goods at any condition and at the same time to give equal opportunities to consumers to obtain basic information before any decision to buy the goods is being made. The Control of Supplies Act 1961 empowers the controller to determine the supplies of essential goods are easily available at a reasonable price in any situation. This Act also provides the MDTCA with the power to control the supply, importation, distribution and marketing of essential goods and the essential power to ration the supply. Under this Act, seven food items are controlled at all times while 24 food items are

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<sup>5</sup> There are other acts which protect consumer interests which are enforced by MDTCA and also by other ministries.

<sup>6</sup> Similar to the Resale Prices Act 1976 of the UK.



controlled only during festive seasons (Appendix 2.1). The main objective is to protect consumers against unscrupulous traders that will tend to increase prices and hoard essential goods that are required during the festive periods. These two acts are therefore the 'government's arm' in its efforts to enforce good business practices against anti-competitive conduct.

Instead of depending on market forces of supply and demand, the two acts are also a mechanism to control inflation and to keep prices in the food industry low in order to help and protect the welfare of the public. According to Carlton and Perloff (1990), this kind of price control measure has an income distribution effect. The literature on price control measures (see for example Jervis, 1949) explains that there are several principal reasons for government to control the prices of food items. These are to protect sellers and buyers of the commodity, to fix a "just" price (presumably to be the equilibrium price based on demand and supply), to improve the market mechanism-especially when price signalling fails, to protect certain classes of the community, to alter the commodity on the market and lastly to reward political supporters. In this regard Pickering (1974) states that the price determined by the regulatory mechanism is termed as a 'just price' between consumers and producers or retailers. However, such regulation, according to Hay and Morris (1993), could never equal or replicate the optimality conditions associated with perfect conditions which are minimum cost of production, price equal marginal cost, zero supernormal profits and no unfulfilled demand at the price set. Therefore only minimum regulatory condition is required if firms are competitive and markets are contestable. Even then, the regulations are aimed at safeguarding the competitive process.

In the above context there are several ways in which prices may be controlled. Stead *et al.* (1996) have listed some measures which include the setting of maximum and minimum prices based on cost and margins, taxation, subsidies and control of supplies or sales. With regard to price setting, the case of the poultry industry of Malaysia is a good example, where the maximum farm-gate price of poultry and the retail price of chicken were set by the Government, under the Control of Supplies Act, 1961. Another food item where government control is pervasive is rice. At the farm level, the government sets minimum prices of paddy to protect producers income from falling, while at the market level, the government sets maximum prices of rice from rising above a certain level to protect consumers' welfare. Since rice is the staple food in Malaysia, the government has to ensure that the prices are within the income of the public. In that context the rice market is divided into three categories, namely, standard grade, premium grade and super grade. A price ceiling (maximum price) is set for the standard grade rice, to ensure the population, especially the lower income group, has access to cheap rice within their means, while the prices of premium and super grade rice are left to be determined by market forces. This policy is not uncommon because according to Stead *et al.* (1996) many developing countries pursue a policy of price control on basic foodstuffs in order to protect the country's poor.

Supermarkets in Malaysia hardly sell the lower (standard) grade rice and may only stock a small quantity of high quality packed rice (Bucklin, 1986). Their abandonment of the rice market to the independent rice dealer is due to government regulation, where rice is a controlled item under the Control of Supplies Act 1961. According to Bucklin, this is because the gross margin of about 6.0 per cent obtained

from selling rice is not attractive to the supermarkets. However in some OECD countries such as Belgium, Iceland, Mexico and Turkey, price controls on certain food products are sometimes implemented in response to specific situations.

The effect of setting maximum prices below the equilibrium prices as a means of keeping prices down for the consumers will result in shortages and will lead to a black market. In contrast, the effect of setting a minimum price (a price floor) above the equilibrium price will lead to a surplus and may also encourage smuggling as a means of obtaining similar goods (where prices are lower) from a neighbouring country.

One significant development where the Malaysian government has undertaken to ensure consumer protection and to safeguard consumer interests was the enactment of the Consumer Protection Act in 1999. As provided for in the Act, the Consumers Claims Tribunal and the National Consumer Advisory Council were established in November 1999 and April 2000 respectively. The basic aim of the Consumer Claims Tribunal was to preside on and expedite the settlement of claims. The National Consumer Advisory Council, on the other hand, was to advise the Government on consumer issues, as well as promotion of consumer protection and awareness.

### 2.1.2 Administrative Policy

The second kind of intervention in the Malaysian retailing sector is with regard to the equity ownership of the retail firm and guidelines on the operations of

the supermarket activity. The Malaysian Government regulation in the ownership of firms can be traced as far back as 1974, when the then Prime Minister announced the Guidelines for the Regulation of Acquisition of Assets, Mergers and Take-Overs of Companies and Businesses along the lines of the NEP. It is important to note that the rationale of these guidelines had no links to economic efficiency but was rather for the pursuit of socio-economic objectives of income distribution and the restructuring of society. Understandably, in 1970, about 63.0 per cent of the share capitals of limited companies were foreign-owned. The Bumiputera owned less than 1.0 per cent, public trust agencies 1.6 per cent and the balance (34.4 per cent) were held by non-Bumiputera, of which the majority was held by the Chinese (Foreign Investment Committee, 1999). According to Hasan (1980), the underlying causes for the imbalances in the ownership of assets were the open character of the Malaysian economy and its historical development on the basis of exploiting natural resources for export, which led to substantial foreign ownership of the economy. This ownership policy is one of the main prongs of the NEP, the objective of which is to restructure the Malaysian society so that the identification of race with economic function is reduced and eventually eliminated<sup>7</sup>.

Through the NEP, wealth distribution was equitably set at 30.0 per cent for the Bumiputera, 40.0 per cent for non-Bumiputera and 30.0 per cent for foreign equity. This was the overall target to be achieved by 1990. The result of this policy action substantially increased the percentage share holding of the Bumiputera in the retail business, from 4.2 per cent in 1975 to 32.3 percent in the 1990, an increase of

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<sup>7</sup> Government of Malaysia, Third Malaysia Plan, 1976-1980, (p. 7), Kuala Lumpur.

670.0 per cent. According to Ariff (1991) the NEP has resulted in huge economic rents accruing to the Bumiputera group.

The implementation of the equity policy is through administrative controls, such that foreign firms are required to seek the approval of the Foreign Investment Committee (FIC) for any transactions which lead to 15.0 per cent ownership or more of the voting power in a Malaysian company and businesses or transactions exceeding in value of the sum of RM5.0 million. However in certain sectors such as the supermarket business, foreign interests are allowed to hold up to 51.0 per cent equity where the balance (49.0 per cent) is to be held by Malaysian and at least 30.0 per cent is to be held by Bumiputera. Some foreign supermarket firms may enter the Malaysian market without a local partner. A grace period of five years will be given to these foreign firms to seek local partners and in the event of their failing to find suitable partners, appeals to extend the grace period may be allowed where proofs of failed negotiations are required. The process of identification and matching with suitable local partners is slow and has often ended up in failure. This has had repercussions on the business activity of the foreign firms, since work permits for the foreign personals will not be extended and proposals for further expansion of business activity, such as the opening of additional stores, will be held back. The entry of the multinational supermarket firms will be discussed further in Chapter Three. As an example, the entry of the UK supermarket chain, Tesco, into the Malaysian retail sector was well conceived. Prior to entry, Tesco had already identified its local partner, a diversified Malaysian public listed company more involved in plantation and properties than anything to do with supermarket activity.

With regard to the administrative policy, Thomas (1982), states that government policy intervention into the affairs of multinational corporations in developing countries is in two aspects: partial equity ownership and through requirements for increasing the domestic value-added and employing host country nationals. His study reveals that a company's size and its strategic importance to the host economy were positively related to intervention. The equity regulations in Malaysia as argued by the policy makers were not designed to stifle foreign investment activity, but they have given rise to some concern. Foreign investors, in particular, have found it difficult to comply with the FIC guidelines, particularly in finding credible local company with financial capability and of similar activities. However according to Ariff (1991), policy makers argued that the equity policy has never been a negative factor, citing the creditable growth rates as well as FDI inflows during the 1980s as evidence. Critics (see Jomo, 1990) however, claimed that the Malaysian economy could have grown at a faster pace, had it not been for the NEP and the equity policy. The equity policy is not only peculiar to Malaysia and according to Khor (2000) most developing countries have policies that regulate the entry of foreign firms and impose restrictions to foreign investors on a sector by sector basis. Their justification is simple, often on the grounds of national development.

In addition to the equity policy of the FIC, there are also guidelines pertaining to the operation of the supermarket activity which is also implemented by the MDTCA, Malaysia. The first is with regard to the minimum floor space requirement which requires hypermarket to have at least 8,000 sq. metres, while supermarkets must be more than 2,800 sq. metres. Secondly, the guidelines also require foreign

companies to have a minimum capital requirement, which refers to the company's shareholders fund for each different type of retail operations as in Table 2.1 as follows:

**Table 2.1**

**Types of Retail Business and Minimum Capital Requirements**

<b>Types</b>	<b>Floor Space (sq. metres)</b>	<b>Capital Requirements</b>
Hypermarkets/Department Stores	>8,000	RM10.0 million
Supermarkets	>2,800	RM5.0 million
Speciality Outlets	-	RM1.0 million

Source: Ministry of Domestic Trade and Consumer Affairs, Malaysia, 1996.

However, the Malaysian Government on 10 April 2002 froze the approval of new supermarket/hypermarket development by foreign firms with immediate effect pending the drafting of a new guideline. The decision to do so was based on the findings by an independent consultant (AC Nielsen), who found that the existing large supermarkets/hypermarkets have detrimental effects and significantly affect the business of small retail outlets operating near to them (Utusan Malaysia [a], 2002). It was found that hypermarkets affected the sales of 58.0 per cent of the retailers in the neighbouring areas where hypermarkets were located. In terms of prices, 35.0 per cent of the retailers lowered their prices in response to competition from the supermarkets/hypermarkets. It was announced that the decision by the Malaysian Government to freeze new approvals of foreign supermarkets/hypermarkets is a move towards an orderly planning and development of these entities in areas away from small retail outlets. However the Government recognised the importance of foreign supermarkets/hypermarkets as a source of retail innovations which could provide linkages to the other sectors in the Malaysian economy. Besides bringing in

foreign investment, the Government argued, these supermarkets/hypermarkets provide job opportunities and help to promote the export of local products to their overseas outlets (Utusan Malaysia [b], 2002). The temporary freeze was therefore lifted on 24 April 2002 and new Guidelines (in contrast with the old Guidelines) were announced by the Government as shown in Table 2.2.

**Table 2.2**

**New Guidelines on Hypermarkets/Large supermarkets**

<b><u>New Guidelines (effective on 24 April 2002)</u></b>	<b><u>Old guidelines (1 November 1995)</u></b>
1. Issued and Paid-Up Capital not less than RM50.0 million.	Issued and Paid-Up Capital RM5.0 million–RM10.0 million.
2. To be located 3.5 kilometres outside town centres.	-
3. Serving a population of at least 350,000 people.	-
4. Floor space greater than 8,000 sq. metres.	No change.
5. At least 30.0 per cent of the floor space allocated for selling local products.	-

Source: Ministry of Domestic Trade and Consumer Affairs Malaysia, 2002.

**NB:** Under the new guidelines all foreign hypermarkets/large supermarkets must have a floor space of at least 8,000 sq. metres.

Four new changes have been introduced in the new guidelines, particularly to slow down the expansion of foreign hypermarkets/supermarkets in Malaysia. The first is the imposition of a higher paid up capital from RM10.0 million to RM50.0 million. The imposition of a higher paid up capital will affect not only foreign firms, but even more so, local firms, since they are partners in the joint-venture (JV) companies. They will have to contribute 49.0 per cent or RM24.5 million<sup>8</sup> of the paid up capital as compared to RM4.9 million under the old guidelines. In addition to the paid-up capital, local firms must also contribute 49.0 per cent towards the cost of

<sup>8</sup> 49.0% out of RM50.0 million



development of the supermarket/hypermarket and also on its expansion later on. Not many local firms have the capacity to raise the required amount and this may pose difficulty to foreign firms in finding a financially capable local partner.

Secondly, the zoning of hypermarkets/supermarkets in out-of-city centre and edge-of-city centre sites was introduced to protect small high street retailers, especially convenience shops. Thirdly, hypermarket/supermarkets are only allowed to operate in a population catchment area of at least 350,000 people. The saturation calculation in determining the number of supermarket and population is based on the French experience. At the moment there are on average 580,900 inhabitants per hypermarket in Malaysia, but in certain cities, for example, Kuala Lumpur the ratio is 233,000 inhabitants per hypermarket. Fourthly, is a requirement at least 30.0 percent of the net selling area must be allocated to local products. This is a move to promote local products and to encourage local production. This is not something new; according to Alexander (1989), in order to be successful, foreign retailers must adapt to the culture of the host country. After all, the products that they sell are meant for the local people and therefore these should be local products.

The success of the equity policy depends significantly on the ability of local entrepreneurs to contribute their share of the capital needed in the JV company. Besides Jaya Jusco (a public listed company with 51.0 per cent of its shares held by its Japanese parent company and 49.0 per cent by Malaysian public) and Tesco, the other foreign firms are facing difficulty to comply with the FIC guidelines. In the case of Makro, its local partner diluted its shareholding from 49.0 per cent to 35.0 per cent mainly because of its inability to provide further capital for expansion. For

Carrefour, the local partner had to withdraw its entire 49.0 per cent equity due to financial difficulty, and this left Carrefour without a local partner for the time being. Three other foreign owned supermarket companies, Topps, Giant and Wellsave, are still looking for suitable local firms.

From the above analysis it shows that the equity policy is not effective in increasing local participation in foreign firms, particularly when it involves a substantial amount of capital throughout the business operations. The other observation is that since the equity policy is only an administrative procedure, which is not governed by laws, therefore a non-complying foreign firm is not illegal under Malaysian laws. This may be the reason why some foreign firms have not taken the equity policy seriously. However, through persuasion and out of respect for the policy of the host country, most foreign firms will abide by the equity policy.

## **2.2 Regulatory Policy of Other Developing Countries**

The restriction on foreign ownership (or equity policy) is not peculiar to Malaysia but applies also to other developing countries as well. Other neighbouring countries that have similar policies are, for example, Thailand, Brunei, Indonesia and China. Thailand's equity policy is more stringent than Malaysia's. In those activities which are reserved for Thai nationals, such as supermarket retailing, aliens' (foreign) participation is only allowed up to a maximum of 49.0 per cent (Allen *et al.*, 1988) in contrast to 51.0 per cent in Malaysia. In practice, however, the equity held by

foreign companies is greater but is hidden under Thai nominees<sup>9</sup>. In Brunei, foreign companies are allowed up to 70.0 per cent equity in the retailing industries, whereas in China, a 50:50 JV company between local and foreign firms operating in the retail sector is normally recommended (Luo, 2000). In addition, only well established commercial multinationals are permitted to do business in the Chinese retail sector and imports of goods are also restricted to only 30.0 percent of their total annual sales. In this context, we may say that the policy in Malaysia is more relaxed than in China. By contrast, in Indonesia, while certain sectors remain closed to foreign investment, the country adopts a more liberal policy stance than Malaysia to sectors such as large-scale retailing, distribution and wholesaling. Indonesia's FDI policy is governed primarily by its Foreign Investment Law No. 1 of 1967 and amended by Law No. 11 of 1970. Under this investment rule, foreign firms are permitted to own 100.0 per cent of the issued and paid up capital of new established firms and are only required, within 15 years from the commencement of commercial operation, to divest at least a nominal value of 5.0 per cent of the paid up capital to an Indonesian entity. But with its unstable political environment, this liberal FDI policy of Indonesia's, is not high on the list of foreign multinational retailers. To date, only two major multinational grocery retailers are present in the Indonesian market, namely, Makro which entered in 1991 and Carrefour in 1998.

With respect to the equity regulation, Sternquist (1997) argues that even though, wholly owned subsidiaries are preferable to foreign firms, a joint venture is

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<sup>9</sup> See also the study by Martinussen (1988) [cited in Caves 1996] - on India's policy of allowing only 40.0 per cent foreign equity in the consumer goods industry resulted in manipulation. The balance 60.0 per cent of the shares were in fact held by the MNFs but hidden under the disguise of an Indian nominee company.

often necessary when entering a different cultural environment. Caves (1996) states that, even without a local-ownership policy, the risk involved in doing business in the developing countries can itself cause the MNFs to forgo full ownership. According to Reuber (1973), some firms may require the equity of local partners in order to conduct negotiations with the host government and to accelerate the penetration of the markets and sometimes their capital contributions are needed as well.

In the next chapter, we shall see that even with regulations on equity ownership and guidelines on the entry of foreign MNFs such as supermarkets, these factors do not deter the entry of these firms into the economies of the developing countries, at least in the case of Malaysia, which is now host to several foreign supermarket firms. This is in sharp contrast to the empirical findings of De Mello (1997) who found that local contents and equity requirements act as deterrents to FDI. In this context we have looked at Indonesia's regulation which is more liberal vis-à-vis the regulation policy of Malaysia but noted that more multinational supermarket firms are attracted to the economies of Malaysia than Indonesia. In the light of these arguments, other factors or determinants may play a significant role in attracting the MNFs, which this dissertation will look at more deeply in the context of the services-manufacturing distinction in Chapter Five.

### **2.3 Competition Policy in UK and Regulation in Malaysia - A Contrast**

The aims of the various acts in Malaysia which were discussed in Section 2.1 are among others to provide a code of ethical business conduct and trade practices and to protect consumers' welfare. On the other hand, the equity policy imposed on

foreign MNFs involved in the retailing activities in Malaysia has the aim of restructuring the corporate ownership of firms, as well as to redistribute economic wealth to the Bumiputera. In these two mechanisms, there is no regulation to promote fair business practices, or to synthesize efficiency and competition among the firms.

Given that Malaysia's competition policy is not well developed<sup>10</sup>, there is no equivalent of the UK Competition Commission to oversee or administer any competition rules or regulations, including the monitoring of restrictive business practices, abuses within the market or possible cartel actions. In other words there is no institutional framework in Malaysia whose function is to maintain, promote and oversee effective competition in the retail trade. Therefore, anti-competitive activities in Malaysia are not per se illegal and no specific documented records of such practices are collated, although they are known to exist. In this context, any abuses within the market committed by the MNFs cannot be prosecuted because the existing laws cannot completely prohibit or control such practices and in this case local retailers without market power may be forced to exit.

While every industrial country has a competition policy (Caves 1982), in contrast most developing countries are hesitant to have one. This is especially because of its negative implications which may work to their detriment by placing local firms on the same playing field as MNFs which possess technology and capital (Wheare and Adcock, 2001). Therefore, the benefits of introducing a competition

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<sup>10</sup> Malaysia has sector based competition regulation in the communication and multi media and the energy sector only (see Lee, 2002 and 2004).

policy must be carefully weighed to accommodate the developmental needs of the nation and to ensure that such a policy is not used to the unfair benefit of any firms. Besides Malaysia, another (neighbouring) country without a competition policy is Singapore. Thailand and Indonesia, however, do have competition policies but the effectiveness of these policies will also depend on the level of sophistication of the instruments to execute them effectively. Often developing countries with competition policy have limited implementation ability (Hoekman and Holmes, 1999). This is consistent with the argument of Singh and Dhumale (1999), who state that the competition policy of the kind practised by the UK or the US could not just be plucked and implemented in developing countries, especially as these countries are at different levels of economic development.

The EU and within it, the UK, have some of the most advanced and well-developed competition policies. The UK competition policy is governed by the Competition Act 1998 (which came into force on 1<sup>st</sup> March 2000) and in some circumstances is complemented by the Enterprise Act 2002 (which repealed the Fair Trading Act 1973). Prior to this, competition policy in UK was defined by four pieces of legislation, namely the Fair Trading Act 1973, the Competition Act 1980, the Restrictive Trade Practices Act 1976 and the Resale Prices Act 1976. The first two dealt with the 'monopoly' problem, the third with collusion and cartels and the fourth with vertical (price) restraints (Hay and Morris, 1991). However the Competition Act 1998 replaces the Restrictive Trade Practices Act 1976, the Resale Prices Act 1976 and most of the Competition Act 1980. The UK Competition Act 1998, which is a subsidiary of the EU legislation, incorporates the provisions of Articles 81 and 82 of the EC Treaty. Article 81 which replaces the Restrictive Trade

Practices Act, 1976, prohibits anti-competitive agreements while Article 82, which replaces the Resale Price Act 1976, prohibits the abuse of a dominant position in a market.

Within the competition policy of the UK or the EU, the mere holding of a dominant position or market power, whether single firm dominance or joint dominance, is not unlawful. However, it is the abuse of that dominant position that results in an infringement of the competition acts. Under the monopoly control provisions, the UK has for jurisdictional purposes confined itself to a simple market share test where it is triggered by a 25.0 per cent market share. Under the competition policy, there is no exemption to the abuse of dominant position but the Competition Act's abuse of dominant position provisions do not penalise a company that has captured a dominant share of the market because of its better performance or in other words because of its efficiency and innovation, where the resulting benefits are passed down to consumers in terms of lower prices.

In its current context the three main pieces of legislation that Malaysia has in its retail trade sector are inadequate because the legislation does not cover the issues of competition, innovation, market power and dominant position. The existing laws only empower the regulator to stabilize the prices of essential goods and to protect consumer interests. As a result, the issues facing the supermarket sector in Malaysia, where foreign multinational supermarket firms are dominating the market share, have not been addressed because in this context Malaysia has no particular view or policy on dominant position but has a strong view on innovation. This view is reflected in its policy on foreign participation in the wholesale and retail trade, which has

explicitly spelt out innovation as its main objective in attracting FDI in the retail trade sector as follows:

‘to encourage the modernisation and increase the efficiency of the industry and its continued contribution to the growth of the economy’(MDTCA, 1996, p. 6)

However the Malaysian government is committed to have its own competition policy which will be called the ‘Fair Trade Practices Policy’ (Eight Malaysia Plan, 2001-2005). The fair trade policy and law will be formulated to prevent anti-competitive behaviour and the abuse of market power, similar to the UK competition policy. It will consist of two components, namely, consumer protection (already embodied in the Consumer Protection Act, 1999) and competition regulation. Malaysia’s fair trade policy will prevent firms from protecting or expanding their market shares by means other than greater efficiency in producing what consumers want. This policy will come into force in the near future.

## **2.4 Conclusion**

This chapter has analysed the extent of government intervention in the retail and supermarket sector between a developing economy, Malaysia, and the practice of developed countries such as the UK. The practices are not only different but are also at the extreme between one and another because Malaysia’s competition policy is limited in scope, unlike that of the UK, where the policy is well developed. Malaysia’s retail regulation depends mostly on three acts (Price Control Act 1946, Control of Supplies Act 1961 and Consumer Protection Act 1999) to bring order to its retail trade practices as well as to protect consumer welfare. In contrast the



competition policy of the UK which incorporates the EU competition legislations (Article 81 and Article 82) is essentially about market structure, company behaviour and levels of performance, all of which relate to efficiency and competition in the market. The goal is to enhance consumers' interests through lower prices, better quality and more choice without direct intervention in the market, in contrast to the practices in Malaysia.

As in most other developing countries, Malaysia has an idiosyncratic policy of imposing equity regulations on foreign retail firms, in contrast to the UK's open market policy and retailers who wish to enter the market can in most cases do exactly as they wish. The exceptions to this in the UK are the large supermarkets or supercentres which are constrained by land-use planning on the grounds of space use and various dimensions of impact and these have similarities to the guidelines in Malaysia such as zoning of hypermarkets/supermarkets in out-of-city centre and edge-of-city centre.

Malaysia, on the other hand, cannot act against firms having market power or a dominant position because Malaysia does not have a policy on this, whereas in the EU and so in the UK, dominant position and abuses of market power will be unlawful from the outset. Exemptions will require proofs of promoting technical or economic progress and efficiency gains and allowing consumers a fair share of the resulting benefits. This means encouraging firms to improve productivity, to reduce prices and to innovate and rewarding consumers with lower prices, higher quality and wider choice. This may also promote the international competitiveness of the domestic market. It was also argued in this chapter that a sound competition policy

and law could contribute to providing an attractive environment for FDI by establishing a stable and transparent legal framework of the kind familiar to foreign investors.

But despite regulations and government interventions, the retail sector, especially the supermarket activity in Malaysia, has attracted the entry of six different multinational supermarket firms beginning in the early 1980s with the entry of Jaya Jusco from Japan. The entry and diffusion of these multinational supermarket firms signal that the retail sector of Malaysia is attractive and therefore important to look at. This will be the subject of the next chapter, where the central focus will be on the entry of this type of services FDI and multinational supermarket firms, which have captured a sizeable share of the supermarket activity in Malaysia.

## CHAPTER THREE

### **THE MALAYSIAN RETAIL AND SUPERMARKET SECTOR - AN OVERVIEW AND ENTRY OF FDI AND MULTINATIONAL FIRMS**

#### **3.0 Introduction**

Chapter Two has discussed the legislative framework and the extent of government regulation in the retail and supermarket sector and highlighted the limited regulatory power of the existing legislation (Acts) which Malaysia has in terms of enhancing consumer welfare as well as protecting local firms against global competition, for example, firms in the supermarket sector. That regulatory practice has been contrasted with the competition policy of developed countries, especially the EU and in particular the UK. The other peculiar policy in Malaysia is with regard to the local equity imposed on foreign firms operating in the retail sector in Malaysia which is considered as a tool for income distribution favouring the Bumiputera group, in contrast to the open policy of the developed economies.

This chapter will examine two things. First, Section 3.1 provides an overview of the Malaysian retail industry. This includes a discussion on the growth of the retail industry and its contribution to the economy, the types of retail establishment, their employment contribution as well as the ownership structure. Within this broad context the contribution of the retail sector of Malaysia will be contrasted with that of the UK retail industry in its contribution to the economy. The second part, which is in Section 3.2, is the main contribution of this chapter, which will focus on the development of the supermarket sector in Malaysia. A prominent

part of the analysis in this section will be on the entry of foreign multinational supermarket firms that have contributed to the growth, development and change in the food retailing sector. These firms have also gained significant market share in Malaysia because of their efficiency and innovation in the retail industry. In this context, this section will also examine the concentration of the supermarket sector, which will be contrasted with the supermarket sector in the UK. The entry of these firms also signals a new type of FDI and MNF, that of services, in contrast to the familiar type of manufacturing FDI. Section 3.3 concludes the chapter.

### **3.1 Overview of the Retail Industry.**

#### **3.1.1 Number of Retail Establishments**

The retailing industry consists, by definition, of the activities involved in the selling of goods to the ultimate consumer for personal or household consumption (Department of Statistics, Malaysia, 1993 and National Statistics UK, 2000). It is the principal link between the producers and consumers. The official statistics, however, do not include the 'informal' retail sector, which encompasses roadside hawking, peddlers, bazaars, stalls, and wet markets. In 1980 there were 90,040 retail establishments in Peninsular Malaysia, but 13 years later (1993), the figure had grown to 154,080 retail establishments, an increase of 71.0 per cent over that period. However, in the year 2001 there was a slight decline of 0.25 percent from 1993 to 153,700 retail establishments. The increase in the numbers of retail establishments for the period 1980-1993 was basically influenced by factors such as the robust growth of the economy, the increase in population as well as the increase in the per

capita income of the people. During that period, the per capita income rose steadily from less than RM5000 in 1980 to more than double in the early 1990s. The main reason for the decline in the numbers of the retail establishments for the period 1993-2001 may be partly attributed to the Asian financial crisis (1997-1998), which saw the exit of many retailers. In contrast, there was a steady decrease in the numbers of retail enterprises in UK for the period 1989-1992. In 1992 the number of retail enterprises in the UK was nearly 10 per cent less than in 1989 (European Commission, 1996). According to the European Commission, the declining trend reflected an increasing rationalisation in the UK retail trade and with no formal barriers to business entry or exit, fluctuations in business numbers are a rule.

### 3.1.2 Industry Growth

The Malaysian wholesale and retail sector grew at an average rate of nearly 10 per cent until the Asian financial crisis, which saw the sector's growth decline to 7.7 per cent in 1997 and a negative growth of 2.0 per cent in 1998. However in terms of its share to GDP, it still maintains its double-digit contribution at more than 12.0 per cent (Table 3.1) and this has been continued for the last nine years since 1992 (Ministry of Finance, 2000). In fact the retail sector's share of GDP, especially during the 1997-1998 Asian financial crisis, contributed quite significantly towards the rapid recovery of the Malaysian economy. In 1997, the retail and wholesale industry share of GDP was 12.3 per cent, while in the year 2000 (after the crisis) it was up by 0.5 per cent to 12.8 per cent.

Likewise in the UK, a similar trend was also reflected in the wholesale and retail sector contribution to GDP. The sector's contribution was 14.0 per cent of GDP in 2000, the same as in 1999. In France, the contribution of the wholesale and retail trade sector to GDP was slightly less than in the UK, at 12.0 per cent in the year 2000. For some other EU countries, the contribution of the wholesale and retail trade to GDP in the year 2000 is reflected in Table 3.2. The sector's contribution to GDP ranges from 11.0 per cent in Germany and Sweden to 14.0 per cent in the UK.

**Table 3.1**

**Contribution of the Wholesale, Retail and Catering Sector  
to Malaysia's GDP.  
(1992-2000)**

<b>Year</b>	<b>Average GDP Growth Rate</b>	<b>Average Growth Rate of Wholesale, retail, hotel and restaurant sector</b>	<b>Per Cent Share to GDP</b>
1992	7.8	11.1	12.0
1993	8.3	11.1	12.4
1994	9.2	8.0	12.2
1995	9.4	10.1	12.3
1996	8.6	9.4	12.4
1997	7.7	7.0	12.3
1998	-7.5	-2.0	12.9
1999	4.3	1.0	12.9
2000	5.0	4.5	12.8

Source: Ministry of Domestic Trade and Consumer Affairs: Study On the Impact of Hypermarket on Retailing (1999) and Ministry of Finance Malaysia: Economic Report 1999/2000.

**Table 3.2**

**Contribution of the Distributive Trade Sector  
to the Economy of some EU Countries  
(2000)**

<b>Country</b>	<b>Share of Distribution Output in Total GDP</b>
Belgium	12.0
Denmark	13.0
France	12.0
Germany	11.0
Sweden	11.0
United Kingdom	14.0

Source: United Nation Statistics Division.

In terms of sales turnover, the retail sector is particularly sensitive to economic instability, being hit harder than average in times of economic recession. For example, during the height of the financial crisis in Malaysia, retail sales took a dip from RM46.5 billion recorded in 1997 to RM37.2 billion in 1998, a decline of 11.0 per cent. However with recovery in aggregate demand, the wholesale and retail sector made a quick revival in 1999, registering a positive growth of 1.0 per cent and in 2000 it was well on a positive growth path of nearly 5 per cent from the crisis year, with registered sales of RM44.0 billion.

Among the actions taken by the Malaysian government to boost the retail sector during the crisis period were a “Buy Malaysian Campaign” aimed at reducing imports and strengthening the economy and granting more permits to retailers to carry out bargain sales at great discounts<sup>11</sup> to stimulate consumer spending.

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<sup>11</sup> It is subjected to abuses because of the difficulty in enforcement to check on the original price and the price offered after a discount.

### 3.1.3 Types of Retail Establishments

The growth of the retail sector over the years was due to deliberate government planning<sup>12</sup> which subsequently resulted in a gradual change in the Malaysian retailing industry. In town centres modern shopping complexes including supermarkets and departmental stores have been developed, dwarfing the pre-war building of shop-houses. Behind the back alleys of the shopping complexes are the street vendors and hawkers. This characteristic is also ubiquitous in many other South East Asian countries.

One of the important peculiarities of Malaysia's retail industry is the domination of small retail outlets. Table 3.3 indicates the types of retail establishments in Malaysia over the past three decades (1980-2001). It can be seen that 91.3 per cent of the total trading outlets in 2001 consisted of small grocery retail shops (Figure 3.1), which sell provisions and other daily necessities such as rice. This figure is 1.9 per cent higher compared to 1980 and 1.1 per cent more than in 1993. According to Akehurst and Alexander (1996), even in developed economies small retail operations will still remain an important element in the retail structure, but not as dominant as in developing countries.

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<sup>12</sup> Malaysia has been implementing successive five years development plans starting from the first development plan in 1967 till now, into the eight development plan (2001-2005). The implementation of these development plans has spurred economic growth.



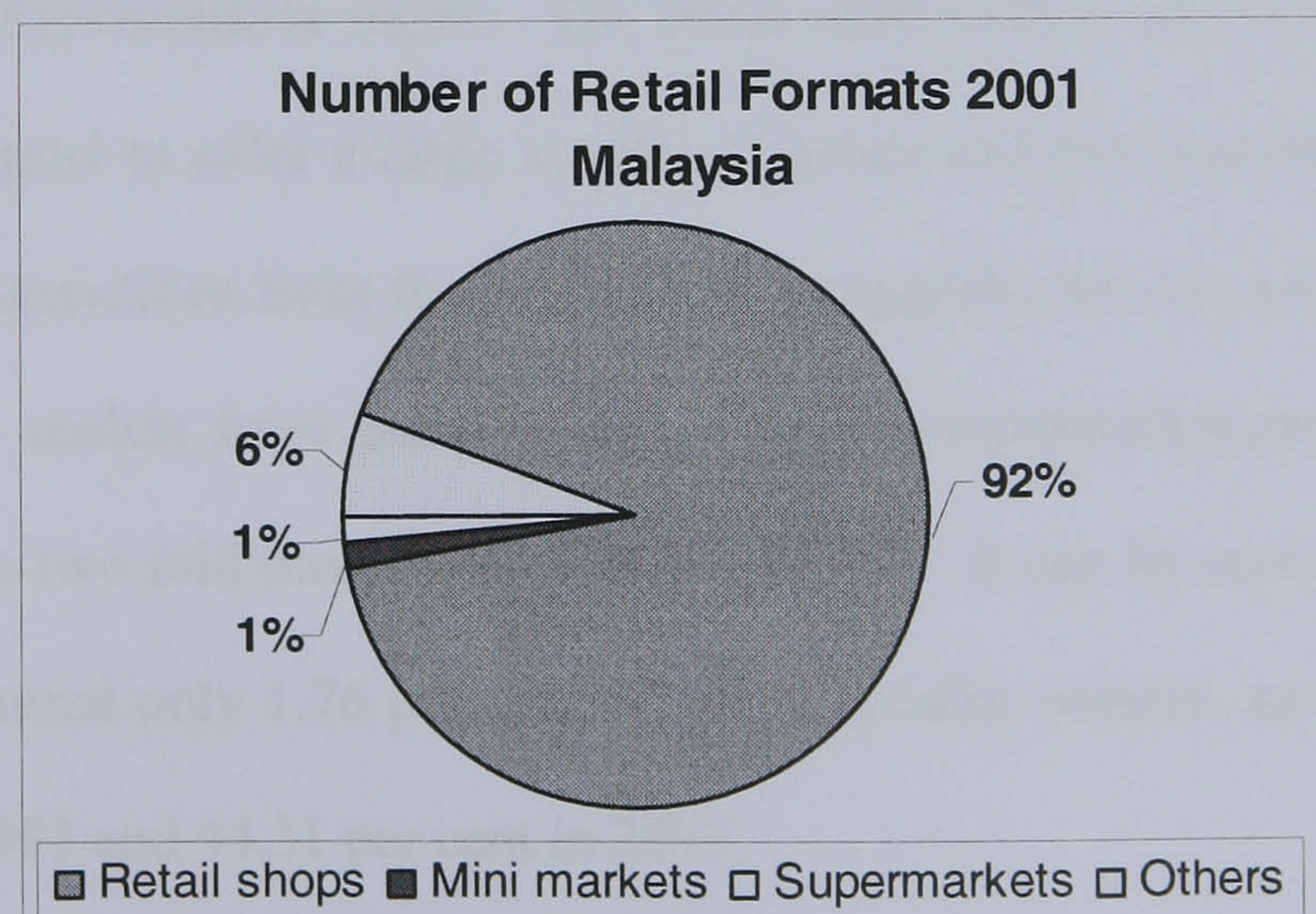
**Table 3.3**  
**Types of Business Establishments in Peninsular Malaysia and Sales Value**  
**1980, 1993 and 2001**

Business Establishments	1980		1993		2001	
	% of total estab.	% of total sales value	% of total estab.	% of total sales value	% of total estab.	% of total sales value
Supermarket/ Hypermarket	0.10	1.76	0.60	22.80	1.40	44.31
Department stores	-	-	0.10	11.80	0.60	9.83
Mini market	2.54	18.91	2.50	7.50	1.50	6.87
Retail shops	89.40	47.50	90.20	47.30	91.30	36.70
Others*	7.96	31.83	6.60	10.60	5.20	2.29
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Survey on Wholesale, Retail and Catering. Department of Statistics, Malaysia, 1982, 1993 and 2001. \* Such as newspaper agents, convenience stores, and other small retail outlets.

The slight increase in the percentage share of small retail establishments for the year 2001 in Malaysia may be due to the increase in consumer demand and also to the viability of these outlets, mainly because of the small capital requirements and operating cost needed in running such outlets. The risk involved in operating a small business is minimal compared to bigger retail establishments. The increase also reflects the need for such outlets to serve the consumer markets in Malaysia, especially in the growing urban areas catering for different classes of society (Allen *et al.* 1988).

**Figure 3.1**



However findings from the Seventh Malaysia Plan (1996-2000) show that the percentage share of the establishment of small retail outlets in the rural areas in fact declined by 5.8 per cent during the 1990-1995 period as compared to urban areas, which registered an increase of 9.1 per cent during the same time. This suggests that retailing activities in the rural areas are not expanding, most probably due to the low rural income and also possibly due to rural-urban migration.

Comparing the sales figures in the three periods (1980, 1993 and 2001), Table 3.3 shows that sales volume from small retail outlets declined slightly from 47.5 per cent in 1980 to 47.3 per cent in 1993 but registered a significant drop in 2001 to 36.7 per cent. Sales from other retail formats except supermarkets also decreased. As the number of supermarkets in Peninsular Malaysia has increased significantly over the past 21 years, it is not surprising to see that the role of small retail grocery shops is beginning to decline. In 2001, retail provision shops constituted 91.3 percent (or 46,540 establishments) with total sales value of 36.7 per cent (RM7.46 billion) or equivalent to an average of RM160,300 per retail shop, which represent only 1.3 per cent of the total sales of a supermarket. Most of these small retail formats are set up in urban centres where they face stiff competition from the supermarkets/hypermarkets sector. The small retail outlets are owner operators and often lack capital to offer a large variety of goods and furthermore consumers only buy smaller quantities from them. Table 3.3 suggests that the decline in sales from small retail outlets have been taken up by the supermarkets/hypermarkets, which registered a two fold increase during that period. It can be seen that in 1980 supermarkets captured only 1.76 per cent of the total sales volume, as compared to 22.8 per cent in 1993 and 44.31 per cent in 2001.

In terms of numbers of establishments, there were 716 supermarkets/hypermarkets in 2001 in contrast to 349 supermarkets in 1993 and only 60 supermarkets in 1980. Most of the local supermarkets are small relative to foreign owned supermarkets. However, before 1980, modern retail outlets such as supermarkets, which were few in number, were only concentrated in the capital city, Kuala Lumpur. They served the affluent and the expatriates, mostly Japanese and Americans, working in Japanese and American multinational corporations (Jackson 1979). In the 1970s there were only 11 supermarkets in Malaysia, mainly because of the low levels of income and the lack of patronage of such markets by the low and middle-income groups (Bucklin, 1986).

The significant increase in the total sales value of the supermarkets in Malaysia between the three periods could be attributed to the rapid economic development that Malaysia has undergone. Beginning in the 1980s onwards, the Malaysian economy was growing at the rate of 8.0 per cent (except during the two recessionary years of 1985 and 1986 and the crisis years of 1997-1998), as compared to an average growth of 7.0 percent in the 1970s. The per capita income of the population was also much higher, an average of nearly US\$4300 in the 1990s period as compared to only US1000 in 1973 (Bucklin, 1986). The population was 23.3 million in 2000, which was 117.0 per cent higher than in 1970. Bucklin argued that there is a direct statistical relationship between economic growth and the changing choice of consumers' retail formats. One can also assume that the retail formats of developing countries will come to resemble more closely those of current developed countries as economic development proceeds and average per capita income rises.

In contrast, for example, in the UK only 62.0 per cent of retail enterprises in 1992 were small single outlet retailers, whereas in France, only 50.0 per cent of the numbers of retail enterprises in 1990 were small retail businesses, comprising traditional neighbourhood stores and street markets (European Commission, 1993). The falling numbers of small retail business is also the trend in all other EU countries, illustrating the process of concentration and consolidation in the sector (European Commission, 1997). This development is clearly shown in a steadily declining trend in the number of retail enterprises and an increase in their average size. In France, the number of retail businesses in food retailing is decreasing faster than in non-food retailing. This is because of the expansion of the hypermarket and supermarket retail formats, which in 1989, had already captured a market share of over 50 per cent for food products (European Commission, 1997).

The contrast between the market share of small retail outlets and that of supermarkets is even more significant in the UK than in Malaysia. While grocery stores in the UK captured only 11.0 per cent of total grocery sales in 1980, the share of superstores and large supermarkets had increased tremendously to almost 75.0 per cent of the grocery market in 1993 (European Commission, 1993). In fact the four largest grocery retailers in the UK, measured by sales from reference stores in 1998/1999, have a market share of 71.0 per cent, with Tesco having a dominant position with 24.6 per cent, followed by Sainsbury (20.7 per cent), Asda (13.4 per cent) and Safeway (12.5 per cent). This is understandably the case as these four supermarket chains control around 43.0 per cent of total store numbers (Competition Commission, 2000). However, the rate of growth of supermarkets and superstores is

now slowing down, reflecting the slow growth in demand for food in the UK (Competition Commission, 2000).

In Jackson's<sup>13</sup> (1979) view, there is a regular pattern in retail distribution that is unique at each stage of economic development, such that as development progresses, the retail format will also change. What was lost in the sales volume in the other retail formats is being captured by other retail operations. According to Jackson (p. 274):

“as the economy advances or becomes more developed, a modern distributing system, represented by large scale retailing units will absorb gradually functions performed previously by the ‘traditional’ informal system, with its market traders and small stores, so that these become progressively less significant and eventually survive only as relict features.”

The large-scale retailing units referred to by Jackson are the modern retail formats such as supermarket chains with efficient and mass retailing systems. Before 1980, retailing was very much the trade of the small retail businesses and other retail formats such as grocery stores, convenience stores, hawkers and peddlers and wet market traders. These types of retail formats are features of low retail development and their relative importance in overall distribution diminishes as the economy advances. Mittendorf (cited in Jackson) explained that, as general levels of income rise, chain stores and supermarkets become increasingly important in the urban food supply system.

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<sup>13</sup> Jackson (1979) undertook a study to conceptualise the relationship between retail system and the development process – mainly in the light of evidence from Kuala Lumpur, Malaysia.

Daniels (1993) argued that the structure of retail distribution is also related to consumer demands, which are influenced by the level, structure and trends of consumption as well as the elements that influenced the purchasing habits of consumers. In support of this argument, the European Commission (1993) states that the retail system in a country is influenced primarily by the standard of living of its people, as measured by per capita GDP.

In the above context Jackson (1979) also argued that, as the economy grows, the population will become more affluent and its consumption pattern will change. Therefore the role of small retailers and other informal retailers such as hawkers and peddlers will decline as increasing use is made of large retail outlets such as supermarkets. The structure of the retail trade also reflects the cultural characteristics of the society it serves, while technological development has brought radical change in the retail trade (European Commission, 1993). Thus, as the economy grows, the retailing sector becomes more sophisticated. This statement correctly matches the pattern shown by sales volume registered by supermarket chains both in UK and in Malaysia. However the dualistic nature of the retailing formats in developing countries will remain, as small retail outlets are complementary elements to supermarkets.

#### 3.1.4 Employment

In terms of employment generation, a total of 897,000 people were employed by the retail trade sector in 2001, representing 9.5 per cent of the total workforce in

Malaysia (Table 3.4). Even during the crisis years of 1997 and 1998, the sector's contribution towards total employment remained unchanged from before the crisis years. In fact in 1998 the share was much higher (9.9 per cent) than in 1997 (9.7 per cent) suggesting that more people were engaged or employed in the wholesale and retail sector during the crisis as compared to the other sectors of the economy. But in general the overall share of the retail and wholesale sector to the total workforce has remained fairly constant for the period 1993 to 2001, reflecting that the sector grew at constant rates over the years, as reflected in Table 3.1. In terms of retail labour productivity, it increased steadily over the years, reaching its peak in 1997. Although it took a dip in the crisis year (1998), it has steadily recovered since the crisis.

In contrast, the retail and wholesale sector in the UK employed 14.4 per cent of its total labour force in 1991. This is not surprising, given that the overall UK market for groceries was worth around £90 billion in 1998 (Competition Commission, 2000), whereas in Malaysia, a comparatively small market, the turnover of the retail sector is only RM45.1 billion or an equivalent of £7.5 billion in 2001. Likewise, in other EU countries, such as France, the retail and wholesale sector employed an estimated 12.3 per cent of their total labour force in 1990.

**Table 3.4**

**Workforce in Wholesale and Retail Trade, Malaysia  
(1993-2001)**

<b>Year</b>	<b>Total workforce (000)</b>	<b>Wholesale (000)</b>	<b>Retail (000)</b>	<b>Total wholesale &amp; Retail (000)</b>	<b>%</b>	<b>Total Sales In Retail (RM 000)*</b>	<b>Productivity Total sales ÷ workforce (RM)</b>
1993	7498	253	500	753	10.0	34000000	45000
1994	7603	262	517	779	10.2	37000000	47000
1995	8024	261	515	776	9.7	40000000	52000
1996	8416	274	542	816	9.7	42000000	51000
1997	8805	287	568	855	9.7	43000000	50000
1998	8563	286	565	851	9.9	32000000	38000
1999	8869	285	575	860	9.7	34000000	40000
2000	9200	294	586	880	9.5	36000000	41000
2001	9430	305	592	897	9.5	38000000	42000

Source: 1. Ministry of Domestic Trade and Consumer Affairs, Malaysia (1999): Study on the Impact of Hypermarket on Retailing;  
 2. Malaysian Retailers Association, and  
 3. Economic Planning Unit, Malaysia.  
 \* Figures are in real value.

### 3.1.5 Ownership Pattern

Another important characteristic of the retail and wholesale sector of Malaysia is with regard to the ownership pattern (Table 3.5). Ethnic Chinese resident in Malaysia are the main players in the industry, controlling 53.3 per cent in wholesale and more than 75.0 per cent in the retail sector in 1975. During the same period, foreign ownership in the wholesale sector was also high at 36.0 per cent and 11.4 per cent in the retail sector. In contrast, the Malays (Bumiputera), controlled only 1.7 per cent and 4.2 per cent respectively. If one considers urban areas as the areas where most trading takes place, the Chinese share in ownership is even more significant. The Bumiputera are considered as “outsiders” in this predominantly



Chinese controlled sector (Allen *et al.* 1988)<sup>14</sup>. This does not augur well for the Malaysian Government policy to promote an equitable ownership pattern in the corporate sector, especially where one ethnic group dominates a particular sector.

**Table 3.5**

**Percentage Share in Ownership of the Retail and Wholesale Industry  
Peninsular Malaysia**

	1975		1990		2001	
	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail
<b>Bumiputera</b>	1.7	4.2	10.2	17.1	17.1	40.7
<b>Chinese</b>	53.3	77.3	85.2	80.7	80.7	58.1
<b>Indians</b>	9.0	7.1	3.0	1.2	1.2	1.0
<b>Foreign</b>	36.0	11.4	1.6	1.0	1.0	0.2
<b>Total</b>	100.0	100.0	100.0	100.0	100.0	100.0

Source: Fourth Malaysia Plan (1981-1985), Sixth Malaysia Plan (1991-1995) and Department of Statistics, Malaysia, 2001.

Under the NEP<sup>15</sup>, which was formulated in 1970 (after the racial riot in 1969), the Bumiputera should be represented in all sectors of the economy and must hold at least 30.0 per cent equity interests. The income growth objective of equitable sharing of the expanding economic cake is one of the major prongs of the NEP. The uneven distribution of economic wealth between ethnic groups in Malaysia is well documented. The incidence of poverty according to ethnic group was highest among the Bumiputera, which stood at nearly 74 per cent among the poor groups in 1970. According to Jomo (1990), a contributory factor, which led to this phenomenon, was basically that the Bumiputera, who were rural-based, were more involved in subsistence agriculture and paddy farming, while their Chinese counterparts, who were basically more urban, were involved in commercial activities. The identification of race with economic function could be traced to Malaysia's historical

<sup>14</sup> The Chinese controlled 56.0% while the Malays owned 35.0%.

<sup>15</sup> See Chapter Two for explanation.

pattern of economic development brought about by the British during its colonial era, for 83 years. Rudner (1979) and Jomo (1990) state that the many existing differences reflecting uneven development between ethnic groups could be attributed to the crucial formative decades under colonial rule, which shaped the economic structure. However, after independence, as a result of the government's deliberate policy action through the creation of a commercial and industrial community among the Bumiputera, their percentage share in ownership in both the retail and the wholesale industry has shown significant improvements. In 2001 there was a marked increase in Bumiputera equity in the retail sector, as compared to in 1975 and also in 1990. However, the achievement of Bumiputera equity in the wholesale sector was still short of the 30.0 per cent target set in the NEP. But there was a marked reduction of foreign ownership in the wholesale and retail sector in 1990 and 2001 as compared to in 1975. The small percentage of foreign ownership left in the retailing activity is mostly involved in the supermarket/hypermarket sector and speciality store operations.

Table 3.6 shows that 90.0 per cent of the retail establishments in Malaysia in 1980 and more than 80.0 per cent in 1990 were categorised as having a sole proprietor type of ownership. These retail establishments are small family run traditional shops and are the major form of business entity in the domestic retail trade sector in Malaysia. In contrast, only 45.0 per cent of the distributive trade enterprises in UK in 1991 were single outlet retailers.

**Table 3.6**  
**Legal Status of Retailers in Peninsular Malaysia**  
**1980 and 1990**

Legal Status	1980		1990		% change
	Nos. of Establishment	%	Nos. of Establishment	%	
Sole Proprietorship	80531	89.4	85041	82.3	5.6
Partnership	7148	8.0	11470	11.1	60.5
Company	1854	2.1	6200	6.0	234.0
Co-operatives	389	0.4	215	0.2	-44.7
Others	115	0.1	405	0.4	252.0
<b>Total</b>	<b>90037</b>	<b>100.0</b>	<b>103,331</b>	<b>100.0</b>	

Source: Department of Statistics, Malaysia, 1982 and Sixth Malaysia Plan, 1991-1995.

The sole proprietorship which corresponds to small retail operations will remain an important element in the retail structure of developing economies. However, even though their number constituted more than 90.0 per cent of the total retail establishment in 2001, their retail sales only constituted 37.0 per cent of the total sales (see Table 3.3). On the other hand there was also an increase in the number of partnership and companies involved in the retail industry in 1990. The need to form partnerships and companies can be attributed to several reasons, including the scale economy effect, to pool capital requirement and also to comply with the local equity requirement imposed by the Malaysian government on foreign owned retail companies, especially on supermarket chains, as was discussed in Chapter Two.

The partnership and company entity are involved in large-scale retailing such as department stores and supermarkets, while the co-operative format, which was popular in the 1980s as a form of business entity, fell out in the 1990s, largely because of its failure to sustain membership. This form of business entity was more popular in the agriculture sector than the other sectors. From the regional pattern of

development in Malaysia, large and medium size retailers are mostly concentrated in four major areas: Kuala Lumpur, Selangor, Penang and Johor Bahru. These areas have the highest population concentration and no doubt have the greatest number of supermarkets and large retailers, including multinational supermarket firms.

The preceding section has discussed the importance of the retail trading sector and its contribution to the Malaysian economy, with comparisons and contrasts to the retail sector of developed economies such as the UK. The next section will look at the development and the impact of entry of the multinational supermarket firms into Malaysia. The main focus will be on the dominance of the multinational supermarket firms vis-à-vis local firms in terms of market share, as well as issues on the socio economic benefits that the host country may derive from the entry of these firms.

## **3.2 The Supermarket Sector**

### **3.2.1 Supermarket Development in Malaysia**

The supermarket-retailing concept was first introduced in Malaysia in 1964 with the opening of the Weld Supermarket - a joint venture company between Cold Storage Creameries and Fitzpatrick Ltd, UK. In terms of equity holdings, The Weld Supermarket was almost entirely held by foreign interests [McTaggart – cited in Othman, 1987]. It marked the beginning of a foreign retailing involvement and of FDI in the grocery sector in Malaysia. The ‘foreignness’ of the first supermarket was not only in terms of ownership but also with regard to its customers, because it was heavily patronised by European and American expatriates. The local people at that

time were not used to modern retailing and preferred wet markets where local products could be obtained fresh and cheap. The lack of response from the local people towards supermarket retailing was reflected by the slow growth of the supermarket development during that period. It was not until three years later, in 1967, that a second supermarket, which was locally owned and known as Emporium and Supermarket Holdings, was opened.

In the eighties a supermarket boom took place in Malaysia. It was also the beginning of the era of modern retailing in Malaysia. During that period, the total number of supermarkets was estimated at 127, of which at least 35.0 per cent were located in Kuala Lumpur and the surrounding areas (Othman, 1987). It was also the period when Malaysia's average GDP growth per year was in the region of 8.0 per cent<sup>16</sup>. That period also saw rapid development taking place in both the government and the private sectors. The private sector undertook development of shopping complexes mainly in Kuala Lumpur and other major towns in Malaysia, while the government spearheaded the public sector spending with developments of infrastructure, especially roads, electricity and telecommunications throughout the country.

In contrast, the supermarket-retailing concept in Europe started much earlier (Pasdermajian, 1954). Its origin in the UK was firmly rooted in the twin processes of industrialisation and urbanisation (Lancaster, 1995). For example, in the UK, the first supermarket was established by Sainsbury in Croydon in the 1950s. This was as

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<sup>16</sup> Sixth Malaysia Plan, 1991-1995.

a result of a visit by Alan Sainsbury in 1949 to the US, where he was impressed by the self-service concept of the US grocery retailing<sup>17</sup>. Since then, the number of supermarkets in UK has increased tremendously, from only 80 supermarkets in 1957 to almost 4500 in 2000 (Competition Commission, 2000).

### 3.2.2 Entry of Foreign Supermarket Firms into Malaysia

Japanese retailers were quick to take advantage of the opportunity to expand their home grown supermarket concept into Malaysia, partly because of the strong economic outlook and also partly as a by-product of the “Look East Policy”<sup>18</sup> adopted by the Malaysian government during the eighties. Initially this policy was widely believed to refer to a changing foreign orientation and reference point (from ‘west’ to ‘east’) in a wide variety of matters. The specific aim of this policy was to emulate Japan’s and South Korea’s ‘economic miracles’ in terms of economic development, especially industrialisation and the establishment of Japanese style *sogoshosha* trading agencies. In the process, the Japanese and Korean companies were to transfer their technology and management expertise to Malaysian companies and counterparts.

Subsequently, in 1984, two supermarket companies from Japan, namely Jaya Jusco and Kimisawa Supermarket started their operations in Malaysia. This was

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<sup>17</sup> According to Hunt (1983) the supermarket concept in America was introduced much earlier than in the UK

<sup>18</sup> The ‘Look East Policy’ was initiated by the Prime Minister, Dr. Mahathir Mohamed in 1981 to learn from the experiences of Japan in the nation building of Malaysia. He considered that the secret of Japanese success and its remarkable development lies in its labour ethics, morale, management and technological capability.

followed by three more supermarket companies, namely Chujitsuya (1985), Hankyu Jaya (1986), and Yaohan (1987). Beside companies from Japan, there was also a company from France that opened a supermarket in Kuala Lumpur in 1987, known as Printemps supermarket<sup>19</sup>.

It was not until the early 1990's that other major international supermarket companies began to realise the market potential of developing economies such as the economies of Asia (including Malaysia) and Latin America (Reardon *et al.* (2003). According to Dawson (1993) and Akehurst and Alexander (1996) the retail revolution of cross-border retailing is a phenomenon of the 1990s and was a period of retail internationalisation. Reardon *et al.* (2003) also pointed out that the tidal wave of retail FDI was due to the global retail multinationals, namely, Ahold, Carrefour, Tesco and Wal-Mart and regional multinationals such as the Dairy Farm Group.

Among the major multinational supermarket companies making their entry into Malaysia in the 1990s were Carrefour from France, Dairy Farm Group from Hong Kong and two from Holland, namely Makro and Ahold Tops. Tesco is a more recent entrant to the grocery retail market in Malaysia, having entered in 2000. The entry of these foreign supermarket firms is also a new source of FDI for Malaysia. The mode of entry, however, differs. While Jaya Jusco, Makro, Carrefour, and lately Tesco entered via "greenfield" investments, the Dairy Farm Group of Hong Kong

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<sup>19</sup> Kimisawa, Chujitsuya, Hankyu Jaya and Printemps supermarkets have all closed down. Yaohan supermarket became a listed public company in 1996 and was known as Aktif Lifestyle Corporation. More than 80.0 per cent of its shares are held by Malaysians.

and Ahold (Tops) of Netherlands entered into the Malaysian market through acquisitions of local supermarkets firms. The Dairy Farm Group acquired Giant supermarket in 1999, a long time family business developed by the Teng family way back in 1974 and it also acquired Wellsave supermarkets in early 2001. However, as was discussed in Chapter Two, foreign supermarket firms operating in Malaysia are required to form a joint-venture company with local firms, in contrast to free entry in the UK market that is provided for under the EC and the UK competition laws.

From Table 3.7, it is interesting to note that none of the local firms in Malaysia that participated as partners in the joint venture (JV) company have relevant expertise and experience in the supermarket activity. These local companies are property developers, plantation companies or investment holding companies. Othman (1987) argued that such JV would help to train local partners and the transfer of technology. But critics argued that the local partners are just “window dressing” or just tools used to comply with the equity regulation of the government and perhaps are only interested in the dividends and profits.

**Table 3.7**  
**Foreign Supermarkets and Local JV Partners in Malaysia**

<b>Supermarkets</b>	<b>Year of Entry</b>	<b>Foreign</b>	<b>Local Firm</b>	<b>Main Activity of Local Firm</b>
Jaya Jusco*	1984	Aeon Group, Japan	-	-
Tops**	1985	Ahold, Netherland	PPB Group	Plantation
Makro,	1992	Makro, Netherland	PKNS	Development
Carrefour,	1994	Carrefour, France	Individual businessman***	Investment
Giant	1994	DFI, Hong Kong	****	-
Wellsave	-	DFI, Hong Kong	*****	-
Tesco	2000	Tesco, UK	SD Holdings	Investment Holding

\*Jaya Jusco is a public listed company. Its local shareholders consist of individuals and many local firms and public institutions.

\*\*Ahold acquired 65.22 per cent of Tops from PBB Group in 1996 and in 2000 PBB Group had divested its entire shareholdings of 34.78 per cent to Ahold.

\*\*\*Had since withdrawn from the JV company in 2001 and currently Carrefour Malaysia is held 100% by Carrefour, France.

\*\*\*\*DFI Hong Kong acquired 100 per cent equity of Giant TMC in 1999 and has yet to identify a local partner.

\*\*\*\*\*Acquired by DFI Hong Kong in early 2001 and has yet to identify a local partner.

Source: Annual Reports of the various companies and Foreign Investment Committee Malaysia.



It was also in the early 1990s that foreign supermarkets such as Aldi, Lidl and Netto and Wal-Mart entered the UK grocery market (see Daniels, 1993 and Competition Commission, 2000). Aldi and Lidl are two major German discounters. Aldi opened its first store in the UK in April 1990, followed by the Danish retailer, Netto, in December the same year and Lidl in 1994. However these companies entered a different segment of the UK grocery market (the lower end discount sectors) and catered for a different category of customers in terms of social class and income group. They aim to sell well below the prices of the market leaders and have a considerably smaller range of goods. The entry of these three firms into the UK was through 'greenfield' investment, while the entry of Wal-Mart, a US grocery retailing chain, was through the acquisition of Asda in July 1999.

According to some authors (see Alexander, 1989, Daniels, 1993, Akehurst and Alexander, 1996, Goldman, 2001 and Reardon *et al.* 2003) the internationalisation of supermarket firms may be attributed to both supply side and demand side variables. Some of the demand side variables are market size, income per capita, economic stability and the openness policy of the host country. Underdeveloped international markets provided not only valuable growth opportunities but also opportunities for sourcing. This underlies the importance of potentially large market opportunities abroad over and above marginal opportunities at home. The push factors or the supply side determinants that have encouraged firms to internationalise are FDI as well as MNCs and technology, saturation of the domestic markets, the desire to export a particular retail offering which will occupy an unfilled niche in a foreign market and restrictions imposed by the home

government. The saturation of the home market argument is determined by its market size and the absorptive capacity of its economy.

In terms of problems encountered in the host markets, site acquisition, different regulatory conditions, different consumer tastes and different social conditions were clearly emphasised (Goldman, 2001). In the context of Malaysia the only significant entry barrier is the equity policy on foreign ownership, whereas for the UK, Alexander (1989) and Wrigley (1993) found that it was the high concentration of market power and capital in the hands of few retailers that hugely raised entry barriers.

### 3.2.3 Market Structure

The major players in the supermarket/hypermarket sector in Malaysia consist of five foreign owned companies and four local companies<sup>20</sup> (Table 3.8). In the year 2000 the five foreign companies had 73 supermarkets/hypermarkets or 51.0 per cent of the total number of major supermarkets, while the 4 local companies owned 49.0 per cent. Together there were a total of 144 major supermarkets/hypermarkets<sup>21</sup> as of early 2000, as compared to more than 4500 in the UK, which constitutes only 3.2 per cent of that in the UK. The supermarket sector in Malaysia is increasingly

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<sup>20</sup> Wellsave was acquired by DFI in early 2000.

<sup>21</sup> As defined by the Ministry of Domestic Trade and Consumer Affairs, Malaysia, a large supermarket/hypermarket must have a minimum floor space of 8,000 square metres of selling area; refrigeration facilities for frozen food and goods must be price marked. The minimum floor requirement is a guide for operators in order to be recognised as large supermarkets or hypermarkets.

multinationalized (foreign-owned) but in Latin America, multinational supermarket firms constitute roughly 70-80 per cent of the top five chains in most countries (Reardon *et al.* 2003). This indicates that the growth of the supermarket sector in Malaysia and in Latin America is significantly driven by FDI from outside these regions. This is very different from supermarket diffusion in Europe and especially the UK, which is driven by local capital.

In addition to the major supermarkets there are also smaller supermarkets in Malaysia that are primarily financed by domestic capital and which have an area of less than 8,000 square metres. These will not be considered in the analysis of market concentration in this chapter. The minimum store size required for a one-stop shop in the UK is 15,000 square feet (Competition Commission, 2000) and this is also the standard set by the MDTCA of Malaysia<sup>22</sup>.

From Table 3.8, for the period 1997-2000, foreign supermarkets/hypermarkets controlled more than 63.0 per cent of the major supermarket business in Malaysia. Giant supermarket, which is owned by the Dairy Farm Group, have a market share of more than 24.0 per cent for the period 1997-2000 in contrast to the locally owned, The Store supermarket, with a turnover of 20.0 per cent for the same period. The four largest supermarket retailers in Malaysia, measured by shares of turnover in 1999/2000, are Giant (26.6%), The Store (21.6%), Makro (11.6%) and Jaya Jusco (10.6%). Foreign retailers control three of these supermarkets, with a market share of nearly 49 per cent. The four supermarkets,

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<sup>22</sup> See Table 2.2, page 23.

however, accounted for 70.4 per cent of sales in 1999/2000. Wellsave, a local supermarket with seven outlets, captured only 1.1 per cent of the market shares and was later acquired by the Dairy Farm Group in early 2001.

In contrast the market share of the four 'foreign owned' firms in the UK, namely Asda, Aldi, Lidl and Netto, was only 16.1 per cent of the grocery market in the year 1998/1999. If the market share of Asda (13.4 per cent) which is owned by Wal-Mart of US is excluded, the market share of the other three foreign supermarkets is only 2.7 per cent and this posed no threat to the UK owned supermarket firms, unlike the situation in Malaysia.

This chapter has calculated the market concentration of the major supermarket chains in Malaysia (Table 3.8). As defined by Clarke (1995) market concentration refers to the degree to which a particular market or industry is concentrated in the hands of a few large firms. Therefore a market is said to be more concentrated, the fewer the number of firms in the market or the more unequal the distribution of market shares. There are a few indices for measuring market concentration. The strengths and weaknesses of the concentration indices are well documented (see Clarke, 1995) but their usefulness depends on the appropriateness to what the index is to measure. One such index is the *Herfindahl-Hirschman Index* or *HHI* which has the merit of combining information about the market shares of all firms in the market and not just the largest four or the largest eight firms. As compared to other concentration indices, Scherer and Ross (1990) and Martin (1994) state that the most used summary measure that combines elements of both firm numbers and inequality is the *HHI*, given by the formula:

$$HHI = \sum_{i=1}^n S_i^2$$

where  $S_i$  is the market share of the  $i^{\text{th}}$  firm.

According to Scherer and Ross (1990), by squaring the market share, the *HHI* weights more heavily the values for large firms than for small firms. Therefore, this means that if data of market shares of very small firms are unavailable, the resulting error will not be large. However it is crucial that the largest sellers' market shares be measured accurately.

According to the Competition Commission (2000) an *HHI* of up to 1,000 indicates a market that is relatively not concentrated, a value between 1,000 and 1,800 indicates moderate concentration and a value of 1,800 and above is taken to indicate high concentration. The *HHI* for the major supermarket/hypermarket firms in Malaysia for the period 1997-2000 ranged from 1,509 to 1,649 indicating a moderate degree of market concentration. However this figure is only an estimate of the major supermarket firms which does not include small supermarket firms. In addition most of these major supermarket firms are located only in major towns in Malaysia. For the UK, even though the national *HHI* as a whole stood at 1,506 for the 1998/1999 period, the *HHI* for the local groceries market was 2,135 and therefore the market is heavily concentrated<sup>23</sup>. This means that although the retail industry in the UK is broadly competitive, significant local concentration and monopoly power exist at local level. Food retailing is even more concentrated in other EU countries such as Norway, Finland and Switzerland, where only three enterprises have a

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<sup>23</sup> A pure monopoly would have an *HHI* index of 10,000.

market share of 80.0 per cent of the grocery segment (Pilat, 1997). In the context of Malaysia, the top four major supermarkets have 71.0 per cent of the supermarket share and in the Latin American countries the top five chains have 65.0 per cent of the supermarket share.

**Table 3.8**

***HHI of Major Supermarkets/hypermarkets in Malaysia***

Company	Country	Nos. of Outlets	Turnover (RM Million)		
			2000 (%)	1997/98	1998/1999
Jaya Jusco	Japan	7 (4.9%)	603.2 (13.1%)	692.5 (13.5%)	679.7 (10.7%)
Carrefour	France	6 (4.2%)	388.8 9 (8.4%)	544.9 (10.6%)	563.6 (8.9%)
Giant	Hong Kong	13 (9.0%)	953.3 (20.6%)	1326.1 (25.8%)	1688.7 (26.6%)
Topps	Dutch	39 (27.0%)	97.2 (2.1%)	155.3 (3.0%)	363.7 (5.7%)
Makro	Dutch	8 (5.6%)	788.9 (17.1%)	724.2 (14.1%)	736.1 (11.6%)
Tesco*	UK	-	-	-	-
<b>Total Foreign</b>	-	73 (51.0%)	2831.4 (61.3%)	3443.0 (67.0%)	4031.8 (62.7%)
Ocean	Local	14 (9.7%)	407.0 (8.8%)	377.8 (7.3%)	576.5 (9.0%)
The Store	Local	32 (22.2%)	1006.1 (21.8%)	943.9 (18.3%)	1386.3 (21.6%)
Xtra	Local	5 (3.5%)	n.a	n.a	n.a
Supercenter					
Aktif	Local	5 (3.5%)	302.0 (6.5%)	293.2 (5.7%)	358.8 (5.6%)
Wellsave**	Local	7 (4.9%)	72.4 (1.6%)	87.4 (1.7%)	73.0 (1.1%)
Other supermarkets	Local	8 (5.5%)	n.a	n.a	n.a
<b>Total Local</b>	-	71 (49.0%)	1787.5 (38.7%)	1702.3 (33.0%)	2394.6 (37.3%)
<b>Total Local &amp; Foreign</b>	-	<b>144 (100%)</b>	<b>4618.9 (100%)</b>	<b>5145.3 (100%)</b>	<b>6426.4 (100%)</b>
<b>HHI</b>	-	-	<b>1509</b>	<b>1592</b>	<b>1649</b>
<b>C4</b>	-	-	<b>72.6</b>	<b>71.7</b>	<b>70.5</b>

\*Its first store was opened in May 2002.

\*\*Acquired by the Dairy Farm Group of Hong Kong in early 2001

Source: Various Company Reports.

In grocery retailing, size will effectively affect cost and prices (Hirsch and Votaw, 1952). McClelland (1962) and Arndt (1975) also argued that large supermarkets may be more efficient than smaller retail firms because they are able to use superior organisation and administrative efficiency such as bulk purchasing

which tend to reduce cost and modern capital equipment such as refrigeration. These may relate to the efficiency and productivity enhancing resources associated with multinational firms, which this dissertation will look at specifically in the context of vertical integration (Chapter Six) and regulation (Chapter Seven). In another study, Setälä (2000) also found that economies of scale exist in grocery retailing, as indicated by lower prices in large stores than smaller ones, where the average price and cost difference between large and small stores is about 10.0 per cent. However while supermarkets were clearly more efficient than smaller food stores, further economies of scale would diminish with increasing size. In contrast a study undertaken by Gripsrud (1982), which relates price behaviour and store size in grocery retailing, found that prices of large stores was not uniformly lower than in small ones. This result was supported by Cotterill (1986) who found a negative relationship between the area of selling space and the price level.

The main contrast of the supermarket sector between Malaysia and the UK is with regard to the domination of foreign capital (Malaysia) over domestic capital (UK). Another difference is that the retail sectors in Malaysia and the UK are at different stages of development. This may relate to the different level of economic development between the two countries. However the supermarket sector development in the developing countries such as Malaysia is increasingly resembling that of developed countries in terms of market structure, which is oligopolistic, with just a handful of giant companies controlling the market.

#### 3.2.4 Socio-Economic Benefits of Multinational Supermarkets

The expected 'trickle down effect' from the entry of multinational supermarket firms as envisaged by the Malaysian government will be the transfer of technology and management expertise, employment creation, development of local suppliers and low prices to consumers (MDTCA, 1999). Within these contexts certain efforts made by the Japanese supermarket firm, Jaya Jusco, may reflect some expectations of the benefits that may be derived from the entry of multinational supermarket firms. In terms of manpower training, Jaya Jusco has various programmes such as sending qualified local staff for one year's training in the various aspects of retailing in Japan and the effect may be the diffusion to the local firms if they hire workers who have been exposed to the technology of the multinational supermarket firms. This is consistent with the evidence found by Glass and Saggi (2002) on the mobility of workers from multinationals to host firms.

Besides capital, the entry of these foreign supermarkets also created employment opportunities in Malaysia. For example, since the entry of Makro into Malaysia in 1992, its 8 hypermarket chains have provided a total of 1540 jobs to the local people, while Carrefour, with 6 hypermarkets, provided employment opportunities for 2,300 Malaysians (1994-2000). The opening of each Carrefour hypermarket meant an additional 400 jobs would be created. Tesco will also create the same number of job opportunities for each of its hypermarkets in Malaysia and it is estimated that a total of 6,000 jobs will be created for its 15 hypermarkets by the end of 2005 (Utusan Malaysia, 2002). In addition to employment creation, the long term effect due to entry of these multinationals may benefit the local workforce in



terms of skills and efficiency. Nevertheless, at the same time, the opening of each hypermarket will also cause unemployment in the small business sector because some of the retail stores are unable to compete and will have to close down.

The type of employment creation by the multinational supermarket firms is, however, more oriented towards unskilled labour, as 73.0 per cent are in this category, while only 12.0 per cent of the locals employed are in the managerial and professional group. Even though Jaya Jusco of Japan has been in Malaysia since 1984, its Chief Executive Officer is still Japanese, as are other top managers such as the Financial Controller. The same is true of Carrefour, France and all other foreign supermarkets in Malaysia. The absence of Malaysians as chief executive officers in these foreign supermarkets may be attributed to the lack of local expertise in the retailing sector and also partly to the policy of the MNFs to maintain foreign control in the decision making posts.

Where sourcing of goods is concerned, local suppliers may or may not benefit from the multinational presence. At least in the case of Malaysia, it was reported by Bernama (2004) that multinationals as well as local supermarket firms preferred to sell imported products rather than the produce of local producers. In this context, the MDTCA of Malaysia has urged local producers to be competitive with imported goods, as well as to improve the quality and packaging of their products. This may relate to the 'make or buy' decisions where it is cheaper to 'make' or import than acquire from local suppliers, which this dissertation will look at more deeply in the context of vertical integration in Chapter Six.

The presence of large foreign supermarkets/hypermarkets in Malaysia also affected the businesses of small retail outlets and their business dropped between 20.0 to 25.0 per cent in the year the supermarket/hypermarket opened (Damis and Poosparajah, 2002). A similar estimate was also reported by Pickering (1972), who argued that the effect of a hypermarket on trade loss would probably vary from zero per cent to at least 25.0 per cent. The Star (2002) reported that over the three years since 1998, more than 3,000 provision stores in Malaysia closed down. These small businesses found it difficult to compete with the low prices that supermarkets/hypermarkets are able to offer to consumers.

### **3.3 Conclusion**

The importance of the retail sector in terms of its contribution signifies that it is an integral part of the country's economy. In Malaysia, small retail formats are still a dominant part of the retail structure. By contrast in the UK these small outlets are becoming less important as their roles are being taken over by large store formats such as supermarkets and hypermarkets. As the standard of living in developing countries improves, increasing trends towards the use of modern retailing characterised by supermarkets/hypermarkets have become more significant, beginning in the early 1990s. A similar trend appears to have emerged in Malaysia.

The supermarket retailing concept in Malaysia was started by FDI and was initiated by a UK firm in the early 1960s and later followed by Japanese firms in the early 1980s. The success of these foreign firms attracted some local firms to open their own supermarket chains. But these early supermarkets were small and the real

wave of cross border international retailing of supermarket firms started only in the early 1990's, particularly in developing economies such as in the Latin American countries and the East and Southeast Asian countries including Malaysia. The new wave of foreign capital in the supermarket sector was spearheaded by large multinational supermarket firms, namely, Ahold, Carrefour, Wal-Mart, Macro, Dairy Farm and Tesco, driven by saturation and intense competition in the home markets. However, the demand pull factors of the untapped developing markets characterised by a large and expanding market provided another stimulus for entry into these economies, of which Malaysia is a recent phenomenon.

The entry of the multinational supermarket firms into Malaysia has radically changed the retail sector from a traditional and sleazy outfit into a modern and large scale retail concept. These firms have also captured more than two thirds of the supermarket share vis-à-vis local supermarket firms because of their efficiency and related technological advantage.

While the major players of the supermarket sector in developing countries are in the hands of foreign owned firms, it was different for the UK, where its major supermarket firms are from home grown capital. Therefore, since the driver of the supermarket development in the developing economies was substantially FDI from outside these regions, the next chapter will look at the FDI theory in explaining the internationalisation of supermarket firms.

## **CHAPTER FOUR**

### **FOREIGN DIRECT INVESTMENT THEORY**

#### **4.0 Introduction**

The purpose of this chapter is to establish to what extent existing FDI theories can be useful in explaining the internationalisation of multinational supermarket firms whose activities span primary, secondary and tertiary sectors in the host country.

The main conclusion will be that, while useful, the existing theories of FDI have not addressed the issues of vertical integration or coordination in ways which might be appropriate for application with reference to supermarkets in particular. Nor do existing FDI theories focus on issues of regulation. The existing empirical works on FDI are aggregated and it will be argued that aggregated approaches are not well suited to issues with reference to entry conditions and regulation at the industry level.

Within these contexts, Section 4.1 of this chapter will enrich our understanding of the definition and measurement of FDI as well as of MNFs, since these two are interrelated. A review on the general theoretical framework and the literature of FDI will be presented in Section 4.2. This will provide a benchmark of the scope and limitations of the existing FDI literature in explaining the entry of the MNFs into the host country. The main contribution of this chapter is in Section 4.3.

This section will evaluate whether the literature on FDI theory is adequate to explain retail internationalisation, especially which involves supermarket firms and inter-industry linkages between other sectors as well as regulation in particular.

## **4.1 Definitions and Measurement of FDI**

### **4.1.1 Definitions**

The International Monetary Fund (IMF, 1993, Section 359) defines FDI as “an investment that reflects the objective of obtaining a lasting interest by a resident entity in one economy in an enterprise resident in another economy”<sup>24</sup>. The lasting interest implies the existence of a long-term relationship between the direct investor and the foreign enterprise and a significant degree of influence by the investor on the management of the enterprise (UNCTAD, 1998). Similarly, the World Trade Organisation (WTO, 1996 p.46) states that: “FDI occurs when an investor based in one country (the home country) acquires an asset in another country (the host country) with the intent to manage that asset”. This WTO document goes on to argue that it is the management dimension which includes the elements of influence and control and the effective voice of decision making that distinguishes between FDI and other types of foreign investment such as portfolio investment<sup>25</sup>.

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<sup>24</sup> See also OECD (b) 1996, definition of FDI.

<sup>25</sup> See also Casson (1979) who distinguished FDI from other forms of foreign investment on the basis that it involves not only ownership but also effective foreign control.

From the perspectives of Dunning (1996) and IMF (1985), FDI generally involves the transfer of a package of resources, including technological, managerial, marketing expertise and entrepreneurship in addition to capital: these may have an even greater impact than the capital flows on a recipient country's production capabilities. Daniels and Radebaugh (1998) argued that financial capital is not the only means for the investor to gain equity, as technology, expertise and markets can be exchanged for an interest in foreign company. This implies that FDI does not only involve financial capital but also physical as well as human capital such as management expertise and entrepreneurial skills, which are more important to the supermarket activity. De Mello (1997)<sup>26</sup> adopts a broader perspective of FDI which includes licensing and franchising. His justification for doing so is based on the grounds of the recent growth of FDI in the service sectors. However De Mello did not mention specifically the types of the service sectors he was referring to.

Although FDI as defined by Dunning (1996) and IMF (1985) constitutes a package of resources, only financial capital is emphasised and recorded by the IMF<sup>27</sup>. This implies that non financial capital transfers are not captured in terms of their worth in 'monetary values.' Needless to say there are difficulties even in the compilation of financial capital data, particularly in the case of developing countries, where governments do not always have the necessary machinery to collect such statistics on a systematic basis,<sup>28</sup> what more to include non financial capital transfers

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<sup>26</sup> See De Mello (1997 p. 4) for the broader perspectives of FDI definition.

<sup>27</sup> UNCTAD (1998 p. 289) - as defined by the IMF, FDI is a balance of payment concept involving cross border transfer of funds.

<sup>28</sup> For this reason, UNCTAD's World Investment Report relies partly on information provided by the home countries rather than on host country information.

such as human capital as well as technology transfers. Even FDI data collected by the IMF and OECD are not fully comparable (World Bank, 1979).

#### 4.1.2 Modalities of FDI

WTO (1996) and Kojima (1978) identified three main modalities of FDI which foreign firms or MNFs undertake in host countries:

i. New equity capital

Equity capital is the value of the MNFs investment in shares in a host country enterprise either wholly (greenfield investment) or in a certain proportion. An equity capital stake of 10.0 per cent or more of the ordinary shares in an incorporated enterprise is normally considered as a threshold for the control of assets or for having an effective voice in the management of the enterprise and is recorded as FDI (Fry, 1993 and IMF, 1993). Any foreign investment not meeting this condition is considered to be a portfolio foreign investment. The United States adopted this definition of FDI in its International Investment and Trade Services Act (Buckley and Clegg, 2000). However Caves (1997) found that countries differ in regard to the minimum percentage of equity ownership that they count as a 'direct investment' that has control over facilities. For example, some may regard foreign ownership of 20.0 per cent in an enterprise as constituting "control" while others may consider 50.0 per cent or more as signifying control. However Berle and Means (1967) define 'control' as something distinct from both management and

ownership<sup>29</sup>. In Malaysia, an acquisition by a foreign firm of 15.0 per cent or more of the voting power in a local enterprise requires the approval of the Government, since this is regarded as having control of the enterprise (The Foreign Investment Committee, 1999). While a greenfield mode of market entry was popular in the 1950s and the 1960s, beginning in the mid 1980s, mergers and acquisitions were the major mode of foreign market entry (World Investment Report, 1997).

ii. Reinvested earnings

These are the MNF's share of affiliate earnings (subsidiary) not distributed as dividends or remitted to the parent MNFs. These earnings are assumed to be reinvested in the affiliate. Reinvested earnings generally constitute a smaller proportion of these flows (IMF, 1985) as compared to equity capitals. In 1996 equity capitals accounted for 78.0 per cent.

iii. Other capital

This refers to short or long term borrowing and lending of funds between the parent company and its subsidiary and is an important mode of 'cheap' financial resources for the subsidiary company. This cheap and easy access to financial capital is rather pertinent to the MNFs entering foreign markets, where the risks are high.

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<sup>29</sup> For a detailed discussion see Berle and Means (1967 p. 66), Chapter V: The Evolution of Control. As defined by the authors, control lies "in the hands of the individual or group who have the actual power to select the board of directors (or its majority), either by mobilising the legal right to choose them .....or by exerting pressure which influences their choice."



These three modes of market entry identified by WTO and Kojima again refer only to financial capital. They do not include other forms of capital such as expertise and human capital and also technology transfer. This again implies that the export of such capital did not enter the FDI statistical data sheet of the host country. As such it can be argued that the amount of FDI flows is underestimated and if all forms of capital flows are taken into account, then figures compiled by international bodies such as the World Bank and the IMF are possibly grossly inadequate in estimating FDI flows<sup>30</sup>.

#### 4.1.3 Relations between FDI and the MNFs

Dunning (1996) argues that before the FDI theories were developed, economists saw FDI as a phenomenon that was a direct consequence of the MNFs. For that reason one cannot fully understand either the MNFs or FDI without the other and in any case a definition of MNFs is also needed. Lall (1976) states that the exact meanings of the terms ‘transnational’ or ‘multinational’ have not been clearly defined. He emphasised three distinct areas in order to characterise the Transnational Corporation (TNC)<sup>31</sup>, namely, economic, organisational and the motivational dimension. These dimensions may be interpreted to include entrepreneurship and managerial skills, thus incorporating both physical and human capital. Definitions by Dunning (1996), Caves (1982 and 1997), Todaro (1989), Hertner (1986) and

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<sup>30</sup> Markusen (1991 p. 15) argues that “.....the book value of FDI investment which is basically a valuation of investment in plant and equipment, reveal only limited information about the true value of the investment. To the extent that a major feature of FDI is the transfer of technology, management know-how, marketing networks, and so forth, recorded values of FDI may seriously underestimate the true economic value.....”

<sup>31</sup> Many authors use them interchangeably for the same meaning.

Buckley and Casson (1976) of the TNC refer to enterprises which own or control value added activities in two or more countries and for which the usual mode of ownership and control is by FDI. In contrast, McManus (1972) argued that the expansion of firms abroad is not foreign investment, which is an international transfer of capital, but it is the extension of managerial controls over certain activities.

Although there is no universally accepted definition of a MNF, the definition put forward by the United Nations Centre on Transnational Corporations (UNCTC) is broad and refers to all enterprises which control assets - factories, mines, sale offices and the like-in two or more countries<sup>32</sup> (UNCTC, 1978 and 1984). Again, here, only physical assets are being emphasized to represent control but control may also be non-physical such as management control, which is more effective in decision making than merely controlling assets, since assets can be leased from other firms which in turn can be used for production. Thus it can be argued that MNFs which control assets do not necessarily control the management. Walters and Blake (1992) defined MNFs as all firms, industrial, service or financial, doing international business of all types within a myriad of international structures. The term is sometimes qualified by specifying that firms should have a certain minimum level of overseas activities, either in terms of the number of countries in which they operate or the proportion of production, assets, or employment overseas, and they should be of a certain minimum size.

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<sup>32</sup> UNCTC used the term Transnational Corporation, TNC instead of MNF.

MNFs are incorporated or unincorporated enterprises comprising parent enterprises and their foreign affiliates that can be classified to be of the horizontal or vertical type according to their motive of operations (UNCTAD, 2001). In general terms, horizontal MNFs conduct FDI in order to have access to some host country market, while vertical FDI is undertaken to reap benefits from international factor price differences and also because of factor endowments such as the extractive industries. In this context it was argued that if MNFs were exactly identical to domestic firms, they would not find it profitable to enter the domestic market. From the preceding discussions, a summary of the definitions of MNFs by the various authors is presented in Table 4.1 below.

**Table 4.1**  
**Definitions of MNFs**

<b>Authors</b>	<b>Definition</b>
McManus (1972)	An extension of managerial control over certain activities abroad and not FDI which is an international transfer of capital.
Lall (1976)	Three distinct dimensions of MNFs, namely, economic, organisational and motivational.
UNCTC (1978 and 1984)	An enterprise which controls assets in more than one country in any field of activity.
Buckley and Casson (1976), Caves (1982, 1987), Hertner (1986), Todaro (1989) and Dunning (1996)	An enterprise which owns or controls activities in more than one country.
Walters and Blake (1982)	An enterprise doing international business of all types and of certain minimum size.
UNCTAD (2001)	An enterprise comprising parent firm and its foreign affiliates that is involved in horizontal or vertical activities in the host country.

## **4.2 Theories of FDI**

In the previous section the focus was on the definition of FDI and the methodological deficiencies in capturing the actual extent of ‘capital’ flows, the

modalities and also the extent to which firms could be categorised as having ‘MNF status’ and which could not. In this section we turn to the literature on the theory of FDI and how this theory can be linked to the internationalisation of supermarket firms, especially with regard to entry into and regulation in the host country.

#### 4.2.1 The General Context

Ever since the internationalisation of capital and the activities of the MNFs began, so there were theories that seek to explain the process involved. According to Dent (1997), the theory of international production can be traced as far back as 1909, when Alfred Weber published his work on the *Theory of the Location of Industries*. Lall and Streeten (1977) had earlier identified two ‘pure’ economic theories, which in their ‘rigorous’ neo-classical form may be relevant to the analysis of foreign investment, that of the trade-theoretic approach in its familiar Heckscher-Ohlin form and the micro-economic theory of the firm approach. Later Kojima (1978) and also Huang (1997) identified three major strands in the literature on the theories of FDI and the MNFs: the industrial organisation approach, the business administration approach or the theory of the firm and the product cycle approach. The latest approach to explain international production was the Global Competition Theories, where the world economy is viewed as a single market and production area (Dent, 1997). To accommodate such an enormous literature of international production and capital flows, Dunning *et al.*<sup>33</sup> (1986) agreed that different schools of thought will

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<sup>33</sup> See Table 2.1 (pp. 21-24): Development of the Theory of International Production - draws upon six different strands of thought: Theory of Capital Movements, Trade Theory, Location Theory, Theory of Industrial Organisation, Theory of Innovation and Theory of the Firm.

have different approaches to explaining international production and FDI, partly because of the different historical circumstances surrounding their origins.

But according to Dunning (1993), prior to the 1960s, there was no established theory of the MNEs or of FDI and attempts to explain the activities of the MNEs outside their national boundaries represented an amalgam of various approaches and of country specific studies. The approaches identified in Dunning (1993) are the theory of capital movements (Iversen, 1935), empirical country specific studies of locational choice starting with Southard (1931) and the modifications to neo-classical trade theory initiated by Williams (1929). These approaches could not be considered as distinguished theories of international production because the ownership and internalisation advantages of the firm were not integrated into their analysis, although these two advantages are considered as an integral part in explaining international production (Dunning *et al.* 1986). This probably explains why Weber's Theory on the Location of Industries was hardly mentioned in textbooks on FDI and MNEs.

In the trade theory, foreign production can be a substitute for exports, as it can influence the terms of trade and thus change the whole pattern of production and specialisation. However in the neo-classical world of the Heckscher-Ohlin trade traditional model, there is no space for FDI. This theory stipulates that any disequilibrium in the prices of goods or factors across countries brought about by different factor endowments and comparative advantage would be immediately corrected by international movements of goods. A country tends to export those goods, which are intensively the country's abundant factor and to import goods,

which are intensively the scarce factor. But the trade model does not explain why MNCs prefer to set production facilities in countries endowed with abundant resources. It also ignores the dimension of management, productivity and also of control and the issue of ownership did not matter.

Drabek (1998 p.11) for example concluded that having surveyed the empirical literature, the link between trade and FDI was ascertained: "I have compiled what I believe to be all the major studies that address the question of the extent to which trade and FDI are substitutable or complementary.....and most of the literature points to the case of complementarities". This is understandable because traditionally trade and FDI theories have been developed separately. The theory of FDI tries to explain why a firm invests in particular countries and uses the notion of ownership, internalisation and location advantage as determinants of investment choice. In contrast, trade theory, which was developed much earlier, is constructed on the premise on why countries trade with others, and stressed the principle of comparative advantage as the determinant of trade patterns.

The most influential among the early approaches in explaining FDI was the theory of international capital movements. The international flow of capital or direct investment was entirely explained within the neo-classical theory of international capital movements (Dunning, 1985). Like other forms of international investment, FDI was seen as a response to differences in the rates of return on capital. According to this arbitrage theory, capital is assumed to be transacted between independent buyers and sellers, without the MNCs coming into the picture and most crucially without any intentional value of managing the investment. This assumption is far

from the reality of investments undertaken by the MNEs, where the element of control and ownership are important factors for international investment, especially when it involves the transfer not only of financial capital but also of physical capital, embodied in technology. The argument that technology transfers can be effected through licensing rather than FDI may not be preferred by the MNEs, especially when there are greater returns from direct investments and in cases which involve protected technology. Dyker (1999) argues that the MNEs are more liberal in their technology transfer policies in the early stages of a particular development but less so as the development matures. In the light of the above discussion and the subsequent discussion below, the development of the FDI theory may be presented as in Table 4.2.

**Table 4.2**

**Mainstream Theories of FDI**

<b>Before 1960</b>	<b>After 1960</b>
Alfred Weber (1909) and Southard (1931) - Theory of the Location of Industries.	Stephen Hymer (1960) - Theories of Industrial Organisation.
Williams (1929) - Theories of Trade.	Vernon (1966) - Product Life Cycle Theory.
Iversen (1935) - Theory of Capital Movements.	Williamson (1975, 1979) and Buckley and Casson (1976) - Theory of the Firm (draws upon the work of Coase, 1937).
	Dunning (1971, 1993) - Eclectic Paradigm - 'OLI' - Ownership, Locational and Internationalisation
	Dicken (1992) - Global Shift Paradigm

To discuss the development of the FDI theory, the following section will examine five major variants of the theory (section 4.2.2 to section 4.2.6) starting from the pioneering work of Stephen Hymer (1960). The purpose of this discussion

is to understand the scope of FDI and its effectiveness in explaining the entry of international capital especially that of multinational supermarket firms into the host country, where they are subjected to regulation and control, at least in the case of Malaysia.

#### 4.2.2 The Pioneering Work of Stephen Hymer

As pointed out by Dunning (1993), the theory of FDI was only developed after 1960 and this was acknowledged by Yamin (1991) who states that the dissertation of the late Stephen Hymer (1960) is generally acknowledged to be a path breaking work and the foundation in the reformulation of the theory and the economic analysis of FDI and the MNFs. Hymer explains the formation and the economic activities of the MNFs based upon the industrial organisation theory. In Hymer's view, whilst the prevailing explanation of international capital movement relied exclusively upon a neo-classical financial theory of portfolio flows where capital moves in response to changes in interests rate (or profit) differentials, such differences could not explain FDI, despite the evidence of sectoral cross investment and the existence of large MNFs with intra-industry trade.

Hymer argued that the unique feature of FDI is a mechanism by which the MNFs maintain control over productive activities outside their national boundaries. That is: FDI means international production. He was also the first to expose the deficiencies of the capital arbitrage theory. The main flaw of the neo-classical theory, according to him, was its inability to explain why MNFs transfer their intermediate product such as knowledge or technology among their units across



different nations, while still retaining property rights over such assets. It was also unable to explain why maintaining ownership specific advantage is important to the MNEs.

Hymer also observed that the capital theory was inconsistent with several obvious patterns in the behaviour of the MNEs. First the United States had long shown net exports of FDI but at the same time also received net inflows of portfolio capital. But how could equity capital be cheap and portfolio capital dear in the United States? Second, the capital theory is also unable to explain why MNEs move in both directions across national boundaries and some countries are both home bases for many MNEs and host to many subsidiaries controlled abroad. Finally, if FDI was due to pure arbitrage of capital, large financial intermediaries should be prominent participants. However non-financial companies make up most of the crowd in the form of manufacturing companies. Furthermore, an international difference in expected returns is not sufficient to induce FDI (Caves, 1982). Under perfect markets, an increase in the short run profits in one country would not induce an influx of international investment. Instead, it would attract new entrants that would eliminate any excess profits. Perfect markets and MNEs are not compatible (Hymer, 1960, Kindleberger 1969). In the words of Kindleberger (1969), direct investment belongs more to the theory of industrial organisation than to that of international capital movements. Hafbauer (1975) reinforced the statement when he argued that foreign investment depends on demand elasticities and factors of production, not just capital-cost differences. The neo-classical financial theory also failed to explain the two way flows of capital between countries with similar factor proportions (Cantwell, 1991). If interest rate is all that matters in capital movements, then why

does the MNC borrow in the host country, even when the rates are higher than in the home country? (Dunning, 1998).

The thrust of Hymer's thesis can be summarised in two inter-related statements. First, FDI is not simply inter-country flows of capital, responding to interest-rate differentials. Second, in order to explain FDI it is also necessary to explain why firms find it profitable to control firms in other countries. It follows from these that the movements of capital associated with FDI are not simply a response to higher rates of interest in the host countries but a means of providing financing for international operations undertaken in the host countries. Firms that invest abroad are firms that possess rent yielding ownership advantages such as technology that could take advantage of the technology deficient country or the expanding host market economies. But why do firms choose FDI and not licensing or exporting? Hymer explained that, in the presence of market imperfections, FDI is preferable to exporting and licensing as a method of exploiting the rents inherent in the advantages firms possess, unlike the situation in a perfect market where the latter would be preferable to FDI. In addition Pavitt (1971) argued that licensing, exporting and joint ventures give other firms legal rights and technological knowledge which can be used against the licensor.

In Hymer's view, the MNC is a creature of market imperfection, which uses its ability of superiority, searching for control in imperfect markets in order to maximise profits and to remove competition, or to exploit an advantage. As Cantwell (1989) argues, Hymer saw the firm as an active agent raising entry barriers, market power and colluding with other firms in the same industry for the purpose of

strengthening their oligopolistic power to capture maximum returns from their ownership advantages. Since Hymer contended that FDI is the preferred mode for entry by the MNCs in foreign markets, this contention will pose interesting questions on the reception of the host countries especially on the welfare implications of FDI. Many researchers<sup>34</sup> have touched on this aspect, especially with regard to developing countries.

Hymer's notion of FDI and the MNCs was not free of critics. The main one focused on its limited explanatory power, which cannot predict the country pattern of FDI or its industrial pattern (Aliber 1970). This critic goes on to say that the theory lacks an element of "foreignness" in the sense that the theory does not incorporate any of the factors that distinguish national economies in its explanatory variables. Lall (1977) for instance argues that for FDI to occur, ownership advantages may be a necessary but not a sufficient condition. The theory is also criticised for explaining only the initial act of FDI and not its growth. Besides, this theory pays little attention to the locational decisions of the MNCs, nor does it explain why, in spite of their advantages, some MNCs fail to internationalise and become successful MNCs. Also, Hymer did not focus on any particular advantage and whether all particular advantages were equally important and suitable as a basis for FDI and international operations. A related point is that the advantages possessed by the MNCs could be exploited not only through FDI but also by exporting, which Hymer did not sufficiently examine. It cannot be denied that the possession of advantages is a

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<sup>34</sup> See the chapter on the Transfers of Technology by Balasubramanyam (1989), Pavitt (1971), Blomstrom (1983) and also Caves (1996).

necessary precondition of FDI; for example, the advantage of having a scale economy is a precondition for the internationalisation of supermarket firms.

Other theories of FDI that build upon the work of Hymer and which are influential in explaining the internationalisation of capital and the MNFs are discussed below.

#### 4.2.3 Product Life Cycle Theory

One of the antecedents of the FDI literature is the product life cycle theory pioneered by Vernon (1966). The main ingredients behind Vernon's product life cycle theory involves three stage interactions between technology, international production and trade or in the words of Kojima (1978), the product life cycle theory is about the process of "innovation, growth and maturity". The theory described the production of a product in America, a technologically advanced country with factor endowments of highly skilled labour and R&D resources matched with a highly sophisticated demand. The chain reaction to this technological leadership led to mass production and bulk sales leading to the export of the product to other developed countries. As demand expands, the mature stage of the product is reached; the product becomes standardised and instead unskilled and semi-skilled labour become important. This allows production to be located in the importing country based on a lower cost location, most probably that of cheap labour in developing countries. The type of industries usually involved tended to be industries, which had no great need of sophisticated industrial environment.

Therefore the ideas of Vernon emphasise the factor cost advantage of host countries, especially the locational dimension.

But in a critique of this theory, Kojima (1978) argued that since the theory is about the process of “birth, growth, maturity and decline of individual commodities”, its relation with FDI is not clear. The export of standardised products to importing countries did not justify FDI. Secondly, the question may also arise: At what stage in the product cycle is there reason for FDI to be undertaken? Vernon’s product cycle theory is not based upon the principle of comparative cost, which allowed FDI to take place. The third argument put forth by Kojima is that there was no mention of such important factors as the relation to the economy of the investor country to that of the host country, nor of the joint-venture development of both the host and investing country, that is, comparative cost. Another critique, by Clegg (1987), claimed that the product cycle is not, in itself, a complete theory of FDI, as it does not explain the ownership of production. Later, Vernon (1971, p. 108) himself acknowledged that “by 1970, the product cycle model was beginning in some respects to be inadequate as a way of looking at the US-controlled multinational enterprise”. But Dunning (1993) supported the theory by contrasting it to other economic theory of foreign production and FDI, which are static and only explain production at discrete points of time, rather than the path of change between this points of time; therefore the product cycle theory is somewhat more dynamic. It relates the changing propensity of firms to engage in FDI as the product they produce moves from the initial stage to its mature stage. This theory can be further criticised on the ground that it only refers to firms engaged in production. However, it neglects firms in services, especially retailing firms such as multinational supermarket firms,

where the products involved are not just 'finished goods' but more importantly it also involves, managerial and entrepreneurship skills.

#### 4.2.4 Theory of the Firm

The next theory that was used to explain FDI is the Theory of the Firm. It was an early theory which draws upon the work of Coase (1937), who argued that firms are created because the additional costs of organising them is cheaper than the transaction costs when individuals conduct business with each other using the market. Therefore firms should conduct internally only those activities that cannot be performed more cheaply in the market or by another firm. The transaction costs referred to are the costs of carrying out market exchanges, which include contracting, the cost of searching, negotiating and policing agreements. For Williamson (1975), market failure due to high costs of transacting is the outcome of the co-existence of three main factors: bounded rationality, opportunism and asset specificity which give rise to high transaction cost. Williamson argues that these three conditions are frequently present simultaneously in today's market economies, resulting in market failures. To avoid all these, MNEs prefer to establish subsidiaries abroad through FDI.

Kojima (1987) argues that this theory views the activities of FDI as a natural consequence of the growth of a firm. Therefore as the firm widens its territorial horizons, such as in international markets, its entire organisation changes. It may involve strengthening and creating new business division in the firm such as an export section, or international business division, and the next stage will be the

setting up of subsidiaries in other parts of the globe. Dunning (1971) added that firms, which are international in operation, may have competitive advantages over domestic firms. They can draw upon their management experience in different economic environment. Even if the firm faces new challenges and problems, it is in a better position to overcome them. In this context, Buckley and Casson (1976) argue that firms internalise in order to avoid market imperfections and minimise transaction cost. They identified five aspects (pp. 37-38) of market imperfections that call for internalisation, one of the critical aspects being government intervention or regulation in rates of income and profit. In this regard, Dunning (1971) cited an example of how a firm is able to minimise its world tax burden by manipulating its intra group prices, by reporting high profits in a low tax country at the expense of profit in a high tax country. A firm may also internalise when facing imperfect markets for its intangible assets such as its technology and human capital and will therefore internalise the advantages that it owns rather than leasing or selling them. Therefore the internalisation theory evolves from the concept of market failure. Firms thus prefer FDI rather than other modes such as licensing to maximise the gains from the firm's advantage.

#### 4.2.5 Eclectic Paradigm

Perhaps the most notable among the variants of the FDI theory is the “eclectic paradigm” approach developed by Dunning (1971 and 1993). It is based on the theories of industrial organisation and of location and of the firm and is popularly

known as the 'OLI paradigm'<sup>35</sup>. According to Dunning (1971), the eclectic paradigm resulted from his dissatisfaction with existing theories of international production: the Hymerian approach, the product cycle theory and the internalisation theory. The general proposition is that a country's MNEs are more likely to engage in FDI (international production) if three conditions are satisfied. These are net ownership specific advantages or competitive advantages (Hymer, 1976); locational advantages that the host country offers to the investing firm (Vernon, 1966) and, lastly, the ability of the firm to internalise those advantages (Coase, 1937, Williamson 1975, Buckley and Casson, 1976). The eclectic paradigm, in other words, is interested in identifying and evaluating the most significant variables affecting the firm production if it carries out FDI. The advantages identified above vary according to country, nature of activity and the characteristics of the firm.

The concept of ownership advantage is especially important to the eclectic paradigm. Dunning (1971) identifies these into two types: first, property rights and/or intangible asset advantages which amongst others include product innovation, human capital, and technology and second, "common governance" which includes firm size and multinationality. The product innovation and firm size advantages are what Bain (1956) had earlier identified as economies of scale and product differentiation in his study of barriers to entry. In addition, Dunning states that the decision by firms to invest abroad will also depend on the location specific advantages offered by the host country. These include market size, cheap labour, investment incentives, the level of infrastructure development and also regional markets (some of these variables will

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<sup>35</sup> The OLI paradigm refers to ownership, locational and internalisation advantages.



appear in the FDI model in Chapter Five). The investing firm will therefore evaluate the arrays of locational specific advantages of the host country before deciding the location that will yield the maximum return from internalising its assets (such as economies of scale). Under the 'eclectic paradigm' it could be argued that FDI is a means of transferring resources, for example, capital, management and technology between countries but within the same firm. But one of the main criticisms of Dunning's eclectic paradigm approach is that it includes so many variables that it loses any operationality. According to Dunning, this is inevitable as a consequence of trying to integrate the different motivations behind FDI into one general theory. He further added that "the eclectic paradigm is not to offer a full explanation of all kinds on international production but of ingredients of particular types of foreign value added activity" (Dunning, 1991, p.125). Further analysis suggests that the 'OLI paradigm' by Dunning was in fact an amalgamation of the various variants of the FDI theories put together. In this context Dent (1997) argued that the 'OLI paradigm' can be further criticised on the grounds that it only offers a series of inter related factors for international production by firms, rather than providing a deeper explanation for it. In the context of explaining the OLI paradigm to the supermarket firms, ownership advantage is important to multinational supermarket firms for the purpose of internalising their superiority in terms of economy of scale advantage, entrepreneurship skills, management as well as marketing expertise. Supermarket firms will definitely depend on the suitability of locational choice as well as internalisation expertise to ensure success. The OLI paradigm, however, does not explain why some firms are vertically integrated or coordinated, as in the case of firms in the supermarket sector which this dissertation will turn to in Chapter Six.

#### 4.2.6 Others

Besides the above mainstream theories of FDI, Dent (1997) identified other variants associated with international production and MNCs activity. These include The New International Division of Labour (NIDL) and the Global Competition Theories. The NIDL theory hinges on the specialisation of labour but fails to explain the two way flows of FDI and the complexity of issues relating to the internationalisation of firms. Global Competition Theories as described by Dent are made up of four strands of ideas which focus on the current nature of global competition, not so much between states but more so between MNCs. Dent states that among the protagonists of this theory was Dicken (1992) on the *global shift* paradigm which describes the globalisation process as essentially the outcome of technological advances where the MNCs are the primary agents of globalisation. The process has been further accelerated especially as a result of the more liberal policy stance that has swept most countries across the world. According to Mohamad (2002) the emphasis of globalisation appears to be on the free flow of capital and trade and goods and services, where products are no longer distinguishable or identifiable with their country of origin. These global competition theories are contemporary paradigms and have become a catch-all concept to describe a range of trends and forces leading to openness, integration and interdependence of economies. This explains why now firms are less dependent on the characteristics of their home country but more dependent on their degree of multinationality.

As the foregoing discussion on FDI theory shows, the contributions which emerged from the work of Hymer (1960) complement rather than competing with

each other. The rich literature on the theory can therefore shed considerable light on the ability of the theory to explain the internationalisation of service industries including multinational supermarkets firms located in Malaysia, which hosts several of them. It is especially significant here that, as Dunning (1993) pointed out, FDI in services are the fastest growing components of MNFs activities in developed as well as developing countries.

#### **4.3 FDI Theory and Internationalisation of Supermarket Firms - A Critique**

This section will be devoted to examine the applicability of the FDI-MNFs theories in explaining the internationalisation of supermarket firms with regard to entry and regulatory issues in the host country, as well as its inter industry linkages with the other sectors of the economy. The issue of linkages is important because supermarket firms are not 'stand alone' firms and are highly dependent on other firms to provide the final goods for resale.

The discussion in the preceding section leads us to say that all of the various variants of the FDI theory discussed above concerned FDI in production or specifically the manufacturing sector. Surprisingly, economists appear to have largely ignored the importance of the FDI theory beyond the manufacturing sector and only in the 1990s did scholars of international business began to realise the relative neglect in studies on the determinants of FDI in services<sup>36</sup>. It will become clear below that the studies that were done on services did not critically explore and

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<sup>36</sup> Dunning (1993 p. 243) - especially in empirical studies.

evaluate the relevance of the FDI theory to those studies. They take for granted that the FDI theories can readily explain their interests. There is a strong historical reason for the insufficient attention of the FDI theory to the service sector. Firstly, Dunning (1993) argued that because manufacturing was the economic activity that was first to be pursued by the developed countries, therefore it is the first to be internationalised as compared to other economic activities such as services and especially retailing firms. The non-manufacturing firms are “followers” rather than leaders. Another reason is that agriculture and manufacturing have always been the central focus of attention in the context of growth and development, while services, especially from firms involved in retailing, have often been viewed as an area of low productivity and limited technological progress and as an appendix to other activities (Sauvant, 1996). Thirdly, the internationalisation of supermarket companies (apart from Japan) only began to take off in the early 1990s, for example in the case of Malaysia and also in the other parts of the developing world (Reardon, 2003). Therefore this presents a new phenomenon in terms of the nature of FDI inflows (before this, supermarkets only involved local capital). Sauvant (1996) and Jones (1996, p. 15) pointed to the fact that “the existing literatures are heavily biased towards manufacturing MNCs, and to a much lesser extent MNCs active in extractive industries”. This can clearly be seen from the pioneering work of Hymer (1960) on manufacturing MNCs of the United States and also on subsequent works.

Even in developing countries such as Malaysia, works drawing on standard FDI literature and FDI statistics in the manufacturing sector are well documented as compared to other sectors of the economy (Ariff, 1992). The arguments put forward earlier by Kirchbach (1982) also found that MNCs involvement in the service sector

of developing countries<sup>37</sup> has received very little attention. He was correct when he predicted that MNFs in the tertiary sector would be more dominating in the 1980s as compared to investment in the primary and manufacturing sector. Of the seven empirical studies surveyed by De Mello (1997), on the FDI determinants, all except one were done on the manufacturing sector. From the above statements, therefore, it may be argued that the over concentration of empirical studies on manufacturing FDI at the expense of empirical studies, especially on retailing, points to the emphasis of the FDI theory on manufacturing. The other point is, if service FDI differs from manufacturing FDI, this limits the use of FDI models in manufacturing to explain FDI in services. Even empirical studies on the FDI theory tend to be concentrated on the demand side determinants of what attracts FDI in the host countries, rather than the supply side determinants of why MNFs invest abroad. But this can be readily understood, from the perspective of host countries, especially developing economies, where the supply side determinants are taken as given and in addition researchers may find it less interesting to study the supply side factors. Perhaps what are more important to the host country are factors that attract the MNFs into their shores, which will be discussed in Chapter Five.

It is evident, therefore, that tests of the applicability of the MNFs-FDI theories to service MNFs over a broad range of service-industries<sup>38</sup> have not received the attention given to industries in the manufacturing sector. There are also shortcomings in the FDI theory in general as Graham (1978) argued that a unified theory

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<sup>37</sup> The developing countries referred to are Malaysia, Indonesia, Philippines, Thailand and Singapore.

<sup>38</sup> Only Li and Guisinger (1992) have undertaken a study on the determinants of FDI in nine service industries including wholesale and retail.

of FDI is lacking in explaining why FDI and MNFs takes place. More recently Jones (1996) suggested that MNFs' involvement in the services sector including the retail sector needs more research, especially with the globalisation of world business activity. Despite the fact that the internationalisation of retailing activity was a major feature of the 1990s (Davies and Jones, 1993) even Dunning (1993), put little emphasis on FDI activity that does not fit under the "manufacturing" or the "resource" seeking category. While it is to be recognized that some studies have been done on the evolution of non-manufacturing MNFs' activity, the interest shown by researchers in this area, especially by economists, is still minimal and insufficient and not in proportion to the importance of services FDI and the MNFs in the service sector. This should not be the case, especially in the light of the fact that the services and consumer sector is currently the fastest increasing component of MNFs' activities, as was mentioned earlier, and a new source of FDI inflows in the case of Malaysia. FDI in services constituted nearly 50.0 per cent of the world's stock of FDI, estimated at US\$1.9 trillion in 1992 (Sauvant, 1996) and the percentage was slightly more in 1997 (World Investment Report, 1998) but has surged to more than two thirds in the period 2000-2002 (World Investment Report, 2004). It must also be emphasised that 85.0 per cent of all FDI in services is in two groups of services-trade related activities and banking and finance (UNCTC, 1988).

However the "export" of consumer based FDI will depend among others on the level of economic development of the host country. Therefore, MNFs which are involved in retailing will not risk opening overseas subsidiaries if the market of the host country is small and the purchasing power is low. This argument is supported by the findings of Luo (2000), on the retail prospect of foreign owned supermarkets in

China. He states that, given the increase in purchasing power, the retail sector has a good outlook, when crowds are lining up at discount stores like Makro and Wal-Mart. Sauvans (1996) also found that the demand for consumer service FDI has grown resulting from increasing income per capita and other factors such as economic development and changes in policies of host governments. On the other hand, retailers invest in foreign markets due to saturation in the home market and the desire to export a particular retail offering which will occupy an unfilled niche in a foreign market. The fact is, this new wave of FDI is gaining momentum, especially so in developing countries, where more and more foreign FDI is operating in the retailing sector or specifically in the supermarkets and hypermarket activity. In this respect Dunning (1993) has pointed that the world of international business in the early 1990s was a very different one from that of the late 1950s or even the 1970s. This new wave of FDI could be related to the different stages of economic development countries might go through and how the significance of the MNCs activity changes with economic development (Sauvans 1996). Therefore the resulting “globalisation” of economic activity has emerged as an important new reality (Bhagwati, 1997) which the existing theory of FDI must be able to capture and adapt. Since new forms of investment have emerged, especially in service industries (including wholesale/retail distribution, financial services, real estate) which have grown much faster than FDI in manufacturing (World Investment Report, 1998), the theory has so far failed to predict this. Studies on service FDI are even more interesting, given the fact that it is a more heavily regulated sector, especially in developing countries, as compared to the manufacturing sector. Malaysia is a good example of this. As was discussed in Chapter Two, while FDI in manufacturing is not subjected to an equity limit, all forms of services FDI and supermarket activity in

particular are subjected to equity restructuring which limits foreign ownership in this sector, especially in developing countries.

Even though Dunning (1993) argues that the neglect of empirical research in service FDI is misplaced, he agrees that there have been few substantive works written on the internationalisation of the services sector. He quotes a few examples, including telecommunications, but again misses the retail sector, especially multinational supermarket firms. He argues that the apparent neglect of services arises because many services are, in fact, supplied by goods producing firms and it is therefore difficult to distinguish between specialised service MNCs and MNCs that produce services. Nevertheless there are certain characteristics that Dunning identified as being distinctive to MNCs activity in services. Firstly, intra-firm specialisation such as the international division of labour has not occurred to the same extent in the services sector. The second argument is that most FDI in services 'follows' rather than 'leads', investment in goods. This is true in the case of finance and insurance service firms, especially Japanese service firms in support of Japanese manufacturers (Dent 1997). But in the case of other service sectors such as multinational supermarket firms, this second argument lacks credibility because supermarket firms do not follow the manufacturer. Instead multinational supermarket firms 'lead' the local supermarkets in terms of scale economies and advancement in innovation and product branding. Thirdly, Dunning (1993) argued that many services MNCs are not capital intensive and their value added is best measured by sales figures, net output or employment. This argument may be contested. Multinational supermarket companies investing in the host country are not the 'one off' type of investment. Initially the investment to build one supermarket may be small relative



to investment made in plants and machinery of the manufacturing firm. But, as the host economy grows, the supermarket firms may find it necessary to add more outlets to serve the market demands of the host country and this needs additional capital outlays which, when added with previous investments, will also be substantial.

Alexander (1989) also agreed that even though international retailing is not a new phenomenon, the study in this particular area is still under-researched. He pointed out that Woolworths' operation was introduced into the UK from the US in the first decade of the 20<sup>th</sup> century and the French Group, Carrefour has operations in other European countries and South America. FDI inflows have diversified in its sectoral composition over the 1980s, away from the historical preponderance of raw materials, extractive industries and manufacturing and into other sectors such as mass retailing and services (Bhagwati, 1997).

The FDI theory is macro and aggregated in approach and, as such, issues concerning vertical integration or coordination that may be relevant to supermarket firms, which is micro in analysis, are not looked at by the FDI theory. However the earliest and most persistent form of backward vertical FDI undertaken by firms based in developed economies was with regard to the resource extracting type of activities obtaining minerals and agricultural products from third world countries which were needed to feed downstream processing firms in the developed countries (Hennart, 1991). These are vertically integrated firms that have production units located in different nations and have the management skills and technologies which could control firms in other countries. However according to Yamin (1991) FDI theories

and empirical works did not discuss MNFs investments in the host countries from the vertical integration point of view but only looked at FDI from the macro perspectives.

The empirical works on FDI and the econometric models developed by other authors that will be discussed in Chapter Five are also about aggregate FDI. This is not to say that the empirical models are not useful but rather that at best they only provide partial answers to the question on entry but not on specific entry such as firms in the supermarket activity. The importance of vertical integration/coordination issues with regard to supermarkets can be realised based on the advantage of synchronising the successive stages of production and marketing with respect to quantity, quality, timing of product flows and on the 'make or buy' decision. The more subtle aspects of the vertical integration and coordination arguments will be analysed in Chapter Six.

The other issue concerning the FDI theory is that too much emphasis is given to financial capital flows, to the neglect of the measurement of non financial capital such as expertise and entrepreneurship, which is embodied in human capital. While financial capital flows as well as physical capital such as plants and machinery can be easily measured, the equivalent financial value of human capital or 'soft technology' is not accounted for in the measurement of financial capital. For example, Dyker (1999) argued that the transfer of technology into the host country depends on the 'soft technology' or human capital. But this is not accounted for in FDI inflows. In the context of services firms the 'soft technology' which is embodied in human capital is more obvious than the physical capital. With this perspective, it

may be argued that the essence of supermarket internationalisation involves not only the international transfer of capital but, more importantly, the international extension and expansion of managerial control over subsidiaries abroad.

In the light of these arguments, how do service FDI and multinational supermarket firms fit into the theory and definition of FDI and the MNFs? According to Boddewyn *et al.* (1986), to answer this question, two conditions must be met: first, MNFs must be involved in FDI; secondly, FDI means the transfer of the factors of production (ownership or equity dimension as well as resources which includes physical as well as human capital) and must include an element of control (not necessary ownership) of the foreign subsidiaries abroad. If these conditions are not met, these firms will simply be called an “international company” engaging either in portfolio investment or in foreign trade. Boddewyn *et al.* suggest how a new definition of the MNFs by the United Nations (1984)<sup>39</sup> can remove this confusion. This new definition of the multinational enterprise by the United Nations which does not involve foreign equity or control such as licensing, franchising and management contract could not be brought into the MNFs category. In other words, to be recognised as an MNF operating in the host country, it must have the element of foreign equity and/or foreign control and multinational supermarket firms have these features. The definition given by Buckley and Casson (1976) is that since all economic activity is about “adding value”, and since to add value is to provide a “service”, therefore all firms, whether extractive, industrial, commercial, financial,

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<sup>39</sup> According to the new definition, Transnational Corporations (also known as MNFs) are enterprises comprising entities in two or more countries regardless of the legal forms and fields of activity of those entities, which operate under a system of decision making permitting coherent policies and a common strategy through one or more decision making centres and in which the entities are so linked by ownership or otherwise and to share knowledge, resources and responsibility.

retail, etc are essentially service firms. Therefore, all firms are “service” firms and all MNFs are ultimately “service MNFs” in some respect (Boddeyn *et al.*, 1986).

As such, there is no difficulty in fitting the retail firm in the current definition of MNFs, but what about the theoretical aspects, how does it fit into the existing theory of FDI? Perhaps Dunning’s (1981) “eclectic paradigm” theory of FDI may provide the answer. As explained by Dawson (1993 p. 27), “Dunning (1981) in a general consideration of direct foreign investment, *irrespective of sector*, suggest three factors that together are of importance in establishing whether a firm develops direct investment in international operations (i.e. establishes shops of its own)”. The three factors identified by Dunning’s are ownership specific, location specific and internalisation advantages.

Boddeyn *et al.* (1986) also suggest that, although the existing theory of FDI and the MNFs may be applied to service and retailing MNFs, the application must be done with caution because of the distinctive characteristics of firms involved in international services. While some concepts may be borrowed from the literature on industrial internationalisation, their applicability to the retail sector remains limited. This is understandable because the rapid phase of internationalisation of the supermarket firms is relatively new by comparison with the manufacturing sector. In a related study, Li and Guisinger (1992) investigated the applicability of the MNFs-FDI theory on nine service multinationals including wholesale and retail. As in any other empirical works on FDI, the emphasis is on the demand side determinants that influence investment decision of the MNFs into the host country. Consistent with previous theoretical discussions (such as by Boddeyn *et al.* 1986), the empirical

findings of Li and Guisinger (1992) suggest that the existing theory of FDI and MNFs can readily explain international service industries in the confinement of the restricted aggregated FDI theory. Even if consumer service multinationals operating in the supermarket activity can fit into the perceived theory of FDI and the MNFs and as such no separate paradigm for explaining FDI and MNFs in this sector is needed<sup>40</sup>, however, the FDI theory fall short of providing comprehensive answers to the question of entry by vertically integrated firms such as supermarkets.

#### **4.4 Conclusion**

This chapter has looked at the various definitions of FDI by many different parties including the IMF and economists and in general FDI is a long term investment which involves control and constitutes a package of resources including not only financial but also physical and non physical resources. However in reality the statistical measurement of FDI differs widely amongst countries in terms of comprehensiveness, timeliness and reliability. Within this context only financial and physical capital are included in the FDI statistics. These are more obvious in manufacturing FDI but less so in the context of firms in services, such as supermarkets, where human capital is more significant (than physical capital) but not included in the FDI measurement. The bearers of these cross border investments or FDI are MNFs, which are referred to as firms that have subsidiaries in more than one country and where the parent firm have control over them.

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<sup>40</sup> This contention is supported by Vida and Fairhurst (1998) but on a more cautious note.

The literature on FDI theory has been analysed from the perspectives of a variety of sub-disciplines of economics, including international trade theory, industrial organisational theory and the theory of the firm. As well as Hymer's work, other variants including the 'product life cycle theory', theory of the firm, the 'eclectic paradigm' and the global shift paradigm have been reviewed. Each variant is an improvement on the earlier works. Throughout, it has been stressed how almost exclusively the FDI theory draws upon the internationalisation of multinational firms in the manufacturing sector, with little attention to the increasingly important services FDI. Therefore, there is a concern about whether the FDI theory is robust in explaining the internationalisation of other economic activities such as multinational supermarket firms, which may differ from manufacturing firms. This theory is also macro in approach and as such it has not looked at issues on vertical integration/coordination or regulation at the industry level, which are crucial for policy makers, particularly considering the tradeoffs between innovation and the impact of entry on local firms.

This is not to say that the FDI theory is not useful, but the fact that it is aggregative and macro in methodology suggests that a disaggregated and micro approach may be helpful to complement the aggregated analysis which this dissertation will look at in Chapter Six. However policy makers may find that the FDI theory is useful in the context of establishing the determinants that attract FDI entry, where it may have implications to macro policy and this will be pursued econometrically in the next chapter.

## **CHAPTER FIVE**

### **DISTINCTION BETWEEN MANUFACTURING AND SERVICES FDI**

#### **5.0 Introduction**

The main purpose of this chapter is to establish a distinction between manufacturing and services FDI inflows. This work follows directly from the last chapter where it was found that established FDI theories and empirical studies make no distinction between firms in manufacturing and firms in services. Section 5.1 will begin with a discussion of some of the existing FDI models with respect to the variables included in the models as well as the sector and the country of study. Following a summary of earlier works in Table 5.1, the main contribution of this chapter will be in Section 5.2. This section will investigate the relationship between services as well as manufacturing FDI against some macro economic variables, using regression techniques. The results of these regressions with respect to the significance of the macro economic variables are summarised in Tables 5.4 and 5.5 and will be discussed in Section 5.3. Diagnostic tests for the relationships developed in the preceding section will be discussed in Section 5.4. Section 5.5 consists of a summary and conclusion and will wrap up this chapter.

The main finding in this chapter is that, both for Malaysia and for the UK, there are differences between services FDI and manufacturing FDI. This in turn will provide links to the topics of regulation and of policy which are key themes in Chapter Seven. Before that, in Chapter Six, this dissertation will develop the point

that, even though the determinants of manufacturing and services related FDI are different, in practice they will also be systematically related because investing firms are commonly vertically integrated multinationals. In particular, in the case of supermarkets, manufacturers and retailers are interrelated by decisions determined by the transfer prices stemming from double or multiple marginalisation arguments of kinds systematically developed in Chapter Six. With that context it is worth emphasizing that the purpose of this chapter is to provide evidence of systematic differences between determinants of manufacturing FDI and determinants of services FDI at the aggregate level. By contrast, it is the purpose of the next chapter to argue more subtly that, despite differences at the aggregate level, in practice manufacturing and services are likely to be systematically interrelated at the micro level.

## **5.1 Existing FDI Models**

This section will examine seven FDI models which represent existing FDI models regarding entry decisions of FDI into specific sectors as well as into specific types of countries (developed as well as developing countries). The main reason for reviewing these models is with a view to comparing and contrasting the determinants that will be used in the aggregate model that may influence entry decisions of services and manufacturing FDI with the examples of the UK and Malaysia.

One of the models is by Beer and Cory (1996) on the locational determinants of US FDI in the European Union (EU). They investigated two dependent variables; total US FDI in the EU and US FDI in manufacturing and both models covered the periods 1977-1989 (11 years) and for 11 of the 12 European



countries<sup>41</sup>. Data were gathered from the U.S. Department of Commerce, the IMF and the World Bank Tables. Estimation was by Generalised Least Squares (GLS) but the F-tests are from Ordinary Least Squares (OLS). The mathematical expression for the model is given by:-

$$Y_{it} = a_0 + a_1 GNP_{t-1} + a_2 [gGNP_{it-1} - gGNP_{ust-1}] + a_3 [WP_{it-1} - WP_{ust-1}] + a_4 EXP_{it-1} + a_5 INTE_{it} + a_6 [GROSS_{it} - GROSS_{ust-1}] + a_7 [TAX_{it-1} - TAX_{ust-1}] + a_8 TAR_t + a_9 CUL_i + e_{it} \quad (5.1)$$

[where  $Y_{it}$  is US FDI in country  $i$  during period  $t$ ,  $GNP_{t-1}$  refers to market size,  $gGNP_{it-1} - gGNP_{ust-1}$  is the growth rate differentials between country  $i$  and the US at period  $t-1$ ,  $WP_{it-1} - WP_{ust-1}$  are wages divided by productivity differential between country  $i$  and the US at period  $t-1$ ,  $EXP_{it-1}$  is export divided by GNP (openness variable) of country  $i$  at period  $t-1$ ,  $INTE_{it}$  refers to differential interest rate,  $GROSS_{it} - GROSS_{ust-1}$  is the differential of gross fixed capital formation to GNP of country  $i$  and the US at period  $t-1$ ,  $TAX_{it-1} - TAX_{ust-1}$  is the tax rate differential between country  $i$  and the US at period  $t-1$ ,  $TAR_t$  is tariffs and  $CUL_i$  is cultural similarity]

Two regression results were obtained for the two dependent variables. Of the nine variables used in both the regressions, only three variables in both regressions were positive and significant. These are: the openness variable ( $EXP_{it-1}$ ), the export variable ( $EXP_{it-1}$ ) variable and the cultural variable ( $CUL_i$ ). While the market size variable is positive and significant in attracting US FDI in manufacturing, this variable was not significant for total US FDI. This suggests that different types of FDI are attracted to different determinants. The growth rate and the gross fixed capital formation variables, however, do not have the expected positive signs in both regressions, indicating that these variables are not important in attracting FDI inflows in this analysis.

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<sup>41</sup> Except Luxembourg

Govindan (1997) developed a model for the determinants of manufacturing FDI in Malaysia. He argued that the inflow of FDI into Malaysia was attributed to the country's open trade and investment policies and its locational advantages. Using time series data for the period 1970-1995 which were obtained from the Malaysian Industrial Development Authority, he estimated three equations by Ordinary Least Square (OLS) methods as follows:

$$\frac{FDIQ}{Q} = \alpha + \beta GDPGR + \frac{\phi M}{GDP} - \lambda INFL - \zeta WAGE + \varphi TAX + \omega NEP \quad (5.2)$$

$$\frac{FDIQ}{Q} = \alpha + \beta GDPGR + \frac{\phi M}{GDP} - \lambda INFL - \zeta WAGE + \eta SKILL + \varphi TAX + \omega NEP \quad (5.3)$$

$$\frac{FDIQ}{Q} = \alpha + \beta GDPGR + \frac{\phi M}{GDP} + \lambda INFL - \chi LAB + \varphi TAX + \omega NEP \quad (5.4)$$

[where  $\frac{FDIQ}{Q}$  is the share of output of foreign firm in total manufacturing output,  $GDPGR$  is

the annual rate of growth of GDP in real terms,  $\frac{M}{GDP}$  is imports as percentage of GDP (openness variable),  $INFL$  is the annual rate of inflation,  $WAGE$  is the average monthly wages per employee in manufacturing,  $TAX$  refers to percentage of projects approved by the government with incentive to total projects approved,  $NEP$  is the government equity ownership rate,  $SKILL$  is labour productivity in manufacturing and  $LAB$  refers to unit labour cost (index)].

The results of the estimated equations showed that the rate of growth does not exert a major influence on manufacturing FDI in Malaysia. Only the openness and the labour coefficients were found to be statistically significant in attracting manufacturing FDI in Malaysia.

Tsai (1991) developed a model for the determinants of FDI in Taiwan. From his review of the empirical literature, Tsai argued that the potential demand side determinants in Taiwan consist of the domestic market, incentives policies and cheap labour. Besides the demand side variables, he also argued that supply side

arguments play a crucial role in determining FDI inflows. Time-series data of 28 years for the period 1958 to 1985 were used to obtain empirical results by means of an OLS technique using the logarithmic formulation. He estimated two equations as specified below:

$$FDI = f(\Delta Y, D1, D2, D3) \quad (5.5)$$

$$RFDI = g(R\Delta Y, RPCGDP, D3) \quad (5.6)$$

[where *FDI* refers to actual flow of FDI into Taiwan in a given year,  $\Delta Y$  is annual change of GDP in Taiwan. *D1* and *D2* represent the two major economic policy changes related to FDI during 1958-85, *RFDI* refers to actual inflows of FDI into Taiwan in a given year divided by FDI in all Least Developed Countries (LDCs) or non-oil exporting LDCs in the corresponding year, *R $\Delta Y$*  is the annual change of GDP in Taiwan divided by the annual change of GDP in all LDCs or non-oil exporting LDCs in the corresponding years, *RPCGDP* refers to the per capita GDP in Taiwan in a given year divided by per capita GDP in all LDCs or non-oil exporting LDCs in the corresponding year, *D3* is a dummy to represent periods with export-oriented FDI and period with domestic market-oriented FDI].

Using (5.5) Tsai found that the ever growing domestic market is a crucial determinant for FDI in Taiwan. However, using equation (5.6), he found that Taiwan's relatively outstanding economic performance as reflected in the expanding domestic market and ever increasing per capita GDP was not attractive to FDI. Thus he argued that the supply side determinants were more important than market size. As such, a demand side model such as equation (5.5) cannot adequately explain the phenomenon of FDI, at least for the case of Taiwan.

Lim (1983) developed a model to test whether fiscal incentives are necessary to attract FDI in Least Developed Countries (LDCs). The study used cross-sectional data for 27 LDCs for the period 1965-1973. The model was estimated by OLS using the logarithmic formulation as follows.

$$F = f(IG, ME, ED, GR) \quad (5.7)$$

[where *F* is the average of the annual per capita total FDI, *IG* refers to incentives package (dummy variable), *ME* is the average of the annual percentage shares of minerals in the

LDCs total merchandise exports, *ED* refers to the level of economic development measured by per capita GDP while *GR* is the rate of economic growth].

The coefficients of *ME* and *ED* were statistically significant while *IG* (incentives package) had an unexpected negative sign. The *GR* variable was not statistically significant, which suggests that FDI here is more concerned with per capita income rather than economic growth or incentives.

A model with the purpose of explaining locational determinants of FDI among industrialised countries was developed by Culem (1988). Six industrialised countries were chosen, namely, US, Germany, France, UK, Netherlands and Belgium. Each observation pertained to a bilateral relationship, from country *a* to country *b*, or vice versa, for a given year. The sample pooled cross-section and chronological annual data over a 14 year period and the choice of countries and of years were basically determined by the availability of data. Two models were used to explain locational determinants of the overall sample of bilateral FDI flows among the six industrialised countries, locational determinants of US FDI with the other five countries, locational determinants of the European FDIs in the US and intra European FDIs. The two models were tested, one ‘without differentials’ on the growth rate and labour cost and the other ‘with country differentials’ on the growth rates and labour costs. The models were as follows:

$$\frac{FDI_{ab}}{Y_a} = \alpha + \alpha_1 y_{b-1} + \alpha_2 \delta y_b + \alpha_3 STR_b + \alpha_4 UL C_b + \alpha_5 \left( \frac{X_{ab}}{Y_a} \right)_{-1} + \alpha_6 (INT_b - INT_w) + \varepsilon \quad (5.8)$$

$$\frac{FDI_{ab}}{Y_a} = b_0 + b_1 y_{b-1} + b_2 (\delta y_b - \delta y_a) + b_3 STR_b + b_4 (UL C_b - UL C_a) + b_5 \left( \frac{X_{ab}}{Y_a} \right)_{-1} + \alpha_6 (INT_b - INT_w) + \gamma \quad (5.9)$$

[Where  $\frac{FDI_{ab}}{Y_a}$  = FDI flow from country  $a$  to country  $b$ ,  $Y_a$  is the gross national product of the investing country  $a$ ,  $y_b$  = real GNP of host country lagged one period,  $\delta y_b$  = annual growth rate of the real GNP of the host country,  $\delta y_a$  refers to the growth rate of the real GNP of the investing country,  $STR_b$  = share of 1968 tariff rate of host country,  $ULC_b$  = unit labour cost of host country,  $ULC_a$  refers to unit labour cost of investing country,  $(\frac{X_{ab}}{Y_a})_{-1}$  = export from source to host country divided by nominal GNP of source country lagged one period (openness variable) and  $INT_b - INT_w$  = nominal interest rate differential between host country and the rest of the world]

Only the complete sample results will be discussed here. All the estimated coefficients are statistically significant in both equations except the tariff rate  $STR_b$  which has the opposite sign in equation (5.8). It appears that investors in industrialised countries prefer a big and expanding market, and even among industrialised countries, a high unit cost of labour is a significant deterrent to inward FDI.

Chakrabarti (2001) developed a model to test the determinants that attracts FDI to search for empirical linkages between FDI and a variety of economic variables. According to Chakrabarti, the literature on FDI is not only extensive but controversial as well. He developed an econometric model (controlling for market size) on cross country data (135 countries - for the year 1994) on eight determinants of FDI via the relationship:

$$FDI = \beta_1 + \beta_2 X + \dots \beta_j X_j \quad (5.10)$$

[FDI is FDI inflows, the eight determinants tested are market size (controlling variable), taxes on profits, industrial wage rate, imports plus exports to GDP (openness), relative exchange rate, average tariffs on imports, annual change of GDP, per capita value of exports less imports (\$US at current prices)]

Chakrabarti found that, besides market size, the openness variable, industrial wage index and the per capita value of exports less imports are positive and significant.

A model developed by Li and Guisinger (1992) is of particular interest here since it is specifically service sector related. They tested the applicability of the MNFs-FDI theories with reference to the locational determinants of service MNFs over nine service sectors<sup>42</sup> based in Japan, Western Europe and US. They compiled data on investment decisions of 168 service firms in nine sectors over the period 1976-1986. Data were obtained from publications of the United Nations Centre on Transnational Corporations, 1988. A single model<sup>43</sup> was developed on the entry determinants of those firms over two periods (1976-1980 and 1980-1986) using a logistic regression method where:

$$P[FI=1] = \frac{1}{\{1 + \exp[-(\beta_0 + \beta_1 GDP + \beta_2 FDI + \beta_3 CD + \beta_4 OPEN + \beta_5 ICI + \beta_6 OLIGOP + \beta_7 SIZE)]\}} \quad (5.11)$$

[ $P[FI=1]$  = the probability that a service MNF increased its number of affiliates from 1976 to 1980,  $GDP$  = market size,  $FDI$  = the home country business presence,  $CD$  = cultural distance,  $OPEN$  = openness of the home country to the establishment of new foreign service subsidiaries,  $ICI$  = international competitiveness of the service industry,  $OLIGOP$  = global oligopolistic reaction in the host country measured by the ratio of the number of other foreign service firms with affiliates in industry  $i$ , host country  $j$ , besides the service MNFs in question divided by the total number of all parent service firms that could establish affiliates in industry  $i$ , host country  $j$ ,  $SIZE$  = growth of size of service firms is measured by the annual growth rate in revenues (sales)].

Only the overall analysis of the model will be summarised here. The variables which were statistically significant in determining foreign investment decisions by firms are the market size (GDP) of the host country, the openness

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<sup>42</sup>These are insurance, reinsurance, wholesale, retail, accounting, advertising, construction, publishing and airlines.

<sup>43</sup> To avoid multicollinearity, two estimates are presented for each time period.

variable, the oligopolistic reaction and also the firm size. Notice that a wage variable is not included in this model, in contrast to the models of manufacturing FDI developed by Beer and Cory (1996) and Govindan (1997). By contrast with these models, too, the services model of Li and Guisinger (1992) also includes new variables such as oligopoly and firm size.

The various types of explanatory variables used in the models discussed above are summarised and compared in Table 5.1 below. Since FDI inflows are country specific, so are the models. As such, variables which are important and significant for one particular country or region (between developed and developing countries) may not be important and significant or may have 'opposite signs' in another country or region. One of the main reasons for this is that different countries and different regions are at different stages of economic development. In addition, Chakrabarti (2001) argued that the lack of a consensus on the relative importance and the direction of impact of the potential determinants of FDI may be explained in part by the fact that most authors have considered only a particular set of explanatory variables.

**Table 5.1**  
**Comparison of Dependent and Explanatory Variables**

	Beer and Cory (1996)	Govindan (1997)	Tsai (1991)	Lim (1983)	Culem (1988)	Chakrabarti (2001)	Li and Guisinger (1992)
<b>Dependent variables</b>							
Manufacturing	/	/					
Services							/
Aggregate FDI	/		/	/	/	/	
<b>Determinants</b>							
Market size							
GNP	/*				/*	/*	
ΔGNP/ΔGDP	/+	/+	/*	/	/*	/	
GDP							/*
Per capita GDP			/	/*			
Wages	/	/				/*	
Openness							
Export/GNP	/*				/*		
Imports/GDP		/*					
M+X/ GDP						/*	
Index (1-4)							/*
Interest Rates	/*				/		
Fixed Capital Form.	/+						
Tax	/	/		/+		/	
Tariffs	/				/+	/	
Culture	/*						/
Inflation		/					
Govt. Policy		/	/*				
Skill		/					
Unit Labour Cost		/*			/*		
Minerals				/*			
Competitiveness							/
Oligopoly							/*
Size							/*
Per capita value of imports and exports							/

Key: \* significant  
+ opposite sign

As was noted in Chapter Four, literature on FDI is heavily biased towards FDI in the manufacturing sector. So, too, are the models. Even models on manufacturing FDI tend to focus on the aggregate level rather than on specific disaggregated manufacturing types. Therefore it is not surprising to find that FDI models on specific service industries have not been developed. Even the model developed by Li and Guisinger (1992) with respect to the service industry is an aggregated model consisting of nine service sectors (This is perhaps not surprising



given that existing FDI models on manufacturing as was mentioned earlier was also on an aggregated basis).

The various FDI models outlined above do not belong to any particular variant of the FDI theories but consist of an amalgam of various variants of the theories. As such, it can be argued that the entry of MNCs and the modelling of FDI into the host country cannot be explained by just one theory such as the “Product Life Cycle Theory”, which hinges on comparative cost, but also draws upon other variants such as the “Theory of the Firm” approach on the advantage of internalisation. Dunning (1991) realised the incomplete approach of the various variants of the FDI theories and suggested an amalgam of the various variants where he came out with the “OLI paradigm”<sup>44</sup>. Therefore it can be argued that the FDI models that have been developed are based on Dunning’s approach. However, even Dunning’s paradigm was been criticised on the grounds that it still lacks deeper explanation of the entry of firms (Dent, 1997).

Here it is worth emphasizing that no specific econometric model has so far been developed on the entry of multinational supermarket firms across countries, both in the developed as well as the developing countries. This is so despite the fact that, as was discussed in Chapter Three, the internationalisation of such firms was particularly noticeable and significant during the last decade, especially via the entry of these firms into the developing countries (including Malaysia).

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<sup>44</sup>Refers to Ownership, Locational and Internalisation advantages.

All of the empirical models discussed above agree on the importance of economic performance (GNP, GDP,  $\Delta$ GNP and  $\Delta$ GDP) in the host country as one of the main determinants in attracting FDI. The catalytic effect of proven economic performance as a measure of the domestic market can be captured by two economic variables, firstly the market size variables measured by GNP or GDP and secondly the growth variable ( $\Delta$ GNP or  $\Delta$ GDP). Other things being equal, the higher the level of economic development, the greater will be the domestic market and so the greater the opportunities for making profits and the incentives to invest. The interpretation of the market size hypothesis (GNP or GDP) emphasises the necessity of large market size for the exploitation of economies of scale necessary for large scale business and may be important for firms dependent on the host economy's market. In addition to the models developed above, especially by Tsai (1991), on developing country FDI models, other empirical studies of developing countries, for example, by Loewendahl and Loewendahl (2001), Estrin *et al.* (1997) and Yeung (1996) found that FDI in developing countries is primarily market seeking, where the goods produced are for the consumption of the host market. But this is contrary to the result obtained by Govindan (1997), that the domestic market is not a factor in attracting manufacturing FDI into Malaysia. This apparent contradiction is understandable because the manufacturing FDI that Malaysia has attracted is export oriented FDI and most of these industries are located in the export processing zones (EPZ) in Malaysia. Among the market size variables commonly used in these models is the absolute GNP in real terms, rather than GDP. This is to reflect the 'true' domestic market which includes income from abroad.

The question of whether to use GNP, GDP or a growth rate variable has been debated by Root and Ahmad (1979) who suggest that even though commonly used, absolute GDP or GNP is a relatively poor indicator of market potential, particularly in many developing countries, since it reflects the size of the population rather than income. The use of per capita GDP may be appropriate since it reflects the income level of the population and this is probably an important indicator that multinational companies will consider. Models developed by Lim (1983) and Tsai (1992) used the market size approach as suggested by Root and Ahmad (1979) and in addition also include the growth rate variable ( $\Delta\text{GDP}$ ) to capture the opportunities a growing economy could offer to investors.

Another problem with the market size theory is that the method for measuring a country's market size could be determined by at least four major indicators including also the population size. The use of GDP or GNP per capita estimates to measure a country market size could be misleading. For example, a small country like Singapore with a high GNP per capita may appear more attractive than neighbouring Malaysia whose GNP per capita is much lower, but the population in Malaysia is over 22 million and the aggregate spending may be higher compared to that in Singapore with 3 million people. However the inclusion of population size together with the other market size variables into one single equation may also lead to multicollinearity problems. In addition, only the models developed by Tsai (1991) take into consideration variations in the economy (for example events that affect growth) which could be captured using dummy variables.

A variety of measures of openness have been used by authors investigating the determinants of FDI (see Table 5.1). Four measures have been estimated here, namely,  $M/GDP$ ,  $X/GDP$ ,  $X+M/GDP$  and an index of 1-4 to reflect the variety of measures used by authors in this context. The openness variable is significant in all of the models that have this variable, as shown in Table 5.1, suggesting that this variable is robust in its relationship with FDI and that it is one of the key variables in attracting FDI inflows. It is also observed that models peculiar to developing countries include government policy or intervention as one of the explanatory variables, such as the models developed by Govindan (1997), Tsai (1991) and Lim (1983). By contrast, in models for developed economies (Beer and Cory, 1996, and Culem, 1988), no such variable is included. It may be that there is a much lower level of intervention or restriction with regard to FDI inflows in the developed economies in contrast to developing countries, as was discussed in Chapter Two.

A limitation of the FDI models discussed above is that the models are time specific and so could only explain certain inferences at that specific time frame on the dependent and explanatory variables and may not be true for other time periods. This is not to say that the FDI models that have been developed are not useful, especially in the context of developing countries, where FDI is important. It only implies that those models could not be used to generalise phenomena at all time periods and that the explanatory power of those models is restricted to testing the 'significance' of the variables affecting entry at that particular point of time only. Note that there is no mechanism in these models to discuss government regulation with regard to entry, apart from capturing it by a dummy variable, as in the models developed by Govindan (1997), Tsai (1991) and Lim (1983). However this does not

tell us much: it only indicates whether such a policy is significant or otherwise in relation to FDI inflows into the host country, which may be relevant in the context of macro policy suitable for policy makers. (This issue is considered further in the context of regulation and of policy in Chapters Seven and Eight).

A more general issue, especially in the case of developing country, is that in practice, time series data may not be systematically collected and this may limit the development of model building using time series macro aggregate data. Indeed, time series data, especially for services FDI, is limited in Malaysia. But these limitations will not prevent this chapter from establishing a difference between services and manufacturing FDI in the context of Malaysia, which has not been done before. The main contribution is to identify the determinants that are associated with services FDI which might attract the entry of services MNFs, including multinational supermarket firms, from the perspectives of the FDI theory.

## **5.2 Model Specifications**

This section will empirically investigate the manufacturing-services distinction with the purpose of establishing a difference between services and manufacturing FDI using regression analysis. An aggregate model will be developed based on an amalgamation of variants of the FDI theories in the spirit of the eclectic approach as espoused by Dunning. In Chapter Eight this specification and Dunning's work will be reconsidered from the perspective of entry decision by MNFs and implications for theory.

The model will take into consideration the observations on the existing FDI models that were discussed in Section 5.1. In addition it will include events<sup>45</sup> that occurred during the study period and this will be reflected in the form of a dummy. This is a more realistic approach compared to the assumption that no such extreme event occurred during the study period. Secondly, the variables of the kind used by Li and Guisinger (1992) and Culem (1988) may not be appropriate to be replicated because the model developed in this chapter will use aggregate time series data instead of cross sectional firm data.

The model will statistically test two dependent variables: (i) FDI inflows in services<sup>46</sup> and (ii) FDI inflows in manufacturing. The main rationale, as was mentioned earlier, is to determine the service-manufacturing distinction by examining those variables that have an effect on the choice of location for manufacturing and for services FDI inflows and whether those variables are the same or different. Certain policy conjectures with respect to entry and regulation will emerge from this and will be pursued further by other means in subsequent chapters.

From the discussion in Section 5.1, the variables that have been documented as being the most important determinants of FDI are the market size variable and the growth indicator, which can be measured respectively by GNP or GDP and growth rate. This is consistent with the hypothesis that developing countries with a high economic growth indicator show signs of an expanding

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<sup>45</sup> Financial crisis in Malaysia from 1997 to 1998.

<sup>46</sup> Data on service FDI will be used as a proxy for entry of MNFs in the services sector.

economy and of an increased market share, which in turn are important signalling mechanisms in attracting MNFs and FDI. The market size hypothesis assumes a positive association between FDI and the expected sales of MNFs. On the other hand, a non significant relationship between FDI and market size would mean that MNFs would be more concerned with exports than with supplying domestic markets.

Since the openness variable of the host country is also found to be significant and widely used by others, as was discussed in Section 5.1, this variable will be one of the core variables to be estimated in the proposed model. The inclusion of this variable in the model may be argued from the point that the openness of the host country for MNFs, including multinational supermarket firms, means that there is freedom for imported goods to move within the international borders and leads to more choice for consumers. It is hypothesised here that the openness of the country as measured by the proxy of the ratio of exports plus imports to GDP will have a positive effect on determining FDI inflows. This measure of openness is used by Chakrabarti (2001)<sup>47</sup> while Beer and Cory (1996) and Culem have used exports to GDP as a proxy of openness and Govindan has used imports to GDP. Li and Guisinger (1992) used an index between 1 to 4 (1=most and 4=little) as an indicator of openness. (Sometimes other indicators have also been used for this purpose, such as the percentage of total current revenue that comes from taxes on international trade and transactions - see Billington, 1999). Here, imports plus exports to GDP  $[(M+X)/GDP]$  will be used as the measure of openness because this reflects the movement of goods from and into the host country. The coefficient is expected to have a positive sign and significant correlation to FDI.

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<sup>47</sup> Buch and Lipponer (2004) have also used imports plus exports to GDP as a measure of openness.

Besides market size and openness, investment decisions by foreign investors are also influenced by macroeconomic instability, reflecting the presence of internal economic pressures (Schneider and Frey, 1985 and Govindan, 1997). The reason for including a variable to reflect this in the regression is that it allows for the possibility that an unstable economy in the host country might affect the investment decisions of international investors. The inflation rate will be used as a proxy for the degree of macroeconomic instability and the risk or uncertainty associated with it. On the other hand, higher inflation might also have a positive impact on the nominal dependent variable (Buch and Lipponer, 2004). The GDP price deflator will be used here as a measure of inflation. This has an advantage over CPI in that the GDP price deflator covers all final expenditure on domestically produced goods and services including households and governments, capital expenditure and exports (National Statistics UK, 2001).

As was discussed in Chapter Four, Hymer (1960) argued that interest rates differential is not a factor in attracting FDI inflows. In order to incorporate Hymer's view, interest rate differentials, lending rates minus London Interbank Offered Rates (LIBOR)<sup>48</sup> will be included to reflect the financial feature of FDI flows. The hypothesis is that lower interest rates in the host country will encourage investors to borrow funds in that country, resulting in lower FDI inflows. In other words, significantly more funds will flow into the host country whenever the prevailing lending interest rate (IR) in the host country is higher. The regression coefficient is expected to be negative.

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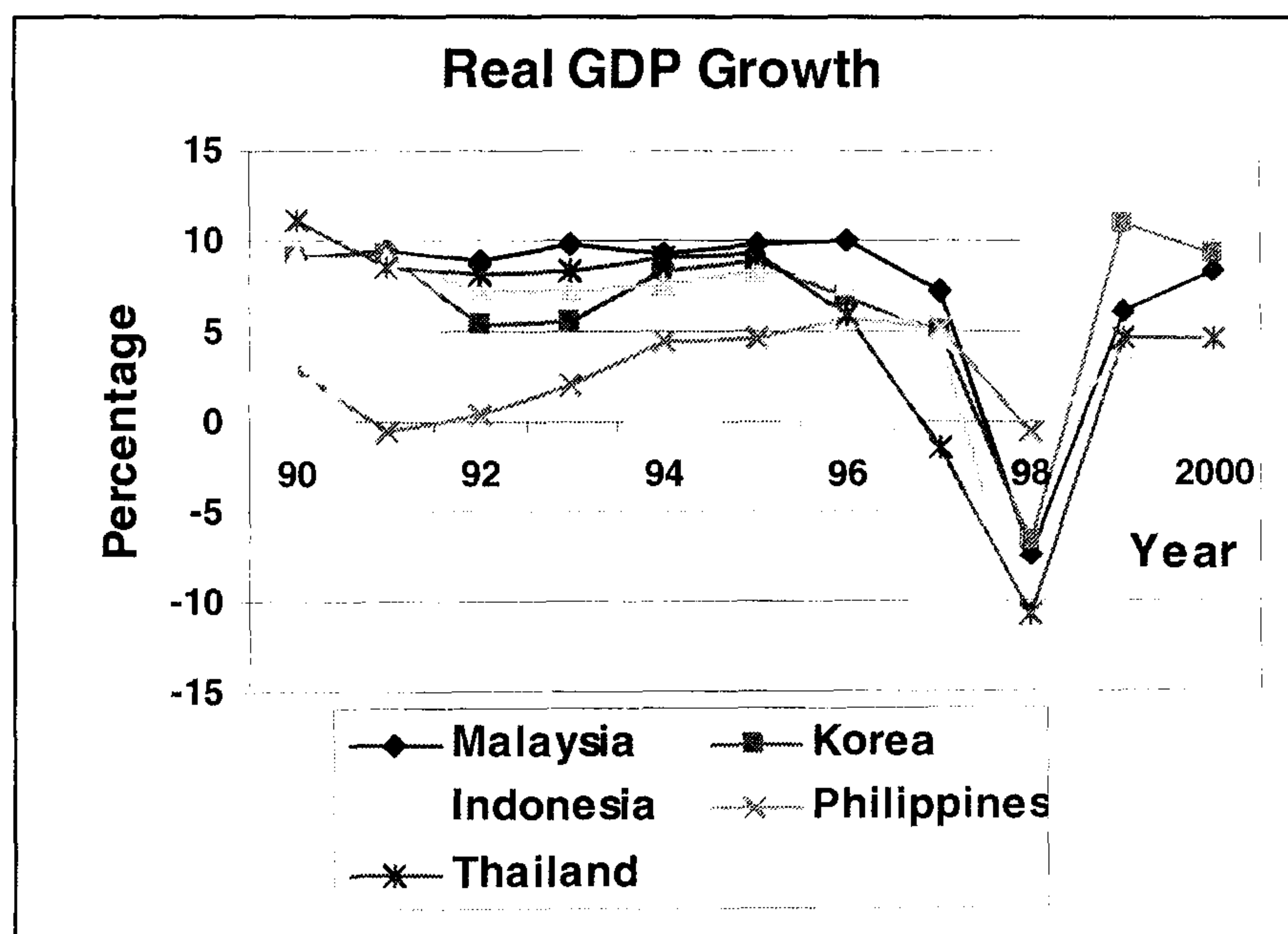
<sup>48</sup> Representing rest of the world.



The other variable that has been the subject of intensive research is the relationship between FDI flows and exchange rates. The observation that FDI may be correlated with exchange rate movements tends to support a common belief that FDI may flow into the host country when the exchange rate of the host country is weak so that foreign firms are able to purchase the assets of the host country cheaply. In support of this argument are a number of empirical studies including Cushman (1985 and 1988), Caves (1989), Froot and Stein (1991) and Swenson (1994), which have found significant correlation between the depreciation of the US Dollar and increased FDI flows in the United States. Conversely, other studies exploring the relationship between measures of exchange rate movements and aggregate investments, including Ray (1989), Stevens (1992) and Blonigen (1997) have found little support for any correlation. At the same time, Blonigen (1997) also argued that one reason why most economists have rejected any links between exchange rates and FDI flows is that investment decisions are not solely based on price but also on the rate of return on investment and other macro economic conditions. We have also seen that, at the height of the Asian financial crisis (1997-1998) when some of the Asian currencies (Indonesia, Malaysia, Philippines, South Korea and Thailand) were devalued to less than half of their value, instead of seeing inward inflows of FDI, as assets were now cheap, the reverse took place - an outward flow of foreign funds. One of the reasons may be that the instability of the economy and the potential to deteriorate further, which would result in further devaluations of the currency, affected investors' confidence. With these perspectives, the real effective exchange rate index will be used in the model.

As mentioned earlier, the model that is developed in this dissertation will take into consideration events such as the Asian financial crisis (1997-1998) which affected the rate of economic growth for Malaysia. Figure 5.1 captures the changes characterised by a period of negative growth which corresponds to the Asian financial crisis. The inclusion of the crisis years in the form of a dummy variable (D1) makes the model more dynamic and is hypothesised to have a negative effect on FDI inflows.

**Figure 5.1**



In accordance with the above discussions, the general mathematical expression for the purpose of establishing a distinction between services and manufacturing determinants of FDI may be written as follows:

$$\ln FDI = \alpha_0 + \alpha_1 \ln GNI_{-1} + \alpha_2 \ln \Delta GDP + \alpha_3 \ln INF + \alpha_4 \ln \frac{M + X}{GDP} + \alpha_5 \ln(IR - LIBOR) + \alpha_6 \ln EX + \alpha_7 D1 + \gamma \dots (5.11)$$

where

$\ln$  denotes natural logarithm

$FDI$  = Total annual manufacturing FDI inflows and services FDI inflows in real terms (base year 1995)

$GNI_{-1}$  = GNI in real terms lagged one year (base year 1995).

$\Delta GDP^{49}$  = annual growth rate

$INF$  = GDP price deflator as a proxy for inflation.

$\frac{M + X}{GDP}$  = Openness of the host country expressed as the ratio of imports plus exports to GDP.

Lending rates- $LIBOR$  = Interest rate differentials between host country and LIBOR.

$EX$  = Real effective exchange rate index.

$D1$  = Dummy variable for financial crisis (1997-1998)

This relationship is tested using Ordinary Least Square (OLS)<sup>50</sup> regression using annual time series data for a 21-year period (1980-2000) for manufacturing FDI inflows and a 16 year period (1985-2000) for service FDI inflows (Appendix 5.1) for Malaysia. For the purpose of comparison<sup>51</sup> the model was also estimated using UK data for manufacturing and services FDI (Appendix 5.2), since data on these sectors are available for a much longer period of 26 years (1975-2000).

The data for manufacturing FDI in Malaysia were obtained from the Malaysian Industrial Development Authority, whose data are based on approved foreign manufacturing projects (manufacturing FDI) for a particular year. The main disadvantage is that projects that have been approved may not be implemented in the same year, or at all<sup>52</sup>. However this is the only available source of manufacturing data systematically collected by the Authority. Data on services FDI were obtained from the Central Bank of Malaysia. The data for UK FDI inflows for manufacturing and services sector were obtained from the National Statistics UK. Data on macroeconomic variables (the independent variables) were obtained from two

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<sup>49</sup>  $\Delta GDP$  is also included in the model to capture the growth effect.

<sup>50</sup> The OLS technique was chosen because it is one of the most well-known and the most suitable for time series data and for country specific purposes (Gujarati, 1995 and Stewart, 1991).

<sup>51</sup> The main reason for using the UK as a comparator is because the UK has a long time series data.

<sup>52</sup> To be consistent with the analysis of the other dependent variable, the lagged variable was not tried.

sources, namely, from World Development Indicators (2002) and the International Financial Statistics Yearbook, IMF (2001).

### **5.3 Empirical Results**

Even though the openness variable, imports plus exports to GDP, was considered to be the most appropriate, regression analysis was carried out on all the openness variables (imports to GDP, exports to GDP and imports plus exports to GDP). These variables were included one at a time in the analysis while retaining other variables. Although imports plus exports to GDP is the main variable of interest here, the main aim is to show that all the openness variables, as mentioned above, are significant. This may relate to taxes, tariffs and subsidies that may have links to regulation that will be discussed in Chapter Seven. Tables 5.2 and 5.3 chart out the difference of the variables (significant or otherwise) between manufacturing and services FDI for the UK and Malaysia, where it is shown that all the three measures of the openness variables are significant.

However only model 5.11 with imports plus exports to GDP ( $M+X/GDP$ ) as the openness variables<sup>53</sup> will be reported in detail here. The results for this model are as in Table 5.4 and Table 5.5 for Malaysia and the UK respectively. The main reason for choosing this model is because it is the most appropriate measure of openness in the context of this dissertation, as it relates to the regulation parameters (imports and exports) that will be discussed in Chapter Seven.

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<sup>53</sup> See Buch and Lipponer (2004) and Chakrabarti (2001)-these two authors have used imports plus exports to GDP as the openness variable.

**Table 5.2****Determinants of Manufacturing and Services FDI Inflows in the UK\***

Variables	Services FDI UK			Manufacturing FDI UK		
	<i>t</i> statistics	<i>t</i> statistics	<i>t</i> statistics	<i>t</i> statistics	<i>t</i> statistics	<i>t</i> statistics
Real GNL <sub>1</sub>	/	/ <sup>+</sup>	-	-	/	/
ΔGDP	-	-	-	/ <sup>+</sup>	/ <sup>+</sup>	/ <sup>+</sup>
Inflation	/ <sup>+</sup>	/ <sup>+</sup>	/ <sup>+</sup>	-	/ <sup>+</sup>	/ <sup>+</sup>
Exchange rate	/	/	/	/	-	/
Lending rates- Libor	/	/	/	/	/	/
M/GDP	/			/		
X/GDP		/			/	
M+X/GDP			/			/

**Table 5.3****Determinants of Manufacturing and Services FDI Inflows in Malaysia\***

Variables	Services FDI Malaysia			Manufacturing FDI Malaysia		
	<i>t</i> statistics	<i>t</i> statistics	<i>t</i> statistics	<i>t</i> statistics	<i>t</i> statistics	<i>t</i> statistics
Real GNL <sub>1</sub>	/	/	/	/	/	/
ΔGDP	-	-	-	/ <sup>+</sup>	/	/ <sup>+</sup>
Inflation	-	-	-	-	-	-
Exchange rate	-	-	-	/	-	/
Lending rates- Libor	/	/	/	/	/	/
D1 (crisis)	/	/	/	/	-	/
M/GDP	/			/		
X/GDP		/			/	
M+X/GDP			/			/

**Key**

/ = significant

/<sup>+</sup> = significant with opposite sign

- = not significant

\* The results are in Appendix 5.3

The *Adjusted R<sup>2</sup>* of the estimates for manufacturing and services FDI inflows in the UK and Malaysia indicate that the model is significant overall. The impact of market size ( $GNI_t$ ) on manufacturing and services FDI inflows in Malaysia is found to be statistically significant. The market size hypothesis is also consistent and significant for manufacturing FDI inflows for the UK. This confirms that market size is an important determinant of FDI in manufacturing. However, when the dependent variable is services FDI in the UK, market size as proxied by real  $GNI_t$  is positive but not significant. One possible conjecture is that the variable  $GNI_t$  is not a good proxy for size in the case of services FDI for the UK. Other work where market size ( $GNI_t$ ) is positive but not significant is by Beer and Cory (1996).

With regard to the growth rate variable that is measured by  $\Delta GDP$ , the service-manufacturing distinction is apparent. The growth rate variable does not have the expected positive signs for manufacturing FDI, for either the UK or Malaysia, but has positive signs (although not significant) for services FDI for both countries. This finding differs from that reported by Culem (1988) and Tsai (1991). This difference might be explained by the fact that the models developed by Culem<sup>54</sup> and Tsai used total FDI inflows as their dependent variable, in contrast to the model developed in this chapter, which used manufacturing and services FDI inflows as the dependent variable. Studies using manufacturing FDI as the dependent variable also found that  $\Delta GDP$  is not a crucial factor in attracting manufacturing FDI inflows (see Govindan, 1997) and is also negative (see Beer and Cory, 1996).

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<sup>54</sup> Culem (1988) also found that the annual growth rate is not significant when his dependent variable is EC FDIs in the United States.

**Table 5.4**  
**Empirical Results of Real Manufacturing and Real Services FDI Inflows in Malaysia**

Variable	manufacturing	Services
<i>Constant</i>	-1.20 (-3.70)	-52.39 (-2.13)
<i>RealGNI<sub>t-1</sub></i>	0.99 (60.7)*	2.78 (2.73)*
<i>ΔGDP</i>	-0.004 (-2.55)*	0.19 (0.64)
<i>Inflation</i>	0.001 (1.06)	0.21 (1.05)
<i>Openness (M+X/GDP)</i>	0.68 (12.30)*	1.89 (2.99)*
<i>Interest Rates</i>	-0.01 (-2.35)*	0.14 (2.89)*
<i>Exchange Rates</i>	-0.22 (-2.42)*	-0.69 (-1.10)
<i>D1</i>	-0.15 (-3.09)*	-0.78 (-1.78)**
<i>Adj. R<sup>2</sup></i>	.90	.93
<i>F</i>	35.5	42.7
<i>DW</i>	1.62	2.21

**Table 5.5**

**Empirical Results of Real Manufacturing and Real Services FDI Inflows in the UK**

Variable	manufacturing	Services
<i>Constant</i>	4.92 (0.76)	11.38 (0.59)
<i>RealGNI<sub>t-1</sub></i>	0.56 (2.28)*	0.27 (0.33)
<i>ΔGDP</i>	-0.13 (-5.55)*	0.02 (0.49)
<i>Inflation</i>	0.01 (6.85)*	0.11 (4.12)*
<i>Openness (M+X/GDP)</i>	4.6 (8.32)*	7.38 (3.99)*
<i>Interest Rates</i>	-0.06 (-4.79)*	-0.14 (-3.53)*
<i>Exchange Rates</i>	-0.12 (-2.21)*	-0.07 (-10.2)*
<i>Adj. R<sup>2</sup></i>	.60	.75
<i>F</i>	4.3	10.5
<i>DW</i>	1.60	1.80

\* significant at the 5% level, \*\* significant at 10% level, *t*-statistics are in parentheses.

**Note:** Gross fixed capital formation as a proxy for infrastructure facilities was formerly included in the model but was dropped because it is not an appropriate measure for infrastructural facilities.

The inflation coefficients for manufacturing and services FDI in the UK and Malaysia, being positive, have unconventional signs. For the UK they are significant. However, as stated earlier, Buch and Lipponer (2004) have argued that the impact of inflation on FDI is not clear-cut a priori. They argued that, on the one hand, inflation is expected to have a negative impact because of the increased macroeconomic instability. On the other, Buch and Lipponer argued that higher inflation might also have a positive impact on the nominal dependent variable.

On the openness, both services and manufacturing FDI of the UK and Malaysia responded positively to the openness variable (imports plus exports to GDP). Most authors have argued that a country's degree of openness to international trade will be a relevant factor in influencing the decision of foreign investment. The openness variable in this estimate is with regard to 'openness to trade' which refers to the ease with which goods are imported or exported. (In this context we may argue that both the UK and Malaysia have open policies towards manufacturing as well as services FDI). The results for the openness variable, which were significant for both countries, support the findings of other works by Govindan (1997), Beer and Cory (1996), Li and Guisinger (1992) and Culem (1988) and Chakrabarti (2004), all of whom showed that the openness variable is positive and statistically significant with regard to FDI inflows.

With regard to the interest rate variable, the regression coefficients for manufacturing and services FDI are negative and significant for the UK and also for manufacturing FDI in Malaysia, but not for services FDI in Malaysia. In this context Culem (1988) and Beer and Cory (1996) argued that high interest rates will encourage investors to bring in funds from outside and we may expect FDI inflows



to be high, in contrast to a lower interest rates policy which may encourage investors to raise more funds in the host country, causing FDI inflows to be low.

The regression coefficient for the exchange rate is negative and significant for manufacturing as well as services FDI for both the UK and Malaysia. This highlights the negative impact of an appreciation of the exchange rate. This finding concurs with those of Cushman (1985 and 1998), Caves (1989), Froot and Stein (1991) and Swenson (1994), although others (see Ray, 1989, Stevens, 1992 and Blonigen, 1997) found no relationship between exchange rate and FDI. However, if foreign investors are keen to avoid any exchange risk, they may borrow where their assets are located. That is, they may borrow in the host country and this may be one reason why economists have argued that the correlation between exchange rate and FDI inflows is mixed (see Blonigen, 1977).

Events that sparked economic turmoil such as the Asian financial crisis (1997-1998) have the expected negative sign for manufacturing and services FDI, indicating that they affected investors' confidence in Malaysia. The financial crisis not only affected new investments but also saw the exit of existing investments. This variable was not tested in the case of the UK, since the UK was not affected by the crisis.

At a more general level, bearing in mind that there are country specific differences between Malaysia (developing) and the UK (developed) in terms of

economic structure and the different stages of economic development, the manufacturing-services distinction between the two countries<sup>55</sup> is also not analogous.

For Malaysia (see Table 5.4), it can be seen that the coefficients of the growth rate and the interest rate variables between manufacturing and services are clearly different because they are opposite in signs. However for the other variables the manufacturing-services distinction was examined further with a view to establish whether the magnitudes of the coefficients of these variables are in fact different. This was done by considering the relative magnitudes of the regression coefficients in the two models relative to their standard errors<sup>56</sup>. In addition to the two variables (growth rate and interest rate), the analysis (Table 5.6) confirmed that the coefficients of market size, openness, and the dummy variable (financial crisis) are different between services and manufacturing FDI, but the exchange rate variable is not different. For the UK (see Table 5.5), the growth rate variable (opposite sign) is clearly different between services and manufacturing FDI. Using the same technique as above, the other variables (see Table 5.7) whose coefficients are different between services and manufacturing FDI are inflation, openness and the interest rates, whereas the coefficients on the market size variable and the exchange rate variable are not different. This form of comparison is only indicative, since it involved a comparison between quite distinct estimations, because the models were independently estimated.

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<sup>55</sup> Regression analysis on the pooling of the UK and Malaysian data was originally reported but it is now dropped from the analysis because of obvious economic differences between the two countries.

<sup>56</sup> To analyse this, we looked at the Adjusted Coefficient=Coefficient $\pm$ standard error. If the two ranges of the coefficients do not overlap, then there is a difference between the coefficients of the two models at the one standard error difference. The analysis was done for cases where at least one coefficient was significant in the initial estimate.

**Table 5.6****Comparing Coefficients Relative to their Standard Errors between Manufacturing and Services FDI - Malaysia**

	Manufacturing			Services		
	-1se	Coefficient	+1se	-1se	Coefficient	+1se
$\Delta GDP^*$		-0.004			0.19	
<i>Interest Rates</i> *		-0.01			0.14	
<i>Real GNI<sub>t-1</sub></i> *	0.97	0.99	1.01	1.76	2.78	3.8
		(0.02)			(1.02)	
<i>Inflation</i>		-			-	
<i>Openness</i> *	0.62	0.68	0.74	1.26	1.89	2.52
		(0.06)			(0.63)	
<i>Exchange Rates</i>	-0.31	-0.22	-0.13	-1.32	-0.69	-0.06
		(0.09)			(0.63)	
<i>D1</i> *	-0.20	-0.15	-0.10	-1.22	-0.78	-0.34
		(0.05)			(0.44)	

Figures in parentheses are the standard error (se).

\* indicate a difference - no overlap.

- not significant in the original estimate

**Table 5.7****Comparing Coefficients Relative to their Standard Errors between Manufacturing and Services FDI- UK**

	Manufacturing			Services		
	-1se	Coefficient	+1se	-1se	Coefficient	+1se
$\Delta GDP^*$		-5.55			0.49	
<i>Real GNI<sub>t-1</sub></i>	0.31	0.56	0.81	-0.55	0.27	1.09
		(0.25)			(0.82)	
<i>Inflation</i> *	0.009	0.01	0.011	0.08	0.11	0.14
		(0.001)			(0.03)	
<i>Openness</i> *	4.05	4.6	5.15	5.53	7.38	9.23
		(0.55)			(1.85)	
<i>Interest Rates</i> *	-0.07	-0.06	-0.05	-0.18	-0.14	-0.10
		(0.01)			(0.04)	
<i>Exchange Rates</i>	-0.17	-0.12	-0.07	-0.077	-0.07	-0.0063
		(0.05)			(0.007)	

Figures in parentheses are the standard error (se).

\* indicate a difference - no overlap.

## 5.4 Diagnostic tests

The models developed above have been checked for multicollinearity, serial correlation, stationarity (taking the first difference), and autocorrelation. The diagnostic statistics from the OLS exercise were used to test for these, especially for the time series model. In addition, the transformation by taking logs is also useful in reducing the variation in the variables. The model was also checked for correlations between the dependent and independent variables, bearing in mind that Pallant (2001) argued that a correlation above 0.3 is preferred.

As for multicollinearity, Achen (1982) and Gujarati (1995) argued that multicollinearity violates no regression assumptions. One way to ascertain the degree of multicollinearity is to calculate a correlation matrix between all the determinants where those highly correlated pairs will be identified. Tabachnick and Fidell (1996) suggest excluding two variables with a bivariate correlation of more than 0.70 in the same analysis. In contrast, others (see Pallant, 2001, Bryman and Cramer, 1997 and Gujarati, 1995) have suggested that the Pearson's correlation between each pair of the independent variables should not exceed 0.80. However multicollinearity cannot be avoided and any regression will suffer from it to some extent (Schroeder *et al.* 1986). Regression will be best when each independent variable is strongly correlated with the dependent variable but uncorrelated with other independent variables. From the correlation coefficient matrix (Appendix 5.4) we can draw the conclusion that multicollinearity is not a major problem, because none of the coefficients for the pairs of independent variables exceed 0.8.

The next test is to check against serial correlation or autocorrelation, which occurs most frequently in time series data sets. The Durbin-Watson<sup>57</sup> test is a useful indicator to check the presence of serial correlation. But this problem is again common in time series models, possibly due to omitted variables or misspecification of the models, and therefore some modifications of the models are needed. To correct for misspecification which leads to autocorrelation or serial correlation, the model relied upon the Cochrane-Orcutt method, which eliminates the presence of serial correlation.

## **5.5 Conclusion**

This chapter has reviewed FDI models representing the manufacturing sector, a model for the services sector as well as FDI models for aggregate FDI inflows involving cross country and also country specific studies of the developed and developing countries.

All the empirical models reviewed in this chapter have shown the importance of market size in relation to the entry of FDI. With regard to other variables, the models in Table 5.1 included variables suited to the sectors and countries under study and also of interest to the authors to establish a statistically significant relationship. For that reason, direct comparisons between the models are difficult. The availability of data is also another limitation, especially for developing countries such as Malaysia.

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<sup>57</sup> Values of DW statistic fall between 0 and 4 and according to Stewart (1991 p. 52), “.....in general the closer the value is to 2, the more acceptable is the estimated relationship will be.”

With the context of establishing the manufacturing-services distinction, the model developed in this chapter has examined several variables, including market size, growth rate, openness, inflation, interest rates, exchange rates and a dummy on economic turmoil. In the analysis it was found that, for Malaysia, the variables that are different between services and manufacturing are market size, growth rate, interest rate, openness and financial crisis. For the UK, the variables on growth rate, inflation, openness and interest rate are different between services and manufacturing FDI. The openness variable measured by imports plus exports to GDP, which is different between manufacturing and services FDI for Malaysia and also the UK, is also a core variable in the context of regulation that will be investigated in Chapter Seven.

Finally aggregate FDI models of the type developed in this chapter do not incorporate the fact that firms in the services and firms in the manufacturing sector may be systematically linked, for example by means of linkages in the form of vertical coordination and vertical integration in the case of supermarket firms. This is a major limitation of the FDI models which this dissertation addresses in a quite different way in the next chapter.

## CHAPTER SIX

### VERTICAL INTEGRATION: WITH APPLICATIONS TO SUPERMARKET FIRMS

#### 6.0 Introduction

In the previous two chapters, this dissertation has looked at the FDI theory and related empirical works with an emphasis on the manufacturing-services distinction. Chapter Four has surveyed the literature on FDI and found that the theory is aggregative and macro in approach and the arguments of the theory are centred on firms in production, although some authors argued that the theory is also applicable to services FDI. Empirical works following from that literature were also seen to concentrate substantially on manufacturing firms, with less emphasis on services firms. Using the same methodology as several previous authors (e.g. by Beer and Cory, 1996 and Culem, 1988) Chapter Five was motivated to show that the entry of FDI in services and manufacturing into the host economy such as Malaysia may be associated with some macro economic variables such as market size, economic growth, inflation, interest rate, openness and exchange rate. The prima facie case for this motivation may have some policy implications for the host country with regard to the entry of services FDI and manufacturing FDI. In that chapter, econometric work was undertaken and the result showed that there is evidence that the coefficients of the variables that attract FDI in services are different from those for manufacturing FDI, both for Malaysia and also for the UK. However, in common with other econometric works in this area, each of these approaches is essentially aggregative and sectoral.

For firm specific entry, aggregated analysis of the kind developed in Chapter Five may be less suitable. A micro methodology is more appropriate to the analysis of MNFs, since the manufacturing-services distinction suggests a case for further disaggregation and for more detached modelling with a firm specific context. With these perspectives, this chapter and Chapter Seven will focus on microeconomic approaches to the analysis of MNFs. In this chapter, a further motivation to consider a disaggregated case is the argument for vertical integration, given the significance of such features for MNFs. The significance of the openness variable in the context of the econometric work in Chapter Five also suggests a potential link to disaggregation with issues on regulation (as taken up in Chapter Seven) and also with reference to discretionary transfer price in the context of vertical integration. Before turning to these points and applications, including potential applications to supermarkets, this chapter paves the way with the formal development of a multistage model and associated results pertaining to the potential optimality of vertical integration vis-à-vis vertical separation.

For this purpose it will draw upon a formal proof of the well-known results of vertical integration, together with the extended models of vertical integration/vertical coordination contained in Hasan and Ryan (2003). To begin with, Section 6.1 will discuss the vertical integration/coordination literature where the emphasis will be on the food supply chain and supermarkets. Section 6.2 will briefly revisit the work of Hasan and Ryan. Although the work of Hasan and Ryan concerned successive monopoly cases, the proof relating to the model can readily be extended to more general cases, including to non successive monopoly conditions and oligopolistic cases. Having done this, in Section 6.3, the associated model is illustrated with



multinational interpretations with examples interpreted with reference among other things to a supermarket related case in which the reader might interpret the final stage as referring to a differentiated oligopoly with vertically integrated suppliers which it wholly owns or controls. The distributional implications stemming from vertical integration relating to the increase in profits, relationship with suppliers, workers and consumers will be discussed in Section 6.4, emphasising that in a multinational setting, benefits may accrue to different nations. Section 6.5 will focus on the issue of technology transfer via vertical integration as an instrument for the transmission of technology between MNFs and domestic firms. Finally, Section 6.6 summarises the discussions and formulates the final conclusion that a firm specific methodological approach is more appropriate to the analysis of MNFs, especially in the context where MNFs are vertically integrated or coordinated organisations spanning both services and production activities. There are efficiency gains when departing from the double marginalisation case, where vertical integration may be welfare enhancing iff (if and only if) benefits are passed down to producers and consumers of the host country. The results stemming from the distributional implications will have some policy implications particularly useful for the host government.

## **6.1 Vertical Integration and Coordination in the Food Industry**

Vertical integration is said to take place when two or more stages of production are merged together under the control and ownership of one company either by forward or backward vertical integration (Waterson 1984; Perry 1989; Carlton and Perloff, 1994 and Kühn and Vives, 1999). In both forms, one or more

intermediary channels that link the stages of production are eliminated. Accordingly here vertical integration will refer to control of supplies of intermediate commodities through ownership of suppliers, whereas the closely related concept of vertical coordination will refer to control of supplies from suppliers but not ownership of suppliers.

The vertical integration/coordination argument was advanced by Williamson (1971, 1979, 1986) based on the pioneering work of Coase (1937) with the emphasis on the comparative merits of markets and firms as institutions for coordinating production decisions. Coase argued that transactions will be organised within the firm if the cost of doing this is lower than the costs associated with those transactions via the markets. This distinction recognizes that transaction costs may be greatly reduced by internalizing the production process and possessing specific assets, whereas in the neoclassical argument, these advantages together with information costs, bargaining and decision costs and policing and enforcement costs are non-existent. Besides the Coasian factors, other arguments for vertical integration have been the asset specificity argument (Williamson, 1986); the drive for market power (Comanor, 1967; Etgar, 1978; Perry, 1989 and Martin, 1994), uncertainty in the supply of the upstream good (Arrow, 1975; Carlton 1979; and Scherer 1980) and the efficiency argument because double marginalisation is eliminated (Splenger, 1950; Hamilton and Mqasqas, 1996 and Kühn and Vives, 1999) as well as arguments stemming from technological advantages (Clarke, 1985 and Davies, 1987). These factors can be summed-up as decisions by firms to balance potentials and capacities while at the same time maintaining flexibility (Vallespir and Kleinhans 2001).

Where supermarket firms are concerned, purchasing their products on the free market is only one of the possible options. In addition to open market transactions, Martinez (2002) states that the supplier and the retailer may undertake trading relationships through contract purchasing, i.e. coordination, or could also undertake complete vertical integration. However in the food sector, open market relationships will be unable to coordinate transactions, given continually changing consumer preferences (Chambers and King, 2002).

There are several reasons why retailers such as supermarket firms may have to get involved in the supply chain rather than purchasing products on the free market. A strong reason for a supermarket firm to integrate or coordinate its activities is to ensure that supplies are provided at the right time, in the right quantity, of appropriate quality and at competitive prices (Competition Commission, 2000 and Dobson and Waterson, 1996). In this context, buying on the spot market is said to be inefficient to handle such a complex transaction involving numerous suppliers along the food supply chain.

Another argument for vertical integration in the food sector is the sophistication and continuous change in consumer preferences and awareness of food quality and safety. This is especially so when quality uncertainty is an increasingly important issue in the food chain. Economides (1999) argues that overall gains in quality may stem from integration of successive stages of production. The case in the poultry, egg and pork industries is a good example; during the last decade these industries have experienced increase in vertical integration and coordination to maintain quality (Aust, 1997). The empirical study of Frank and Henderson (1992)

suggests that transactional inefficiencies encountered in the food industry promote increased utilisation of non market vertical arrangements. The usual Coasian transaction cost factors identified by them are uncertainty, input supplier concentration, asset specificity and internalisation cost. However Osegowitsch and Madhok (2003) contend that many of the earlier reasons for vertical integration motives have become outdated and diminished in importance. This is especially so in the food supply chain where, they argue, a transaction cost argument is not the only motive for firms in this sector to consider integration but there are other compelling reasons, which are more peculiar to the food industry (see Hennessy, 1996). One reason is that information asymmetry with regard to quality is a major motive for firms in the food supply chain to coordinate their activities. This is also consistent with the argument of Chambers and King (2002), which state that the cost of measuring product quality will affect the structure of market relationship in the food supply chain. In general Davies (1987) had earlier mentioned that information asymmetry with regard to quality of the intermediate product might motivate the user to integrate its upstream supplier.

A further motivation for retailers to effectively become backward integrated into the supply chain to a much greater extent than supplying firms have been able to integrate forward is because of the growing concentration in the retail sector vis-a-vis other sectors. Here it means that retailers have used extensive mechanism including coordination and contracting to formalise the relationship with suppliers with the aim of controlling the nature and the flow of the products involved.

Where supermarket firms are concerned, they have effectively used their size,

concentration and market power to coordinate their trading relationship with their suppliers to their advantage (Competition Commission, 2000). Two main issues with reference to vertical integration between the supermarkets and their suppliers which were the subject of that report on supermarkets by the Competition Commission of the UK were the ability of the supermarkets to drive down suppliers' price to uneconomic levels and other alleged practices of which the most common was requiring suppliers to pay for shelf space or slotting fees for their products. With reference to size and market power, these were earlier recognised by Hirsh and Votaw (1952) who argued that power will naturally come with economic size of the firm where a big supermarket has a cost advantage over a small grocery shop. This is supported by Dobson and Waterson's (1996) assertion that state economies of size and scope have a cost advantage over smaller rivals.

In the multinational context, food retailers, and especially supermarket firms in the UK and the United States, are highly advanced in terms of logistics, marketing, pricing as well as sourcing of supplies. They have come to a stage of a 'one-stop shopping' concept with several large multiple retail chains dominating the market. The advancement of these firms may relate to their having technical innovation and human expertise which are central to their undertaking vertical integration or coordination with their product suppliers. They have also used their size effectively to bargain for lower prices with their suppliers. As these firms internationalise they will bring along their technologies and expertise and may start to change the food retailing sector of the host country, especially in developing markets. These firms will introduce their operating systems to the host market and in doing so will

modernise the sector, a transformation which may benefit local firms such as suppliers through the transfer of technology by the MNFs.

Having surveyed the literature on the importance of coordination and integration in the food supply chain, the next section will revisit the work of Hasan and Ryan (2003) in which various phenomena pertaining to the vertical integration or vertical coordination decisions were explicitly modelled for general cases, before going on to Section 6.3 to consider specifically multinational extensions and interpretations of that model, with an idea of linking it to supermarket firms.

## **6.2 Vertical Integration Model in the Context of Applications to Supermarket Firms**

Prior to developing the vertical integration arguments with reference and explicit applications to multinational supermarket firms, this section will first summarize the vertical integration model as set out in Hasan and Ryan, which forms the basis of the multinational discussion in the next section.

The basic model consists of two successive monopoly firms at stages of production,  $s$  and  $s-1$ . The production function of firm  $s$  is specified by  $x_s = f_s(L_s, K_s, y_s)$ , where  $x_s$  is output and  $L_s, K_s, y_s$  are respectively quantities of labour, capital and intermediate inputs utilised in the production. The inverse demand at level  $s$  is  $p(x_s)$  and the unit costs of labour, capital and intermediate inputs are given by  $w, r$  and  $p(y_s)$  respectively, then the profit optimizing level,  $\pi_1^*$ , of firm  $s$  is given by the relationship as follows:

$$\begin{aligned}
& \text{Max } \pi_1^* = p(x_s)x_s - wL_s - rK_s - p(y_s)y_s & (6.1) \\
& \text{s.t. } x_s = f_s(L_s, K_s, y_s) \\
& x_s, L_s, K_s, y_s \geq 0
\end{aligned}$$

In a context of successive monopoly,  $p(y_s)$  corresponds to the way in which input  $y_s$  is acquired by firm  $s$ . The intermediate inputs  $y_s$  may be acquired either from an independently profit maximising firm, i.e. based on the spot market price or  $p(y_s)$  may be an optimally determined intra-firm transfer price determined via vertical integration or from coordination between firm  $s$  and its intermediate input supplier. These possibilities will be considered below, following the development of a model of the enterprise producing the intermediate output  $y_s$ .

Intermediate inputs are produced by a firm  $s-1$ , whose production function is  $y_{s-1} = f_{s-1}(L_{s-1}, K_{s-1}, Z_{s-1})$ , where  $y_{s-1}$  is output and  $L_{s-1}$  is the number of labour,  $K_{s-1}$  is the amount of capital and  $z_{s-1}$  are quantities of intermediate inputs to firm  $s-1$  and correspondingly it pays unit cost of wage,  $w$ , interest rate,  $r$  and cost  $c_z$  respectively. With the given output and production factors, the profit maximising function,  $\pi_2^*$ , for a firm  $s-1$  is given by:

$$\begin{aligned}
& \text{Max } \pi_2^* = p(y_{s-1})y_{s-1} - wL_{s-1} - rK_{s-1} - c_z Z_{s-1} & (6.2) \\
& \text{s.t. } y_{s-1} = f_{s-1}(L_{s-1}, K_{s-1}, Z_{s-1}) \\
& y_{s-1}, L_{s-1}, K_{s-1}, Z_{s-1} \geq 0
\end{aligned}$$

In the absence of either vertical integration or of vertical coordination, if firm  $s$  is the only purchaser of output  $y_{s-1}$ , such that  $y_s = y_{s-1}$  and  $p(y_s) = p(y_{s-1})$ , then an optimal solution to (6.2) is in turn consistent with the optimization plan by a firm via (6.1) and a supplier via (6.2). This situation is synonymous with the market clearing conjecture or the spot market situation.

The next possibility is to consider a situation where firm  $s$  and its intermediate input supplier  $s-1$ , are vertically integrated, such that  $y_s=y_{s-1}$ . This strategy may be optimal because then firm  $s$  can determine its own input price,  $p(y_{s-1})$  from its own supplier  $s-1$  and can arrange optimal production of  $x_s$  as well as  $y_{s-1}$  so that overall profits are optimised. The profit maximisation strategy,  $\pi_3^*$ , of the integrated firm for this case is as follows:

$$\begin{aligned} \text{Max } \pi_3^* &= \pi_3^* = p(x_s)x_s - wL_s - rK_s - wL_{s-1} - rK_{s-1} - c_z Z_{s-1} \\ \text{s.t. } x_s &= f_s(L_s, K_s, y_s) \\ y_s &= f_{s-1}(L_{s-1}, K_{s-1}, Z_{s-1}) \\ x_s, L_s, K_s, y_s, L_{s-1}, K_{s-1}, Z_{s-1} &\geq 0 \end{aligned} \quad (6.3)$$

The results and ideas stemming from (6.1), (6.2) and (6.3) [see Appendix 6.1 for the details] were formalised in Hasan and Ryan (2003) via Theorems I and II below:

**Theorem I**

If  $y_{s-1}=y_s$  the overall profits generated by maximising via (6.3) and establishing an optimally determined endogenous transfer price  $\lambda_{s-1}$  is no less than profit generated via separate maximisations via (6.1) and (6.2) with an exogenous transfer price  $p(y_s)$ , i.e:  
 $\pi_3^* \geq \pi_1 + \pi_2$

**Proof**

If  $y_{s-1}=y_s$  so that  $p(y_{s-1})=p(y_s)$  then optimal solutions  $\pi_1, \pi_2$  to (6.1) and (6.2) together constitute a feasible but not necessarily an optimal solution  $\pi_3^*$  to (6.3)

**Theorem II**

With assumptions as in (6.1), (6.2) and (6.3), unless  $\lambda_{s-1}=p(y_{s-1}^*)$ , where  $\lambda_{s-1}$  is optimal in (6.3) and  $y_{s-1}^*$  is optimal in (6.2), the optimal solution to (6.3) is such that  $\lambda_{s-1} < p(y_{s-1}^*)$  and  $y_{s-1} > y_{s-1}^*$ , whereby  $p(y_{s-1})^*$  and  $y_{s-1}^*$  are optimal in (6.2).

**Proof**

The proof of this result is in Appendix 6.2

While the models set out in (6.1), (6.2) and (6.3) were of the successive monopoly types, Hasan and Ryan argued that the conditions and proofs relating to Theorems I and II can be extended to oligopolistic cases too, involving more than



one firm at stage  $s$  ( $s=1, 2, \dots, N$ ) and  $s-1$  ( $s=2, 3, \dots, N$ ). In the paper extensions were also made to include quality variables,  $q$ , efficiency and productivity enhancing resources,  $g$  and the associated interpretations with reference to ‘make or buy’ decisions by means of the relations  $y_s=y_1+y_2$ , where  $y_s$  are acquisitions of intermediate inputs,  $y_1$  is ‘make’ and  $y_2$  is buy at a unit cost  $c_2$ . The expanded model is as follows:

$$\begin{aligned} \text{Max } \pi_4 = \pi_4^* &= p_s(x_s, q)x_s - wL_s - rK_s - wL_{s-1} - rK_{s-1} - c_z z_{s-1} - c_2 y_2 - G_1(g_1) - G_2(g_2) - Q(q) \\ \text{s.t. } & y_s = y_1 + y_2 \\ & x_s = f_s(L_s, K_s, y_s, g_1) \\ & y_1 = f_{s-1}(L_{s-1}, K_{s-1}, z_{s-1}, g_2) \\ & x_s, L_s, K_s, y_s, L_{s-1}, K_{s-1}, z_{s-1} \geq 0 \end{aligned} \quad (6.4)$$

### Theorem III

With assumptions as in Appendix (6.3) and if  $c_2^* \leq c_2$  and/or  $G_1^*(g_1) \leq G_1(g_1)$  and/or  $G_2^*(g_2) \leq G_2(g_2)$  then:

$$\begin{aligned} \text{Max } \pi_4 = \pi_4^* &= p_s(x_s, q) x_s - wL_s - rK_s - wL_{s-1} - rK_{s-1} - c_z z_{s-1} - c_2 y_2 - G_1(g_1) - G_2(g_2) - \\ & Q(q) - \theta(y_s - y_1 - y_2) - \lambda_s [x_s - f_s(L_s, K_s, y_s, g_1)] - \lambda_{s-1} [y_1 - f_{s-1}(L_{s-1}, K_{s-1}, z_{s-1}, g_2)] \quad (6.4)^* \\ & \leq \end{aligned}$$

$$\begin{aligned} \text{Max } \pi_4 = \pi_4^* &= p_s(x_s, q) x_s - wL_s - rK_s - wL_{s-1} - rK_{s-1} - c_z z_{s-1} - c_2^* y_2 - G_1^*(g_1) - G_2^*(g_2) - \\ & Q(q) - \theta(y_s - y_1 - y_2) - \lambda_s [x_s - f_s(L_s, K_s, y_s, g_1)] - \lambda_{s-1} [y_1 - f_{s-1}(L_{s-1}, K_{s-1}, z_{s-1}, g_2)] \quad (6.4)^{**} \end{aligned}$$

### Proof

Any solution to (6.4)\* is a feasible but not necessarily an optimal solution to (6.4)\*\*.

The quality variable  $q$  in (6.4) together with quality related cost relation  $Q(q)$  will be discussed in the context of perceived quality which is associated with branding. The efficiency enhancing resources  $g_1$ ,  $g_2$  and associated costs  $G_1(g_1)$ ,  $G_2(g_2)$  may refer to technical innovations and human capital or expertise associated with the MNFs, where  $G_1(g_1)$  is the cost of the productivity enhancing resources at the final stage  $s$  while  $G_2(g_2)$  is the cost of these resources at the intermediate input stage,  $s-1$ . Firm  $s-1$  intermediate input is  $z_{s-1}$  and its associated cost is  $c_{z-1}$ . In the

multinational context there may be several options of sourcing: firm  $s$  may obtain its intermediate inputs either from its integrated subsidiary firm,  $s-1$  via quantities  $y_1 > 0$ , from an independent external source,  $c_2$  via quantities  $y_2 > 0$  or from the optimal mix of both of these two sources,  $y_1, y_2 > 0$ .

In the subsequent section, this chapter will consider variants of these results with multinational interpretations and applications, particularly the potential advantages over alternative producers (or sources).

### **6.3 Vertical Integration - An Extension to Multinational Interpretations and Applications**

In Chapter Three it was shown that in less than a decade since the multinational presence in the Malaysian supermarket activity, sales from multinational supermarket firms have far exceeded sales generated from local supermarket firms. This phenomenon is not unexpected because the entry of these firms into the host market has brought along intangible assets or efficiency enhancing resources that are superior to the expertise of local firms. This is further compounded because local firms may lack product quality,  $q$  in the line of business activity they are in. These intangible assets of the MNEs may relate to  $g_1, g_2$  and associated costs  $G_1(g_1), G_2(g_2)$  and  $q$  with related cost relation  $Q(q)$  as in equation (6.4).

Dunning (1996) states that FDI constitutes a package of resources. But he did not specifically identify the specific resources. In this context, one kind of specific

resources are those associated with variables  $g_1, g_2$  and  $q$  as in equation (6.4). These efficiency enhancing resources  $g_1, g_2$  and  $q$  are one of the main reasons why host governments are preoccupied with the policy of attracting FDI and MNFs into their economies. There will be welfare gains from  $g_1, g_2$  which accompany the entry of these firms through increased competition, which will drive down cost and prices, while  $q$  will benefit consumers in terms of superior quality.

For host governments, at least in Malaysia, entry of the multinational supermarket firms is expected to reform the supermarket sector by bringing in retail innovation and change, especially where the supermarket activity is characterised with small, non-innovative local firms, as was discussed in Chapter Three. Therefore potential application of that kind provides motivation to examine the vertical integration framework in Section 6.2 but with multinational interpretations and potential applications to supermarkets which will be drawn from the context of the stylised models and Theorems. It will be argued that the restructuring of the retailing sector which will benefit the host country in general and the supermarket activity in particular will come from the quality variable  $q$  and the productivity enhancing resources  $g_1, g_2$ .

A third feature that has been incorporated into model (6.4) is the ‘make or buy’ decisions,  $y_s = y_1 + y_2$ . In the multinational context the decision to ‘make or buy’, may have a major impact on the supply of intermediate inputs from the local suppliers. The MNFs may ‘make’  $y_1$  via vertical integration or ‘buy’,  $y_2$  via imports or it may also buy from local suppliers provided the transfer price is lower than imports. In this way model (6.4) can be understood as a stylised presentation of the

supply chain decisions in organising the supply of its intermediate inputs from the supplier to the retail chains.

Firstly, this section will look at the quality variable,  $q$  in model (6.4), which is presented in the context of perceived quality where firms signal quality through branding. The quality variable  $q$  is analogous to Bain's (1956) brand allegiance or product differentiation advantages that may be used by firms to block entry but in model (6.4), the quality or brand is used to penetrate new markets and elevate the host market. The quality variable in (6.4) is similar to the advertising variable in Baumol's seminal sales revenue maximisation model with advertising (Baumol 1959). Consumers may perceive the brand as a 'sign of quality' in its production and nowadays the brand has become one of the basic motives for the consumers' choice of a particular product. It is also likely to be seen as a symbol of status, especially when acquaintance is made with foreign brands.

In this context, MNFs entering a new market may have an advantage over local firms because the MNFs have their own label brands and foreign brands are associated with the quality connotation. The entry of these firms may therefore lead to more competition and possibly more promotional activities and greater product differentiation. In terms of supermarket activity, the brand has strategic importance primarily of its impact on demand. Therefore the quality variable,  $q$  which is presented in the demand side in model (6.4) may shift the demand curve to the right as demand increases. In this context firms would optimally put in more resources or their managerial skills to quality enhancement,  $q$  up to a certain point according to the optimizing condition:

$$\delta\pi_4/\delta q = x_s \delta p_s(x_s, q)/\delta q - \delta Q(q)/\delta q \leq 0 \quad (6.5)$$

For firms, brands assume a certain value to be invested in where the returns from such investments justify their costs. In this respect we may argue that firms with higher product quality are more efficient producers than firms with lower product quality. When MNFs bring in high quality products, this would optimally increase the welfare of consumers and would also reduce the cost to consumer of searching for the right products.

In the context of the Malaysian supermarket activity, “own label” brands, were introduced by the multinational supermarket firms such as Tesco and Carrefour. The entry of these firms into the supermarket activity has brought along established brand names or “own label” goods which differentiate them from the products of the local supermarkets. The multinational supermarkets started prominently displaying their private brands, which may create loyalty to a particular supermarket chain and have the power to differentiate products and separate them from other competitive products.

Secondly, assume also for the purpose of argument that MNFs entering a new market not only bring in quality/brands but also technology,  $g_1$  where model (6.4) is a stylised presentation of this. If entry is without a relatively advantageous  $g_1$  then the host government may not allow the MNFs to come in, especially if the expectation of the host government is that  $g_1$  may bring associated increase in innovation, competition and change in the host economy.

If the MNFs have a superior  $g_1$  these firms may internationalise in order to take advantage stemming from their superiority in technical innovation and human expertise. As was mentioned with reference to the FDI literature (in Chapter Four) MNFs have a large pool of managerial expertise, financial assets and technical resources and in part this may explain the MNFs' ability to penetrate new markets in contrast to firms with lower  $g_s$ .

Since incoming firms or the MNFs are associated with higher efficiency and productivity and are more efficient than local firms such that  $g_1 > g$  (assume that  $g$  is the productivity and efficiency of local firms), and that the cost of achieving efficiency and productivity is  $G_1(g_1) < G(g)$  (where  $G(g)$  is the associated cost of local firms) then the MNFs will optimally exploit its management expertise,  $g_1$  up to the point where its marginal value in enhancing production equates to its marginal cost of securing that enhancement through the relationship:

$$\delta\pi_4/\delta g_1 = -\delta G_1(g_1)/\delta g_1 + \lambda_s \delta f_s/\delta g_1 \leq 0 \quad (6.6)$$

In a market that consists of two efficiencies and productivity differentials, some distinct market developments may be anticipated. Firstly, firms with higher  $g_1$  and therefore lower cost  $G_1(g_1)$  may organise production internally or integrate to take advantage of the technological economies, in contrast to firms with lesser productivity enhancing properties  $g$  and higher cost,  $G(g)$ . Secondly, a firm with a higher efficiency and productivity level,  $g_1$  may have a bigger market share than firms with lower  $g$ . Following this argument we may expect that with relatively superior  $g_1$  the MNFs will have a bigger market share than domestic firms, as was evident in the supermarket activity in Malaysia.

One reason for the efficiency and productivity of MNFs being higher than those of a host nation is because they employ more knowledgeable and experienced managerial staff as compared to local firms. However the associated cost  $G_1(g_1)$  may also be higher but this is a trade-off to the higher productivity and efficiency of the staff.

The third impact on the technology differentials will be the process of learning and catching up. This may not be difficult, especially in the context of supermarket activities which involve management expertise, which is relatively easily transferable through on the job training of domestic employees who move from foreign to domestic firms where expertise may be passed on in the process. The process of technology transfer through the learning effect may be passed on either horizontally to domestic supermarket firms or vertically to local producers in terms of  $g_2$ , which will be discussed in Section 6.5. Eventually the technological gap will converge and this may lead to a situation where multinational and local firms may compete on equal grounds. This situation is more interesting because it has policy implication pertaining to the competitiveness of local firms vis a vis the entry of new MNFs and in this context the host government may want to evaluate the presence of the MNFs, especially with regard to market penetration and market shares between the two firms.

Condition (6.6) provides one kind of explanation for the possibility that even in unfamiliar market conditions, MNFs which have firm specific advantages in terms of superior  $g_1$ , by means of superior human capital, may still be able to obtain superior returns from their operations in these markets which we have looked at in

Chapter Three in the context of the MNFs' share in the supermarket activity in Malaysia.

The preceding paragraphs have so far argued the relative advantages of the MNFs in terms of their  $q$  and  $g_1$  and related costs  $Q(q)$  and  $G_1(g_1)$  vis-à-vis local firms. The following paragraphs will discuss the 'make or buy' decisions,  $y_s=y_1+y_2$ , introduced in model (6.4). In this respect the 'buy' options served as an alternative where outside sourcing may provide another form of potentially cost reducing and profit optimization strategy via quantities  $y_2$  and price  $c_2$  in contrast to the 'make' options or vertical integration via  $y_1$ . This decision has an impact on local suppliers because they may benefit or may be bypassed. The options whether to 'make or buy' relate to the conditions:

$$\delta\pi_4/\delta y_1=\theta-\lambda_{s-1}\leq 0 \quad (6.7)$$

$$\delta\pi_4/\delta y_2=\theta-c_2\leq 0 \quad (6.8)$$

Given conditions (6.7) and (6.8), a firm will 'make' if the cost of acquiring inputs from its integrated subsidiary via quantities  $y_1>0$  and transfer price  $\lambda_{s-1}$  is cheaper than outsourcing via quantities  $y_2>0$  and price  $c_2$  or vice versa or the intermediate inputs may be acquired from an optimal mix of both. The proofs of these arguments relate to Theorem II. Together with condition  $\delta\pi_4/\delta y_s=-\theta-\lambda_s\delta f_s/\delta y_s\leq 0$ , for an overall optimum to obtain (see Appendix 6.3), the following condition must hold:

$$\lambda_s\delta f_s/\delta y_s\leq\theta\leq\min\{\lambda_{s-1},c_2\} \quad (6.9)$$



In the context of the MNFs, outsourcing rather than producing internally may also provide them with another cheaper source for their intermediate inputs. There are two main reasons why this may happen. Firstly, MNFs with subsidiaries in more than one country may trade with each other. This is a well known phenomenon, and the intra-firm trade is a significant proportion of trade by the MNFs. For example, Tesco Malaysia may obtain supplies from Tesco Thailand or from any of its subsidiaries, provided the transfer price,  $c_2$  is lower than the transfer price,  $\lambda_{s-1}$  if the intermediate goods are to be produced internally or if the intermediate goods are obtained from local firms. Secondly, the MNF via its internationalisation links may have easier access to cheaper foreign imports and may substitute the local products as well as the local producers. In this case local producers may be left out in the context of the 'buy' decisions of the MNFs. Securing supplies outside the host markets may benefit the firms and workers of other countries instead of the host country where the MNFs are operating. In this situation the host government may intervene through regulation via the imposition of higher tariffs on imports which this dissertation will look at in Chapter Seven.

This is especially the case if local suppliers are high cost producers  $c_2$ , (particularly when efficiency and productivity are lower) than international suppliers or imports and vertical integration, such that the cost of acquiring inputs from local suppliers may reduce the profits of the MNFs. Furthermore, local suppliers are also hampered by the limit on their productivity enhancing resources,  $g$  and associated costs  $G(g)$  vis-à-vis to the integrated subsidiary,  $s-1$ , with  $g_2$  and associated costs  $G_2(g_2)$  whose marginal cost of securing that enhancement is governed by the condition:

$$\delta\pi_4/\delta g_2 = -\delta G_2(g_2)/\delta g_2 + \lambda_s \delta f_s/\delta g_2 \leq 0 \quad (6.10)$$

The import or ‘make’ decisions of the MNFs may only be transitory in the condition where local suppliers may be high cost producers due to low efficiency enhancing resources or lower quality products, but through the process of catching up and technology transfer, local suppliers may eventually replace imports. This may also propel the integration/coordination between the MNFs and domestic suppliers.

Notice that in the multinational context, different nations may benefit from the activities of the MNFs. While business is done in the host countries where profits are extracted and then repatriated, supplies may be imported from the cheapest cost source and not from the host country, benefiting the suppliers and workers of other nations instead of suppliers of the host country. Outsourcing by MNFs from suppliers outside the host country will not help in the development of indigenous local firms. For example, the Bumiputera suppliers which the Malaysian government are trying to promote may not benefit if multinational supermarket firms such as Tesco are sourcing their goods from outside instead of from these suppliers.

The preceding paragraphs have discussed the interpretations of  $q$ ,  $g_1$ ,  $g_2$  and the ‘make or buy’ decisions,  $y_s = y_1 + y_2$ , in the model under (6.4) in the multinational context, with an idea of linking it to supermarket firms. Issues with regard to profits repatriation and redistribution are also likely to be important, especially so if all parties, including the owners of the MNFs, suppliers, consumers and the host country (regulator) are all to benefit from entry of these firms. Accordingly the next section

will explore the distributional implications of vertical integration in the multinational context.

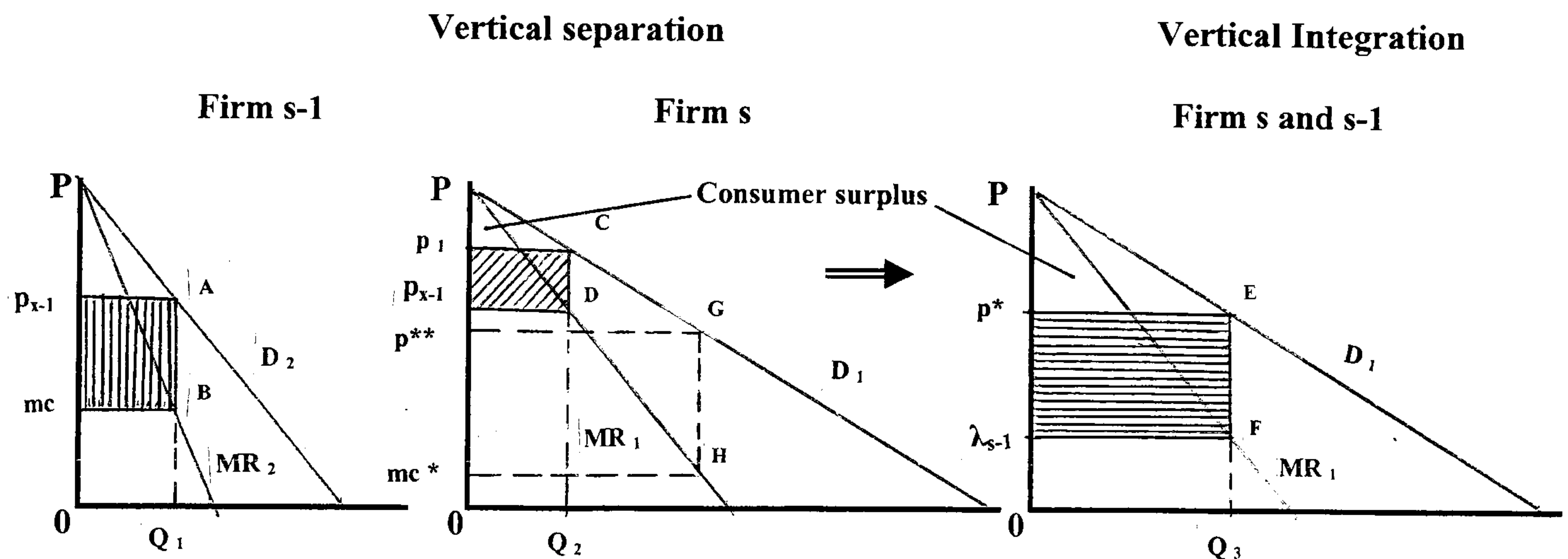
#### 6.4 Distributional Implications

In the multinational context, the distributional effect arising from vertical integration may have implications for four groups, namely shareholders, suppliers, consumers and workers, especially if these groups reside in at least two distinct nations. This is unlike the situation where these groups are all in the same nation.

In order to develop this point further it will be useful to illustrate the distributional implications relating to the theorems of the vertical integration model developed in the last section with a graphical presentation similar to the standard textbook illustration. For this purpose, certain key assumptions are necessary. Firstly, we may assume that firms  $s$  and  $s-1$  are successive monopolies and secondly the various inputs must be combined in fixed proportions in the final product.

Let consider a situation involving a single potential user,  $s$  and a single potential supplier,  $s-1$  at each stage. Assume that firm  $s-1$  sells all its output to firm  $s$  and charges a wholesale price,  $p_{x-1}$ , per unit. Firm  $s$  treats this wholesale price as its marginal costs. Under vertical separation, we see that firm  $s-1$  charges  $p_{x-1}$ , which is above its marginal cost of  $mc$  and firm  $s$  charges  $p_1$  which is above its marginal costs,  $p_{x-1}$  (assuming other costs constant). Figure 6.1 shows the resulting double mark up,  $p_1 > p_{x-1}$ . Since each firm adds a monopoly mark-up, consumers face two mark-ups instead of one.

**Figure 6.1**



Now let us consider a situation where firms  $s$  and  $s-1$  decide to integrate. The strategy to integrate may be optimal because firm  $s$  can now determine an overall profit maximising choice of its internal transfer price,  $\lambda_{s-1}$  (Theorem II) rather than its being taken as given, as in the case of vertical separation. In the context of Theorems I and II, together it was argued that, stemming from a lower transfer price,  $\lambda_{s-1}$ , the profits of the integrated monopolists are at least as great as the sum of the profits of the two independent monopolists prior to integration (otherwise vertical integration is not optimal). This is illustrated in Figure 6.1 where the shaded area,  $p^* \lambda_{s-1} EF$  of the integrated firms is greater than the combined shaded areas of firms  $s$  and  $s-1$  (vertical separation),  $p_{x-1} mc AB + p_1 p_{x-1} CD$  such that  $p^* \lambda_{s-1} EF > p_{x-1} mc AB + p_1 p_{x-1} CD$ . In the successive monopoly case, consumers facing the double mark-up buy less output,  $Q_2$ , than in the integrated case,  $Q_3$ . As a result, they are worse off. Thus, both consumers and firms are worse off with successive monopolies than when these firms are integrated. These losses provide a strong incentive to integrate.

The model in (6.4) also incorporates more subtle cases in which the firm, apart from obtaining its input supply from local suppliers (buy) via  $y_2$  and the 'make'

decision or vertical integration (produce internally by its subsidiary company), via  $y_1$ , may also have other options for acquiring its inputs supply from other sources, via imports (the 'buy' versus 'make' options). If the 'buy' cost (imports) is lower than the cost of the other two sources then this will push down firm,  $s$ , marginal cost to  $mc^*$  (which is lower than under vertical separation,  $p_{x-1}$ , and also under vertical integration,  $\lambda_{s-1}$ ) and this in return may yield a bigger profit margin ( $p^* - mc^*GH$ ).

The welfare implications of vertical integration which may accrue for the four parties above are easily predicted if these groups belong to a single nation. Firstly, the increase in the collective profits of the integrated firm will accrue to its shareholders where profits will not be repatriated but may be reinvested in the host country. Secondly, local suppliers will also benefit by supplying the required inputs. The third impact is with regard to the workers, who are better off because more jobs are created (area  $\lambda_{s-1}OFQ_3$ ). The fourth implication is the gain to consumers and clearly here this group will benefit ( $Pp^*E > Pp_1C$ ) in terms of lower prices because double marginalisation has been eliminated. These results conform to the standard double marginalisation arguments that all parties are better off if firms are integrated rather than being separated.

In the multinational context, however, the distributional impact of vertical integration may have different interpretations because, as already noted, the groups may belong to more than one nation. In the context of super profits (see Theorem I), since the owners of the MNEs are foreign, then profits may be repatriated. From the point of view of the host country, the MNEs must trade-off gains to consumers and potentially also suppliers against the possibility that super profits will be channelled

abroad rather than, for example, retained by those domestic firms which would have supplied the commodity in the absence of MNFs entry.

For an illustration of the distributional gains where the groups reside in at least two nations, we may assume that the MNFs are foreign owned, the sales (supermarkets) are in Malaysia, supplies are obtained from local as well as imports and the consumers are Malaysians. In a case where the intermediate goods are being sourced from imports (cheaper than if acquired locally), then suppliers and workers of the host country may not benefit. In this context the efforts to promote local products and suppliers may not materialise as was initially envisaged in the entry of the MNFs. Perhaps the only welfare gain is to the consumers of the host country in terms of low prices, as in the standard double marginalisation argument. Within these interpretations it is therefore not evident whether the net welfare gain to the host country is obvious as tabulated in Table 6.1. This interpretation is useful especially for Malaysia which is home to six different multinational supermarket firms and in this case Malaysia may have reasons to regulate multinational entry, a point which will be taken up in the next chapter.

**Table 6.1**

**Static Analysis on the Distributional Gains on the Entry of Vertically Integrated MNFs**

	<b>Vertical Integration (Make)*</b>	<b>Buy (local and imports)</b>	<b>Vertical Integration And Buy</b>
<b>Profits</b>	<b>F</b>	<b>F,H</b>	<b>F,F,H</b>
<b>Consumers</b>	<b>H</b>	<b>H</b>	<b>H</b>
<b>Suppliers</b>	<b>F</b>	<b>F,H</b>	<b>F,F,H</b>
<b>Workers</b>	<b>F</b>	<b>F,H</b>	<b>F,F,H</b>

F=Foreign, H=Host country

\* The assumption is that the 'make' decision is also between foreign firms because local firms are high cost producers.

From Table 6.1, the distributional implication of the vertically integrated MNFs for the four distinct groups is easier to draw in the disaggregated analysis vis-à-vis the aggregated approach. Each of these results may be linked to regulation, which will be taken up in Chapter Seven.

## **6.5 Vertical Integration as a Channel for Technology Transfer**

In the previous sections, this chapter has discussed the variants of vertical integration from the multinational context and except for efficiency and productivity reasons or in other words technology and expertise,  $g_1, g_2$  which may be passed down to local firms, the net distributional effect to the host country is ambiguous or mixed. This section will proceed to discuss why countries are interested in attracting MNFs and FDI, with an emphasis on the issue of technology transfer,  $g_1, g_2$  in (6.4) from the MNFs to domestic firms.

MNFs may transfer their technologies to foreign countries in a variety of ways - by emigration of skilled workers, by export of goods and services, by licensing and by having subsidiaries in the host country through FDI. In most sectors and in the context of supermarkets direct investment may be the most appropriate form for the multinational presence. On the other hand the host government, too, may prefer FDI to other modes because FDI is associated with a wide variety of benefits, including not only the inflows of financial capital but more importantly in such cases, the host government is in direct contact with the provider of technology, which may lead to the transfer of technologies and human expertise to the host country. The diffusion of technology to local firms is also argued to be faster when

these MNFs set up subsidiaries in the host market than through other modes such as licensing or export.

Pack and Saggi (1991) have found that suppliers in developing countries may benefit from technology diffusion from buyers in developed markets. In this context model 6.4 is one mechanism by which the MNF at level  $s$  may transfer its expertise to local firms, where the transmission may be more effective if these firms undertake vertical integration. In this way vertical integration may accelerate the diffusion of new technology to domestic firms and also provide a faster way for its adoption, thus reducing the cost of transmission. However the success of the transmission depends on the absorptive capacity of the local firms, bearing in mind that these firms have low level of skills and expertise. In any case, the long run effect is to raise the technological capabilities of domestic firms, thereby closing the technological gap. This explains the preoccupation of policymakers with technology transfers, stemming from the argument that external knowledge is an important input for the innovation process of domestic firms.

According to Ali (1992), the technology factor is one of the main assets that the host government might consider in deciding the entry of MNFs to operate in its economy. It is also an important objective in encouraging FDI, since the expectation is that FDI will facilitate technology transfer from the more advanced countries and the acquisition of such technology is perceived as a crucial component of rapid economic growth. In the context of supermarkets, this dissertation has argued earlier that the human capital in the form of managerial skills is more obvious than the



physical capital flows, which may not be realised in the context of FDI, as discussed in Chapter Four.

Technology may be passed on to local firms in a number of ways. While the direct effect of the technology transfer is the enhancement of the  $g_s$  of the local suppliers via vertical integration (if the MNEs undertake vertical integration with local firms) the other mechanism is the indirect effect, that is, in terms of technological spill-over to local competitors (local supermarkets). Firstly, technology embodied in capital goods may be transferred to domestic suppliers who learn new techniques from the MNEs. The second mechanism is through learning by doing combined with on the job training of domestic employees who move from foreign to domestic firms, where management expertise may be passed on in the process or indirectly by the physical movement of workers who have been exposed to the technology. Thirdly, technology transfer may be affected through copying the format of the MNEs which may be applied by local supermarket firms.

## **6.6 Conclusion**

The analysis of this chapter stems from the vertical integration work of Hasan and Ryan (2003). It has provided formal proofs of the double dividend arguments together with extensions of this framework to incorporate conditions of quality, efficiency and 'make or buy' decisions. This chapter has emphasised that manufacturing related and services related FDI are likely to be interrelated for reasons stemming from vertical integration of elements of firms' activities.

In the context of model (6.4) and related multinational interpretations, ways in which quality, productivity and efficiency as well as the ‘make or buy’ decisions may affect local firms have been considered. In the multinational context the quality variable is signalled via product branding, where foreign brands are perceived to be of high quality than local products. This chapter has also shown how efficiency enhancing resources may have an impact on the transfer price, leading to integration or disintegration. The transfer price in turn will influence the ‘make or buy’ decisions, requiring the intermediate inputs to be sourced from the lowest cost suppliers, whether from imports, local firms or from a firm’s own subsidiary via vertical integration. There are also tradeoffs in innovation and efficiency. In this context we may see that the host government may encourage the entry of innovative MNFs, and that this may lead to the displacement of local firms. This chapter has also emphasised how, with multinational interpretations, the benefits stemming from vertical integration may have implications for different nations, both via suppliers and via profits and the net welfare gain to the host country may only be in terms of lower prices to consumers.

The firm specific approach undertaken in this chapter has deepened our analysis of the vertically integrated structures of the MNFs, which will complement the aggregated work in Chapter Five. This approach will also be useful in the next chapter, which will look at regulation in the context of the openness variable that was found to be significant in the aggregated work in the last chapter.

## CHAPTER SEVEN

### ENTRY AND REGULATION OF MULTINATIONAL FIRMS

#### 7.0 Introduction

The main motivation of the previous chapter was vertical integration, given the significance of that feature for MNFs. In that chapter vertical integration was looked at from a firm specific and disaggregated approach. That approach included interpretations pertaining to the quality variable  $q$ , the efficiency enhancing variables  $g_1, g_2$  and associated costs  $G_1(g_1), G_2(g_2)$  and the 'make or buy' decisions  $y_1, y_2$  and consideration of potential applications, including supermarket firms. That chapter also looked at the distributional implications of vertical integration relating to profits, consumers, suppliers and workers, which in the context of multinational interpretations may have policy implications for the entry of MNFs, including potential applications to supermarket firms.

In this chapter the firm specific approach to the analysis of the MNFs will be developed further with the emphasis now being on regulatory applications. The motivation for discussing regulation may be seen in the context where issues of regulation have been a policy concern to the host government, especially where local firms are not competitive. However there are trade-offs to regulation, particularly between efficiency of the MNFs and the less efficient local firms. Inhibiting foreign entry is equivalent to blocking foreign capital and innovation, but that is often inconsistent with the development objectives of developing countries. On the other hand, too much entry will also hurt local firms. An example of a regulatory

mechanism on foreign entry is the equity regulation that was discussed in Chapter Two in the context of the supermarket firms in Malaysia.

This chapter will, however, look at a different kind of regulation which is distinct from the regulatory context that was discussed in Chapter Two but potentially applicable to supermarket firms in Malaysia. It will look at ways in which the variables associated in model (6.4) pertaining to  $g_1, g_2$  and related costs  $G_1(g_1), G_2(g_2)$  and the 'make or buy' decisions,  $y_1, y_2$  potentially associated with the MNFs including supermarket firms may be regulated. These variables are potentially open to regulation via contingent taxes, tariffs or subsidies that have links to efficiency and competition, in contrast to the equity regulation discussed in Chapter Two, which has no such links.

Further motivation for discussing regulation issues stems from the openness variable that was found to be significant in the econometric works in Chapter Five. In that chapter it was shown that the openness variable is aggregative and needs to be looked at using a micro methodology that may suggest a potential link to regulation and to a disaggregation approach. In the disaggregated approach, the openness variable may have wider applications with respect to the variables in model (6.4) in contrast to the macro result in the aggregated work. In this way regulation related applications and interpretations pertaining to MNFs are clearly identified and the results are much sharper.

With this perspective, this chapter will use extensions of the Hasan and Ryan (2003) model to suggest ways in which microeconomic explanations with the focus

on MNFs' regulation may at least in part provide theoretical and policy related predictions to the host country with potential applications to supermarket firms, especially in the context of Malaysia. One conclusion will be that this approach may present a host government such as Malaysia with a complementary set of regulatory policy measures which may be superior to and in contrast to the restrictive regulatory policies such as those discussed in Chapter Two.

It will also be argued that issues of regulation and entry could also be linked to the implicit regulatory mechanism of the contestability theory and in particular to regulated contestability, which is a refinement of the contestability idea. In the regulated contestability extension, links to regulation and especially to the entry of MNFs will be with regard to two useful distinctions, between physical and financial contestability and between market and industrial contestability.

In the context of the above preliminaries this Chapter is organized as follows: Section 7.1 will revisit model (6.4) from the preceding chapter but here the scope and emphasis is on regulation and also with multinational extensions and applications. This section will extend the model to include regulatory parameters  $(t, \alpha, \psi)$  with respect to the variables that may be open to host country regulation, such as the efficiency enhancing variables  $g_1, g_2$  and associated costs  $G_1(g_1), G_2(g_2)$  and the make or buy variables  $y_1, y_2$ . Then Section 7.2 will look at regulation in a wider perspective of the contestability ideas and in particular ideas on regulated contestability. In Section 7.3, the preceding discussions are extended to look at three related key issues - MNFs, FDI and competition policy (of the European Union and

the UK). The conclusion in Section 7.4 will note the links now obtained between the various chapters that will lead into the concluding chapter.

## 7.1 Regulating Multinational Firms

For the purpose of further discussions with the emphasis on regulation, this Chapter will introduce further interpretations with reference to the stylised model of (6.4) in Chapter Six which is reproduced here for ease of reference as follows:

$$\begin{aligned} \text{Max } \pi = \pi^* = p_s(x_s, q)x_s - wL_s - rK_s - wL_{s-1} - rK_{s-1} - c_2y_2 - G_1(g_1) - G_2(g_2) - Q(q) \quad (7.1) \\ \text{s.t.} \quad & y_s = y_1 + y_2 \\ & x_s = f_s(L_s, K_s, y_s, g_1) \\ & y_1 = f_{s-1}(L_{s-1}, K_{s-1}, Z_{s-1}, g_2) \\ & x_s, L_s, K_s, y_s, L_{s-1}, K_{s-1}, Z_{s-1} \geq 0 \end{aligned}$$

The model above may be interpreted in such a way that a foreign owned MNF operating at level,  $s$ , in a host country, may ‘make’ its intermediate inputs  $y_1$  from its subsidiary operating at level  $s-1$  via vertical integration and it may acquire its intermediate inputs via vertical coordination from foreign suppliers through imports. (Here the ‘make’ decision  $y_1$ , will refer to internal production as well as imports). In this context too, for the purpose of interpretation and argument, firm  $s$  may also ‘buy’ its intermediate inputs  $y_2$  from local producers with associated costs  $c_2y_2$ . The ways in which the MNFs acquire their intermediate inputs depend on the decision whether or not to ‘make or buy’ inputs  $y_s$  and in that context will depend on the transfer price,  $\lambda_{s-1}$  (see Chapter Six) which in turn, depends on the productivity between producing internally or coordinating,  $y_1$  or outside sourcing,  $y_2$ , via the relationship  $y_s = y_1 + y_2$ . In the multinational interpretation, it has already been argued

in the preceding chapter that profits,  $\pi$ , in model (7.1) may be shipped abroad to the home country of the MNFs. By adopting this approach, further analysis and arguments regarding the stylised model and its extension to regulation and multinational interpretations will be much clearer.

### 7.1.1 The Basic Regulatory Approach

In relation to the stylised model (7.1) there are several regulatory mechanisms which a host government may comprehend to regulate the presence of the MNFs in its economy. One of the most important and simplest instruments is the use of tax rates on profits such as the imposition of a corporate tax. If we let  $t \geq 0$  be the share of profits earned in a host country which eventually go to taxes, the after tax earning,  $\pi$  of the MNFs will be:

$$\begin{aligned} \text{Max } \pi = \pi^* &= (1-t)[p_s(x_s, q)x_s - wL_s - rK_s - wL_{s-1} - rK_{s-1} - c_z Z_{s-1} \\ &\quad - c_2 y_2 - G_1(g_1) - G_2(g_2) - Q(q)] \quad (7.2) \\ \text{s.t. } & y_s = y_1 + y_2 \\ & x_s = f_s(L_s, K_s, y_s, g_1) \\ & y_1 = f_{s-1}(L_{s-1}, K_{s-1}, Z_{s-1}, g_2) \\ & x_s, L_s, K_s, y_s, L_{s-1}, K_{s-1}, Z_{s-1} \geq 0 \end{aligned}$$

Therefore in addition to the cost of production, the firm is also burdened by taxes on its super profits,  $(1-t)$  which may be an international competitive tax rate. The effect of raising or decreasing a tax rate,  $t \geq 0$ , and holding other variables constant may have an impact on the behaviour of the MNFs, either encouraging or discouraging the firm to shift its production into other countries. In order to encourage multinational entry, the host government may set a lower tax rate,  $t$  viz a

viz  $t$  of other countries. In this context it may be argued that the tax rate,  $t$ , corresponds to the openness of the host country in attracting MNFs entry. But there is contrasting evidence as to the effectiveness of taxes as a major instrument in influencing the location of multinational investment. A profit tax based approach to regulation and to the entry of the MNFs has been implemented by many developing countries but with minimal impact of attracting MNFs, because any reduction in tax rates by one country may be offset with a corresponding reduction by other countries (see Yeung, 1996). An earlier finding by Horst (1971) was that minor changes in any tax rate are likely to have no effect on the MNFs's behaviour. Another reason is that because multinationals are global firms with subsidiaries in more than one country, a slight reduction in the tax rate in one country may benefit the existing subsidiary in that country and will not result in a relocation of other subsidiaries from other countries.

But this does not mean that tax incentives have little impact on attracting MNFs. UNCTAD (1995) argued that tax holidays or temporary rebates for certain investments have been implemented in as many as 67 countries that may have benefited primarily short-term investments. In the OECD countries where the general investment climates are similar, any differential in the tax rate of these countries may influence the investment decisions of the MNFs (for a discussion on the tax policy issue see Morisset and Pirnia, 2000).

At the same time, corporate taxation plays an important withholding function, raising revenues on domestic-source income that might otherwise escape the tax net. In this regard we have looked at this issue in Chapter Six, showing that in the



multinational context there is a far greater possibility of the after tax earnings that might go overseas or be repatriated, rather than being reinvested in the host country. The desire to tax this income while not discouraging foreign investors raises some concern regarding the sensitivity of MNFs to taxation and how much additional investment can be expected from tax relief and at what cost. Therefore in the context of model (7.2) and its multinational interpretations, a regulation based on taxes must be internationally competitive. This means that in the first instance it must ensure that the burden imposed is not excessive and it does not deter multinationals' entry. But if the objective of raising the tax rate is to deter entry and protect local firms, based on the infant industry argument then the host government, especially developing countries, may lose particularly on two important aspects which are much needed in their development. These countries may not only lose on much needed investment, but also on the efficiency and productivity enhancing resources,  $g_1, g_2$  (with the possibility of transferring technology to local firms) associated with these firms, that were discussed in the last chapter.

Besides regulation based on overall profits, the next section will show how other variables in model (7.2) are also open for regulation and provide further mechanism for the host government to induce firms in the direction that best suits the policy and the development objectives of the host country.

### **7.1.2 Regulation with Respect to Technology**

The importance of the efficiency and productivity enhancing variables has been discussed in detail in Chapter Six, where it was argued that MNFs are

associated with  $g_1, g_2$  which is superior to the  $g_s$  of local firms. Thus, one way at looking at rivalry is to look at the differentials between  $g_1, g_2$  and  $g_s$  and the associated costs  $G_1(g_1), G_2(g_2)$  and  $G_s(g_s)$  respectively. Under the assumption of the model, a MNF will make and supply its intermediate inputs if it has superior  $g_1, g_2$  and lower associated costs,  $G_1(g_1), G_2(g_2)$  leading to the lowering of the transfer price  $\lambda_{s-1}$  and will buy from outside if the costs of outside producers, whether local or imports, are lower than the cost (transfer price) of producing internally. In these ways the decision between 'make or buy' will depend directly on the relative efficiency  $g_1, g_2$  for the MNFs and  $g_s$  for the local suppliers.

Potentially, here, the role of the government is to facilitate the process of change and innovation and introduce a more efficient way of production. This is consistent with the argument of Romer (1993) who says that since MNFs are the flagship of innovations and ideas, these firms may provide a channel for the diffusion of knowledge-based and firm specific assets. To attract these firms, developing countries may ease restrictions on incoming MNFs by offering special incentives including lower tax and tax holidays (as was discussed above), subsidies for infrastructures and may provide incentives for the recruitment of expertise. The rationale for this special treatment often stems from the understanding that MNFs generate externalities in the form of technology transfer (see Pavitt, 1971, Teece, 1977 and Aitken and Harrison, 1999). In this context the government may impose a policy that only firms with superior  $g_1$  and lower cost  $G_1(g_1)$  vis-à-vis alternative sources may be allowed to enter the host market. This has been the key policy of most developing countries in attracting FDI and MNFs, as was argued in Chapter Six.

In order for innovation to take place and for this policy to be effective, the government may introduce a regulatory mechanism to attract firms with technology and human expertise, as well as to encourage these firms to transfer their expertise to local firms. By holding other variables constant, this policy may be implemented via contingent subsidies  $(1-\alpha)$ , which may be imputed into the associated cost variables,  $G_1(g_1)$  of the MNFs and  $G_2(g_2)$  of its subsidiary as follows:

$$\text{Max}\pi=\pi^*=\text{p}_s(x_s,q)x_s-wL_s-rK_s-wL_{s-1}-rK_{s-1}-c_z z_{s-1}-c_2 y_2-(1-\alpha)_1 G_1(g_1)-(1-\alpha)_2 G_2(g_2)-Q(q) \quad (7.3)$$

s.t the same conditions as (7.2).

Associating Lagrange multipliers with the constraints as shown in Appendix 6.3, the corresponding Lagrangean is:

$$\text{Max}\pi=\pi^*=\text{p}_s(x_s,q)x_s-wL_s-rK_s-wL_{s-1}-rK_{s-1}-c_z z_{s-1}-c_2 y_2-(1-\alpha)_1 G_1(g_1)-(1-\alpha)_2 G_2(g_2)-Q(q) \\ -\theta(y_s-y_1-y_2)-\lambda_s[x_s-f_s(L_s,K_s,y_s,g_1)]-\lambda_{s-1}[y_1-f_{s-1}(L_{s-1},K_{s-1},z_{s-1},g_2)] \quad (7.3)^*$$

The necessary conditions for a maximum to (7.3)\*, where conditions (7.3.1)-(7.3.10) are analogous to those of (6.4.1) to (6.4.10) [Appendix 6.3] except for the two conditions associated with  $G_1(g_1)$  and  $G_2(g_2)$  which are given as follows:

$$\delta\pi/\delta g_1 = -(1-\alpha)_1 \delta G_1(g_1)/\delta g_1 + \lambda_s \delta f_s/\delta g_1 \leq 0 \quad (7.3.11)$$

$$\delta\pi/\delta g_2 = -(1-\alpha)_2 \delta G_2(g_2)/\delta g_2 + \lambda_{s-1} \delta f_s/\delta g_2 \leq 0 \quad (7.3.12)$$

In contrast to the corporate income tax,  $t$ , which taxed the overall profits of the company, model (7.3) provides an extension with respect to the technology enhancing variables and associated costs that are open for regulation. For the

purpose of argument, if the objective of the country in attracting MNFs is because of their superiority in  $g_1$ , the government may encourage the rate of inflow of  $g_1$  by regulating the associated cost  $G_1(g_1)$ , via  $(1-\alpha)_1$  by subsidizing incoming technology because of its higher efficiency, which distinguishes it from the local industries. The subsidy may take the form of a tax incentive allowance. In this case,  $\alpha$  is similar to the investment incentives that Yeung (1996), identified as an important variable that may have attracted the entry of MNFs with research and development facilities to set up operations in countries offering the incentives. In this context the provision of incentives via  $\alpha$  which may further reduce costs  $G_1(g_1)$  may encourage MNFs to employ more efficient and productivity enhancing resources,  $g_1$ . The same incentive may also be provided to its integrated subsidiary,  $s-1$  with efficiency  $g_2$  and associated cost  $G_2(g_2)$ .

Likewise, if we assume that the local producers have efficiency and productivity enhancing variables,  $g_s$  and costs  $G_s(g_s)$  which are less superior and of higher costs than  $g_1, g_2$  and costs  $G_1(g_1), G_2(g_2)$  of the MNFs and its subsidiary, then the impact of  $g_s$  may also be enhanced via a regulatory mechanism  $\alpha_s$ , such as by subsidizing the associated costs  $G_s(g_s)$ . Therefore via contingent subsidies  $\alpha_s$ , local firms may employ more resources to enhance capabilities viz-a-viz MNFs. However because of the differentials in the efficiency, subsidizing  $G_s(g_s)$  of local firms in general will not have the same effect as subsidizing  $G_1(g_1), G_2(g_2)$  of the MNFs because these firms are in different stages of development with local firms still in a learning process.

Given  $\alpha$ , conditions (7.3.11) and (7.3.12) require that the efficiency enhancing resources are to be employed to the point where the marginal enhancement in value of production equates to the marginal cost of securing that enhancement. The efficiency and productivity enhancing variables,  $g_1, g_2$  may also refer to labour enhancing as well as to capital enhancing productivity and in the context of model (7.3) the government may employ contingent taxes or subsidies to affect the usage of these variables. For example the government may lower the rate of interest on capital or may remove barriers to capital, so that now firms will have easy access to cheaper capital, which will have an effect on cost and influence production decisions. If capital is cheap, more labour saving technology may be employed or it may also result in an expansion of existing facilities. In countries where labour is abundant, the government may provide incentives to encourage firms that employ local labour and local expatriates and may tax firms that employ foreign expertise or foreign labour. Contingent taxes and subsidies on labour and capital may promote labour or capital intensive technology and this depends on the development objectives of the countries. In this context, Freeman (1971) argued that if MNCs used capital intensive technology, then it may run counter to the labour intensive strategy where labour is abundant in developing countries.

For reasons of increased productivity, innovation and competition, more subtly in the Malaysian case since the objective of the government is to innovate and increase the efficiency of the supermarket sector, then a direct policy approach is to import more efficient organisation structures associated with superior efficiency and productivity enhancing resources,  $g_1, g_2$  and lower costs  $G_1(g_1), G_2(g_2)$ .

However such policy on taxes and subsidies on the efficiency enhancing resources may only be applied at the industry level but the point here is to show that each of the variables as depicted in model (7.3) is also potentially regulated. Apart from technology, the other variables in the model such as the intermediate inputs are also open for regulation, which will have an impact on local production and local producers. This will be discussed below.

### **7.1.3 Regulation with Respect to Intermediate Inputs**

A further extension of model (7.1) in which a potential mechanism whereby market shares of intermediate inputs may be regulated is to introduce regulatory parameters  $\psi_3$ ,  $\psi_5$  and  $\psi_4$  with respect to the costs associated with the intermediate inputs of the ‘make’ decisions,  $y_1$  via  $c_z$ , of firm  $s-1$  as well as imports and the ‘buy’ decisions,  $c_2$  respectively. The issue of regulation of market shares of intermediate inputs stems from our earlier discussion on the distributional impact (see Chapter Six) that might accrue to local suppliers vis-a-vis foreign suppliers. In the multinational context we have interpreted that different nations may benefit from the ‘make or buy’ decisions and that local suppliers may be left out. This section will show how regulation parameters ( $\psi_3$ ,  $\psi_4$  and  $\psi_5$ ) may play crucial roles in discriminating outside suppliers or imports that may benefit local firms. Therefore in this regard the ground for economic regulation is premised on the basis of income and wealth distribution effect rather than on market failure and the case for public regulation in this context is stronger in developing countries (Stiglitz 1998).

Holding other variables constant, in this case the regulatory parameter  $\psi_3, \psi_4, \psi_5$  may take the form of contingent tariffs or subsidies depending on the objective of the government. The incorporation of this variable will extend the model as follows:

$$\begin{aligned} \text{Max } \pi = \pi^* = & p(x_s, q)x_s - wL_s - rK_s - wL_{s-1} - rK_{s-1} - (c_z + \psi_3)z_{s-1} - (c_2 + \psi_4)y_2 - y_1\psi_5 \\ & - G_1(g_1) - G_2(g_2) - Q(q) \end{aligned} \quad (7.4)$$

$$\begin{aligned} \text{s.t } & y_s = y_1 + y_2 \\ & x_s = f_s(L_s, K_s, y_s, g_1) \\ & y_1 = f_{s-1}(L_{s-1}, K_{s-1}, z_{s-1}, g_2) \\ & x_s, L_s, K_s, y_s, L_{s-1}, K_{s-1}, z_{s-1} \geq 0 \end{aligned}$$

Associating Lagrange multipliers  $\theta, \lambda_s, \lambda_{s-1}$  with the constraints in (7.4), the corresponding Lagrangean is:

$$\begin{aligned} \text{Max } \pi = \pi^* = & p(x_s, q)x_s - wL_s - rK_s - wL_{s-1} - rK_{s-1} - (c_z + \psi_3)z_{s-1} - (c_2 + \psi_4)y_2 - y_1\psi_5 - G_1(g_1) - G_2(g_2) - \\ & Q(q) - \theta(y_s - y_1 - y_2) - \lambda_s[x_s - f_s(L_s, K_s, y_s, g_1)] - \lambda_{s-1}[y_1 - f_{s-1}(L_{s-1}, K_{s-1}, z_{s-1}, g_2)] \end{aligned} \quad (7.4)^*$$

Necessary conditions to an optimum to (7.4)\* are:-

$$\delta\pi/\delta x_s = p(x_s) - x_s \delta p/\delta x_s - \lambda_s \leq 0 \quad (7.4.1)$$

$$\delta\pi/\delta L_s = -w + \lambda_s \delta f_s/\delta L_s \leq 0 \quad (7.4.2)$$

$$\delta\pi/\delta K_s = -r + \lambda_s \delta f_s/\delta K_s \leq 0 \quad (7.4.3)$$

$$\delta\pi/\delta y_s = -\theta + \lambda_s \delta f_s/\delta y_s \leq 0 \quad (7.4.4)$$

$$\delta\pi/\delta L_{s-1} = -w + \lambda_{s-1} \delta f_{s-1}/\delta L_{s-1} \leq 0 \quad (7.4.5)$$

$$\delta\pi/\delta K_{s-1} = -r + \lambda_{s-1} \delta f_{s-1}/\delta K_{s-1} \leq 0 \quad (7.4.6)$$

$$\delta\pi/\delta z_{s-1} = -(c_z + \psi_3) + \lambda_{s-1} \delta f_{s-1}/\delta z \leq 0 \quad (7.4.7)$$

$$\delta\pi/\delta q = x_s p \delta p_s(x_s, q)/\delta q - \delta Q(q)/\delta q \leq 0 \quad (7.4.8)$$

$$\delta\pi/\delta y_1 = \theta - (\psi_5 + \lambda_{s-1}) \leq 0 \quad (7.4.9)$$

$$\delta\pi/\delta y_2 = \theta - (c_2 + \psi_4) \leq 0 \quad (7.4.10)$$

$$\delta\pi/\delta g_1 = -\delta G_1(g_1)/\delta g_1 + \lambda_s \delta f_s/\delta g_1 \leq 0 \quad (7.4.11)$$

$$\delta\pi/\delta g_2 = -\delta G_2(g_2)/\delta g_2 + \lambda_{s-1} \delta f_s/\delta g_2 \leq 0 \quad (7.4.12)$$

In a manner similar to conditions (6.4.1)-(6.4.6), (6.4.8)-(6.4.9) and (6.4.11)-(6.4.12) [as in Appendix 6.3], conditions (7.4.1)-(7.4.6), (7.4.8) and (7.4.11)-(7.4.12) take on familiar interpretations according to which at a profit maximising optimum to (7.4), marginal revenue product equates to marginal factor cost for each factor employed. However a key difference is with respect to conditions (7.4.7), (7.4.9) and (7.4.10) which are associated with regulation parameters,  $\psi_3$ ,  $\psi_5$  and  $\psi_4$  respectively which may be in the form of contingent subsidies or tariffs on the costs of the intermediate inputs,  $c_z$ , imports and  $c_2$  which may be imposed on the MNFs.

This chapter has already assumed (see page 165) that the ‘make’ decision,  $y_1$  may refer to the acquisition of inputs either from internal productions from vertically integrated subsidiary,  $s-1$  or the acquisition of inputs from foreign suppliers through imports and  $y_2$  will refer to the ‘buy’ decision of intermediate inputs from the production of local producers. The central focus of our discussion here is with regard to regulation pertaining to the acquisition of intermediate inputs, between the ‘make’<sup>58</sup> decisions via imports and the ‘buy’ decisions involving local suppliers,  $c_2$  via  $y_1, y_2$  in (7.4).

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<sup>58</sup> Regulation via  $\psi_3$  (taxes or subsidies) on the ‘make’ decision on the intermediate inputs,  $c_z$ , by an integrated firm is not possible because in practice it may be difficult to differentiate between production by an integrated firm and by independent suppliers.



In the context of model (7.4),  $\psi_5$  and  $\psi_4$  are regulatory parameters to regulate market shares with respect to the ‘make or buy’ decisions,  $y_1, y_2$  of the MNFs on their acquisition of intermediate inputs. An effective mechanism by which market shares of the intermediate inputs may be regulated is to impose either contingent tariff or subsidy on the cost of the intermediate inputs. The host country may impose tariff,  $\psi_5 > 0$  or subsidy  $\psi_5 < 0$ , on the ‘make’ decision,  $y_1$  of the intermediate inputs via imports and likewise may also impose the same conditions ( $0 > \psi_4 > 0$ ) on the ‘buy’ decision,  $y_2$  from local suppliers.

First, consider regulation in the context of pushing up the transfer price  $\lambda_{s-1}$  from imports (the ‘make’ decision) and  $c_2$  from the ‘buy’ decision where tariffs are involved,  $\psi_5 > 0$  and  $\psi_4 > 0$  respectively. The imposition of tariffs  $\psi_5 > 0$  on the cost of acquiring intermediate inputs from imports in the ‘make’ decision  $y_1$  will raise its price to  $(\psi_5 + \lambda_{s-1})$  and similarly if tariffs,  $\psi_4 > 0$  are imposed on the intermediate inputs of the ‘buy’ decision from local producers, the cost of local production will rise to  $(c_2 + \psi_4)$  and local production will be expensive too. Therefore the higher the per-unit tariffs on the intermediate inputs, the more will be the disturbances to total output and sales and to their allocation, to prices, factor flows and profits. If the ‘buy’ decision from local production is to be the main source of supply of the intermediate inputs for the MNFs, and if imports are cheaper than local production, the government may set higher tariffs on imports, so that  $\psi_4 < \psi_5$ . This will push up the price of the intermediate inputs from imports such that  $(\psi_5 + \lambda_{s-1}) > (c_2 + \psi_4)$ , and necessary condition for a maximum to (7.4) with regard to the ‘buy’ decision,  $y_2$  is:

$$\delta\pi/\delta y_2 = \theta - (c_2 + \psi_4) \leq 0 \quad (7.4.10)^*$$

Likewise if the ‘make’ decision via imports is to be the main source of supply, the government may fix  $\psi_5 < \psi_4$ , such that  $(\psi_5 + \lambda_{s-1}) < (c_2 + \psi_4)$ , and necessary condition for a maximum to (7.4) with regard to the ‘make’ decision,  $y_1$  is :

$$\delta\pi/\delta y_1 = \theta - (\psi_5 + \lambda_{s-1}) \leq 0 \quad (7.4.9)^*$$

Therefore the direction of trade will reflect the cost advantage between ‘make’ and ‘buy’. In these ways conditions (7.4.10)\* and (7.4.9)\* which relate to the ‘make or buy’ decisions require that intermediate inputs be acquired from the lowest cost source, either from imports via quantities  $y_1 > 0$  or from local producers via quantities  $y_2 > 0$ , or from an optimal mix from these two sources. Together with conditions (7.4.4) they require that for an optimum to obtain, the following condition must hold:

$$\lambda_s \delta f_s / \delta y_s \leq \theta \leq \min \{ \psi_5 + \lambda_{s-1}, c_2 + \psi_4 \} \quad (7.4.13)$$

From (7.4.13),  $\theta = \min \{ \psi_5 + \lambda_{s-1}, c_2 + \psi_4 \}$ , where  $(\psi_5 + \lambda_{s-1})$  is the transfer price under the ‘make’ decision via imports and  $(c_2 + \psi_4)$  is the price via acquisition of intermediate inputs from local suppliers. Because the ‘make or buy’ decisions depend on the transfer price (inclusive of contingent tariffs added on to it) where the optimal strategy is to use  $y_1$  if cheaper than  $y_2$ , or vice versa, a higher tariff, by raising the MNFs import costs, is certain to discourage imports, encourage local production and raise prices in the importing country. In this situation, local producers may benefit from the tariffs regime and this may increase their welfare. Therefore a differential tariffs policy is one way to regulate market shares between imports and local productions of intermediate goods and also a mechanism to protect

local producers against imports. Such a regulatory policy may be effective in protecting Bumiputera producers at least in the case of the Malaysian supermarket sector.

On the other hand it is unlikely that the government will subsidize the ‘make’ decision  $y_1$ , via  $\psi_5 < 0$ , which will push down the cost of the ‘make’ decisions via imports,  $(\psi_5 + \lambda_{s-1})$  which in any case will be detrimental to local producers. There are also various other combinations of tariffs and subsidies which the government may use to regulate between the ‘make’ and ‘buy’ decisions. It is often the case that the government, especially in developing countries, may subsidise local production so as to bring down the price of local inputs such that  $(c_2) < (\psi_5 + \lambda_{s-1})$ . In this case the ‘buy’ decision from local production is cheaper than the ‘make’ option, which tends to benefit local producers. Therefore the tariff or tax mechanism used by the government in this case is a fundamental strategy to switch internal production to the ‘buy’ decision, which may bring benefits to local producers. This mechanism is similar to that in Ryan (2000), who argued that taxes and subsidies may be used to regulate demands and outputs as well as capacities and these may have implications for industrial and market structures.

The regulatory mechanisms that have been discussed above are different from the regulatory approaches in Chapter Two. One of the main advantages of the mechanisms argued in this chapter is that these mechanisms have direct links to efficiency and productivity of the industry structure, whereas in Chapter Two, the regulatory emphasis was on the basis of income distribution. In addition, regulatory applications of the kind developed in this chapter with reference to potential entry of

foreign firms may be tailored to suit the objectives of the host government more effectively, such as to safeguard local firms. This is in contrast to the policy of restricting foreign entry as in the case discussed in Chapter Two. A restrictive policy will not only discourage entry of MNFs but more importantly discourage the entry of innovation and efficiency which are catalytic for growth and competition.

The imposition of tariffs ( $\psi_5 > 0$ ) on the imports of intermediate goods under certain specific conditions may be allowed by the World Trade Organisation (WTO). For example, tariffs may be permitted during the transition period or the process of catching up in order to safeguard domestic producers (WTO, 2003). However according to the WTO, the safeguard measure should be short term and they should not last more than four years, although they may be extended up to eight years, but only on certain conditions, for example the measure is needed and there is evidence that the industry is adjusting.

Consistent with WTO rules and in the context of model (7.4) a balanced regulatory policy between tariffs and subsidies is justified for a transitional period in order to accommodate the adjustment process needed to enable domestic firms to catch up with the superior  $g_1, g_2$  of the MNFs and their integrated subsidiaries. However to be effective a protectionist policy of this kind must operate within a specific time frame as suggested by WTO. Otherwise, the adjustment process will be too slow and local firms may be too complacent to adjust.

Even though there is a consensus that most countries are becoming more concerned about the spread, scale and reach of the MNFs, nevertheless these

countries have also been actively and consciously attracting FDI and MNFs, because the entry of these firms is desirable from the perspectives of innovation, technology transfer and efficiency gains, which have been discussed in Chapters Six. The specific concern is only with regard to the capacity of individual countries to control the activities of the MNFs, given that these firms have substantial bargaining power. At the same time, the advocates of a free market, as well as the MNFs, seek to guarantee freedom to operate with as few constraints as possible. Pressures for regulation and control of MNFs arise from domestic economic problems, especially because local firms are being displaced through foreign entry and production and also because domestic policy goals are being undermined. However Calzolari and Gremaq (2001) state that the existing theoretical literature on regulation of MNFs is very limited, even though regulation is important to ensure efficiency and competition, as well as to safeguard national interests.

In the preceding sections we have looked at ways in which the entry of the MNFs may be regulated and how these may impact on entry decisions, market structures and innovation. Regulation mechanisms include taxes, tariffs and subsidies which may relate to the openness variable that was discussed in Chapter Five. These have been considered in detail in a microeconomic context in contrast to the aggregate econometric approach developed earlier. The micro and firm specific approach in model (7.4) shows how the host country may vary the degree of the ‘openness’ directed at firm  $s$  and  $s-1$  (and also in more general case at level  $s-2\dots s-N$ ) and since these firms are integrated therefore the impact of regulation at level  $s$  may have implications to level  $s-1$  and vice-versa.

This chapter has discussed entry, regulation and the openness variable, elements which could be used to make contact with literature on the contestable market theory advanced by Baumol *et al.* (1982). For example the openness variable and the regulatory mechanism are analogous with the free entry and exit variable of Baumol *et al.* and more specifically with the ideas on regulated contestability of Ryan (2000) which will be discussed below.

## **7.2 Regulation, Contestability and Regulated Contestability**

The regulation mechanism associated with the entry of MNFs and related regulatory interpretations developed in the last section may suggest links to the contestable market theory advocated by Baumol *et al.* (1982) and more specifically to the contestability extension of Ryan (2000). Baumol *et al.* (1982) and Baumol and Willig (1986) put forth a new view of markets that in the absence of sunk cost when firms can enter an industry freely and where exit is costless and fast, the behaviour of the incumbent firms is always constrained because the incumbent firms may fear 'hit and run' entry. Since then, the development of the contestability theory has attracted other writers including Shepherd (1984), Cairns (1986) and most notably Ryan (2000). Shepherd developed a critique of the contestability theory with the conclusion that the implicit threat derived from contestability should not shift attention from real competition in the market, while Cairns examined the contestability theory in the context of uncertainty. The variants of the contestability theory by Ryan which may be usefully link to the regulatory context of this chapter will be discussed more deeply later. However, inherent in the contestability theory of free entry and exit is the implication for regulatory considerations and its potential in

disciplining incumbent firms in the market. Given such a potential threat, it was argued that the key idea is that even a single firm industry might behave as if competitive, disciplined by the threat of hit and run tactics by potential new entrants. In this context Baumol and Willig (1986 p. 22) explained that the theory of contestable market can be helpful in the design of public policy in two ways. First it undertakes to provide the criteria to distinguish the cases in which government intervention is desirable from those in which it is not and secondly, it seeks to offer tools that will increase the public welfare benefits of the intervention.

A useful extension which is in fact a refinement of the contestability theory is provided by Ryan (2000). He considers three key areas that distinguish his contestability variants from the contestability ideas of Baumol *et al.* (1982) and Baumol and Willig (1986). These are between physical and financial contestability, between market and industrial contestability and a regulation related role which refers to the possibility of systematic intervention by regulators by means of taxes or subsidies with the purpose of regulating the conditions of the market and could be termed as regulated contestability.

The distinction between physical and financial contestability could among other things refer to how investment may be undertaken and to the control of profits across a border. In this context we may find that a diversifying MNE may enter a market by acquiring existing producers without adding new physical capital or may also enter via imports or may also make new physical investment. This is physical contestability, which refers to the locating of plants in the host country and the control of this physical investment, in contrast to financial contestability which

relates to the financing of assets or liability in the host country. This is in sharp distinction to Baumol *et al.* (1982) contestable market condition, which refers only to new capacity being created in the market and not changes of ownership of existing producers or via imports and of financial investments.

Another distinction is with regard to industrial contestability and market contestability, “.....referring respectively to conditions of entry and exit for the marginal potential producer and for the marginal potential supplier in a region” (Ryan 2000, pp. 714-715). Clearly models (7.2) and (7.4) have features similar to Ryan’s market contestability and industrial contestability conditions respectively. The government via contingent taxes or subsidies  $t$  ( $t \geq 0$ ) in model (7.2) may vary the market contestability conditions - with reference to existing firms and to potential firms, for example between multinational supermarket firms and domestic supermarket firms competing in the same market. Likewise via conditions,  $(c_z + \psi_3)^{59}$ ,  $(\psi_5 + \lambda_{s-1})$  and  $(c_2 + \psi_4)$  in model (7.4) the government may select values of contingent tariffs or subsidies to vary the conditions relating to industrial contestability of producers where a key distinction relates to the ‘make or buy’, decisions,  $y_1, y_2$  which affect contingent cost of potential suppliers - between imports (outside suppliers) and local suppliers

Therefore in order for effective competition to take place between multinational and local firms in a context of a regulated market, the regulator may consider introducing several contestability-based strategies. Regulators, for example may consider contestability based legislation to remove barriers that may impede the

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<sup>59</sup> In practice, as was noted earlier, it may be difficult to differentiate between  $\psi_3$  (internal production) and production by outside suppliers ( $\psi_5$  and  $\psi_4$ ).



international contestability of such markets. Regulators may also consider contestability based regulation in the context that was discussed above, where a regulator can affect a firm's behaviour by the threat of regulation as well as by regulation itself. This may also mean that the regulator may take on the role of a potential hit and run entrant in an attempt to influence firms' pricing and output decisions and potentially influence their investment decisions too.

In the above context, the government may use the approach implicit in models (7.2), (7.3) and (7.4) to synthesize conditions of potential entry in general and for market as well as industrial contestability in particular. This underlines the fact that models (7.2), (7.3) and (7.4) may potentially consist of a variety of behaviour and entry conditions that may be varied in accordance to the regulated contestability ideas. For example, by regulating  $G_1(g_1), G_2(g_2)$  in model (7.3) the government may affect the productivity and efficiency of the MNFs and its subsidiary. Also in the context of a regulated contestable market we may look at multinationals operating alongside local firms which may eventually be displaced. A way to avoid local producers being displaced is to regulate the market conditions, for example by imposing tariffs on imports,  $\psi_5$  in model (7.4) as a mechanism to regulate the process of competition.

In a regulated market we have seen that the regulatory mechanism in principle discriminates between national and foreign firms. The government may fix the entry and exit conditions of certain firms to vary the contestability of the markets. This may limit the international contestability of such markets, but a limit to contestability may be needed to promote development of local firms and under

special conditions (UNCTAD, 1997). In this context, contestability is a matter of a degree of the openness to either physical or non-physical capital and in a way is related to the entry of FDI and the MNFs.

### **7.3 Multinational Firms, FDI and Competition Policy**

In general, Chapter Six has argued that MNFs have firm specific advantages which are related to the production method they use, the way in which activities are organised and also the way they marketed their products which all these make them superior than local firms. Innovation specific advantages of these kinds have been seen in the multinational supermarket activity in Malaysia and the specific policy the Malaysian government has on this was discussed in Chapter Two. However the superiority of the MNFs can become a threat to local firms and this chapter has looked at ways in which the superiority may be regulated so that local firms may benefit and at the same time entry of the MNFs with innovations is encouraged.

In reality it is difficult to identify a country that does not regulate inward FDI and MNFs in some ways or other, either through official restrictions or official approval processes in which the government intervenes directly to affect the level, composition or form of foreign investment and multinational activities and also a selective level of competition. Admittedly these concerns are voiced principally by developing countries but they are not only confined to them, and even in the developed countries such as the EU the entry of the MNFs from outside the region may be treated differently, as is implicitly seen in the competition policy of the EU.

In Chapter Six we have looked at how innovation and efficiency stemming from vertical integration may lead to efficiency gains such as the elimination of double marginalisation and the increase in collective profits. These benefits are recognised by the competition authorities as being not against the public interest and therefore will not trigger any intervention or investigation by the competition authorities. This is consistent with the exemption given under the UK and the EU Competition Policy, where vertical integration in the context discussed in Chapter Six involving firms operating at a different level of the production or distribution chain may be excluded from investigation. The exclusion of vertically integrated firms may involve relationships between manufacturers and wholesalers or retailers, wholesalers and retailers or even between two wholesalers, provided they are operating at different levels of the supply chain.

Exemptions may also be granted especially in the context of MNFs with market power if there are overriding countervailing benefits. These benefits may include among others an improvement in efficiency gains from innovation, improving production or distribution which results in lower costs and promoting technical or economic progress and allowing consumers a fair share of the resulting benefits. In this regard the competition policy of the UK and the EU may allow firms having 25.0 per cent or more of the market shares, provided these firms do not abuse their dominant position and market power. In this context we have seen that the four largest UK supermarket firms measured by shares of grocery sales in 1998/1999 controlled 71.2 per cent, with Tesco having 24.6 per cent.

## 7.4 Conclusion

This chapter has looked at some kinds of regulation and government policy particularly suited to MNFs associated with vertically integrated activities, with potential applications including supermarket firms. The host countries are interested in ways in which the activities of the MNFs may affect a variety of policy goals. In that context models (7.2)-(7.4) have shown how entry of such firms may be regulated in specific ways to achieve various goals, including productivity enhancing goals and competition enhancing goals.

It has been shown how governments may choose to regulate entry and multinational activities through contingent taxes and subsidies. The tax policy may reflect the attractiveness of the host country as an investment destination and particularly may affect the level of entry of MNFs. Other things being equal, a lower corporate tax in one host country may attract more entry vis-à-vis other countries. However a lower tax rate also implies a loss of revenue. On the other hand a higher tax rate imposed on MNFs may also be a mechanism to enhance the survival of local firms but may have the unfortunate side effects of reducing foreign investments and the efficiency gains associated with multinational entry.

Similarly the use of contingent subsidies,  $\alpha$  may be used as mechanisms to attract and regulate the entry of MNFs and their subsidiaries with efficiency and productivity enhancing variables,  $g_1, g_2$  and associated costs  $G_1(g_1), G_2(g_2)$ . At the same time host governments, especially those in developing countries, may also want to enhance the efficiency and the productivity variables,  $g_s$  of local firms via the

transfer of technology. Since it is commonly the case that the efficiency and productivity enhancing variables of the MNCs are superior to the efficiency variables of firms in developing countries (see Pavitt, 1971), then in the context of model (7.3) contingent subsidies may also be an effective mechanism to encourage the transfer of technology,  $g_1, g_2$  to local firms.

This chapter has also looked at the survival of local producers which may be affected by the 'make or buy' decisions,  $y_1, y_2$  of the MNCs regarding the acquisition of their intermediate inputs. With the assumption that local producers are high cost producers, the governments may bring in competition to reduce costs. In this context an MNC with its superior  $g_1$  may produce its intermediate inputs internally, via its subsidiary,  $s-1$  with efficiency  $g_2$  or through its multinational contacts worldwide may import from outside. Limiting all forms of the 'make' decision,  $y_1$  via subsidiary production or from imports, in the present model (7.4), would obviously imply a higher price for domestic consumers - a trade off which consumers are unlikely to accept. An optimal policy measure could be one which strengthens local producers, via  $\psi_4$  rather than a policy that hinders the multinationals' ability to supply the local market. Such regulatory measures are also potentially consistent with WTO transition ideas and probably with the UK and the EU innovation rules.

Finally, the presence of MNCs may also be subjected to other kinds of public intervention, especially by means of national competition policies. However, most developing countries do not have formal competition policies but may have legislation on the protection of consumers welfare, as is the case in Malaysia. A major step forward in such cases would be to promote the implementation of a well

developed competition policy in these countries that protects both consumers as well as business entities. In this context Malaysia could draw useful lessons particularly from the UK and the EU Competition Acts.

## CHAPTER EIGHT

### CONCLUSION

#### 8.0 A Brief Review

This dissertation has explored the subject of FDI and entry with reference to multinational supermarket firms from three distinct perspectives, namely from the aggregated FDI theory, from a micro approach using industrial economics literature and also from the context of regulation, both in theory and practice. Following the introduction, Chapter Two focused on a wider regulatory framework and its potential impact on entry and industry development with a contrast between European practice and the practice in Malaysia. Within this broader regulatory context, in Chapter Three, attention turned to issues of concentration and the determinants of industry structure with emphasis on potential entry of multinational supermarket firms into a developing economy. A variety of literature which bears on this topic was reviewed in that chapter, including literature on industrial economics and on multinationals. This more general framework in turn led to the development of four chapters which form the core of this dissertation, namely two chapters on FDI (FDI theory and empirical modelling of the services-manufacturing distinction), a chapter on vertical integration and coordination and a chapter on regulation of entry by MNEs. Supermarket firms were used as a class of examples to illustrate the emphasis in these chapters on service industry related developments because of the particular importance of such firms to the host economy in terms of their economic contributions, as well as providing useful examples from the perspective of FDI and economic policy. The subject of supermarkets is also useful and distinctive vis-à-vis

other firms in services because they can usefully be seen as vertically coordinated or integrated organisations combining aspects of both services and manufacturing related activities.

## **8.1 Some Key Results**

This dissertation has added to the large number of studies on FDI but with a different emphasis and methodology. It has looked at services FDI and at supermarket firms, in contrast to the preponderance of studies which have concentrated on manufacturing FDI. The analysis has not only included the entry of FDI and MNFs but has also focused on market structures, vertical integration and regulation, where these themes are interrelated and have implications for theory and policy. The policy implications are a concern to the host country, especially with regard to FDI and regulation mechanism because there might be trade-offs.

The determinants of entry of services FDI were empirically tested using econometric analysis. In the model it was found that the variables that are significant to the inflows of services FDI in the UK are inflation rate, openness, interest rates and exchange rates, whereas the growth rate and the market size variable (GNI) are not statistically significant. A potential explanation for this was explored in Chapter Five where it was argued that foreign investors may consider other determinants (such as the openness variable) rather than the growth rate, which may not be sustainable over the long run. In the case of services FDI inflows in Malaysia, the variable estimations associated with market size, openness, interest rates and financial crisis are statistically significant, whereas the variables on growth rate,



exchange rate and inflation are not significant. Chapter Five has suggested an explanation for the difference on the interest rate variable; it was postulated that foreign firms might be bringing in capital from abroad instead of raising funds from within because of the high interest rates in the host country. On the exchange rate variable, it was argued that an appreciation of the exchange rate may have a negative impact on FDI inflows but some economists tend to reject the links between FDI and exchange rates. The impact of inflation on FDI is not clear-cut a priori and it was argued that it might have negative and also positive impacts on FDI.

Chapter Five has shown that the magnitudes of the coefficients of the variables relative to their standard errors are quite different between services and manufacturing FDI for the UK and also for Malaysia. One main variable that is central to the finding is the openness variable. This variable is also a key variable in the context of regulation, as discussed in Chapter Seven, and this in itself is a novel result. The services-manufacturing distinction will have some policy implications for governments seeking to attract FDI, particularly in the context of vertical integration, multinational firms and regulation, as will be discussed further in Section 8.3 of this Chapter.

However, in common with authors using such methods, the econometric studies of FDI undertaken here were aggregated methodologies and also sector specific, related to the services-manufacturing FDI distinction but not to micro and firm specific analysis. In part because there is a clear distinction between manufacturing and services FDI, arguably at least for certain purposes a disaggregated approach would be more appropriate and this in turn via issues relating

to vertical integration and MNFs suggests an interrelation between the two sectors. In this context this dissertation went on to look at vertical integration and regulation related issues.

Chapter Six developed a stylised model based on earlier work by Hasan and Ryan (2003) looking at potential determinants of whether or not a firm would potentially integrate or otherwise. That chapter looked at internal productivity versus external productivity issues, which in turn will affect the transfer price. It also looked at ways in which an advantage in productivity will affect prices to consumers and the nature and degree of integration or coordination with suppliers. Following on this, the interpretation of the basic model was extended to look at multinational applications. In the context of the ‘make or buy’ decisions it was argued that tradeoffs in innovation and efficiency may lead to reductions in outputs by domestic suppliers because MNFs may source from their own subsidiaries (integration) or from imports rather than from local suppliers. This argument is related to the fact that incoming firms (MNFs) have a higher productivity enhancing resources relative to local firms. A partial or complete switch by the MNFs from a ‘make’ to a ‘buy’ decision may be associated with a higher productivity of local suppliers as compared to the acquisition from within (subsidiary) or from imports. The results stemming from the interpretations have implications, including potential applications to multinational supermarket firms.

The analysis in Chapter Six on the distributional implications from vertical integration also makes a new contribution. By means of multinational interpretations, Chapter Six has shown that the distributional benefits stemming from vertical

integration may accrue to different nations involving owners of the super profits, suppliers and workers, whereas this distinction is not obvious in FDI models using aggregated and econometric methods. In this context it was found that the net welfare gain to the host nation as a whole is not really evident because only consumers may gain in terms of lower prices.

The regulation model in Chapter Seven on the other hand has shown how regulatory environments may affect not only entry decisions but also interactions between corporate structures and efficiency. In this context, one key variable that has links to regulation was 'openness', in ways potentially associated with the openness variable which is also central to aggregate FDI model. The difference is that in the regulation model the 'openness' arises at a disaggregated level, in contrast to the aggregated level of the FDI model. At a disaggregated level the government may vary the magnitude of the openness variable in at least three different ways, namely, directly at the entry level involving taxes,  $t$ , indirectly with reference to inducement with reference to the efficiency and productivity enhancing resources  $g_1, g_2$  and associated costs  $G_1(g_1), G_2(g_2)$  and finally with reference to policy at the intermediate inputs level,  $c_z, c_2$  and imports. The decisions to regulate in each of these ways may be based on the policy directions of the host government in particular with reference to a wider application on how tariffs and subsidies will affect the 'make or buy' decisions and the different behaviour and outcome if taxes are charged on the profits of the MNEs. These regulatory mechanisms have policy implications potentially applicable to supermarket firms. The models in Chapters Six and Seven show how in every case the structure of affected incoming firms will change depending at which point taxes, tariffs or subsidies are included.

## 8.2 Some Implications for Theory

The key chapters of this dissertation have looked at FDI theory, vertical integration theory and also at regulatory mechanisms in the context of FDI and MNEs. A combination of both the macro and micro methodologies has been used in ways which demonstrate how both approaches can be useful and can substantially contribute towards the understanding of FDI and MNEs and the ways in which they may be regulated.

A prominent theory of FDI which was reviewed in Chapter Five and referred to extensively in subsequent chapters in this dissertation was the 'eclectic' paradigm espoused by Dunning (1991). It consists of an amalgam of approaches which Dunning found lacking in the related works of other authors. But, as noted in that chapter, Dunning's paradigm has also been criticised on the grounds that it lacks deeper explanation of the behaviour of the MNEs, especially in the context where now most MNEs have diversified their activities. The 'eclectic' paradigm identifies three aspects, ownership, locational and internalisation (OLI) specific advantages as being the main motivation for FDI flows. However the OLI paradigm does not explain the evolution of FDI flows. In this dissertation it was argued that there are other shortcomings of existing FDI theories, including that of Dunning.

A prominent shortcoming of the FDI literature is the essentially manufacturing oriented emphasis. In terms of empirical works, most studies on FDI also relate to manufacturing firms (see Chapter Five) and little attention has been given to services FDI and the vertically integrated nature of the MNEs. The

manufacturing emphasis may have been appropriate in the early years of FDI inflows but the current and also the future flows of FDI seem to be in the services sector (see UNCTAD 2003). Further, associated econometric works (example Beer and Cory, 1996, Govindan, 1997, Culem, 1988 and Li and Guisinger, 1992) have been aggregative and not firm specific and here it has been argued that in order to analyse MNFs a micro methodology may be more appropriate. This point was demonstrated and underlined by the theme of supermarkets and associated vertical integration and regulation issues, which has been maintained throughout this dissertation. This microeconomic approach can substantially improve the aggregated FDI approach and its results.

The major variants of the FDI theories, including Dunning's 'eclectic' paradigm, do not address specifically the manufacturing-services distinction of FDI and MNFs. This leads to the motivation in Chapter Five, which pursued the manufacturing-services distinction, and it was shown that there is a difference between the coefficients associated with the variables at the aggregate level for the UK and Malaysia. One of the key results in the distinction is the openness variable, which may have implications for policy and regulation. This suggest more arguments and a significance for a disaggregated approach that needs to be looked at in the context of vertical integration (Chapter Six) and regulation (Chapter Seven). Again, this was not highlighted by the 'eclectic' paradigm, which is macro in methodology. A *prima facie* case for disaggregation and sector specific analysis stems from its usefulness for policy related purposes, which is sharper to draw than the macro approach.

A further extension of the micro approach adopted in this dissertation is on regulation, whereas in the standard FDI model and literature on FDI there is no direct mention of regulation in the context of entry of FDI and the MNEs. The resulting regulatory model has looked at a wider application of the openness variable on the impact of regulation on FDI which was not looked at by the FDI model. The regulation model has shown how the effect of varying the magnitude of the openness variable such as raising or lowering the barriers on taxes and subsidies will have an impact on market structures, leading to integration or disintegration. It was also shown in Chapter Seven that issues regarding regulation and entry could also be usefully linked to the implicit regulatory mechanism of the contestability theory and in particular to regulated contestability ideas, especially with regard to two useful distinctions between physical and financial contestability and between market and industrial contestability.

A focus on a disaggregated approach was also used to highlight the fact that standard FDI theory has not distinguished between financial capital and human capital. In fact the measurement of FDI as defined by the IMF, 1993 and UNCTAD, 1998 refers to FDI as cross border transfer of funds, which is financial capital. In the context of services FDI, human capital may be significant and financial capital may be only the complementary factor in this sector. Therefore FDI is also about the transfer of non financial capabilities. In this context, the human capital may be linked with the efficiency and productivity enhancing resources associated with the vertical integration model that was looked at in Chapter Six, where it was argued that MNEs have a higher productivity vis-à-vis local firms.

### 8.3 Some Implications for Policy

This section will look at the policy implications both in general and also in the context of Malaysia. In Chapter Two, this dissertation has traced the regulation practices of Malaysia (developing) and also, in contrast, those of the UK (developed). In that chapter it was shown that government intervention in the retail trading sector in Malaysia is pervasive in contrast to the manufacturing sector. The retail trading sector is subjected to legislative acts (such as Price Control Acts, 1946 and Control of Supplies Act, 1961) as well as administrative control (minimum capital requirement and equity policy). This intervention is postulated on the grounds of curbing inflation and income distribution. The main policy implications of these interventions are the impact on the industry structure which will affect supply and demand as well as prices, and will lead to inefficiency in the industry. In addition there will also be costs of monitoring of prices and enforcement of these acts. In contrast, the UK relied upon the Competition Act (1998) which has links to efficiency and also to regulation.

The equity policy that was also discussed intensively in Chapter Two is not only peculiar to Malaysia but is also found in other developing countries as well. In the retailing sector, a foreign firm is required to form a joint venture company with local firms, especially with the Bumiputera group. This policy was designed in the context of income distribution but the impact of limiting foreign equity in the retail trading sector (including supermarket) may have implications, such that it may stifle and discourage entry of FDI and MNCs which is needed especially from the perspective of innovation and as drivers of development. In addition, the equity

policy is not effective in increasing Bumiputera participation in the corporate sector, since as Chapter Three has shown, multinational supermarket firms have difficulty in finding suitable local partners with financial capital capability. Furthermore, it was found that some Bumiputera firms are only used as ‘window dressing’ rather than becoming active business partners.

It was also shown that antitrust legislation or competition policy in Malaysia is largely missing (there is only the Consumer Protection Act, 1999), whereas in the UK, competition policy and related laws are well developed. In the absence of post entry regulation or competition policy, this means that Malaysia has no particular view or policy on dominant position and market power and matters arising from these, such as abuses of dominant position and anti competitive conduct may not be addressed. One policy implication will be that this may affect Malaysia’s international competitiveness in attracting FDI and MNFs, since in theory competition policy is an imposed level playing field with rules applying to all.

Therefore the antitrust legislation or competition policy is arguably important for Malaysia, and useful lessons in this respect could be drawn from the UK and the EU. One such lesson is that the approach towards dominant position may be different in the context of Malaysia and hence the emphasis in policy will also be different. In Malaysia the emphasis may be more on innovation and efficiency rather than concern with unfair use of dominant position and market power. This is in contrast to the UK and the EU, where innovation is secondary to the issue of unfair use of a dominant position.



Chapter Three has shown that Malaysia is an attractive location for multinational supermarket firms. It now hosts several of them, including some of the world largest supermarket firms, Carrefour of France and Tesco of the UK. The entry of these MNFs is a new source of FDI associated with innovation that has brought radical change to the supermarket sector but at the same time has affected sales from local supermarket firms. The innovation and efficiency of these firms are clearly evident. Within a short time, these firms have established a dominant position and have captured a significant share (see Table 3.8) of the supermarket sales vis-à-vis local firms. As was argued earlier, the development policy in Malaysia is to encourage innovation, and issues of dominance and market power are secondary, unlike the UK and the EU.

Chapter Four has looked at the FDI theory, and it was argued that there are shortcomings of the theory but nevertheless relevant in explaining FDI and MNFs in general. Empirical work on the entry of FDI was carried out in Chapter Five in the context of the manufacturing-services distinction, where determinants on market size, growth, openness, inflation, interest rates and the exchange rates were tested. One result of the econometric work is that the coefficients of the variables (relative to their standard errors) between services and manufacturing FDI exhibit a difference. In particular a key determinant in the econometric work is the openness variable. One policy implication suggests that an open policy is both desirable for manufacturing as well as services FDI and will attract more investors vis-à-vis countries with barriers to entry. In the FDI model, the openness variable measures tariffs but in general openness may also refer to policies that restrict entry, such as the equity policy in Malaysia. In this context, it is therefore essential for a small

economy such as Malaysia to review its openness policy if it is to attract more FDI. Other things equal, apart from bringing in capital, MNFs have higher productivity and or lower costs. They may also bring in innovation which may be transferred to local firms. We considered phenomena of this kind in Chapter Six.

In Chapter Six this dissertation has looked at vertical integration in the context of the MNFs with potential applications to multinational supermarket firms. It was shown that there may be some policy implications stemming from the ‘make or buy’ decisions and the efficiency and productivity enhancing resources. Since MNFs are often vertically integrated, the different outcomes on the ‘make or buy’ decisions may have an impact on industry structure leading to integration or disintegration. Local suppliers may or may not benefit from the decisions, for instance if the multinational supermarket firms decided to source internally (vertical integration) or via imports for reasons stemming from lower transfer price, better quality and higher efficiency. If the policy is to encourage local production at the expense of efficiency and productivity of the MNFs, there may be tradeoffs, for example, between lower prices in supermarkets that benefit consumers arising from efficiency of the MNFs (via vertical integration or imports) and higher prices by relatively less efficient local suppliers. A longer term policy objective would be to provide incentives in order to encourage the integration of local suppliers with the multinational supermarket firms, particularly with a view of transferring technology so that local suppliers may become more efficient producers over time.

As well as technology transfer, there is also technological spill-over from the efficiency and productivity enhancing resources of the MNFs. This spill-over may

come from competition, labour mobility and also through imitation. The technological spill-over may also benefit local firms and of relative importance to the development objectives of Malaysia. On the other hand, as well as being potentially productivity enhancing, MNFs may also be particularly threatening sources of FDI, as was discussed in Chapter Three. However, a pragmatic policy approach is therefore to look at the entry of the MNFs with a view to benefit from their presence that will synthesize change in the domestic firms, rather than to restrict entry.

In terms of regulatory mechanisms, this dissertation has looked at a wider framework of regulatory policy and ways in which entry of FDI and MNFs may be regulated including, potentially, supermarket firms. As well as considering openness in an aggregated econometric context in the FDI model, this dissertation has looked both in general and specific ways how openness may affect or be affected by regulatory policies on FDI entry (magnitude and profits), market structures (integration or disintegration) and efficiency (innovation and productivity), bearing in mind that the government may vary the entry conditions in line with the national objectives of the host country. From the perspective of policy, a competitive regulatory policy relative to other countries will ensure that investments are not affected while at the same time government priorities are not compromised and local supermarket firms as well as local suppliers are not worse off.

Malaysia is a small economy, seen by its government as dependent on FDI, and the MNFs are viewed as the catalyst for growth and development. The work here suggests that from the policy point of view it is therefore imperative for Malaysia to beef up its openness policy as one way of attracting more FDI in order to

stay competitive vis-à-vis other countries and at the same time encourage competition to enhance the productivity of local firms. But this is not to say that the entry of FDI must not be regulated, because unregulated entry will present a threat to local firms.

#### **8.4 Future Work**

This dissertation has paved the way for the analysis on vertically integrated MNFs (including supermarket firms) from a number of different approaches including the FDI theory, the vertical integration approach and also regulation issues. It has looked at both the aggregated and macro approach, as well as the disaggregated and micro methodology, each of which has looked at specific issues but in a way interrelated with each other.

However much remains to be done. Firstly, it is suggested that a case study on multinational supermarket firms (such as Tesco or Carrefour) would be valuable to the analysis on vertical integration in the context of the quality variable, the productivity and efficiency enhancing variables and the ‘make or buy’ decision and in this way the stylised model may be tested. In the context of a double monopoly model, besides the ‘make or buy’ decisions as discussed in Chapter Six, ways in which the price of the intermediate good are actually determined may be investigated further. In addition, future work should also quantify the distributional gains of vertical integration with regard to super profits, suppliers, and consumers.

Secondly, much more work needs to be done on the regulation issues regarding the costs and benefits of taxes and subsidies. In this context, using a parameterised model would be helpful to calculate transfers, welfare gains and dead weight losses arising from the various possibilities of taxes and subsidies. Finally, an overall model is also suggested for future work to take into account the firm's reaction with regard to taxes and subsidies set by the government.

List of Goods under the Control of Supplies Act, 1961

**1. Controlled at all times**

Food Items

Sugar

Milk – includes powdered, condensed milk and liquid milk

Salt

Flour

Cooking Oil

Rice, all types

Bread

Non Food Items

Rubber wood

Cement and clinker

Fertilizer

Pesticide

Cast Iron Rod

Kerosene

Petrol and Diesel

**2. List of Food Items Controlled during Festive Season**

All types of butter and cheese	Meat and meat products	Fruits
All 'halal' bottle drinks	Poultry	Onions and garlic
All type of cooking oil	Prawns	Chili
Coconut	Eggs	Pepper
Groundnuts	Sea Products	Rice flour
Mushroom		Maize flour
Jelly		Potatoes

## Malaysia manufacturing and services FDI data (US\$)

## Appendix 5.1

Year	fdimanu*	fdiservices*	GNI(lag1)*	gdprate	ir-llibor	inf	open (M+X/GDP)	exrate	d1
1980	328325380	n.a	20139000000	7.44	-6.44	6.87	0.94	131.49	0.00
1981	583950940	n.a	25203000000	6.94	-8.37	1.06	0.90	132.04	0.00
1982	700819470	n.a	27749000000	5.94	-4.50	2.53	0.95	140.37	0.00
1983	269097950	n.a	27436000000	6.25	1.36	5.19	0.99	147.01	0.00
1984	296106390	n.a	27229000000	7.76	0.41	5.55	1.01	152.71	0.00
1985	395258340	40791100	30187000000	-1.12	3.15	-1.51	0.97	145.10	0.00
1986	648435270	38801380	30424000000	1.15	3.83	-8.64	0.99	121.81	0.00
1987	826302050	44123550	30454000000	5.39	1.01	5.53	1.05	115.46	0.00
1988	1796689130	39779010	32770000000	9.94	-0.73	3.62	1.10	105.46	0.00
1989	3201146500	81021090	36704000000	9.06	-2.28	4.46	1.21	103.57	0.00
1990	6524476680	102516650	39590000000	9.01	-1.15	3.81	1.35	98.52	0.00
1991	6261139870	449706310	43235000000	9.55	2.14	3.58	1.48	95.88	0.00
1992	6804033310	506891270	47426000000	8.89	5.46	2.42	1.49	102.52	0.00
1993	2326861580	633604740	54692000000	9.89	5.77	3.99	1.53	103.61	0.00
1994	4429331250	530078130	62978000000	9.21	2.87	3.94	1.74	99.68	0.00
1995	3597004330	1654209280	71910000000	9.83	1.59	3.63	1.92	100.00	0.00
1996	6744351520	2057334920	83015000000	10.00	3.38	3.68	1.87	104.44	0.00
1997	2947820920	1111767730	94613000000	7.32	3.77	3.48	1.84	103.31	1.00
1998	3437757630	1001052630	99728000000	-7.36	5.03	8.50	1.80	82.10	1.00
1999	3229958680	1227368420	80774000000	6.08	1.87	-0.04	1.88	84.48	0.00
2000	5223283950	1706315790	78264000000	8.30	0.24	4.75	2.11	86.62	0.00

\* For the purpose of econometric works the nominal figures was converted into real values (1995 as base year).

## UK manufacturing and services FDI data (US\$)

Appendix 5.2

Year	fdimanu*	fdiservices*	GNI(lag1)*	gdprate	ir-llibor	inf	open (M+X/GDP)	exrate
1975	660540000	648000000	217000000000	-0.68	2.05	27.03	0.38	84.5
1976	1014030000	391000000	240000000000	2.80	3.43	15.18	0.40	77.7
1977	1736190000	740000000	248000000000	2.36	3.70	13.77	0.41	76.4
1978	1877750000	628000000	259000000000	3.40	0.40	11.55	0.41	91.5
1979	2335440000	1470000000	295000000000	2.75	1.83	14.50	0.42	105.6
1980	3525250000	2540000000	375000000000	-2.18	1.98	19.37	0.42	126.5
1981	513790000	1450000000	474000000000	-1.27	-3.62	11.27	0.42	135.2
1982	330050000	1650000000	532000000000	1.80	-1.44	7.42	0.42	128.5
1983	1457250000	1620000000	530000000000	3.75	0.12	5.33	0.43	119.1
1984	1223800000	1290000000	490000000000	2.45	-1.19	4.55	0.45	114.3
1985	1676160000	1360000000	463000000000	3.78	3.94	5.63	0.45	113.6
1986	1697850000	3600000000	458000000000	4.21	3.98	3.11	0.46	105.2
1987	5638050000	7020000000	518000000000	4.43	2.46	5.20	0.47	108.6
1988	7459010000	8090000000	637000000000	5.17	2.32	6.04	0.48	113.3
1989	12324550000	123000000000	807000000000	2.11	4.63	7.46	0.50	110.0
1990	6241620000	192000000000	871000000000	0.66	6.44	7.66	0.50	109.8
1991	5581950000	58100000000	934000000000	-1.47	5.56	6.66	0.50	114.0
1992	4471110000	57900000000	971000000000	0.07	5.56	3.97	0.53	114.0
1993	4919520000	78600000000	1070000000000	2.33	2.63	2.74	0.53	104.7
1994	3725280000	22000000000	1070000000000	4.39	0.74	1.53	0.55	105.5
1995	6457300000	137000000000	1100000000000	2.79	0.65	2.51	0.57	100.0
1996	7272600000	138000000000	1120000000000	2.55	0.45	3.26	0.60	102.1
1997	9444600000	224000000000	1190000000000	3.51	0.82	2.91	0.63	122.8
1998	18193600000	422000000000	1270000000000	2.64	1.62	3.02	0.65	131.3
1999	18011160000	703000000000	1330000000000	2.29	-0.08	2.28	0.68	134.7
2000	16393500000	978000000000	1410000000000	3.07	-0.55	1.80	0.72	142.5

\* For the purpose of econometric works the nominal figures was converted into real values (1995 as base year).



**Table 5.2**  
**Determinants of Manufacturing and Services FDI Inflows in the UK**

Variables	Real Services FDI UK			Real Manufacturing FDI UK		
	Constant	0.89 (0.11)	70.82 (5.43)	11.38 (0.59)	16.28 (1.78)	1.85 (0.18)
Real GNL <sub>1</sub>	0.69 (2.14)	-1.90 (-4.40)	0.27 (0.33)	0.12 (0.36)	0.79 (2.08)	0.56 (2.28)
ΔGDP	0.03 (1.60)	0.01 (0.91)	0.02 (0.49)	-0.15 (-4.78)	-0.12 (-3.09)	-0.13 (-5.55)
Inflation	0.12 (10.4)	0.12 (8.84)	0.11 (4.12)	0.05 (1.67)	0.11 (5.690)	0.01 (6.85)
Exchange rate	-0.05 (-8.40)	-0.05 (-8.20)	-0.07 (-10.2)	-0.01 (-1.88)	-0.02 (-1.27)	-0.12 (-2.21)
Lending rates- Libor	-0.15 (-6.37)	-0.13 (-5.31)	-0.14 (-3.53)	-0.05 (-3.16)	-0.07 (-4.23)	-0.06 (-4.79)
M/GDP	11.21 (8.80)	-	-	7.13 (10.68)	-	-
X/GDP	-	18.92 (3.78)	-	-	9.92 (4.62)	-
M+X/GDP	-	-	7.38 (3.99)	-	-	4.6 (8.32)
<i>Adj. R</i> <sup>2</sup>	.72	.70	.75	.68	.65	.60

**Table 5.3**  
**Determinants of Manufacturing and Services FDI Inflows in Malaysia**

Variables	Services FDI Malaysia			Manufacturing FDI Malaysia		
	Constant	-51.69 (-1.55)	-78.37 (-3.74)	-52.39 (-2.13)	-1.65 (-3.77)	-1.89 (-7.19)
Real GNL <sub>1</sub>	2.77 (2.00)	3.89 (4.49)	2.78 (2.73)	1.02 (47.7)	1.03 (71.8)	0.99 (60.70)
ΔGDP	0.04 (1.13)	0.01 (0.24)	0.19 (0.64)	-0.005 (-1.92)	0.01 (2.16)	-0.004 (-2.55)
Inflation	0.03 (1.40)	0.02 (0.78)	0.21 (1.05)	0.002 (-1.42)	0.01 (2.15)	0.001 (1.06)
Exchange rate	-0.08 (-0.04)	2.14 (1.23)	-0.69 (-1.10)	-0.38 (-2.82)	-0.19 (-1.22)	-0.22 (-2.42)
Lending rates- Libor	0.13 (2.30)	0.15 (2.60)	0.14 (2.89)	-0.01 (-1.76)	0.02 (1.690)	-0.01 (-2.35)
D1 (crisis)	-0.69 (-1.24)	-1.05 (-2.31)	-0.78 (-1.78)	(-0.17)	0.11 (1.78)	-0.15 (-3.09)
M/GDP	3.93 (2.14)	-	-	1.30 (7.39)	-	-
X/GDP	-	2.16 (2.38)	-	-	1.23 (13.2)	-
M+X/GDP	-	-	1.89 (2.99)	-	-	0.68 (12.30)
<i>Adj. R</i> <sup>2</sup>	.92	.91	.93	.90	.91	.90

Appendix 5.4**Correlation Matrix of Coefficients of Manufacturing FDI UK.**

	LrealFDI	LrealGNI	ΔGDP	Inflation	Exchange Rate	Interest Rate	Openness
LrealFDI	1.0000						
LrealGNI(-1)	0.37733	1.0000					
ΔGDP	-0.46467	0.032725	1.0000				
Inflation	0.50799	-0.054471	-0.64962	1.0000			
Exchange Rate	0.37347	-0.0028615	-0.36091	0.35079	1.0000		
Interest Rate	0.054894	-0.14528	-0.056340	0.24221	-0.20676	1.0000	
Openness (M+X/GDP)	0.60627	0.79200	-0.066326	0.24277	0.16541	-0.087244	1.0000

**Correlation Matrix of Coefficients of Services FDI UK.**

	LrealFDI	LrealGNI	ΔGDP	Inflation	Exchange Rate	Interest Rate	Openness
LrealFDI	1.0000						
LrealGNI(-1)	0.64901	1.0000					
ΔGDP	-0.31447	0.032725	1.0000				
Inflation	0.38920	-0.054471	-0.64962	1.0000			
Exchange Rate	0.22093	-0.0028615	-0.36091	0.35079	1.0000		
Interest Rate	0.0021931	-0.14528	-0.056340	0.24221	-0.20676	1.0000	
Openness (M+X/GDP)	0.85824	0.79200	-0.066326	0.24277	0.16541	-0.087244	1.0000

### Correlation Matrix of Coefficients of Services FDI Malaysia

	LrealFDI	LrealGNI	AGDP	Inflation	Exchange Rate	Interest Rate	Dummy (D1)	Openness
LrealFDI	1.0000							
LrealGNI(-1)	0.88068	1.0000						
AGDP	-0.17112	-0.36871	1.0000					
Inflation	-0.08327	-0.074649	-0.35889	1.0000				
Exchange Rate	0.45580	0.13641	0.47672	-0.074322	1.0000			
Interest Rate	0.17504	0.074066	-0.46406	-0.13189	-0.018025	1.0000		
Dummy (D1)	0.26681	0.60897	-0.67166	0.15548	-0.43561	0.19320	1.0000	
Openness (M+X/GDP)	0.95016	0.80399	-0.14248	-0.055032	0.38490	-0.026633	0.29956	1.0000

### Correlation Matrix of Coefficients of Manufacturing FDI Malaysia

	LrealFDI	LrealGNI	AGDP	Inflation	Exchange Rate	Interest Rate	Dummy (D1)	Openness
LrealFDI	1.0000							
LrealGNI(-1)	0.96594	1.0000						
AGDP	0.053862	0.044485	1.0000					
Inflation	0.066774	0.042790	-0.14887	1.0000				
Exchange Rate	0.003694	0.040022	0.43037	-0.018150	1.0000			
Interest Rate	-0.13417	-0.034780	-0.41928	-0.033741	0.14172	1.0000		
Dummy (D1)	0.092046	-0.027431	-0.56067	0.17220	-0.44950	0.065650	1.0000	
Openness (M+X/GDP)	0.70015	0.50762	0.035429	0.094557	-0.060024	-0.24437	0.34789	1.0000

## Appendix 6.1

Associating Lagrange multipliers  $\lambda_s$  and  $\lambda_{s-1}$  with the constraints of (6.3), the corresponding Lagrangean is:-

$$\begin{aligned} \text{Max } \pi_3 = \pi_3^* = & p_s(x_s)x_s - wL_s - rK_s - wL_{s-1} - rK_{s-1} - c_z z_{s-1} - \lambda_s [x_s - f_s(L_s, K_s, y_s)] \\ & - \lambda_{s-1} [y_s - f_{s-1}(L_{s-1}, K_{s-1}, z_{s-1})] \end{aligned} \quad (6.3)^*$$

### **Necessary Conditions for a Maximum**

$$x_s \geq 0 \quad \delta\pi_3/\delta x_s = p(x_s) + x_s \delta p/\delta x_s - \lambda_s \leq 0 \quad (6.3.1)$$

$$L_s \geq 0 \quad \delta\pi_3/\delta L_s = -w + \lambda_s \delta f_s/\delta L_s \leq 0 \quad (6.3.2)$$

$$K_s \geq 0 \quad \delta\pi_3/\delta K_s = -r + \lambda_s \delta f_s/\delta K_s \leq 0 \quad (6.3.3)$$

$$y_s \geq 0 \quad \delta\pi_3/\delta y = -\lambda_{s-1} + \lambda_s \delta f_s/\delta y_s \leq 0 \quad (6.3.4)$$

$$L_{s-1} \geq 0 \quad \delta\pi_3/\delta L_{s-1} = -w + \lambda_{s-1} \delta f_{s-1}/\delta L_{s-1} \leq 0 \quad (6.3.5)$$

$$K_{s-1} \geq 0 \quad \delta\pi_3/\delta K_{s-1} = -r + \lambda_{s-1} \delta f_{s-1}/\delta K_{s-1} \leq 0 \quad (6.3.6)$$

$$z_{s-1} \geq 0 \quad \delta\pi_3/\delta z = -c + \lambda_{s-1} \delta f_{s-1}/\delta z \leq 0 \quad (6.3.7)$$

Proof

**There are three possibilities**

- $\lambda_{s-1} = p(y_{s-1}^*)$ . In this case  $\pi_3^* = \pi_1^* + \pi_2^*$  and vertical integration/coordination would yield the same overall value as independent profit maximization at levels  $s$  and  $s-1$ .
- $\lambda_{s-1} > p(y_{s-1}^*)$ . In this case profits contributed at level  $s-1$  are reduced vis a vis an optimum to (6.2) since  $p(y_{s-1}^*)$  is associated with a profit maximizing solution to (6.2). Under this condition, too, profit at level  $s$  must be *reduced* vis a vis an optimum to (6.1) since unit costs of inputs  $y_{s-1}$  are then *increased* vis a vis an optimum solution to (6.2), it follows that, if  $\lambda_{s-1} > p(y_{s-1}^*)$ , that solution cannot be optimal in (6.3).
- $\lambda_{s-1} < p(y_{s-1}^*)$ . In this case profits contributed at level  $s-1$  will again be decreased vis a vis an optimum to (6.2) since  $p(y_{s-1}^*)$  is associated with a profit maximizing solution to (6.2). But in this case the profit contribution at level  $s$  would be *increased*, since unit costs of inputs  $y_{s-1}$  are then *decreased* vis a vis an optimum solution to (6.2).

It follows that a necessary condition for an increase in overall profit such that  $\pi_3^* > \pi_1^* + \pi_2^*$  is  $\lambda_{s-1} < p(y_{s-1}^*)$  and thence, by the concavity of  $p(y_{s-1}^*)$ , that  $y_{s-1} > y_{s-1}^*$ .

Associating Lagrange multipliers  $\theta$ ,  $\lambda_s$  and  $\lambda_{s-1}$  with the constraints of (6.4), the corresponding Lagrangean is:-

**Maximising Conditions**

$$\begin{aligned} \text{Max } \pi_4 = \pi_4^* = & p_s(x_s, q) x_s - wL_s - rK_s - wL_{s-1} - rK_{s-1} - c_z Z_{s-1} - c_2 y_2 - G_1(g_1) - G_2(g_2) - Q(q) \\ & - \theta(y_s - y_1 - y_2) - \lambda_s [x_s - f_s(L_s, K_s, y_s, g_1)] - \lambda_{s-1} [y_1 - f_{s-1}(L_{s-1}, K_{s-1}, Z_{s-1}, g_2)] \end{aligned} \quad (6.4)^*$$

Necessary conditions for a maximum to (6.4)\* are:-

$$\Delta \pi_4 / \delta x_s = p(x_s) + x_s \delta p / \delta x_s - \lambda_s \leq 0 \quad (6.4.1)$$

$$\delta \pi_4 / \delta L_s = -w + \lambda_s \delta f_s / \delta L_s \leq 0 \quad (6.4.2)$$

$$\delta \pi_4 / \delta K_s = -r + \lambda_s \delta f_s / \delta K_s \leq 0 \quad (6.4.3)$$

$$\delta \pi_4 / \delta y_s = -\theta + \lambda_s \delta f_s / \delta y_s \leq 0 \quad (6.4.4)$$

$$\delta \pi_4 / \delta L_{s-1} = -w + \lambda_{s-1} \delta f_{s-1} / \delta L_{s-1} \leq 0 \quad (6.4.5)$$

$$\delta \pi_4 / \delta K_{s-1} = -r + \lambda_{s-1} \delta f_{s-1} / \delta K_{s-1} \leq 0 \quad (6.4.6)$$

$$\delta \pi_4 / \delta Z = -c + \lambda_{s-1} \delta f_{s-1} / \delta Z \leq 0 \quad (6.4.7)$$

$$\delta \pi_4 / \delta q = x_s \delta p_s(x_s, q) / \delta q - \delta Q(q) / \delta q \leq 0 \quad (6.4.8)$$

$$\delta \pi_4 / \delta y_1 = \theta - \lambda_{s-1} \leq 0 \quad (6.4.9)$$

$$\delta \pi_4 / \delta y_2 = \theta - c_2 \leq 0 \quad (6.4.10)$$

$$\delta \pi_4 / \delta g_1 = -\delta G_1(g_1) / \delta g_1 + \lambda_s \delta f_s / \delta g_1 \leq 0 \quad (6.4.11)$$

$$\delta \pi_4 / \delta g_2 = -\delta G_2(g_2) / \delta g_2 + \lambda_s \delta f_s / \delta g_2 \leq 0 \quad (6.4.12)$$

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