An Analysis of Financial Performance of Malaysian-Based Multinational Enterprises

Professor F. Laswad*
Dr. P.B. Oyelere[#]

September 1999

Commerce Division
PO Box 84
Lincoln University
CANTERBURY

Telephone No: (64) (3) 325 2811
Fax No: (64) (3) 325 3847
E-mail: laswad@kea.lincoln.ac.nz

Abstract

Multinational enterprises (MNEs) have a major influence on contemporary world trade and business. Their dominance is predicted to grow in the future, as greater convergence and integration is achieved in world economies. Generating evidence that further our understanding of their behaviour is, therefore, considered to be an important research priority. This paper examines various aspects of the reported financial performance of Malaysian-based MNEs with emphasis on profitability. The aim is to provide empirical evidence on the nature and magnitude of their reported profitability. It compares the performances of foreign-controlled firms with those of Malaysian-controlled firms, and also examines inter-industrial differentials in profitability. Data on sampled firms were collected from their annual reports. Statistical analyses were conducted, on three-year average and annual profitability figures of the firms, using exploratory data analytical (EDA) techniques. Formal non-parametric statistical tests were then carried out to establish whether there were differences in the performances of foreign-controlled and locally-controlled firms. Results indicate significant differences in the average performances reported by different groups of Malaysian-based MNEs, both in terms of location of control and industrial affiliation. The findings suggest that MNEs' performances could be explained, using a number of characteristics, such as size, industry and location of control.

Contents

List of Tables

1.   Introduction

Multinational Enterprises (MNEs) have become a dominant force in the world of international trade and business today. Their dominance is predicted to grow in the future, as greater convergence and integration is achieved in world economies. The growing influence of MNEs necessitates greater understanding of various aspects of their operations and results. There is an opportunity for MNEs to use the multi-jurisdictional location of their assets to shift income from one country to another. The reported profitability of MNEs have therefore been a subject of considerable research interest in recent times. Majority of such studies have, however been based on the performances of MNEs in developed Western economies. Little attention is directed to profitability of MNEs based in developing and emerging economies. The current study examines various aspects of the reported financial performance of Malaysian-based MNEs with emphasis on profitability. The aim is to provide empirical evidence on the nature and magnitude of their reported profitability, given their size, industry and location of control.

Data were collected from the annual reports of MNEs over a three-year period. Statistical analyses were carried out using both exploratory data analytical techniques and non-parametric statistical tests. The results of the analyses indicate that, given a number of homogenetical grouping characteristics such as location of control and industrial affiliation, statistically significant differences can be found in the financial performances of Malaysian-based MNEs.

The remainder of the paper is organised as follows. Related literature is reviewed in the next section. The literature review covers theories of MNE growth and development and studies of their financial performance. This is followed by a discussion of the research design and methodology including sample selection, data collection and analysis. The results of the study are then discussed. Summaries and conclusions, including potential limitations and areas for further study, are presented in the final section.

2.   Related Literature

The literature covering various aspects of multinational foreign direct investment (FDI) is considerable. MNEs and FDIs play a significant role in international trade and business. FDI[1] involves the ownership (in part or whole) and management of a foreign operation established through investment in production resources in a country other than base country. These transferred resources are formed as foreign subsidiaries which may come into existence either through the acquisition of existing local firms or in the form of greenfield ventures. Multinationality evolves from the sustained capability of a firm to originate and continuously perpetrate FDIs in more than one national jurisdiction.[2] In this section, we review some theories of multinational FDI and studies that examined their financial performances.

2.1   Theories of Multinational Foreign Direct Investment

A number of theories attempt to explain the evolution and growth of this form of international business involvement. The approaches of these proponents differ widely. Hood and Young (1979) identified them to include:

- political approaches; including the neo-imperialist (Leninist) explanation for the growth of MN firms;[3]

- socio-psychological (or behavioural) approach; centering on the expansionist moods and aspirations of groups and/or individuals within a firm, as a provider of the necessary elixir for FDI. An inversion of Maslow's (1970) Theory of Need is relevant here. When the inverted model is visualised in a geographic context, we can see a firm moving to "conquer" wider geographic areas as soon as its immediate environmental needs are satisfied. The spirit of conquest, which is a necessary "virtue" in the psychological make-up of all great entrepreneurs is also inferred here; and

---

[1] The US Department of Commerce defined FDI as including "all foreign business organisations in which a US person, organisation or affiliated group owns an interest of 10% or more", and/or "a foreign business organisation in which 50% or more of the voting stock is owned by US residents even though no single US group owns as much as 10%" US Department of Commerce (1970).
[2] The exact number of foreign locations of production that qualifies a firm to be regarded as an MNE is still a subject of academic debate (Rugman et al, 1985).
[3] See, for example, Lenin (1966).

- historical approaches; viewing the FDI phenomena as a bye-product of monumental twentieth century developments in transport, communication and other infrastructural technology.[4]

However, the most significant and robust explanatory theories of FDI are derived from the economic literature. Neo-classical economists view investments as a function of interest rate, with capital moving from locations of abundance to high interest locations where capital is relatively scarce. This persists until a state of equilibrium is attained.

Ricardian (1817) and (later) Heckscher-Ohlin (1933) *theories of comparative advantage* considered factor (of production) endowment to be the most important variable that determines international trade patterns. Nations are better off exporting those products whose production process employs relatively more of the input resources that are most abundantly available to them. International trade in this respect is therefore viewed as being more or less (input) supply-induced. These theories could be logically applied to explain trade pattern between developed economies and most developing and emerging economies such as Malaysia.

Nonetheless, international business in a world based on this theory would only require a knowledge of international trade (exporting, in particular) and international capital movement, with no involvement of other forms of international business involvement, such as licensing, for example (Rugman et al, 1985). The occurrence of these other modes is a reality largely because of the natural and unnatural barriers that impede the realisation of free and perfect economic market concepts. The neo-classical position, therefore, does not fully explain the FDI phenomenon in dynamic economies such as Malaysia. It fails, in particular, to predict the substantial amount of capital flow from Malaysia to other nations of developed, dynamic and less developed status. The presence of barriers to capital, trade and investment flows is by far more prominent in developing economies. This provides a context for observing a number of relevant FDI literature.

Hymer (1960) perhaps contributed most to the emergence of the coherent body of literature that is today referred to as FDI theory. Proceeding from a logical criticism of the neo-

---

[4] See, for example, Chandler (1962)

classical position, he - and later Kindleberger (1969) - submits that national and, more especially, international product and factor markets are rife with imperfections, and these provide the major impetus for FDI. The sources of such imperfections may include technology, interference in competition by governments or firms with separate markets (Kindleberger, 1969). Market inefficiencies result in higher transaction costs that make other trade options, such as exporting, unattractive. And with the market for technology and expertise highly imperfect, the obvious solution is for the firm to move its capital across boundary in order to maintain control over, and be able to exploit its special advantage on an international scale. This will only be attractive if the economic rent accruing from the exploitation of the advantage can be enhanced by foreign production. The dynamic economies of Asia provided more than adequate return on most forms of foreign investment up to the period of the 1997 economic crisis, hence they were able to attract even greater amount of FDI.[5] Hymer's theory however failed to explicitly dissect and explain the nature of the advantages that lead to FDI; that is, which firms are likely to invest what asset and in which country.

Vernon's (1966; 1971 and 1977) product life cycle theory of FDI views overseas investment in parallel with the natural life cycle of a product from it's initial launch, through maturity to its eventual decline. The theory ". . . provides a systematic explanation of how the exporting, importing and manufacturing location of a product changes over time . . . (and) how firms respond to changing competitive conditions, as domestic and foreign markets for the product grow, mature and decline" (Giddy, 1978; p.90). Vernon's (1966) model typifies the rate and direction of growth of US MNEs in the first twenty years that followed the second world war. A number of empirical studies within this period proved its validity when applied to post-war US FDIs. Vernon's contribution was significant especially when viewed in terms of the barriers to entry and evolution of competition, and in relation to the initial price elasticity of demand for a new product (Giddy). The theory was of even greater relevance in situations of changing market conditions over time and between countries (Rugman et al). However, it cannot be usefully applied to explain some aspects of trade and investment flows to the dynamic economies of South East Asia. Some of the developments that cannot be explained by the theory include: the innovation and development of products specifically targeted at foreign markets by MNEs; FDIs undertaken from the onset to produce goods and/or services already being manufactured by local firms in the host nation; and the acquisition of local

---

[5] Four out of the top six developing-country recipients of FDI between 1990 and 1996 are Asian (IFC, 1997).

firms in host countries as a means of accessing certain advantages that are unavailable to the MNE (Niosi, 1985). The predictive abilities of the product life cycle theory has been eroded by time, to the extent that it could, at best, only "take its place as . . . one facet of the more general phenomenon of large international firms successfully applying a diversity of monopolistic advantages across national boundaries in order to *internalise* imperfectly competitive factor markets" (Giddy).

Knickerbocker (1974) explained FDI away as an outcome of the "*follow-the-leader*" reactions of oligopolistic rivals. In this sense, FDI is viewed as a necessary defensive strategy by rival firms when a member of the oligopolistic industry breaks rank to invest abroad. The necessity of the action arises from the need to forestall continued loss of export (as the outputs of FDI fills the export market gap) and counter the leader's potential for acquiring new capabilities such as financial buoyancy as a result of the income generated from its FDI. Knickerbocker's work, which is based on post second world war FDI of American firms, goes a long way in explaining the industrial distribution of these investments, predicting stronger oligopolistic reactions in highly concentrated industries (Niosi). To the extent that the theory has little relevance with respect to the FDI activities of the "leader", however, its usefulness is limited in the Malaysian context where the growing stock of outward FDIs are by such "leader" firms, with, in most cases, strong governmental support and encouragement. A "follow-the-leader" strategy is not an optimal one at all times, especially in an oligopolistic industry where the strategy may be unprofitable to the leader (Buckley and Casson, 1991).

The answer to the question of "why the leader broke rank in the first place", raised by Knickerbocker's theory is partly provided by Magee's (1977) *appropriability theory*. It proposed that FDI developed as a result of the desire of the firm to derive full appropriability of the returns for its investment in the production of unique special advantages. This is necessary because of the public good nature of these advantages, which renders them untradeable in private markets. By organising transactions within the firm across national boundaries, as a means of sidestepping the inefficiencies in the market therefore, the firm ensures greater appropriability of the private returns to its investment in special advantages. In other words, by internalising the information or knowledge that makes up their unique and special advantages, firms are able to derive adequate appropriability of returns for the efforts involved in innovating them. Additional resources are ploughed by firms into trying to protect the appropriability from their special advantages against market hazards such as

imitations by rival firms. These protective efforts have not been very successful in some Asian countries, especially with high-tech products. Substantial dissipation of firms' proprietary special advantages have resulted in widespread pirating and imitative practices. Magee failed to disclose specific actions that MNEs may undertake to facilitate greater appropriability of their returns in such situations (Hood and Young, 1979) The theory however provides a useful 'missing link' when viewed in the context of Knickerbocker's *oligopolistic reaction* theory. Appropriability theory drew heavily on the ideas enshrined in the work of Hymer (1960) and Kindleberger (1969). It further relied on the concept of *internalisation*, which has been developed into a full-blown theory of FDI by Buckley and Casson (1976; 1991), Rugman (1980) and Rugman et al (1985).

Internalisation, which has been suggested in one form or the other as an underlying reason for FDI, was developed into a full theory by Buckley and Casson (1976). The theory depends on the assumption of profit-maximisation, emphasises very general forms of imperfect competition stemming from the costs of organising markets, and concentrates on imperfections in intermediate product markets rather than in the final product markets. Before FDI can proceed at all, the firm must possess some unique advantages obtained as "the rewards for past investments in (1) R&D facilities . . . (2) the creation of an integrated team of skills, . . . and (3) the creation of an information transmission network which not only allows the benefits of (1) and (2) to be transmitted at low cost within the organisation, but also protects such information . . . from outsiders." (Buckley and Casson, 1976; p.69.) The ability specified in (3) above is very crucial for the establishment of FDI and is the major difference between this theory and earlier similar approaches in the Hymer-Kindleberger tradition. In essence, a firm must not only possess unique advantages but must also be convinced in its economic calculations that it will be able to profitably exploit those advantages with minimal risk of dissipation.

Rugman's (1980) and Rugman et al's (1985) approach are very similar to Buckley and Casson's. Progressing from a free trade assumption, they introduced market imperfection into the discussion and observed that MNEs are replacements for free trade when trade is impeded by market imperfections. Two sets of factors that account for FDI strategy were then identified as location-specific factors (environmental variables) and firm-specific factors (internal variables).

Location-specific factors are the economic and non-economic variables in a country's aggregate production function and also include its political, cultural and social systems. Careful analysis of these factors is required for firms locating in high-risk-high-return economies of South East Asia. Firm-specific advantages (FSAs), on the other hand, are those unique internal advantages (such as knowledge, management, marketing, R&D and strategic planning skills) possessed by MNEs which gives them a relative advantage over other firms. The MNE then needs to exercise proprietary rights over its FSAs to maximise its worldwide income with minimal dissipation of this invaluable asset. This it does through internalisation, that is, the creation of an internal market that allows the firm to appropriate the returns from the advantage it generates. Internalisation therefore is a rational response to market imperfections in the pricing of MNEs' unique advantages. It is an economically efficient internal response to exogenous impediments to free trade and is a superior device to other potential solutions such as licensing or patent rights because it gives the MNE the additional benefit of self-regulation and monitoring of its advantages. The internalisation theory provides valuable explanations on why a firm might prefer to set up a subsidiary, rather than transact directly with the market. Buckley and Casson were able to synthesise most previous FDI theories and explain them relative to their own position, thereby establishing a link between the current major explanations of the FDI phenomenon.

From the above review, it can be concluded that market imperfections, both in intermediate and final product markets, the result of natural and unnatural barriers to trade, play an important role in the origin of MNEs. Unnatural barriers such as government interventions through laws, regulations, etc, for example, have for long been identified as the most dominant type of these imperfections in developing countries. Proponents of free trade prefer complete removal of these barriers. The net cost-benefit of such removal for these countries may be hard to estimate. Perhaps more significantly, the 1997 economic crisis appear to suggest that dynamic emerging economies such as Malaysia are yet structurally, institutionally or informationally primed for the complete removal of such barriers (Hansen and Stride, 1998).

The high risks associated with operating in these markets also bear promises of potential high returns. Both foreign and locally-owned business operations in a country like Malaysia are therefore expected to be highly profitable. The current study examines the nature and extent of profitability of Malaysian-based investments.

2.2 Reported Performances of Multinational Enterprises

The reported performance of MNEs is a subject of interest to a broad range of stakeholders and users of financial statements. Current and potential investors, for example, need the results for their investment-making decisions. Because of the multi-jurisdictional location of these investments, however, the reported performance of MNEs assume even greater significance. The significance is not lost on governments in different nations, since the financial behaviour of MNEs, among other things, impacts upon their revenue base.

Studies have been carried out to explore the reported performance of MNEs especially with regards to differences between foreign- and locally-controlled firms. Various accounting measures of performance were used in these studies. Most of them, however, have been based on the results on MNEs in developed western economies especially the US. Wheeler (1988; 1990) studied the profitability performance of US-based firms. He compared the rate of return of foreign-owned firms with those of US-owned companies and found that the return on assets of all US-owned corporations was six times larger than those of foreign-owned US subsidiaries. Wheeler reported illogical trends in the financial measures of capability and performance of foreign-owned US subsidiaries between 1983 and 1987. While their capabilities (total assets) grew from $530,334million in 1983 to $959,400million in 1987, their performance (return on assets) remained under 1 per cent.

Kim and Lyn's (1990) study also examined the profitability of US-based firms. They compared five performance ratios (earnings per share, return on equity before tax, return on equity after tax, gross profit margin and operating profit margin) of foreign-owned firms to those of US-owned ones for the years 1980 to 1984. Their results reveal that foreign firms operating in the US earn lower profits than American firms. They also found that US-owned firms, contrary to popular belief, are more efficient than foreign-owned ones[6].

Crain and Stitts (1994) used gross profit margin (GPM) as a measure of performance and compared foreign firms operating in the US to US-owned firms on this basis. Their findings indicate that foreign-controlled firms reported significantly lower GPMs than US-controlled firms.

---

[6] This finding is supported by Munday and Peel (1997) who found that foreign-owned (Japanese) firms operating in the UK are less efficient than their British counterparts.

Nitsch et al (1995) studied the characteristics and performances of Japanese FDIs located in seven Western European countries. From their selected sample of 118 firms, they found statistically significant differences in inter-country performances, industry, mode and reasons for making investment. On a three-point scale of loss (1), breakeven (2) and gain (3), the firms returned an average performance of 2.36. This average was exactly the same as that reported by UK-based Japanese firms; better than the French (2.12) average; but less than the German (2.43) average. Industry-wise, the best performance in the UK was recorded in the industrial equipment industry (2.75), while the worst was in transportation equipment (1.80). Greenfield operation (2.55) was the best mode of entry into the UK for the sampled Japanese firms. It compares to joint-ventureship (2.29) and acquisition (2.00), which was found to be a generally poor mode of entry into Europe for Japanese investment.

Oyelere & Emmanuel (1996) conducted a preliminary study into the performances (and post-performance distributions) of UK-based FODCs. They matched 36 FODCs with 36 UK-owned firms on the basis of size (total assets) and compared their profitability and distributions as reported in their annual reports and accounts in 1992 and 1993. Their findings revealed that foreign-owned firms' performances were significantly lower than those of UK-owned firms.

Munday and Peel (1997) undertook extensive study of the performance and efficiency of Japanese owned manufacturing firms operating in the UK. They compared them to UK-owned investments and found that Japanese-owned firms significantly under-performed UK-owned ones with respect to profitability, asset efficiency, stock efficiency and credit risks.

Oyelere and Emmanuel (1998) also reported on the performance of a sample of UK-based assets. Matching a sample of foreign- to UK-controlled firms on the basis of capability, their logistic regression analysis revealed that a firm is more likely to be foreign-controlled if it reports lower performance and higher post-performance distribution. They confirmed evidence of significant income-shifting out of foreign-controlled assets and found the claim that ITP is the key mechanism for such shifts difficult to dismiss.

Compared to studies on the financial performances of MNEs in developed western economies as reviewed above, empirical studies on MNE firms in developing and emerging economies are few and far between. This is despite the monumental economic progress witnessed in the

dynamic economies of South East Asia over the last two decades as evidenced by significant growth in their GNP and manufacturing outputs. One of the few notable studies of firm performances in this region is Lecraw (1983) who studied the performance determinants of 153 MNEs in five ASEAN countries (Indonesia, Malaysia, Philippines, Singapore and Thailand). His study was based on profit performance in six light manufacturing industries. He reported an average return on equity of about 20 per cent for the MNEs in his sample. This rate of return far outstrips those reported in studies of MNEs in developed economies reported above and confirms the expectations of higher returns usually associated with investments in riskier assets or locations. Lecraw found significant positive correlation between the performance of the firms and a number of variables including firm's market share, advertising and R&D intensity. His results also revealed a negative relationship between reduced profitability and variables such as import penetration, number of home countries of MNEs and growth in firm's sales.

It is surprising that more efforts have not been invested in studies of the performances of MNE assets in developing and emerging economies, in general and Malaysia, in particular. Despite restrictive investment policies in most of these countries, FDI have grown significantly in recent times. The flow of investment, which quintupled from 1990 to 1995, exceeded $100 billion in 1996 (IFC, 1997). Malaysia receives a significant proportion of these flow of FDIs. According to the World Bank Debtor Reporting System (cited in IFC, 1997), Malaysia was the fourth largest developing-country recipient of FDI in two successive ten-year periods from 1970-79 and 1980-89. It has since moved into third place behind China and Mexico for the period 1990-96. During this period, FDI inflows into Malaysia totaled US$30,293 million, making the country the 13th largest FDI recipient nation worldwide (OECD, 1998). The country was one of only six LDCs, whose FDI flows was greater than 5 per cent of their GNP. Indeed, as at the end of 1996, more than half (RM33.2 out of RM66.3 billion) of the total fixed asset of Malaysian companies are foreign-owned (Asia Business, 1998).

The flow of investment has, however, not been one-way; Malaysian MNEs have become aggressive in their pursuit of global investment opportunities. Increasing competition has been cited as one of the reasons for the acceleration of outward investment, with Malaysia companies venturing as far as Croatia and Uzbekistan (Soledad, 1996). Outward investments rose by 40% to RM6.6 billion in 1994. Most of the investments were however concentrated

in Singapore and other South Asian countries. African countries, notably South Africa and Zimbabwe, are also receiving increasing proportions of Malaysian outward investments (Astbury, 1994; Marriott, 1997).

From all indications, MNEs are a dominant force in the economy of Malaysia. A study of their characteristics and financial behaviour should therefore shed some light on economic events such as the recent Asian crisis. The current study explores the reported financial accounting performance of Malaysian-based MNEs. The research methodology employed is described next.

3.   Research Design and Methodology

3.1   Sample Selection

Sampled companies for this study were selected from the KLSE index. The key criterion for inclusion was multinationality; that is, whether the company is foreign-controlled or it is Malaysian-controlled, and owns direct investments outside Malaysia. A company is classified as foreign-controlled if more than 50 per cent of its shareholding are owned outside Malaysia. Companies from the investment and financial services and related industries were excluded from our sample. A total of 242 MNEs for which performance data are accessible were included in the sample for this study. Information on the control location and industrial affiliation of sampled firms are presented in Table 1.

Table 1
Industrial Affiliation and Control Location of Sampled Firms

Industry	FC*		MC**		ALL	
	No	%	No	%	No	%
Construction	-	-	21	9.6	21	8.7
Consumer Products	12	50.0	28	12.8	40	16.5
Hotel	-	-	2	0.9	2	0.8
Industrial Products	9	37.5	59	27.1	68	28.1
Mining	-	-	6	2.8	6	2.5
Plantation	-	-	11	5.0	11	4.6
Properties	1	4.2	32	14.7	33	13.6
Trading & Services	2	8.3	59	27.1	61	25.2
Total	24	100.0	218	100.0	242	100.0

* Foreign-controlled; ** Malaysian-controlled

Sampled companies are spread across six of the twelve industrial groupings on the KLSE. The highest number (68; about 28%) of companies in the sample are from the *Industrial products* sector. This is followed by the *Trading and services* sector with 61 (about 25%) of the sample. The *Hotels* industry has the least representation (2 companies). About ten per cent (24) of the companies included in the sample are foreign-controlled (FCs), while the remaining 218 are Malaysian-controlled (MCs).

3.2 Data Collection

This study is aimed at exploring the nature and magnitude of the reported profitability of Malaysian based multinationals relative to a number of attributes such as size, industry and location of control. To achieve this aim, data were extracted from the annual reports of sampled companies as displayed on the KLSE-RIS website (http://www.klse-ris.com.my/) for the three-year period, 1995 t0 1997. The website provides, among other things, financial information and news on most of the companies on the KLSE. The data extracted for the purpose of this research are coded and defined in Table 2 (Panel A). The performance data were further normalised into a number of performance ratios - operating expenses to sales (OEXS), return on capital employed (ROCE), return on total assets (ROTA) and return on turnover (ROTO) - as coded and defined in Panel B of Table 2.

Table 2
Definition of Research Variables and Ratios

Panel A: Performance variables						
VARIABLES	RESEARCH CODE	DEFINITION				
Operating expenses	OPEX	The total operating expenses of the company.				
Profit before tax	PBTX	Total profit for the year before tax but after income from associated companies and other investments, interest receivable, interest payable, amounts written off investments and exceptional items.				
Profit after tax	PATX	Total profit for the year after tax but before after-tax items, extraordinary items and dividends.				
Panel B: Performance ratios						
RATIOS	RESEARCH CODE	DEFINITION				
Operating expenses to sales	OEXS	$\frac{\text{Operating expenses} \times 100}{\text{Sales (to 3}^{\text{rd}}\text{ parties only)}}$				
Return on capital employed	ROCE	$\frac{\text{Profit before tax} \times 100}{\text{Capital employed}}$				
Return on total asset	ROTA	$\frac{\text{Profit before tax} \times 100}{\text{Total assets}}$				
Return on turnover	ROTO	$\frac{\text{Profit after tax} \times 100}{\text{Sales}}$				

3.3   Data Analysis

A two-step analytical approach was employed in this study whereby exploratory data analysis (EDA) was first carried out before formal statistical testing. EDA exposes the most illuminating features of the dataset, which are likely to be overlooked during formal statistical analysis. The results are reported in the next section. Statistical tests are then carried out on the performance variables at the univariate level on annual and three-year average bases. Specifically, because of the non-normal distribution of collected data, the nonparametric *Mann-Whitney U* (*M-WU*), *Kruskal-Wallis H* (*K-WH*) and *Friedman* tests were employed to investigate the presence or otherwise of any systematic differences between the performances of sampled firms. The results of these tests are also reported in the next section.

4.   Results and Findings

EDA results reveal that the 242 firms had an average total asset of RM1,396.45million over the three-year period covered by this study (Table 3). The average sales figure for the same period was RM683.27million. Capital employed by all the firms averaged RM567.3million. MCs, despite their apparent size advantage, as indicated by their higher mean total asset and capital employed, recorded a lower average turnover of RM658.51million as compared to FCs' RM901.77. Consequently, their mean asset turnover, a measure of efficient use of assets was significantly lower than those of FCs.

Table 3
Descriptive Statistics of the Size and Performances of Sampled Companies

Panel A: All companies (n = 242)						
Variables	**Mean**	**Median**	**Std Deviation**	**SE of Mean**	**Skewness**	**Kurtosis**
Size						
Total assets	1,396,446,474	600,069,722	2,821,714,655	186,872,618	5.047	31.482
Capital employed	567,301,851	277,780,000	1,030,905,988	68,273,417	6.371	57.460
Sales	683,270,442	264,141,500	1,193,267,804	79,374,994	4.553	29.512
Performance						
Operating expenses	606,120,216	233,243,767	1,043,959,142	69,597,276	4.486	29.291
Profit before tax	91,318,565	33,008,333	217,685,426	14,448,289	6.101	49.122
Profit after tax	65,111,756	22,969,000	167,880,227	11,142,602	6.291	53.325
*Ratios**						
A. Profitability						
Return on capital employed	13.61	14.10	37.61	2.50	-7.586	101.706
Return on total assets (times)	6.88	6.59	9.25	.61	-.762	14.698
Return on turnover	17.16	7.52	145.07	9.65	14.398	213.828
B. Efficiency						
Asset turnover (times)	.69	.55	.54	.04	2.013	6.176
Operating expenses to sales	90.61	90.08	26.64	1.78	4.985	40.240

  * Figures, unless otherwise stated, are in percentages and rounded to the nearest two decimal places.

Panel B: Foreign-controlled companies (n = 24)						
Variables	**Mean**	**Median**	**Std Deviation**	**SE of Mean**	**Skewness**	**Kurtosis**
Size						
Total assets	903,328,657	879,053,061	808,969,479	168,681,797	1.869	3.668
Capital employed	391,928,168	319,459,333	291,230,074	60,725,668	1.580	2.518
Sales	901,770,499	574,467,000	752,414,210	156,889,208	.879	-.808
Performance						
Operating expenses	804,675,918	494,861,667	712,210,499	148,506,155	1.054	-.344
Profit before tax	100,073,009	69,750,333	108,869,383	22,700,836	2.487	7.898
Profit after tax	78,583,572	51,768,000	81,459,357	16,985,450	2.117	5.661
Ratios*						
A. Profitability						
Return on capital employed	28.22	20.64	30.19	6.30	3.330	13.128
Return on total assets (times)	13.52	10.01	11.96	2.49	1.957	4.472
Return on turnover	9.68	9.29	6.12	1.28	.763	-.381
B. Efficiency						
Asset turnover (times)	1.15	.95	.59	.12	.281	-1.322
Operating expenses to sales	87.66	91.09	8.62	1.80	-.975	.050

* Figures, unless otherwise stated, are in percentages and rounded to the nearest two decimal places.

Panel C: Malaysian-controlled companies (n = 218)	Mean	Median	Std Deviation	SE of Mean	Skewness	Kurtosis
Variables	**Mean**	**Median**	**Std Deviation**	**SE of Mean**	**Skewness**	**Kurtosis**
Size						
Total assets	1,451,771,888	590,840,667	2,959,508,542	206,701,043	4.817	28.423
Capital employed	586,977,923	267,418,856	1,081,473,813	75,533,407	6.092	52.251
Sales	658,514,278	243,932,116	1,232,195,035	86,483,137	4.629	29.264
Performance						
Operating expenses	583,512,388	212,702,833	1,074,251,297	75,584,057	4.598	29.496
Profit before tax	90,331,544	27,696,167	226,851,790	15,882,802	5.990	46.394
Profit after tax	63,592,875	20,062,691	175,028,548	12,254,449	6.186	50.401
Ratios*						
A. Profitability						
Return on capital employed	11.97	13.43	38.06	2.66	-8.274	106.055
Return on total assets (times)	6.13	6.17	8.62	.60	-1.851	17.634
Return on turnover	18.01	7.31	153.07	10.74	13.649	192.125
B. Efficiency						
Asset turnover (times)	.63	.52	.51	.04	2.453	9.609
Operating expenses to sales	90.95	89.83	27.96	1.97	4.781	36.598

* Figures, unless otherwise stated, are in percentages and rounded to the nearest two decimal places.

Table 4
Descriptive Statistics on Year-by-Year Performances of Sampled Companies

All companies (n = 242)	Mean			Std Deviation			Skewness		
Performance Variables	1995	1996	1997	1995	1996	1997	1995	1996	1997
Operating expenses	706,049,531	602,196,241	553,321,133	1,223,849,506	1,059,416,350.39	932,106,699.20	4.609	4.333	4.248
Profit before tax	90,244,067	99,222,668	93,067,799	268,765,199	231,675,865.74	189,278,978.67	4.784	5.611	6.124
Profit after tax	59,983,034	72,433,193	69,374,775	210,327,456	181,018,328.63	148,341,089.86	4.310	5.406	6.576
Return on capital employed	6.6200	20.5929	18.1113	70.6678	51.9341	19.7678	-11.780	12.263	2.268
Return on total assets	3.7780	112.5360	116.4489	19.4397	1566.5059	1278.2975	-7.290	14.966	13.365
Return on turnover	26.9932	18.8771	16.1265	358.8466	90.5950	342.0365	14.696	10.174	2.878
Asset turnover (times)	.6592	.7056	3.7506	.5394	.5536	42.5138	1.912	1.685	14.207
Operating expenses to sales	93.1547	87.5175	106.9973	28.7133	22.6865	246.5065	3.832	4.095	13.652

Performance-wise, the average reported PBTX for all the companies in the sample over the three-year period of this study was RM91.32million. FCs' average PBTX of RM100.07million was higher than that of MCs. This resulted in higher ROCE and ROTA reportage by FCs. MCs, however, reported higher ROTO and EPS. Generally, the profitability ratios indicate healthy performance levels when compared with MNE performances in other countries.[7] The stability of these performances may be observed by looking at the extent of year-to-year variability of the performance variables. These are reported in Table 4 above.

The statistics, as reported in Table 4, indicate high level of variability in the year-to-year performances of the MNEs in our sample. A typical example is the ROTA, which varied from 3.8 per cent in Year 1 to 116 per cent in Year 3. More importantly, from a methodological perspective, the EDA results suggest that the samples in this study may not be from a normal distribution. As a result, nonparametric statistical tests were applied.

The *M-WU* test was employed to test for systematic differentials in performances in relation to differences in the location of control of sampled MNEs. The results of the tests are presented in Table 5.

Table 5
Mann-Whitney U **Test of Differences in Mean Performances of FC and MC Companies (3-year average)**

	MEAN RANK		TEST STATISTICS			
Research Variable	**FC***	**MC***	**U**	**W**	**Z**	**Sig. (p)**
OPEX	154.83	108.24	1361.00	21864.00	-3.252	.001 [a]
PBTX	148.61	110.10	1550.00	22460.00	-2.666	.008 [a]
PATX	152.43	109.67	1462.00	22372.00	-2.961	.003 [a]
OEXS	113.30	112.97	2316.00	22819.00	-0.024	.981
ROCE	150.04	109.94	1517.00	22427.00	-2.777	.005 [a]
ROTA	153.83	109.51	1430.00	22340.00	-3.068	.002 [a]
ROTO	120.35	112.72	2177.00	22883.00	-0.530	.596

(a) indicates that differences are significant at the 1% level.

The results of the test, as presented in Table 5, indicate that there are statistically significant differences in the performances of the two homogenetically distinct groups of MNEs. Differences in OPEX, PBTX, PATX, ROCE and ROTA are all significant at the 1% level. The interesting aspects of these results is the higher mean ranking of the performances of FC MNEs, which indicate that, they, on average, outperformed MCs. This result contradicts the findings of a number of previous studies (Kim and Lyn, 1990; Crain and Stitts, 1994;

---

[7] Kim and Lyn (1990) and Munday and Peel (1997), for example, reported substantially lower performance ratios for US- and UK-based companies respectively.

Munday and Peel, 1997; Oyelere and Emmanuel, 1998; Emmanuel and Oyelere, 1999; for example) which were carried out in developed economies. It appears therefore that the assumption of higher appropriable returns implicit in a number of post-Hymer FDI theories (Magee, 1977; Buckley and Casson, 1991) still holds in the case of the Malaysian business environment. This could partly explain the increasing stock of FDI in the country.

Another interesting finding is the significantly higher trading expenditure (OPEX) reported by FCs. OPEX is an important variable when the performances of foreign- and domestically-controlled companies are being compared, the main reason being the potential distortionary effect of ITP on reported figures. The higher mean ranking of OPEX by FCs, for example, may indicate that ITP is being used to inflate OPEX and shift income out of Malaysia by FCs. Findings in this regard are however inconclusively, given the insignificant difference between the two sets of companies when OPEX was normalised by sales (OEXS). Further studies incorporating ITP variables with those explored in the current study, may provide additional insight in this regard.

The *K-WH* test was employed to test for differences in performance that may result from industrial affiliation. Results, as indicated in Table 6, show that there are statistically significant differences in the inter-industrial performances of sampled firms.

Table 6
***Kruskal-Wallis H* Test of Differences in Inter-Industrial Mean Performances (3-year average)**

| Research Variable | MEAN RANK | | | | | | | | TEST STATISTICS | |
| | Industry* | | | | | | | | | |
	1	2	3	4	5	6	7	8	Chi-square	Sig. (p)
OPEX	129.50	125.53	85.50	106.57	102.83	110.56	88.91	122.27	9.457	.221
PBTX	116.15	119.46	177.50	100.85	70.33	118.30	123.39	119.86	8.422	.297
PATX	112.35	120.85	184.00	104.00	70.00	113.90	121.12	118.75	7.497	.379
OEXS	116.85	132.24	28.00	126.03	196.33	102.44	76.27	101.82	31.469	.000[a]
ROCE	109.70	133.18	75.00	112.85	42.33	73.30	98.88	128.68	19.669	.006[a]
ROTA	97.45	136.36	123.50	112.03	60.50	99.50	105.82	119.29	11.231	.129
ROTO	107.40	96.97	212.00	103.84	74.67	121.60	139.24	121.45	16.685	.020[b]

* 1 = Construction; 2 = Consumer Products; 3 = Hotel; 4 = Industrial Products; 5 = Mining; 6 = Plantation; 7 = Properties; 8 = Trading & Services
(a) indicates that differences are significant at the 1% level and (b) at 5%.

Significant differences were found in three normalised inter-industrial performance variables. Differences in OEXS and ROCE were statistically significant at the 1% level while ROTO is significant at the 5% level. The ROCE of MNEs operating mainly in the Consumer Products and Trading and Services industries were significantly greater than those obtained in other industries. On the other hand, profitability in Mining, Plantation and the Hotels industries

were relatively lower. The significant difference in ROCE between the industries could be explained by the scale of dynamic asset (capital employed, for example) required to operate in the respective industries. There is likely to be greater requirement for these assets relative to return in industries such as Mining and Plantation than for Trading and Services and Consumer Products operations.

When taxation is taken into consideration and returns are denominated by turnover (ROTO), however, MNEs in the Hotels industry significantly outperformed all other MNEs. ROTO in the Mining industry remained significantly low, possibly as a result of the significantly high OEXS ratio of the industry. Conversely, the high ROTO performance of the Hotels industry is traceable to low OEXS.

The *Friedman* test was used to test for inter-annual differences in the performances of Malaysian-based MNEs. Results of the test are presented in Table 7.

Table 7
Friedman Test of Inter-Annual Variability of Mean Performances of Malaysian-based MNEs

Research Variable	MEAN RANK			TEST STATISTICS	
	1995	**1996**	**1997**	**Chi-square**	**Sig. (p)**
OPEX	2.67	2.01	1.33	172.010	.000[a]
PBTX	1.95	2.19	1.85	12.030	.002[a]
PATX	1.94	2.20	1.86	12.030	.002[a]
OEXS	2.33	1.88	1.80	31.594	.000[a]
ROCE	1.63	2.12	2.25	41.739	.000[a]
ROTA	1.51	2.10	2.39	79.085	.000[a]
ROTO	1.64	2.08	2.28	41.582	.000[a]

(a) indicates that differences are significant at the 1% level.

The results clearly show that there are statistically significant inter-annual variations in the performances of Malaysian-based MNEs. Year-to-year differences were significant at the 1% level for all the variables considered in this study. The mean ranking pattern shows that progressive fall in OPEX and OEXS between 1995 and 1997 resulted in progressive increases in profitability ratios (ROCE, ROTA and ROTO). PBTX and PATX however reveal a different pattern, peaking in 1996 and regressing to least ranking the following year. The inter-annual variability in OPEX is highly significant and will require additional investigation, given the stated importance of this variable from ITP perspective. It is possible that MNEs are actively engaging in income-shifting practices, using the opportunities provided by ITP.

Generally, the results in Table 7 confirm the notion of high volatility associated with emerging markets. Volatility also portends risks and events such as the Asian economic crisis could possibly be forecasted from trends of the pooled performances of all firms if such performances are viewed as expected returns in a risk-return model.

5.   Summary and Conclusion

This study investigated the performances of Malaysian-based MNEs listed on KLSE, using the reported financial accounting figures for the pre-Asian crisis years of 1995 to 1997. The study was considered necessary given the domineering influence of MNEs on global economies especially with respect to emerging economies such as Malaysia. Economic meltdowns are sometimes directly traceable to the activities of MNEs.

The study used accounting numbers as disclosed in the annual reports of Malaysian-based MNEs. Accounting numbers may not reflect all aspects of firms' economic performances. In addition, accounting policy choices of firms may influence reported earnings. While profitability, as reported in firms' annual reports, provide globally recognised signals of performances with direct impact on corporate value, future researchers may consider using other economic models to explore the performances of Malaysian MNEs. Further refinement of this study should adjust for possible differences in accounting policies.

The results of the study confirmed that there was a high level of volatility in the performances of Malaysian-based MNEs over the three years covered by the study. While this, in itself, is not uncommon in emerging economies, it portends a high level of risk and investors need to consider whether the appropriable returns are adequate to compensate them for undertaking such risks.

The study also found differences in performance ratios between the eight industrial sectors represented. The inverse relationship between OEXS and profitability was clearly reflected in the performances of the MNEs studied. Profit performance ratios in the Hotels industry ranked highest, while the Mining industry ranked lowest. Inter-industrial differences in performance should be a matter of interest to a broad range of parties including potential investors and Malaysian policy makers in the areas of tax and investment. Potential investors may want to ascertain post-performance distribution patterns in these industries. Future

studies in this area should explore these patterns to ascertain distribution policies especially with regards to dividend and taxation.

Perhaps most significantly, FCs in this study out-performed MCs. Although this finding contradicts a number of previous studies, it is supported by a number of post-Hymer FDI theories. Higher returns are required on FDIs to compensate for the implicit transaction costs of cross-border investments. The finding could also be an indication of the superior technology and efficiency levels in FCs. We conclude that Malaysia is a profitable environment for FDI. Whether this conclusion will still hold after the Asian crisis is an issue worth investigating in the near future.

References

Asian Business (1998) Economic Statistics: Malaysia, *Asian Business*, April, 31-32.

Astbury, S. (1994) Firms feel pull overseas, *Asian Business*, April: 31.

Buckley, P. J. and M. C. Casson (1976) *The Future of the Multinational Enterprise*, London: Macmillan.

Buckley, P. J. and M. C. Casson (1991) *The Future of the Multinational Enterprise*, London: Macmillan.

Chandler, A.J. (1962) *Strategy and Structure: Chapters in the History of the American Industrial Experience*, Cambridge, Mass. MIT Press.

Crain, T.L and R.H. Stitts (1994) A comparison of gross profit margins between foreign-controlled domestic corporations and comparable US-controlled domestic corporations, *Journal of International Accounting, Auditing and Taxation*, 3(1): 85-101.

Emmanuel, C.R and P.B. Oyelere (1999) Differences in the performances of foreign-controlled and domestically-controlled firms: Some UK evidence, *Lincoln University Working Paper Series* No. 71/3.

Giddy, I. H. (1978) The Demise of the Product Cycle Model in International Business Theory, *Columbia Journal of World Business*. Spring: 90-7.

Hansen, M. and R. Stride (1998) Asia's Ring of Fire, *Asian Business*, April: 38-40.

Hood, N. and S. Young (1979) *The Economics of Multinational Enterprise*, London: Longman.

Hymer, S. H. (1960) *The International Operation of National Firms: A Study of Direct Foreign Investment.* Cambridge, Mass.: MIT Press (revised edition, 1976).

International Finance Corporation (1997) *Foreign Direct Investment*, Washington, D.C.: IFC and Foreign Investment Advisory Service.

Kim, W.S. and E.O. Lyn (1990) FDI theories and the performance of foreign multinationals operating in the US, *Journal of International Business Studies* (First Quarter): 41-54.

Kindleberger, C. P. (1969) *American Business Abroad.* New Haven: Yale University Press.

Knickerbocker, F. T. (1974) *Oligopolistic Reaction and Multinational Enterprise.* Cambridge, Mass.: Harvard Business School, Division of Research.

Lecraw, D. J. (1983) Performance of Transnational Corporations in Less-Developed Countries *Journal of International Business Studies*, Spring/Summer: 15-33.

Lenin, V.I. (1966) *Imperialism, the Highest Stage of Capitalism: A Popular Outline*, 13th edition, Moscow: Progress Publishers.

Magee, S. P. (1977) Information and Multinational Enterprises: An Appropriability Theory of Direct Foreign Investment, in J. N. Bhagwati (ed) *The New International Economic Order,* pp.317-40. Cambridge, Mass.: MIT Press.

Marriott, C. (1997) Malaysia's expansionist multinationals go on a shopping spree, *Global Finance*, June: 38-42.

Maslow, A.H. (1970) *Motivation and Personality,* 2nd edition New York: Harper & Row.

Munday, M. and M.J. Peel (1997) The Japanese manufacturing sector in the UK: A performance appraisal, *Accounting and Business Research* (Winter) 28(1): 19-39.

Nitsch, D., P. Beamish and S. Makino (1995) Characteristics and performance of Japanese foreign direct investment in Europe, *European Management Journal* 13(3): 276-285.

OECD (1998) Recent Trends in Foreign Direct Investment *Financial Market Trends*, June (No. 70), available on OECD website (www.oecd.org).

Ohlin, B. (1933) *Interregional and International Trade*, Cambridge, Mass.: Harvard University Press.

Oyelere P.B. and C.R. Emmanuel (1996) Seeking evidence of international transfer pricing abuse, *Glasgow University Working Paper Series* No. 96/3.

Oyelere P.B. and C.R. Emmanuel (1998) International transfer pricing and income shifting: Evidence from the UK, *European Accounting Review* 7(4): 623-635.

Ricardo, D. (1817) *Principles of Political Economy and Taxation*, Cambridge: Cambridge University Press.

Rugman, A. (1980) A New Theory of the Multinational Enterprise: Internationalisation Versus Internalisation, *Columbia Journal of World Business.* Spring: 23-29.

Rugman, A. M., D. J. Lecraw and L. D. Booth (1985) *International Business: Firm and Environment,* New York: McGraw-Hill.

Soledad, G. (1996) Competition drives companies offshore, *Asiamoney*, October: 76.

Vernon, R. (1966) International Investment and International Trade in the Product Cycle, *Quarterly Journal of Economics,* May: 190-207.

Vernon, R. (1971) *Sovereignty at Bay: The Multinational Spread of US Enterprises.* New York: Basil Books.

Vernon, R. (1977) *Storm Over the Multinationals - The Real Issues.* Cambridge, Mass.: Harvard University Press.

Wheeler, J.E. (1988) An academic look at transfer pricing in a global economy, *Tax Notes* (July 4): 87-96.

Wheeler, J.E. (1990) *Hearings on Tax Underpayments by Foreign-Owned US Subsidiaries.* House Ways and Means Oversight Sub-Committee of the United States House of Representatives: 1-15.